

GOVERNMENT OF MEGHALAYA



INTEGRATED WATERSHED MANAGEMENT PROGRAMME

WEST GARO HILLS - IWMP-XIII

2012-2013



**TURA SOIL AND WATER CONSERVATION
(T) DIVISION
WEST GARO HILLS, MEGHALAYA**

DETAILED PROJECT REPORT

INTEGRATED WATERSHED

MANAGEMENT PROJECT

W.G.H. - IWMP -XIII

2012- 2013

GAMBEGRE C&RD BLOCK

WEST GARO HILLS

MEGHALAYA

SUMMARY

Name of the Sate	: Meghalaya
Name of the District	: West Garo Hills District
Name of the C&RD Block	: Gambegre,
Name of the Villages	: Gambegre, Chigitchakgre, Jengchamgre Sengminpara, Rakwapara, Somonpara
Name of the Project	: West Garo Hills – IWMP –XIII
Total Geographical Area	: 4287 Ha
Total Treatment Area	: 2090 Ha
Total Project Cost	: 313.500 lakhs
Project Duration	: 5 Years
Project Implementing Agency	: Soil & Water Conservation Territorial Division, Tura

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CHAPTER I

INTRODUCTION AND BACKGROUND

CHAPTER I

INTRODUCTION AND BACKGROUND

1.1 Project Background:

The Integrated Watershed Management Programme Project - XIII is located at West Garo Hills under Gambegre C&RD Block, West Garo Hills District of Meghalaya, comprising of 4(four) Micro Watershed i.e. 1. Sikkli Watershed, 2. Sokchon Watershed, 3. Wadro Watershed, 4. Mecheng Watershed. All the 4(four) Watershed consists of a single micro-watershed, the project area is drained by the Sanda & Bandra River and its tributaries flowing in a South to North direction. The total area is 4287 Ha. with 2090 ha. to be treated under the Integrated Watershed Management Programme (IWMP).

The Project area is located at a distance of about 25.3 km from Sikkli Watershed, 52.3 Sokchon Watershed, 55 km. from Wadro Watershed & 45 Mecheng Watershed from Tura the District Headquarter. A total no. of 6(Six) villages are covered under this project. They are –

1. Sikkli Micro Watershed :- a.) Gambegre Village.
b.) Chigitchakgre village.
2. Sokchon Micro Watershed :- a.) Jengchamgre village.
b.) Sengminpara village.
3. Mecheng Micro Watershed :- a.) Somonpara village.
4. Wadro Micro Watershed :- a.) Rakwapara village.

1.2 Micro-watershed Information:

The micro-watershed code is _____ as codified by the North East Space Application Centre (NESAC). The total area of the micro-watershed is 4287 Ha., with 2090 hectares to be treated under the Integrated Watershed Management Programme (IWMP).

1.3 Need and Scope for Watershed Development:

The micro-watershed W.G.H. IWMP - XIII falls under the High Priority category as per the prioritization of watersheds Super Map GIS prepared by Tura Soil & Water Conservation (T) Division, West Garo Hills, Meghalaya. The farmers are all marginal.. Jhum cultivation is practiced by most of the inhabitants of these villages on the slopes.

Even though the area receives ample rainfall during the monsoons, there is acute shortage of water during the dry seasons and the villagers have to travel long distances for fetching water even for domestic use.

1.4 Other developmental projects/schemes running in the Project Area:

The other developmental projects/schemes undertaken in the Project Area are:-

- i. MNREGS

CHAPTER II
BASIC INFORMATION OF THE
PROJECT AREA

CHAPTER II BASIC INFORMATION OF THE PROJECT AREA

2.1 Location:

The Project area is located at West Garo Hills District. There are 11(eleven) villages within the Watershed which are as follows –

1. Gambegre Village.
2. Chigitchakgre village.
3. Jengchamgre village.
4. Sengminpara village.
5. Somonpara village.
6. Rakwapara village.

Following were the tables given below the location and its distance from the Tura Head Quarter of W.G.H. IWMP –XIII.

Name of the Project	Name of Micro Watershed	Geographical location	Distance from Project Area to District HQtr.
W.G.H. IWMP - XIII	Sikkli Micro Watershed	90°08'30" N to 90°12'00" N 25°24'00" E to 25°26'15" E	25.3 km.
	Sokchon Micro Watershed	90°02'15" N to 90°05'15" N 25°23'15" E to 25°19'30" E	52.5 km.
	Mecheng Micro Watershed	90°06'00" N to 90°08'15" N 25°26'15" E to 25°23'15" E	45 km.
	Wadro Micro Watershed	90°04'30" N to 90°06'45" N 25°24'45" E to 25°21'00" E	55 km.

2.2 Physiography:

The physiography of the micro-watershed is highly undulating. The altitude ranges from a minimum of 20 m to a high of 265 m above mean sea level. The slope ranges of each Watershed are given in the below noted tables.

Sl no.	Name of the Watershed	Lower reaches (%)	Middle reaches (%)	Upper reaches (%)	Elevation (m)
1.	Sikkli Watershed.	0 – 24	49 - 74	74 - 94	140 - 273
2.	Sokchon Watershed.	0 -14	42-56	70 - 84	59 -240
3.	Wadro Watershed	0 - 16	33 - 50	67 - 84	140 - 240
4.	Mecheng Watershed	0 - 17	34 - 52	69 -86	49 - 240

Table 2.1: Physiographic details

Name of Watershed	Slope Range (%)	Order of watershed Sub/Micro-watershed	Major streams	Topography
1. Sikkli W/S	0 - 94	2 nd	Sikkli stream, Chigitchak stream, Romi Stream, Damal Stream, Matchok stream, Jenggim Stream, Dokera Stream.	Gniss with old intiers, sela group (AP)
2. Sokchon W/S	0 - 84	3 rd	Banguri Stream , mandal Stream, Doringgek Stream , Sasat Stream, Teksra Stream.	
3. Wadro W/S	0 - 84	2 nd	Gonchu Stream, Wadro Stream, Belbeta Stream, Urijora Stream, Menda Stream	
4. Mecheng W/S.	0 - 86	3 rd	Mecheng Stream, Minja Stream, Chitippa Stream, Jada Stream, Chimeseng Stream, Jongdik Stream, Rongka Stream.	

2.3 Drainage :The major stream draining the micro-watershed is the Sikkli Stream, Sökkchon Stream, Wadro Stream, Mecheng Stream Etc which is a 2nd &3rd order stream. The slopes of the micro-watershed are dissected by numerous small tributaries flowing to the Grim River, Sanda River & Bandra River.

2.4 Soil :

Soil in general is moderately deep, excessively drained fine loamy soils in surface structure. They are moderately acidic in nature. The soil depth is deep to moderately deep. Due to uniform slopes and presence of many water courses, no drainage problem exist. The watershed area does not have a major erosion problem but of moderate erosion.

Table 2.2: Details of soil erosion in the project areas:

1	2	3	4	5	6	7	8	9	
Sl. No.	Names of State	Names of District	Names of Projects	Cause	Types of erosion	Area affected (ha)	Run-off (mm/year)	Average soil loss (Tonnes/ ha/ year)	
1	Meghalaya	West Garo Hills	West Garo Hills – IWMP XIII	Water erosion:					
				A	Sheet				
				B	Rill	2090	NA	NA	
				C	Gully				
				Sub total		2090			
				Wind erosion		nil	nil	Nil	

2.5 Climate :-

The Watershed lies under Central Hyper-thermic Agro-climatic plateau. The average annual rainfall is about 3600mm. Monsoon normally starts in the middle of May and last till middle of October. About 80% of the total annual rainfall is received from June to September. May and June are the hottest month recording average maximum temperature of 32°C. December and January accounts for lowest of 10°C to 12°C.

Table 2.3: Agro-climatic zones of the project areas, soil types, average rainfall and major crops.

1	2	3	4	5	6	7		8	9	
Sl. No.	Name of State	Name of the Agro-climatic zone	Area (in ha)	Names of the districts	Names of the Projects	Major soil types		Average annual rainfall in mm (preceding 5 years' average)	Major crops	
						a) Type	b) Area (ha)		a) Name	b) Area (ha)
1	Meghalaya	Central Hyper-thermic Agro-climatic	4287	West Garo Hills.	W.G.H. IWMP XIII	Fine clay soil to fine loamy soil	4287	3600	Paddy	189.7
									Maize	98.5
									Millet	78
									Ginger	69
									Arecanut	123
									TOTAL	558.2ha.

2.6 Agriculture :

Agriculture is the primary occupation of the people of the area. The people mostly practice jhum. The jhum plots vary from 0.5 to 1.0 Ha, and are cultivated for 3-4 years. The principal agricultural crops grown of the jhum fields are paddy, potato, sweet potato, millet, maize, yam and vegetables etc. Fruit crops are well suited in the lower reaches which include, *Elaegnus latifolia*, orange, pineapple, jackfruit, litchi. The slopes of the W.G.H. IWMP – XIII are also very suitable for betel nut, betel leaf, black pepper, broomstick, cashewnut etc. which contribute to the income of the people.

Table 2.4: Crop yield and production 741.74

Crops	Area (ha)	Average Yield (Qtl) per ha.	Total Production (Qtl.)
Paddy	189.7	15	2845.5
Maize	98.5	20	1970
Millet	78	8	624
Ginger	69	35	2415
Arecanut	123	8	984
		TOTAL	8838.5

2.7 Natural Vegetation :

The tree species common to the watershed area includes – *Albizzia spp*, *Schima wallichii*, *Embllica officianalis*, *Bombax cieba*, and *bamboo spp*. However, due to Jhum cultivation and stone quarry, the forest cover of the area has reduced considerably.

2.8 Socio-Economic Profile :

Economically, the area is perhaps the most backward in the district. The main reason is due to the absence of road communication, primitive way of agricultural practices like jhumming and the difficult terrain of the area. The entire population depends upon agriculture and horticulture , daily labour in the stone quarry for sustenance.

Demographic Status : The total households in the watershed project are 378 nos. with a total population of 1905 nos. which 956 nos. are male and 948 nos are female.

1. Gambegre Village.
2. Chigitchakgre village.
3. Jengchamgre village.
4. Sengminpara village.
5. Somonpara village.
6. Rakwapara village.

Infrastructure facilities :

- 2.1.1 **Roads** : All the villages within the Project Area are not connected by road. The Project area depends entirely on the kutchra road connected either to PWD main Road.
- 2.1.2 **School** : There are only 6 L.P Schools & 3 U.P Schools, 2(two) Secondary School within the Project Area run either by the Community.
- 2.1.3 **Electricity** : At present there is electricity connection in the Project Area
- 2.1.4 **Health** : There is no Community Health Centre Within the Project Area
- 2.1.5 **Water Supply** : There is drinking water supply by the PHE Deptt.. in the area but was not maintained properly and was not sufficient to meet the daily requirement.
- 2.1.6 **Market** : There is a weekly market held once in a week Gambegre,Bolori in the main market where the people sell their produce is at Tura.

Table 2.5: Infrastructure Status.

1	2	3		4			
Name of District	Name of Project	Parameters:		Status			
West Garo Hills	West Garo Hills – IWMP XIII	(i)	No. of villages connected to the main road by an all-weather road.	All villages are at 1 hr to 3 hrs walking from the motorable junction			
		(ii)	No. of village provided with electricity	60 %			
		(iii)	No. of households without access to drinking water	40 %			
		(iv)	No. of educational institutions: Primary (P)/ Secondary (S)/ Higher Secondary (HS)/ Vocational institution (VI)	(P)	(S)	(HS)	(VI)
				6	3	2	-
		(v)	No. of village with access to Primary Health Centre	Nil			
		(vi)	No. of village with access Veterinary Dispensary	Nil			
		(vii)	No. of village with access Post Office	Nil			
		(viii)	No. of village with access Banks	1(one) Gambegre			
		(ix)	No. of village with access Markets/ mandis	2 (two) Gambegre, Bolori			
		(x)	No. of village with access Agro-Industries	Nil			
		(xi)	Total quantity of surplus milk	Nil			
		(XIII)	No. of milk collection centres (e.g. Union (U)/ Society (S)/ Private agency (PA)/ Others (O))	(U)	(S)	(PA)	(O)
				Nil	Nil	Nil	Nil
(XIIIi)	No. of villages with access to Aganwadi Centres	5 nos.					
(xiv)	Any other facilities with no. of villages (Church)	6 nos.					

2.6 Livestock : There are only 4 kinds of livestock farming being farmed in the area viz.Cattle, Piggery, Poultry and Goatry.

2.7 Land ownership :

The proposed project is under the “A’ king land tenure system. prevailing in Garo Hills District of Meghalaya in which a land is held a particular class {Mahari) under the custody of the Head of the Clan or a Village Chief called “Nokma” recognized as such by the Garo Hills District Councils.

Table 2.7: Land Holding:

1	2	3	4	5	6			
Name of District	Name of the Project	Types of Farmer	No. of households	No. of BPL households	Land holding (ha)			
					Irrigated	Rainfed	Total	
West Garo Hills	West Garo Hills – IWMP XIII	(i) Large	-	-	-	-	-	
		(ii) Small	98	-	-	53.68	53.68	
		(iii) Marginal	280	-	-	-	80.52	80.52
		(iv) Landless		-	-	-	-	-
		Sub - Total	378	-	-	-	-	134.2

Table 2.5: Common Property Resources in the Project Area

1	2	3	4				5			
Name of District	Name of the Projects	CPR Particulars	Total Area (ha) Area owned/ In possession of				Area available for treatment (ha)			
			Pvt. Person	Govt. (specify deptt.)	PRI	Any other (Community)	Pvt. Person	Govt. (specify deptt.)	PRI	Any other (Community)
West Garo Hills	West Garo Hills IWMP XIII	(i) Wasteland/ degraded land				97				1186.56
		(ii) Pastures								
		(iii) Agriculture land (horti /crop land)	134.2			1103.8				151.71
		(iv) Current jhum				704				
		(v) Forest open				2016				751.73
		(vi) Scrub forest								
		(vii) Build up areas	232							
		(viii) Weekly Markets								
		(ix) Permanent Markets								
		(x) Temples/ Places of worship								
		(xi) Others (Pl. specify) Horticulture.								
TOTAL			366.2			3920.8				2090

2.9 Land use and land cover :

As per the land use land cover map Watershed area has been broadly classified into the following land uses.

a) Current jhum	= 704 Ha
b) Built up areas	= 232 Ha
c) Wasteland	= 97 Ha
d) Forest open	= 2016 Ha
e) <u>Agriculture land</u>	= 1238 Ha
Total	= 4287 Ha

2.10 Problems of the Area :

The primary problems of the area is jhumming. Majority of the population depends on Jhum Cultivation for their livelihood. Vast tracks of abandoned Jhum areas are converted to Stone Quarry areas which has further degraded the capability of the land. Road communication is another infrastructural problems that the area is facing where large volume crops like pineapple, jackfruits etc do not find their way into the market which has resulted in poor socio-economic status of the people. However, to control or to overcome the said problems an innovative approach has been formulated and documented in the Action Plan or the Treatment Plan the Detailed Project Report. The method of identification of the problems is through the Participatory Rural Appraisal Exercises is conducted in all the villages within the Watershed.

Further the major problems in the project area are :-

- (i) Unsustainable exploitation of forest vegetation.
- (ii) Absence of soil and water conservation measures.
- (iii) Lack of technical knowledge on crop management and water management.
- (iv) Poor socio economic set up.
- (v) Fire hazards

CHAPTER III

PROJECT PLANNING & INSTITUTION BUILDING

CHAPTER III

PROJECT PLANNING & INSTITUTION BUILDING

3.1 Scientific Planning

i) **Base Line Survey:**

To establish a benchmark for assessing the impact of any intervention (pre-project & post project) a baseline survey is essential. The baseline survey included household census & socio-economic survey by using structured and semi –structured questionnaires, bio-physical survey to identify and assess the status of natural resources in the project area

ii) **Participatory Rural Appraisal:**

To further obtain information on the project area, the people, resources, various PRA techniques like resource mapping, social mapping, seasonal calendars, matrix ranking, Venn diagrams were used.

iii) **GIS & Remote Sensing:**

To facilitate the process of prioritization and planning Geographic Information System was use. The land use and land cover (LULC) maps were prepared by the DWCDC, Tura Soil & Water Conservation. The activities were located on the field by using GPS and accordingly transferred to the maps on GIS platform.

Table 3.1: Details of Scientific Planning and Inputs in IWMP projects:

1	2	2
Sl. No.	Scientific criteria/ inputs used	No. of projects in which scientific criteria were used
A.	Planning	
	Cluster approach	3
	Whether technical back-stopping for the project has been arranged? If yes, mention the name of the Institute.	-
	Baseline survey	YES
	Hydro-geological survey	NO
	Contour mapping	YES
	Participatory Net Planning (PNP)	YES
1	2	2
	Remote sensing data-especially soil/ crop/ run-off cover	YES
	Ridge to Valley treatment	YES
	Online IT connectivity between	
	(1) Project and DRDA cell/ZP	YES
	(2) DRDA and SLNA	YES
	(3) SLNA and DoLR	YES
	Availability of GIS layers	
	1. Cadastral map	NO
	2. Village boundaries	NO
	3. Drainage	YES
	4. Soil (Soil nutrient status)	YES
	5. Land use	YES
	6. Ground water status	NO
	7. Watershed boundaries	YES
	8. Activity	YES
	Crop simulation models [#]	NO
Integrated coupled analyzer/ near infrared visible spectroscopy/ medium spectroscopy for high speed soil nutrient analysis	NO	
Normalized difference vegetation index (NDVI) [#]	NO	
Weather Stations	YES	
B.	Inputs	
	1. Bio-pesticides	NO
	2. Organic manures	YES
	3. Vermi-compost	YES
	4. Bio-fertilizer	YES
	5. Water saving devices	YES
	6. Mechanized tools/ implements	NO
	7. Bio-fencing	YES
	8. Nutrient budgeting	NO
	9. Automatic water level recorders & sediment samplers	YES

iii) User Group

To manage the assets created and ensure their sustainability User Groups will be formed. The people have been sensitized on the importance of ensuring that the assets created are sustainably used and the essentiality of having User Groups for maintenance and operation of their assets.

Table 3.4: User Group Details Nil

1	2	3				4				5			6		
Names of Districts	Names of Projects	Total no. of Ugs				No. of members				No. of SC/ST in each category			No. of BPL in each category		
		Men	Women	Both	Total	Categories	M	F	Total	M	F	Total	M	F	Total
West Garo Hills	W.G. H. IWMP XIII					(i) Landless									
						(ii) SF									
						(iii) MF									
						(iv) LF									
Total					NIL			NIL			NIL			NIL	

CHAPTER IV
PROJECT ACTIVITIES

CHAPTER IV PROJECT ACTIVITIES

4.1 Preparatory Phase:

i) Entry Point Activities (EPA)

(Financial – Rs. in lakh)

1	2	3	4	5	6	7	8	9	10	11
Sl. No.	State	District	Names of Project	Amount earmarked for EPA	Entry Point Activities planned	Estimated cost	Expenditure incurred	Balance	Expected outcome	Actual outcome
1	Meghalaya	W.G.H	W.G.H IWMP XIII	12.54	Spring Chamber	12.54	12.54	Nil	N.A	Safe drinking water facility.

4.2 Watershed Works Phase:

4.2.1 Activities related to surface water resources in the project areas:

1	2	3	4	5	6			7											
					Pre Project			Proposed Project											
					No	Area irrigated (ha)	Storage capacity	Augmentation/ repair of existing structures				Construction of new structures				Total target			
								No	Area to be treated (ha)	Storage capacity	Estimated cost (in lakhs)	No	Area to be treated (ha)	Storage capacity (per unit)	Estimated cost (in lakhs)	No	Area to be treated (ha)	Storage capacity (m ³)	Estimated cost
1	Meghalaya	West Garo Hills	W.G.H IWMP XIII	C.C. Irri. Dam	-	-	-	-	-	-	-	8	266.93	2882.84 m ³	40.03950	8	266.93	23062.72 m ³	40.03950
				Water harvesting Structure	-	-	-	-	-	-	-	5	150.2	4145.52 m ³	22.53	5	150.2	20727.6 m ³	22.53
				Dugout Pond	-	-	-	-	-	-	-	18	120	12096 m ³	18.0	18	120	21772.8 m ³	18.0
				Protection Wall	-	-	-	-	-	-	-	24	160	-	24.0	24	160	-	24.0
			Earthen Irri. Channel								1284	16.84 rmt	-	2.526	1284 rmt	16.84	-	2.526	
			Total																
					-	-	-	-	-	-	-	55 nos & 1284 rmt	713.97		107.09550	55 nos & 1284 rmt.	713.97		107.09550

4.2.3 Activities executed by User Groups in the Project Areas.

	2	3						
Names of Districts	Names of Projects	Major activities of the UGs –Targets				No. of UGs involved	Estimated Cost	Amount of WDF to be collected
		Structure/ activity proposed						
		Sl. No.	Type	No.#	Treatment (ha)			
W.G.H	W.G.H IWMP- XIII	1.	C.C irrigation Dam	8	266.93	8	40.0395	2.001975
		2	Check Dam	-	-	-	-	-
		3	Water Harvesting Structure	5	150.2	5	22.53	1.1265
		4	Earthen Irrigation Channel	5052	16.84	5	2.526	.1263
		5	Dug out Pond	24	160	24	24.0	1.2
		6	Protection Wall	18	120	18	18.0	.9
		7	Spring Chamber	16	83.6	16	12.54	.627
		TOTAL		71 nos. & 1284 Rmt.	797.57 ha.	76	119.6355	4.781775

4.2.5 Activities related to livelihoods by Self Help Groups (SHGs) in the project areas:

1	2	3		
Names of the Districts	Names of projects	Major activities of the SHGs		
		Name of activity	No. of SHGs involved	Average annual income from activity per SHG
West Garo Hills	W.G.H IWMP-XIII Total	Power tiller	1	34000
		Poultry	14	89000
		Rubber Nursery	12	134000
		Integrated Farming	4	78000
		TOTAL	31	335000

4.2.6 Activities related to livelihoods by Self Help Groups (SHGs) in the project areas:

4	5				6	7	8			9	10
No. of SHGs given training	Total assistance received by the SHG (Amount in Rs.)				Total annual Income generated (Rs.)	Total annual Savings (Rs.)	No. of SHGs Graded as			Total Amount of loan sanctioned by the bank(s)	No. of SHGs federated
	Loan from revolving fund	Training	Material	Others (pl. specify)			I	II	III		
		N	I	L							

4.2.7 Other activities of watershed works phase:

1	2	3		4		5		6		7		8		9		10		11		12		13
District	Names of projects	Ridge area treatment		Drainage line treatment		Nursery raising		Land development		Horticulture Development		Pasture Development		Veterinary services		Fishery development		Non-conventional energy		Any other (please specify)		Total cost incurred (Rs. In lakhs)
		(a) Ha.	(b) Rs.	(a)	(b)	(a)	(b)	(a)	(b)	(a)	(b)	(a)	(b)	(a)	(b)	(a)	(b)	(a)	(b)			
West Garo Hills	WGH – IWMP - XIII	254	9.14 40	713. 97	107.09 550	12	19.1 50	159. 2	16.58 550	28 4.9	42. 735	-	-	142	14.44	-	-	1	2.0	i.) Vegetable Cultivation	12.25	
																					ii.) Tailoring	
																				iii)Carpentry	1.925	
																				iv)Vermicomposting (8unit)	1.10	
																				v)Integrated Farming	6.0	
	Total	254	9.14 40	713. 97	107.09 550	12	19.1 50	159. 2	16.58 550	28 4.9	42. 735	-	-	142	14.44	-	-	1	2.0		23.975	235.1 25

4.2.8 Details of engineering structures in watershed works:

1	2	3	4			5			6	7				8								
District	Project	Name of structures	Type of treatment			Type of land			Executing agency	Target				Achievement								
			(i) Ridge area (R)	(ii) Drainage line (D)	(iii) Land Dev. (L)	(i) Private	(ii) Com-munity	(iii) Others (pl. specify)	(i) UG (ii) SHG (iii) Others (pl. specify)	No. of units (No./ cum. rmt)	Estimated cost (Rs. in lakh)				Expected month & year of completion (mm/yyyy)	No. of Units (No./ cu.m./ rmt)	Expenditure incurred (Rs. in lakh)				Status of completion	Actual month & year of completion (mm/yyyy)
											M	W	O	T			M	W	O	T		
W.G.H	W.G.H IWMP XIII	Dug out Pond		D		P		Individual	18		18.0		18.0	2 years	-	-	-	-	-	-		
		Terracing			L	P		Individual	57.5		11.5		11.5	3 years	-	-	-	-	-	-		
		Impmnt of existing paddy			L			Individual	101.7		5.0855		5.08550	2 years								
		Protection Wall		D			C	User Group	24	9.6	14.4		24.0	2 years	-	-	-	-	-	-		
		Earthen irrigation Channel		D			C	User Group	1284		2.526		2.526	2 years	-	-	-	-	-	-		
		Water Harvesting farm pond.		D			C	User Group	5	9.012	13.518		22.53	2 years	-	-	-	-	-	-		
		C.C.Irrigation Dam		D			C	User Group	8	16.0158	24.0237		40.03950	2 years	-	-	-	-	-	-		
		Spring Chamber		D			C	User Group	16	5.016	7.524		12.54	2 years	-	-	-	-	-	-		
		Total									39.6438	96.5772		136.221		-	-	-	-	-	-	

4.2.9 Details of engineering structures in watershed works.

9

Outcomes

Reduction in run off (cu.m)	Area treated (ha)	Water level (m)		Production (quintal)		Income (Rs.)		Mandays generated					No. of beneficiaries				
		Pre-project	Post project	Pre-project	Post project	Pre-project	Post project	SC	ST	Others	Women	Total	SC	ST	Others	Women	Total
NA	-	NA	-	NA	-	NA	-	-	5794632		3863088	965772		1143	-	762	1905
NA	-	NA	-	NA	-	NA	-	-	5794632		3863088	965772		1143	-	762	1905

2.10 Details of activities connected with vegetative cover in watershed works:

1	2	3	4			5			6	7				8			
District	Project	Name of structure/ work	Type of treatment			Type of land			Executing agency	Target				Achievement			
			(i) Ridge area (R)	(ii) Drainage line (D)	(iii) Land dev. (L)	(i) Private	(ii) Community	(iii) Others (pl. specify)	(i) UG (ii) SHG (iii) Others (pl. specify)	Area (ha)	No. of plants	Estimated cost (Rs. in lakh)	Expected month & year of completion (mm/yyyy)	Area (ha)	No. of plants	Expenditure incurred (Rs. in lakh)	Actual month & year of completion (mm/yyyy)
WGH	WGH IWMP-XIII	Improvement of degraded forest.	R				C		UG/SHG	254		9.1440	1 year	-	-	-	-
		Rubber Plantation	R				C	Individual	UG/Individual	284.9		42.7350	3 years	-	-	-	-
		TOTAL									538.9		51.8790		-	-	-

in case two or more activities are executed over same area, the figures in area treated should be accounted only once and should reflect only the actual watershed area treated.

4.2.12 Details of allied / other activities:

1	2	3	4			5	6		7	
District	Project	Name of activity	Type of land			Executing agency	Target		Achievement	
			(i) Private	(ii) Community	(iii) Others (landless)	(i) UG (ii)SHG (iii) Others (pl. specify)	Estimated cost (Rs. in lakh)	Expected month & year of completion (mm/yyyy)	Expenditure incurred (Rs. in lakh)	Actual month & year of completion (mm/yyyy)
West Garo Hills	W.G.H IWMP-XIII	Vegetable Cultivation	P			Individual/UG /SHG	12.250	3 years	-	-
		Tailoring			L	Individual/UG /SHG	2.25	3 years	-	-
		Carpentry			L	Individual/UG /SHG	2.7	2 years	-	-
		Vermi composting			L	SHG/UG	1.1	2 years	-	-
		Piggery			L	SHG	10.24	3 years	-	-
		Integrated farming			L	Individual/UG /SHG	6.0	1 years	-	-
		Poultry			L	Individual/UG /SHG	4.20	3 years	-	-
		Power Tiller			L	SHG	2.0	1 year	-	-
		Group Rubber Poly Bag nursery			L	SHG	19.15	3 years	-	-
										-
Total							59.565	-	-	-

(Contd.)

4.3 Consolidation and withdrawal phase
Details of activities in the CPRs in the project areas:

1	2	3	4	5	6				7						
					Target				Achievement						
					Target area under the activity (ha)	Estimated expenditure (Rs.)	Expected no. of beneficiaries	Estimated contribution to WDF (Rs.)	Area treated under the activity (ha)	Expenditure incurred (Rs.)	Actual no. of beneficiaries	No. of mandays			WDF collected (Rs.)
SC	ST	F													
West Garo Hills	W.G.H IWMP XIII		Waste land	i.)Improvement of degraded forest.	254	9.144	245	0.4572	-	-	-	-	-	-	-
				ii.) Rubber Plantation	284.9	42.7350	213	2.13675	-	-	-	-	-	-	-
			Streams	C.C.irrigation Dam	8 nos.	40.03950	560	2.001975	-	-	-	-	-	-	-
			Agri-land	1. Protection Wall	24 nos.	24.0	112	1.2	-	-	-	-	-	-	-
				2. Earthen irrigation Channel.	1284 rmt	2.5260	560	0.1263	-	-	-	-	-	-	-
			Springs	Spring chamber	16 nos.	12.54	160	-	-	-	-	-	-	-	-
Water Conservation	i)Water harvesting farm pond	5 nos.	22.53	134	1.1265	-	-	-	-	-	-	-			
	ii) Dugout pond	18 nos.	18.0	112	.90	-	-	-	-	-	-	-			

CHAPTER V
PROJECT PHASING & BUDGETING

PROJECT PHASING & BUDGETING

CONSOLIDATED ACTION PLAN FOR WGH-IWMP-XIII(BATCH-IV) UNDER TERRITORIAL DIVISION, TURA.

Name of District : West Garo Hills
 Name of C. & R. D. Block : Gambegre
 Name of Project: WGH-IWMP-XIII

No. of villages Covered : 8 nos
 Project Area : 2090 Ha
 Total Project Cost 313.50 Lakh

(Figures in lakh)

1	2	3	4	5	6	7	8	9	10	11	12	13	14	
Sl. No.	Activities	I st Yr. (6%)		II nd Yr. (14%)		III rd Yr. (50%)		IV th Yr. (25%)		V th Yr. (5%)		Total 100%		
		Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	
I	Management Cost :													
A	Administrative Cost : 10 %			2%	6.27000	5%	15.67500	3%	9.40500	-	-	10%	31.35000	
	i) Honorarium of 1 WDT Member	month	0	0	24	2.40000	48	4.80000	48	4.80000	0	0	120	12.00000
	ii) Honorarium of WC Chairman	month	0	0	20	0.10000	24	0.12000	24	0.12000	0	0	68	0.34000
	iii) Honorarium of WCM	month	0	0	16	0.25600	24	0.38400	20	0.32000	0	0	60	0.96000
	iv) TA for WDT members	month	0	0	24	1.20000	48	2.40000	48	2.40000	0	0	120	6.00000
	v) Office expenses		0	0	0	2.31400	0	7.97100	0	1.76500	0	0	0	12.05000
	Total Of 'A'			0.00		6.27000		15.67500		9.40500		0.00		31.35000
B	Preparatory Phase :													
	Entry Point Activities ; 4 %		4%	12.54000									4%	12.54000
	i) Spring chamber @ Rs. 75000/-	nos	16	12.54000									16	12.54000
	Total of 'B'		16	12.54000		0.00		0.00		0.00		0.00		12.54000

1	2	3	4	5	6	7	8	9	10	11	12	13	14
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C.	Institution & Capacity Building ; 5 %		1%	3.13500	2%	6.27000	1%	3.13500	1%	3.13500			5%	15.67500
	i) Awareness Campaign	nos	20	3.13500	0	0	3	0.45000	3	0.45000	0	0	26	4.03500
	ii) Exposure visits off-campus	nos	0	0	0	0	0	0	0	0	0	0	0	0.00000
	iii) Capacity Building of SHGs/Ugs/farmers	nos	0	0	16	3.20000	8	1.60000	8	1.60000	0	0	32	6.40000
	iv) Capacity Building of WC members	nos	0	0	12	2.40000	4	0.80000	5	1.08500	0	0	21	4.28500
	v) Capacity Building of WDT/W Volunteer	nos	0	0	6	0.67000	2	0.28500	0	0	0	0	8	0.95500
	Total of 'C'		20	3.13500	34	6.27000	17	3.13500	16	3.13500	0	0	87	15.67500
D.	Detail Project Report (DPR) - 1%		1%	3.13500									1%	3.13500
	i) Cost of Resources Inventories works		0	0	0	0	0	0	0	0	0	0	0	0.00000
	ii) Cost of PRA		0	0.80000	0	0	0	0	0	0	0	0	0	0.80000
	iii) Cost of Land use survey		0	0.80000	0	0	0	0	0	0	0	0	0	0.80000
	iv) Cost of formulating		0	1.53500	0	0	0	0	0	0	0	0	0	1.53500
	Total of 'D'			3.13500		0		0		0		0		3.13500
E.	i) Monitoring - 1%				0.20%	0.62700	0.50%	1.56750	0.30%	0.94050			1%	3.13500
F.	ii) Evaluation - 1%				0.30%	0.94050	0.50%	1.56750	0.20%	0.62700			1%	3.13500
	Total of 'E'			0		1.56750		3.13500		1.56750		0		6.27000
II	Watershed Works Phase : 56 %				7.50%	23.51250	37%	115.99500	11.50%	36.05250			56%	175.56000
A.	Arable Land Treatment :													
	i) Terracing -	Ha	0	0	10	2.00000	40	8.00000	7.5	1.50000	0	0	57.5	11.50000
	ii) Improvement of existing paddy field	Ha	0	0	0	0	80	4.00000	21.71	1.08550	0	0	102	5.08550
	Total of 'A'		0	0	10	2.00000	120	12.00000	29.21	2.58550	0	0	159	16.58550
B.	Non-Arable Land Treatment :													
	i) Improvement of degraded forest	Ha	0	0	0	0	254	9.14400	0	0	0	0	254	9.14400
	ii) Rubber Plantation	Ha	0	0	7.5	1.12500	258	38.67000	19.6	2.94000	0	0	285	42.73500
	Total of 'B'		0	0	7.5	1.125	512	47.81400	19.6	2.94000	0	0	538.9	51.87900

1	2		3	4	5	6	7	8	9	10	11	12	13	14
C.	Drainage Line Treatment :													
	i) C.C. Irrigation Dam	nos	0	0	4	20.01250	0	0	4	20.02700	0	0	8	40.03950
	ii) Water harvesting structure	nos	0	0	0	0	4	18.03000	1	4.50000	0	0	5	22.53000
	iii) Dug out Pond	nos	0	0	0	0	15	15.00000	3	3.00000	0	0	18	18.00000
	iv) Protection Wall	nos	0	0	0	0	21	21.00000	3	3	0	0	24	24.00000
	v) Earthen Irrigation Channel	nos	0	0	3	0.37500	1281	2.15100	0	0	0	0	1284	2.52600
	Total of 'C'			0		20.38750		56.18100		30.52700		0		107.09550
	Total of II (A to C)	Ha	0	0	17.5	23.51250	632	115.99500	48.81	36.05250	0	0	698.1	175.56000
III	<u>Livelihood Activities for Assetless Person -</u> 9%	-			1%	3.13500	3%	9.40500	5%	15.67500			9%	28.21500
	i) Vegetable cultivation	unit	0	0	23	2.35000	39	3.90000	60	6.00000	0	0	122	12.25000
	ii) Tailoring	unit	0	0	1	0.10000	8	0.80000	18	1.80000	0	0	27	2.70000
	iii) Carpentry	unit	0	0	0	0	17	0.85000	21	1.07500	0	0	38	1.92500
	iv) Vermi composting	unit	0	0	4	0.52500	4	0.57500	0	0	0	0	8	1.10000
	v) Piggery unit	unit	0	0	2	0.16000	41	3.28000	85	6.80000	0	0	128	10.24000
	Total of III		0	0	26	3.13500	54	9.40500	89	15.67500	0	0	169	28.21500
IV	<u>Production System & Micro Enterprises -</u> 10%	-			1%	3.13500	3%	9.40500	6%	18.81000			10%	31.35000
	i) Power tiller	unit	0	0	0	0	0	0	1	2.00000	0	0	1	2.00000
	ii) Poultry	unit	0	0	3	0.90000	7	2.10000	4	1.20000	0	0	14	4.20000
	iii) Rubber nursery	unit	0	0	4	2.23500	4	7.30500	4	9.61000	0	0	12	19.15000
	(iv) Integrated farming	unit	0	0	0	0	0	0	4	6.00000	0	0	4	6.00000
	Total of IV			0		3.13500		9.40500		18.81000		0		31.35000

1	2		3	4	5	6	7	8	9	10	11	12	13	14
V	Consolidation & withdrawal Phase - 3%										3%	9.40500	3%	9.40500
	i) Repairing & maintenance of CPR's											7.60500	0	7.60500
	ii) Documentation & final report preparation											1.80000	0	1.80000
	Total of V			0		0		0		0		9.40500		9.40500
Grand Total (I + II + III + IV + V)			6%	18.81000	14%	43.89000	50%	156.75000	27%	84.64500	3%	9.40500	100%	313.50000

PROJECT PHASING & BUDGETING

ACTION PLAN OF SIKKILI MICRO WATRSHED (IWMP) UNDER TERRITORIAL DIVISION, TURA.

Name of District : West Garo Hills
 Name of C. & R. D. Block : Gambegre
 Name of Project: WGH-IWMP-XIII

No. of villages Covered : 2 nos
 Project Area : 590 Ha
 Total Project Cost 88.50 Lakh

(Figures in lakh)

1	2	3	4	5	6	7	8	9	10	11	12	13	14
Sl. No.	Activities	I st Yr. (6%)		II nd Yr. (14%)		III rd Yr. (50%)		IV th Yr. (25%)		V th Yr. (5%)		Total 100%	
		Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.
I	Management Cost :												
A	Administrative Cost : 10 %			2%	1.77000	5%	4.42500	3%	2.65500	-	-	10%	8.85000
	i) Honorarium of 1 WDT Member	month		6	0.60000	12	1.20000	12	1.20000			30	3.00000
	ii)Honorarium of WC Chairman	month		5	0.02500	6	0.03000	6	0.03000			17	0.08500
	iii) Honorarium of WCM	month		4	0.06400	6	0.09600	5	0.08000			15	0.24000
	iv) TA for WDT members	month		6	0.30000	12	0.60000	12	0.60000			30	1.50000
	v)Office expenses				0.78100		2.49900		0.74500			0	4.02500
	Total Of 'A'		0.00		1.77000		4.42500		2.65500		0.00		8.85000
B	Preparatory Phase :												
	Entry Point Activities ; 4 %		4%		3.54000							4%	3.54000
	i)Spring chamber	nos	4	4	3.54000							4	3.54000
	Total of 'B'		3.54000		0.00		0.00		0.00		0.00		3.54000

1	2	3	4	5	6	7	8	9	10	11	12	13	14	
C.	Institution & Capacity Building ; 5 %		1%	0.88500	2%	1.77000	1%	0.88500	1%	0.88500			5%	4.42500
	i) Awareness Campaign	nos	5	0.88500	0	0	0	0	0	0			5	0.88500
	ii) Exposure visits off-campus	nos		0		0		0		0			0	0.00000
	iii) Capacity Building of SHGs/Ugs/farmers	nos		0	4	0.80000	2	0.40000	2	0.40000			8	1.60000
	iv) Capacity Building of WC members	nos		0	3	0.60000	1	0.20000	2	0.48500			6	1.28500
	v) Capacity Building of WDT/W Volunteer	nos			3	0.37000	2	0.28500		0.00000			5	0.65500
	Total of 'C'		5	0.88500	10	1.77000	5	0.88500	4	0.88500	0	0	24	4.42500
D.	Detail Project Report (DPR) - 1%		1%	0.88500									1%	0.88500
	i) Cost of Resources Inventories works												0	0.00000
	ii) Cost of PRA			0.20000									0	0.20000
	iii) Cost of Land use survey			0.20000									0	0.20000
	iv) Cost of formulating			0.48500									0	0.48500
	Total of 'D'			0.88500		0		0		0		0		0.88500
E.	i) Monitoring - 1%				0.20%	0.17700	0.50%	0.44250	0.30%	0.26550			1%	0.88500
F.	ii) Evaluation - 1%				0.30%	0.26550	0.50%	0.44250	0.20%	0.17700			1%	0.88500
	Total of 'E'			0		0.44250		0.88500		0.44250		0		1.77000
II	<u>Watershed Works Phase : 56 %</u>	-			7.50%	6.63750	37%	32.74500	11.50%	10.17750			56%	49.56000
A.	Arable Land Treatment :													
	i) Terracing -	Ha			2.5	0.50000	10	2.00000	2.5	0.50000			15	3.00000
	ii) Improvement of existing paddy field	Ha			0	0	20	1.00000	3.55	0.17750			23.55	1.17750
	Total of 'A'		0	0	2.5	0.50000	30	3.00000	6.05	0.67750	0	0	38.55	4.17750
B.	Non-Arable Land Treatment :													
	i) Improvement of degraded forest	Ha					63.5	2.28600					63.5	2.28600
	ii) Rubber Plantation	Ha			7.500	1.12500	68.8	10.32000					76.300	11.44500
	Total of 'B'		0	0	7.500	1.12500	132	12.60600	0	0.00000	0	0	139.8	13.73100

1	2		3	4	5	6	7	8	9	10	11	12	13	14
C.	Drainage Line Treatment :													
	i) C.C. Irrigation Dam	nos			1	5.01250	0	0	1	5.00000			2	10.01250
	ii) Water harvesting structure	nos			0	0	1	4.50000	1	4.50000			2	9.00000
	iii) Dug out Pond	nos			0	0	6	6.00000					6	6.00000
	iv) Protection Wall	nos			0	0	6	6.00000	0	0			6	6.00000
	v) Earthen Irrigation Channel	nos					1278	0.63900					1278	0.63900
	Total of 'C'			0		5.01250		17.13900		9.50000		0		31.65150
	Total of II (A to C)	Ha	0	0	10	6.63750	162	32.74500	6.05	10.17750	0	0	178.35	49.56000
III	Livelihood Activities for Assetless Person - 9%	-			1%	0.88500	3%	2.65500	5%	4.42500			9%	7.96500
	i) Vegetable cultivation	unit			5	0.50000	12	1.20000	15	1.50000			32	3.20000
	ii) Tailoring	unit			0	0	2	0.20000	6	0.60000			8	0.80000
	iii) Carpentry	unit			0	0	5	0.25000	6	0.32500			11	0.57500
	iv) Vermi composting	unit			2	0.22500	1	0.12500		0			3	0.35000
	v) Piggery unit	unit			2	0.16000	11	0.88000	25	2.00000			38	3.04000
	Total of III		0	0	26	0.88500	54	2.65500	89	4.42500	0	0	169	7.96500

IV	Production System & Micro Enterprises - 10%	-			1%	0.88500	3%	2.65500	6%	5.31000			10%	8.85000
	i) Power tiller	unit							1	2.00000			1	2.00000
	ii)Poultry	unit				0	4	1.20000	1	0.30000			5	1.50000
	iii)Rubber nursery	unit			1	0.88500	1	1.45500	1	1.51000			3	3.85000
	(iv) Integrated farming	unit							1	1.50000			1	1.50000
	Total of IV			0		0.88500		2.65500		5.31000		0		8.85000

1	2		3	4	5	6	7	8	9	10	11	12	13	14
V	Consolidation & withdrawal Phase - 3% i) Repairing & maintenance of CPR's ii) Documentation of successful experience & report preparation										3%	2.65500 2.20500 0.45000	3% 0 0	2.65500 2.20500 0.45000
	Total of V			0		0		0		0		2.65500		2.65500
	Grand Total (I + II + III + IV + V)		6%	5.31000	14%	12.39000	50%	44.25000	27%	23.89500	3%	2.65500	100%	88.50000

PROJECT PHASING & BUDGETING

ACTION PLAN OF SOKCHON MICRO WATRSHED (IWMP) UNDER TERRITORIAL DIVISION, TURA.

Name of District : West Garo Hills
 Name of C. & R. D. Block : Gambegre
 Name of Project: WGH-IWMP-XIII

No. of villages Covered : 2 nos
 Project Area : 500 Ha
 Total Project Cost 75.00 Lakh

(Figures in lakh)

1	2		3	4	5	6	7	8	9	10	11	12	13	14
Sl. No.	Activities		I st Yr. (6%)		II nd Yr. (14%)		III rd Yr. (50%)		IV th Yr. (25%)		V th Yr. (5%)		Total 100%	
			Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.
I	Management Cost :	-												
A	Administrative Cost : 10 %				2%	1.50000	5%	3.75000	3%	2.25000	-	-	10%	7.50000
	i) Honorarium of 1 WDT Member	month			6	0.60000	12	1.20000	12	1.20000			30	3.00000
	ii) Honorarium of WC Chairman	month			5	0.02500	6	0.03000	6	0.03000			17	0.08500
	iii) Honorarium of WCM	month			4	0.06400	6	0.09600	5	0.08000			15	0.24000
	iv) TA for WDT members	month			6	0.30000	12	0.60000	12	0.60000			30	1.50000
	v) Office expenses					0.51100		1.82400		0.34000			0	2.67500
	Total Of 'A'			0.00		1.50000		3.75000		2.25000		0.00		7.50000
B	Preparatory Phase :													
	Entry Point Activities ; 4 %		4%	3.00000									4%	3.00000
	i) Spring chamber @ Rs. 75000/-	nos	4	3.00000									4	3.00000
	Total of 'B'			3.00000		0.00		0.00		0.00		0.00		3.00000

1	2	3	4	5	6	7	8	9	10	11	12	13	14	
C.	Institution & Capacity Building ; 5 %		1%	0.75000	2%	1.50000	1%	0.75000	1%	0.75000			5%	3.75000
	i) Awareness Campaign	nos	5	0.75000	0	0	1	0.15000	1	0.15000			7	1.05000
	ii) Exposure visits off-campus	nos		0		0		0		0			0	0.00000
	iii)Capacity Building of SHGs/Ugs/farmers	nos		0	4	0.80000	2	0.40000	2	0.40000			8	1.60000
	iv) Capacity Building of WC members	nos		0	3	0.60000	1	0.20000	1	0.20000			5	1.00000
	v) Capacity Building of WDT/W Volunteer	nos			1	0.10000	0	0.00000		0.00000			1	0.10000
	Total of 'C'		5	0.75000	8	1.50000	4	0.75000	4	0.75000	0	0	21	3.75000
D.	Detail Project Report (DPR) - 1%		1%	0.75000									1%	0.75000
	i) Cost of Resources Inventories works												0	0.00000
	ii) Cost of PRA			0.20000									0	0.20000
	iii) Cost of Land use survey			0.20000									0	0.20000
	iv) Cost of formulating			0.35000									0	0.35000
	Total of 'D'			0.75000		0		0		0		0		0.75000
E.	i) Monitoring - 1%				0.20%	0.15000	0.50%	0.37500	0.30%	0.22500			1%	0.75000
F.	ii) Evaluation - 1%				0.30%	0.22500	0.50%	0.37500	0.20%	0.15000			1%	0.75000
	Total of 'E'			0		0.37500		0.75000		0.37500		0		1.50000
II	<u>Watershed Works Phase : 56 %</u>				7.50%	5.62500	37%	27.75000	11.50%	8.62500			56%	42.00000
A.	Arable Land Treatment :													
	i) Terracing -.	Ha			2.5	0.50000	10	2.00000	2.5	0.50000			15	3.00000
	ii) Improvement of existing paddy field	Ha			0	0	20	1.00000	2.72	0.13600			22.72	1.13600
	Total of 'A'		0	0	2.5	0.50000	30	3.00000	5.22	0.63600	0	0	37.7	4.13600
B.	Non-Arable Land Treatment :													
	i)Improvement of degraded forest	Ha					63.5	2.28600					63.5	2.28600
	ii)Rubber Plantation	Ha					63	9.45000	6.5	0.97500			69.5	10.42500
	Total of 'B'		0	0	0	0	127	11.73600		0.97500	0	0	133	12.71100

1	2		3	4	5	6	7	8	9	10	11	12	13	14
C.	Drainage Line Treatment :													
	i) C.C. Irrigation Dam	nos			1	5.00000	0	0	1	5.01400			2	10.01400
	ii) Water harvesting structure	nos			0	0	1	4.51000					1	4.51000
	iii) Dug out Pond	nos			0	0	3	3.00000	1	1.00000			4	4.00000
	iv) Protection Wall	nos			0	0	5	5.00000	1	1.00000			6	6.00000
	v) Earthen Irrigation Channel	nos			1	0.12500	1	0.50400					2	0.62900
	Total of 'C'			0		5.12500		13.01400		7.01400		0		25.15300
	Total of II (A to C)	Ha	0	0	2.5	5.62500	157	27.75000	5.22	8.62500	0	0	171	42.00000
III	<u>Livelihood Activities for Assetless Person - 9%</u>	-			1%	0.75000	3%	2.25000	5%	3.75000			9%	6.75000
	i) Vegetable cultivation	unit			6	0.65000	9	0.90000	15	1.50000			30	3.05000
	ii) Tailoring	unit			1	0.10000	2	0.20000	4	0.40000			7	0.70000
	iii) Carpentry	unit			0	0	4	0.20000	5	0.25000			9	0.45000
	iv) Vermi composting	unit			0	0	1	0.15000		0			1	0.15000
	v) Piggery unit	unit			0	0	10	0.80000	20	1.60000			30	2.40000
	Total of III		0	0	26	0.75000	54	2.25000	89	3.75000	0	0	169	6.75000
IV	<u>Production System & Micro Enterprises - 10%</u>	-			1%	0.75000	3%	2.25000	6%	4.50000			10%	7.50000
	i) Power tiller	unit							0	0			0	0
	ii)Poultry	unit			1	0.30000	1	0.30000	1	0.30000			3	0.90000
	iii)Rubber nursery	unit			1	0.45000	1	1.95000	1	2.70000			3	5.10000
	(iv) Integrated farming	unit							1	1.50000			1	1.50000
	Total of IV			0		0.75000		2.25000		4.50000		0		7.50000

1	2		3	4	5	6	7	8	9	10	11	12	13	14
V	Consolidation & withdrawal Phase - 3%										3%	2.25000	3%	2.25000
	i) Repairing & maintenance of CPR's											1.80000	0	1.80000
	ii) Documentation of successful experience & report preparation											0.45000	0	0.45000
	Total of V			0		0		0		0		2.25000		2.25000
Grand Total (I + II + III + IV + V)			6%	4.50000	14%	10.50000	50%	37.50000	27%	20.25000	3%	2.25000	100%	75.00000

PROJECT PHASING & BUDGETING

ACTION PLAN OF WADRO MICRO WATRSHED (IWMP) UNDER TERRITORIAL DIVISION, TURA.

Name of District : West Garo Hills
 Name of C. & R. D. Block : Gambegre
 Name of Project: WGH-IWMP-XIII

No. of villages Covered : 2 nos
 Project Area : 500 Ha
 Total Project Cost 75.00 Lakh

(Figures in lakh)

1	2	3	4	5	6	7	8	9	10	11	12	13	14
Sl. No.	Activities	I st Yr. (6%)		II nd Yr. (14%)		III rd Yr. (50%)		IV th Yr. (25%)		V th Yr. (5%)		Total 100%	
		Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.
I	Management Cost :												
A	Administrative Cost : 10 %			2%	1.50000	5%	3.75000	3%	2.25000	-	-	10%	7.50000
	i) Honorarium of 1 WDT Member	month		6	0.60000	12	1.20000	12	1.20000			30	3.00000
	ii) Honorarium of WC Chairman	month		5	0.02500	6	0.03000	6	0.03000			17	0.08500
	iii) Honorarium of WCM	month		4	0.06400	6	0.09600	5	0.08000			15	0.24000
	iv) TA for WDT members	month		6	0.30000	12	0.60000	12	0.60000			30	1.50000
	v) Office expenses	h			0.51100		1.82400		0.34000			0	2.67500
	Total Of 'A'			0.00	1.50000		3.75000		2.25000		0.00		7.50000
B	Preparatory Phase :												
	Entry Point Activities ; 4 %			4%	3.00000							4%	3.00000
	i) Spring chamber @ Rs. 75000/-	nos	4	0	3.00000							4	3.00000
	Total of 'B'			3.00000	0		0.00		0.00		0.00		3.00000

1	2	3	4	5	6	7	8	9	10	11	12	13	14	
C.	Institution & Capacity Building ; 5 %		1%	0.7500 0	2%	1.50000	1%	0.75000	1%	0.75000			5%	3.75000
	i) Awareness Campaign	nos	5	0.7500 0	0	0	1	0.15000	1	0.15000			7	1.05000
	ii) Exposure visits off-campus	nos		0		0		0		0			0	0.00000
	iii) Capacity Building of SHGs/Ugs/farmers	nos		0	4	0.80000	2	0.40000	2	0.40000			8	1.60000
	iv) Capacity Building of WC members	nos		0	3	0.60000	1	0.20000	1	0.20000			5	1.00000
	v) Capacity Building of WDT/W Volunteer	nos		0	1	0.10000	0	0.00000		0.00000			1	0.10000
	Total of 'C'		5	0.7500 0	8	1.50000	4	0.75000	4	0.75000	0	0	21	3.75000
D.	Detail Project Report (DPR) - 1%		1%	0.7500 0									1%	0.75000
	i) Cost of Resources Inventories works			0.2000 0									0	0.00000
	ii) Cost of PRA			0.2000 0									0	0.20000
	iii) Cost of Land use survey			0.2000 0									0	0.20000
	iv) Cost of formulating			0.3500 0									0	0.35000
	Total of 'D'			0.7500 0		0		0		0		0		0.75000
E.	i) Monitoring - 1%				0.20 %	0.15000	0.50 %	0.37500	0.30%	0.22500			1%	0.75000
F.	ii) Evaluation - 1%				0.30 %	0.22500	0.50 %	0.37500	0.20%	0.15000			1%	0.75000
	Total of 'E'			0		0.37500		0.75000		0.37500		0		1.50000
II	<u>Watershed Works Phase : 56 %</u>				7.50 %	5.62500	37%	27.7500 0	11.50 %	8.62500			56%	42.0000 0
A.	Arable Land Treatment :													
	i) Terracing -	Ha			2.5	0.50000	10	2.00000	2.5	0.50000			15 22.7	3.00000
	ii) Improvement of existing paddy field	Ha			0	0	20	1.00000	2.72	0.13600			2	1.13600
	Total of 'A'		0	0	2.5	0.50000	30	3.00000	5.22	0.63600	0	0	37.7	4.13600

B.	Non-Arable Land Treatment :													
	i)Improvement of degraded forest -	Ha					63.5	2.28600					63.5	2.28600
	ii)Rubber Plantation -	Ha					63	9.45000	6.6	0.99000			69.6	10.44000
														0
	Total of 'B'		0	0	0	0	127	11.7360	6.6	0.99000	0	0	133.	12.7260

63.0667

0.00000

1	2		3	4	5	6	7	8	9	10	11	12	13	14
C.	Drainage Line Treatment :													
	i) C.C. Irrigation Dam	nos			1	5.00000	0	0	1	4.99900			2	9.99900
	ii) Water harvesting structure	nos			0	0	1	4.51000					1	4.51000
	iii) Dug out Pond	nos			0	0	3	3.00000	1	1.00000			4	4.00000
	iv) Protection Wall	nos			0	0	5	5.00000	1	1.00000			6	6.00000
	v) Earthen Irrigation Channel	nos			1	0.12500	1	0.50400					2	0.62900
	Total of 'C'			0		5.12500		13.0140		6.99900		0		25.1380
	Total of II (A to C)	Ha	0	0	2.5	5.62500	157	27.7500	11.82	8.62500	0	0	170.	42.0000
								0					8	0
III	Livelihood Activities for Assetless Person - 9%	-			1%	0.75000	3%	2.25000	5%	3.75000			9%	6.75000
	i) Vegetable cultivation	unit			6	0.60000	9	0.90000	15	1.50000			30	3.00000
	ii) Tailoring	unit			0	0	2	0.20000	4	0.40000			6	0.60000
	iii) Carpentry	unit			0	0	4	0.20000	5	0.25000			9	0.45000
	iv) Vermi composting	unit			1	0.15000	1	0.15000		0			2	0.30000
	v) Piggery unit	unit			0	0	10	0.80000	20	1.60000			30	2.40000
	Total of III		0	0	26	0.75000	54	2.25000	89	3.75000	0	0	169	6.75000

IV	Production System & Micro Enterprises - 10%	-			1%	0.75000	3%	2.25000	6%	4.50000			10%	7.50000
	i) Power tiller	unit							0	0			0	0
	ii)Poultry	unit			1	0.30000	1	0.30000	1	0.30000			3	0.90000
	iii)Rubber nursery	unit			1	0.45000	1	1.95000	1	2.70000			3	5.10000
	(iv) Integrated farming	unit							1	1.50000			1	1.50000
Total of IV					0	0.75000	2.25000	4.50000	0	0	0	0	7.50000	

1	2		3	4	5	6	7	8	9	10	11	12	13	14
V	Consolidation & withdrawal Phase - 3%										3%	2.2500	3%	2.25000
	i) Repairing & maintenance of CPR's											0	0	1.80000
	ii)Documentation of successful experience & report preparation											0.4500	0	0.45000
Total of V				0	0	0	0	0	0	0	2.2500	0	2.25000	
Grand Total				4.5000	10.5000	37.5000	20.2500	2.2500	100	75.0000				
(I + II + III + IV + V)			6%	0	14%	0	50%	0	27%	0	3%	0	%	0

PROJECT PHASING & BUDGETING

ACTION PLAN OF MECHENG MICRO WATRSHED (IWMP) UNDER TERRITORIAL DIVISION, TURA.

Name of District : West Garo Hills
Name of C. & R. D. Block : Gambegre
Name of Project: WGH-IWMP-XIII

No. of villages Covered : 2 nos
Project Area : 500 Ha
Total Project Cost 75.00 Lakh

(Figures in lakh)

1	2		3	4	5	6	7	8	9	10	11	12	13	14
Sl. No	Activities		I st Yr. (6%)		II nd Yr. (14%)		III rd Yr. (50%)		IV th Yr. (25%)		V th Yr. (5%)		Total 100%	
			Phy	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy	Fin.	Phy.	Fin.

I	Management Cost :	-											
A	Administrative Cost : 10 %			2%	1.50000	5%	3.75000	3%	2.25000	-	-	10%	7.50000
	i) Honorarium of 1 WDT Member	mont h		6	0.60000	12	1.20000	12	1.20000			30	3.00000
	ii) Honorarium of WC Chairman	mont h		5	0.02500	6	0.03000	6	0.03000			17	0.08500
	iii) Honorarium of WCM	mont h		4	0.06400	6	0.09600	5	0.08000			15	0.24000
	iv) TA for WDT members	mont h		6	0.30000	12	0.60000	12	0.60000			30	1.50000
	v) Office expenses				0.51100		1.82400		0.34000			0	2.67500
	Total Of 'A'				0.00		1.50000		3.75000			0.00	7.50000
B	Preparatory Phase :												
	Entry Point Activities ; 4 %			4%	3.0000 0							4%	3.00000
	i) Spring chamber	nos	4		3.0000 0							4	3.00000
	Total of 'B'				3.0000 0		0.00		0.00			0.00	3.00000

1	2	3	4	5	6	7	8	9	10	11	12	13	14	
C.	Institution & Capacity Building ; 5 %		1%	0.7500 0	2%	1.50000	1%	0.75000	1%	0.75000			5%	3.75000
	i) Awareness Campaign	nos	5	0.7500 0	0	0	1	0.15000	1	0.15000			7	1.05000
	ii) Exposure visits off-campus	nos		0		0		0		0			0	0.00000
	iii) Capacity Building of SHGs/Ugs/farmers	nos		0	4	0.80000	2	0.40000	2	0.40000			8	1.60000
	iv) Capacity Building of WC members	nos		0	3	0.60000	1	0.20000	1	0.20000			5	1.00000
	v) Capacity Building of WDT/W Volunteer	nos		0	1	0.10000	0	0.00000		0.00000			1	0.10000
	Total of 'C'		5	0.7500 0	8	1.50000	4	0.75000	4	0.75000	0	0	21	3.75000
D.	Detail Project Report (DPR) - 1%		1%	0.7500 0									1%	0.75000
	i) Cost of Resources Inventories works			0.2000 0									0	0.00000
	ii) Cost of PRA			0.2000 0									0	0.20000
	iii) Cost of Land use survey			0.2000 0									0	0.20000
	iv) Cost of formulating			0.3500 0									0	0.35000
	Total of 'D'			0.7500 0		0		0		0		0		0.75000
E.	i) Monitoring - 1%				0.20 %	0.15000	0.50 %	0.37500	0.30%	0.22500			1%	0.75000
F.	ii) Evaluation - 1%				0.30 %	0.22500	0.50 %	0.37500	0.20%	0.15000			1%	0.75000
	Total of 'E'			0		0.37500		0.75000		0.37500		0		1.50000
II	<u>Watershed Works Phase : 56 %</u>				7.50 %	5.62500	37%	27.7500 0	11.50 %	8.62500			56%	42.0000 0
A.	Arable Land Treatment :												12.5	
	i) Terracing -	Ha			2.50	0.50000	10.00	2.00000					0	2.50000
	ii) Improvement of existing paddy field	Ha			0	0	20.00	1.00000	12.72	0.63600			32.7 2	1.63600

	Total of 'A'		0	0	2.5	0.50000	30	3.00000	12.72	0.63600	0	0	45.2	4.13600
B.	Non-Arable Land Treatment :													
	i)Improvement of degraded forest -	Ha					63.5	2.28600					63.5	2.28600
	ii)Rubber Plantation -	Ha					63	9.45000	6.50	0.97500			69.5	0
	Total of 'B'		0	0	0	0	127	11.7360	6.5	0.97500	0	0	133.	12.7110
			0	0	0	0	0	0	0	0	0	0	0	0

1	2		3	4	5	6	7	8	9	10	11	12	13	14
C.	Drainage Line Treatment :													
	i) C.C. Irrigation Dam	nos			1	5.00000	0	0	1	5.01400			2	10.0140
	ii) Water harvesting structure	nos			0	0	1	4.51000					1	4.51000
	iii) Dug out Pond	nos			0	0	3	3.00000	1	1.00000			4	4.00000
	iv) Protection Wall	nos			0	0	5	5.00000	1	1.00000			6	6.00000
	v) Earthen Irrigation Channel	nos			1	0.12500	1	0.50400					2	0.62900
	Total of 'C'			0		5.12500		13.0140		7.01400		0		25.1530
	Total of II (A to C)	Ha	0	0	2.5	5.62500	157	27.7500	19.22	8.62500	0	0	178.	42.0000
			0	0	2.5	5.62500	157	0	19.22	8.62500	0	0	2	0
III	Livelihood Activities for Assetless Person - 9%	-			1%	0.75000	3%	2.25000	5%	3.75000			9%	6.75000
	i) Vegetable cultivation	unit			6	0.60000	9	0.90000	15	1.50000			30	3.00000
	ii) Tailoring	unit			0	0	2	0.20000	4	0.40000			6	0.60000
	iii) Carpentry	unit			0	0	4	0.20000	5	0.25000			9	0.45000
	iv) Vermi composting	unit			1	0.15000	1	0.15000		0			2	0.30000
	v) Piggery unit	unit			0	0	10	0.80000	20	1.60000			30	2.40000
	Total of III		0	0	26	0.75000	54	2.25000	89	3.75000	0	0	169	6.75000

IV	<u>Production System & Micro Enterprises - 10%</u>	-			1%	0.75000	3%	2.25000	6%	4.50000			10%	7.50000
	i) Power tiller	unit							0	0			0	0
	ii)Poultry	unit			1	0.30000	1	0.30000	1	0.30000			3	0.90000
	iii)Rubber nursery	unit			1	0.45000	1	1.95000	1	2.70000			3	5.10000
	(iv) Integrated farming	unit							1	1.50000			1	1.50000
Total of IV					0	0.75000		2.25000		4.50000		0		7.50000

1	2		3	4	5	6	7	8	9	10	11	12	13	14
V	<u>Consolidation & withdrawal Phase - 3%</u>										3%	2.2500		2.25000
	i) Repairing & maintenance of CPR's											0	0	1.80000
	ii)Documentation of successful experience & report preparation											0.4500	0	0.45000
Total of V				0		0		0		0		2.2500		2.25000
Grand Total				4.5000		10.5000		37.5000		20.2500		2.2500		75.0000
(I + II + III +IV +V)			6%	0	14%	0	50%	0	27%	0	3%	0	%	0

Details of the types of areas covered under the IWMP Programme:

1	2	3	4	5	6		7	8	9	10				11						
					Project duration (dd/mm/yyyy)					Area of the projects	Project cost (Rs. In lakh)	Names of Micro watersheds & Code nos. (as per DoLR's unique codification)	Area (ha) of the projects				Area details (ha) (falling within the projects)			
					From	To							Cultivated rainfed area	Cultivated irrigated area	Uncultivated wasteland		Agri. Land	Forest land	Community land	Others (pl. specify) Horticulture & Build up Area
				a) Temporary fallow	b) Permanent															
1	Meghalaya	West Garo Hills	W.G.H IWMP-XIII		2012	2017	2090	31350000	i. Sikkli w/s ii. Mecheng w/s iii. Wadro w/s iv. Sokchon w/s	3486	-	801	-	234.78	1119.61	343.18	392.43	2090		

Details of Project Fund Accounts of Distt. Agency and Watershed Committees:

1	2	3	4	5				6				
Sl. No.	Names of States	Name of Districts	Names of Projects	Distt. Agency's Project Account details				Watershed Committee (WC) account details:				
				Name of the Bank and Branch where project account has been opened	Account Number (to be obtained confidentially)	Account type (Savings / Current/ Others)	Name & Designation of authorized persons who operate the account.	Name of Watershed Committee	Name of the Bank and Branch where project account has been opened	Account number (to be obtained confidentially)	Account type (Savings/ current others)	Name & Designation of authorized persons who operate the account.

* from Column no. 2, total no. of States implementing the programme, from Column no. 3, total no. of Districts; from Column no. 4, total no. of projects under PPP; from Column no. 5, total no. of private companies/ agencies, from column no. 7, total amounts may be mentioned at the end of the table for the entire country.

CHAPTER VI
CAPACITY BUILDING

CHAPTER VI CAPACITY BUILDING

Capacity Building is a process to systematically upgrade the skill of individuals or groups for achieving a specific target. Capacity building in the project has been planned for all the stake holders involved i.e. State Level, District Level, Project Level and Village Level. The relevant details pertaining to Capacity Building has been shown below.

Table 6.1: List of approved Training Institutes for Capacity Building:

1	2	3	4	5	6	7	8	9				
								Performance				
S . N o	Sta te	Name of the Traini ng Instit ute	Full Address with contact no., website & e-mail	Name & Designati on of the Head of Institute	Type of Institute #	Area(s) of specialization ^{\$}	Accre- ditation details	Refe r- ence Year	No. of trainin gs assign ed	No. of train ees to be train ed	No. of trainin gs conduc ted	No. of trainee s trained
1	Meghalaya	NIRD (NER)	Guwaha ti	Director	Central Govt.	Remote Sensing, Rural Devt.	NA					
2		SIRD	Nongsde r	Director	State Govt.	Capacity Building	NA					
3		RRT C	Umran	Director	Don- Bosco	Agri-Horti, Animal Husbandry, Entrepreneurshi p	NA					
4		ICAR	Umiam	Director	Central Govt.	Do	NA					
5		VTC	Kyrdem Kulai	Director	State Govt.	Animal Husbandry	NA					
6		Fruit Garde n	Shillong	Director	State Govt.	Agri-Horti, Fruit Processing	NA					

- From Column no. 2, total no. of States implementing the programme, from Column no. 3, no. of training institutes, from column No. 9, total no. of category-wise trainings and trainees may be given at the end of the table for the entire country

- # Central govt. Dept./ State govt. Dept./ Autonomous Body/ Research Institutes/ Universities/ Others (pl. specify)

^{\$} Capacity Building/ Agriculture/ Horticulture/ Animal Husbandry/ Pisciculture/ Remote Sensing/ Water conservation/ Ground water/ Forestry/ livelihoods/ entrepreneurship development/ others (pl. specify)

[@] The training institutes must fulfill the conditions mentioned in the operations guidelines.

- (i) Technical experts in fields required by IWMP
- (ii) Past experiences
- (iii) Annual Turnover
- (iv) Receives funds either from the Central or State Government
- (v) Publications
- (vi) Not blacklisted by any Govt. organizations
- (vii) Audited accounts
- (viii) Organizational structure

Table 6.2: Capacity Building activities for the year 2012-13 as on 31/03/2012 (dd/mm/yyyy)*

1	2	3	4	5	6		7	
Project Stakeholders	Total no. of persons	No. of persons trained so far	No. of persons to be trained during current financial year	No. of persons trained during current financial year	Sources of funding for training		Funds utilized (Lakhs)	
					a) DoLR	b) Any other (Pl. specify)	a) DoLR	b) Any other (Pl. specify)
PIAs	10	NIL	10	NIL	100%	NIL	-	-
WDTs	4	NIL	4	NIL				
Ugs	40	NIL	40	NIL				
SHGs	50	NIL	50	NIL				
WCs	10	NIL	10	NIL				
GPs	NIL	NIL	NIL	NIL				
Community	218	NIL	109	NIL				
Others (Pl. specify)								
TOTAL	232	0	223	0	100%	0	-	-

Table 6.3: Information, Education & Communication (IEC) activities for the year 12-13 as on 31/03/13 (dd/mm/yyyy)*

	1	2	3	4	5
	Activity	Executing agency	Estimated expenditure (Rs.)	Expenditure incurred (Rs.)	Outcome (may quantity, wherever possible)
1.	Pamphlets & banners	S&WC(T) Division.	15.675	-	a) Better understanding of Project Concept. b) Preview of Project achievement.

CHAPTER VII
EXPECTED OUTCOME

CHAPTER VII EXPECTED OUTCOME

Table 7.1 Employment related outcomes:

Sl No	Name of Project	1										2				
		Wage employment										Self employment				
		No. of mandays					No. of beneficiaries					No. of beneficiaries				
		SC	ST	Others	Women	Total	SC	ST	Others	Women	Total	SC	ST	Others	Women	Total
1.	WGH IWMP - XIII	-	5794632	-	3863088	965772	-	1143	-	762	1905	-	-	-	-	-

Table 7.2 Migration Details:

1	2	3	4	5	6	7	8	9	10	
Names of the Districts	Names of Projects	Name of village	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. in lakh)	For reduced migration identify major activities of IWMP responsible	
									(a) Structures	(b) Livelihoods
				N	I	L				

* From column no. 2, total number of States; from column no. 3, total no. of Districts; from column no. 4, total no. of projects; from column no. 5, total no. of villages; from column no. 6, total no. of persons migrating; from column no. 7, average no. of days for annual migration; from column no. 9, average distance of migration from the village and from column no. 11, average income from occupation during migration, for the entire country may be given at the end of the Table.

* From column no. 2, no. of States; from column no. 3, no. of Districts; from column no. 4, no. of projects; from column no. 5, no. of villages; from column nos. 9 & 10, particular-wise totals for the entire country may be given at the end of the table.

@ In column no. 6, the categories given in table no. M(SP) 10, column 5 may be filled as required.

In column no. 7, only the letter assigned to each type, as given below, needs to be typed.

F	for right to	fishing [culture, harvest and sale]
Fw	for right to	collect firewood for domestic purposes
G	for right to	grazing for cattle and
MFP	for right to	collect and sell minor forest produces
P	for right to	passage across the CPR
Rd	for right to	construct a road for access to individual property
S/M	for right to	collect and sell sand and minerals
T	for right to	collect timber for construction of house
Wd	for right to	collect/ use water for drinking
Wi	for right to	use water for irrigation
O	for any right other than indicated above	(please specify)

Table 7.5 Water related outcomes:

Table 7.5.1 Details of average ground water table depth in the project areas of the Country: State-wise * (in metres)

1	2	3	4	5	6	7	8
Names of Districts	Names of Projects	Sources	Pre-Project level	Mid-term project level	Post-Project level	Increase/decrease (Col. 8 – Col. 6)	Remarks
West Garo Hills	W.G.H IWMP- XIII	Open Well	Moderate	Increased	Increased	Increased	Increased
		Bore Well	NA	NA	NA	NA	
		Other (specific) Spring	Increased	Increased	Increased	Increased	Increased

* From column no. 2, total number of States; from column no. 3, total no. of Districts; from column no. 4, total no. of projects, from column nos. 6 to 9, the average measurements, category-wise, for the entire country may be given at the end of the table. The data must be based on the average of the Ground Water Table collected by PIA with the help of concerned technical expert in the same sample of 10 % of selected wells and bore wells in the villages in the watershed project area during pre-project, mid-term and post-project periods.

Table 7.5.2 Status of Drinking water:

1	2	3			4			5
District	Name of the project	Availability of drinking water (no. of months in a year)			Quality of drinking water			Comments
		Pre-project	Post-project	Change in availability	Pre-project	Post-project	Change in quality	
West Garo Hills	WGH IWMP-XIII	Insufficient	Sufficient	10-12 Months	Moderate	Improved	Improved	

* From column no. 2, total number of States implementing the programme, from column no. 3, total no. of Districts; from column no. 4, category-wise no. of projects, from column no. 5, average no. of months may be given at the end of the table for the entire country.

Table 7.5.3 Water Use efficiency:

1	2	3	4			
District	Name of the project	Name of major crop	Water savings in cu.m.			
			through water saving devices ^{\$}	through water conserving agronomic practices [#]	Any other (pl specify)	Total
W.G.H	WGH IWMP-XIII	Paddy	NA	NA	NA	
		Maize	NA	NA	NA	

* From column no. 2, total number of States implementing the programme, from column no. 3, total no. of Districts; from column no. 4, total no. of projects, from column no. 6, practice-wise totals may be mentioned at the end of the table for the entire country.

^{\$} Sprinkler, Drip, PVC pipe, etc.

[#] Vermi-compost, organic manuring, Mulching, Check basin, Alternate furrow, Ridges & furrow & other scientific practices.

Table 7.6: Vegetation/ crop related outcomes:

Table 7.6.1 Details of Karif crop area and yield in the project areas:

1	2	3	4						5						6					
			Pre-project						Mid-term						Post-project					
			Area (ha)		Average Yield (Qtl) per ha.		Total Production (Qtl)		Area (ha)		Average Yield per ha (Qtl)		Total Production (Qtl)		Area (ha)		Average Yield per ha (Qtl)		Total Production (Qtl)	
			Irri	Rf.	Irri	Rf.	Irri	Rf.	Irri	Rf.	Irri	Rf.	Irri	Rf.	Irri	Rf.	Irri	Rf.	Irri	Rf.
W.G.H	WGH IWMP- XIII	Paddy	-	142.97	-	12	-	1715.64	-	62.1	-	15	-	931.5	200	38	16	15	3200	570
		Maize	-	40	-	26	-	1040	-	33	-	24	-	792		33		24	-	792
		Vegetable	-	7	-	30	-	210	-	5	-	30	-	150	6	4	36	30	216	150
		Total	-	189.97	-	68	-	2965.64	-	100.1	-	69	-	1873.5	206	75	52	69	3416	1512

* From column no. 2, total number of States; from column no. 3, total no. of Districts; from column no. 4, total no. of projects, from column no. 5, total no. of crops; from column no. 6 to 8, the totals for the area, average yield per ha and total production, category-wise, for the entire country may be given at the end of the Table.

Irri. – Irrigated Rf – Rainfed

Table 7.6.2 Details of Rabi crop area and yield in the project areas:

1 Sl No.	2 Names of States	3 Names of the Districts	4 Name of Projec ts	5 Name of crops	6						7						8					
					Pre-project						Mid-term						Post-project					
					Area (ha)		Average Yield (Qtl) per ha.		Total Producti on (Qtl)		Area (ha)		Average Yield per ha (Qtl)		Total Production (Qtl)		Area (ha)		Average Yield per ha (Qtl)		Total Production (Qtl)	
Irri	Rf.	Irri	Rf.	Irri	Rf.	Irri	Rf.	Irri	Rf.	Irri	Rf.	Irri	Rf.	Irri	Rf.	Irri	Rf.	Irri	Rf.			
	Meghalaya	West Garo Hills	WGH IWMP XIII	Paddy	-	-	-	-	-	-	-	136. 6	-	15	-	204. 9	197	-	15	-	2955	-
				Vegetable	-	-	-	-	-	-	-	8	-	36	-	288	6	-	36	-	216	-
				Total	-	-	-	-	-	-	-	142. 6	-	51	-	492. 9	203	-	51	-	3171	-

* From column no. 2, total number of States; from column no. 3, total no. of Districts; from column no. 4, total no. of projects, from column no. 5, total no. of crops; from column no. 6 to 8, the totals for the area, average yield per ha and total production, category-wise, for the entire country may be given at the end of the Table.

Irri. – Irrigated Rf – Rainfed

Table 7.6.3 Details of Zaid crop area and yield in the project areas of the Country: State-wise:

1	2	3	4	5	6						7						8					
Sl No.	Names of States	Names of the Districts	Name of Projects	Name of crops	Pre-project						Mid-term						Post-project					
					Area (ha)		Average Yield (Qtl) per ha.		Total Production (Qtl)		Area (ha)		Average Yield per ha (Qtl)		Total Production (Qtl)		Area (ha)		Average Yield per ha (Qtl)		Total Production (Qtl)	
					Irri	Rf.	Irri	Rf.	Irri	Rf.	Irri	Rf.	Irri	Rf.	Irri	Rf.	Irri	Rf.	Irri	Rf.	Irri	Rf.
	Meghalaya	West Garo Hills	WGH IWMP XIII		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

* From column no. 2, total number of States; from column no. 3, total no. of Districts; from column no. 4, total no. of projects, from column no. 5, total no. of crops; from column no. 6 to 8, the totals for the area, average yield per ha and total production, category-wise, for the entire country may be given at the end of the Table.

Irri. – Irrigated Rf – Rainfed

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Table 7.6.4 Increase/ Decrease in area under fodder:

1	2	3	4			5		
District	Name of project	Duration of Project	Existing area under fodder (ha)			Achievement (ha)		
			Source/Name of report	Year of reference	Area already under fodder	Area under fodder proposed to be covered through IWMP	Area under fodder actually covered through IWMP	Change in area under fodder
W.G.H	W.G.H IWMP-XIII	5 yrs	-	-	-	-	-	-

* From column no. 2, total number of States implementing the programme, from column no. 3, total no. of Districts; from column no. 4, total no. of projects, from column nos. 6 & 7, total area in ha may be given at the end of the table for the entire country.

Table 7.6.5 Increase/ Decrease in Forest/vegetation cover:

1	2	3	4			5		
District	Name of project	Duration of Project	Existing area tree cover (ha)			Achievement (ha)		
			Source/Name of report	Year of reference	Area already under forest/vegetative cover	Forest/vegetative cover area proposed to be covered under IWMP	Forest/vegetative cover area actually covered under IWMP	Change in forest/vegetative cover area
W.G.H	W.G.H IWMP- XIII	5 yrs	NESAC LULC	2006-07	2016	254	-	254

* From column no. 2, total number of States implementing the programme, from column no. 3, total no. of Districts; from column no. 4, total no. of projects, from column nos. 6 & 7, total area in ha may be given at the end of the table for the entire country.

Table 7.6.6 Increase/ Decrease in area under horticulture:

1	2	3	4			5		
District	Name of project	Duration of Project	Existing area under horticulture (ha)			Achievement (ha)		
			Source/Name of report	Year of reference	Area already under horticulture	Area under horticulture proposed to be covered through IWMP	Area under horticulture actually covered through IWMP	Change in area under horticulture
W.G.H	W.G.H IWMP-XIII	5 yrs	NESAC LULC	2006-07	1238	284.9	-	284.9

* From column no. 2, total number of States implementing the programme, from column no. 3, total no. of Districts; from column no. 4, total no. of projects, from column nos. 6 & 7, total area in ha may be given at the end of the table for the entire country.

Table 7.6.7 Increase/ Decrease in area under fuel-wood:

1	2	3	4			5		
District	Name of project	Duration of Project	Existing area under fodder (ha)			Achievement (ha)		
			Source/Name of report	Year of reference	Area already under fuel-wood	Area under fuel-wood proposed to be covered under IWMP	Area under fuel-wood actually covered under IWMP	Change in area under fuel-wood
W.G.H	W.G.H IWMP-XIII	5 yrs	-	-	-	-	-	-

* From column no. 2, total number of States implementing the programme, from column no. 3, total no. of Districts; from column no. 4, total no. of projects, from column nos. 6 & 7, total area in ha may be given at the end of the table for the entire country.

Table 7.7 Livelihood related outcomes:

Table 7.7.1 Details of livestock in the project areas (for fluids please mention in litres, for solids please mention in kgs. and income in Rs.):

1 Names of the Districts	2 Name of Projects	3 Type of Animal	4			5			6			7 Remarks
			Pre-project			Mid-term			Post-project			
			No.	Yield	Income	No.	Yield	Income	No.	Yield	Income	
West Garo Hills	W.G.H IWMP- XIII											
		Piggery	225	800kg	250000	560	1000kg	560000	650	1300kg	650000	Increased
		Poultry	1800	1000kg	120000	2500	1800kg	250000	4000	2500kg	1450000	Increased
Total												

* From column no. 2, total number of States; from column no. 3, total no. of Districts; from column no. 4, total no. of projects, from column nos. 5 to 8, the total nos. of animals and the average yield and incomes, category-wise, for the entire country may be given at the end of the Table.

Table 7.7.2 Details of other livelihoods created for landless people

1	2	3	4	5				6	7					8				
District	Project	Name of activity	Fund required for the activity (Rs.)	Sources of funding (Rs.)				Actual Expenditure incurred on activity (Rs.)	No. of beneficiaries to be trained					No. of beneficiaries taking up activity				
				Project Fund	Beneficiary	Others (pl. specify)	Total		SC	ST	Others	Women	Total	SC	ST	Others	Women	Total
West Garo Hills	WGH IWM P XIII	Vegitable cultivation	12.425	12.25	497	-	12.25	-	-	497	-	-	497	-	-	-	-	-
		Tailoring	2.7	2.7	120	-	2.7	-	-	120	-	-	120	-	-	-	-	-
		Carpentry	1.850	1.925	370	-	1.925	-	-	370	-	-	370	-	-	-	-	-
		Vermi composting	1.0	1.0	67	-	1.0	-	-	67	-	-	67	-	-	-	-	-
		Piggery	10.24	10.24	128	-	10.24	-	-	128	-	-	128	-	-	-	-	-

(Contd.)

* From column no. 2, total number of States; from column no. 3, total no. of Districts; from column no. 4, total no. of projects, from column no. 5, total no. of activities; from column no. 6, total funds required for the activity, from column no. 7 to 12, category-wise totals, from column no. 13, category-wise totals, for the entire country may be given at the end of the Table.

* From column no. 2, total number of States; from column no. 3, total no. of Districts; from column no. 4, total no. of projects, from column no. 5, total no. of activities; from column no. 6, total funds required for the activity, from column no. 7 to 12, category-wise totals, from column no. 13, category-wise totals, for the entire country may be given at the end of the Table.

Table 7.7.5 Details of other livelihoods created for farmers * (contd.)

9		10	11				12
No. of persons employed indirectly in the activity		Annual increase in income due to activity (Rs.)	Impact of livelihoods programme				Any other information (pl. Specify)
			Migration (No. of beneficiaries)		Development of backward-forward linkages		
Total	Grand Total (8+9)		Pre-project	Post-project	Pre-project	Post-project	
NIL	NIL	34000	NIL	NIL	NIL	NIL	NIL
NIL	NIL	2,45,679	NIL	NIL	NIL	NIL	NIL
NIL	NIL	2,67,900	NIL	NIL	NIL	NIL	NIL
NIL	NIL						

**Table 7.8 Marketing related outcomes:
Backward-Forward linkages ***

1	2	3	4	5	6	
District	Project	Type of Marketing Facility	Pre-project (no.)	During the project (no.)	Post-project (no.)	
West Garo Hills	WGH IWMP - XIII	(A) Backward linkages	NIL	NIL	NIL	
		(i) Seed certification	NIL	NIL	NIL	
		(ii) Seed supply system	NIL	NIL	NIL	
		(iii) Fertilizer supply system	NIL	NIL	NIL	
		(iv) Pesticide supply system	NIL	NIL	NIL	
		(v) Credit institutions	1	2	3	
		(vi) Water supply	NIL	3	3	
		(vii) Extension services	NIL	NIL	NIL	
		(viii) Nurseries	NIL	NIL	NIL	
		(ix) Tools/machinery suppliers	NIL	NIL	NIL	
		(x) Price Support system	NIL	NIL	NIL	
		(xi) Labour	NIL	NIL	NIL	
		(xii) Any other (please specify)	NIL	NIL	NIL	
		(A) Forward linkages				
		(i) Harvesting/threshing machinery	NIL	NIL	NIL	
		(ii) Storage (including cold storage)	NIL	NIL	NIL	
		(iii) Road network	1	1	1	
		(iv) Transport facilities	NIL	NIL	NIL	
		(v) Markets / Mandis	NIL	NIL	NIL	
		(vi) Agro and other Industries	NIL	NIL	NIL	
		(vii) Milk and other collection centres	NIL	NIL	NIL	
		(viii) Labour	NIL	5	6	
		(ix) Any other (please specify)	NIL	NIL	NIL	

* from column no. 2, total no. of States implementing the programme, from column no. 3, total no. of Districts; from column no. 4, total no. of projects; from column no. 6, 7 & 8, category-wise totals may be given at the end of the table for the entire country.

Table 7.9 Abstract of outcomes:

1	2	3	4	5	6	7	
Sl. No.	State	Item	Unit	Pre-project Status	Post-project Status	Remarks	
	Meghalaya	Status of water table		Lack of management	Improved		
		Ground water structures repaired/ rejuvenated	Nil	Nil	nil		
		Quality of drinking water	Nil	Unsafe	Better quality		
		Availability of drinking water	-	10 months in a year	12 months availability		
		Increase in irrigation potential	17 nos.	24% irrigated	94% irrigated		
		Change in cropping/ land use pattern	-	Single cropping	Double Cropping		
		Area under agricultural crop					
		i	Area under single crop	Ha	89%	97%	
		ii	Area under double crop	Ha	Nil	76%	
		iii	Area under multiple crop	Ha	Nil	nil	
			Net increase in crop production area		742	1089	10.5% increase in cropping area
			Increase in area under vegetation		248.87 ha	273.757 ha	13.7% increase in vegetation cover
			Increase in area under horticulture		495.2	751.73	15% increase
			Increase in area under fuel & fodder		-	-	-
			Increase in milk production		NA	NA	NA
			No. of SHGs		Nil	20	
			Increase in no. of livelihoods	-	1.) Agriculture 2) Horticulture	1. Agriculture. 2. Horticulture. 3. vegetable Cultivation. 4. Pigery. 5. Poultry. etc	
			Increase in income	Rs.	20000-20000	50000-60000	
			Migration	Nos	Nil	nil	
			No. of school going children		20%	89%	
			SHG Federations formed	Nos.	Nil	1	
			Credit linkage with banks	Nos.	Nil	1	
		Resource use agreements	Nos.	None	a.) NOC for development work. b.) Agreements		
		WDF collection & management		None			
		Summary of lessons learnt		Nil			

Table 7.10 Cost effectiveness of structures/ activities*

1	2	3	4	5	6	7	8	9	10
District	Name of project	Name of WC	Name of structure/ activity	Estimated cost (Rs.)	Expected quantifiable benefits (Rs.)	Expenditure incurred (Rs.)	Actual quantifiable benefit (Rs.)	Benefit: Cost ratio [#]	IRR
West Garo Hills	WGH IWMP XIII	i.) Sikkli W/S ii.) Wadro W/S iii.)Mecheng W/S iv) Sokchon W/S	As per work plan	107.026	62.95647	107.026	37.03322	01:01.7	-

* from column no. 2, total no. of States implementing the programme, from column no. 3, total no. of Districts; from Column no. 4, no. of projects, from column no. 5, no. of WCs, from column no. 6, no. of structures/ activities, from column no. 7 to 10, category-wise# totals, may be mentioned at the end of the table for the entire country.

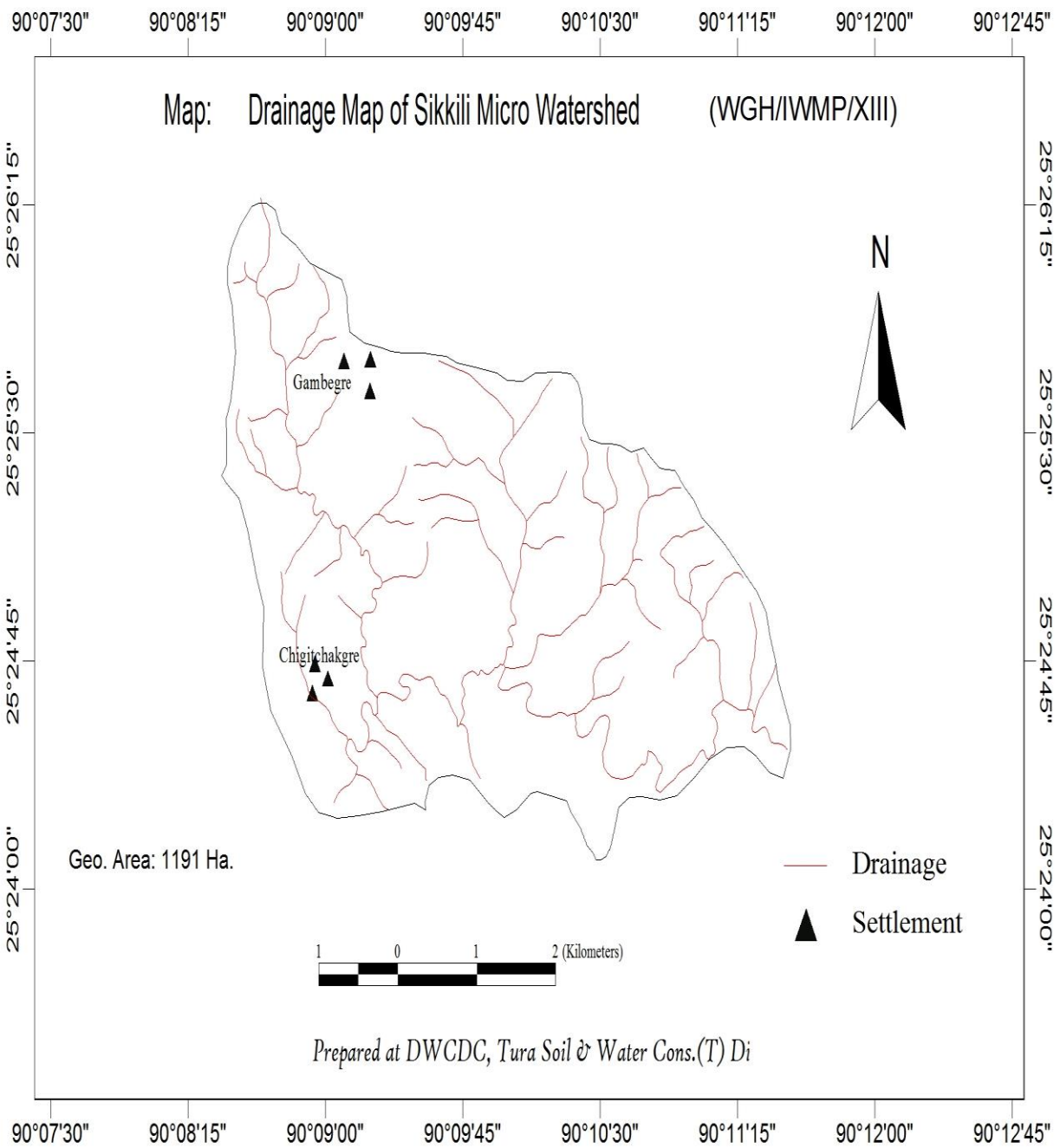
[#] B:C ratio more than 1 – cost effective
less than 1 – Not cost effective

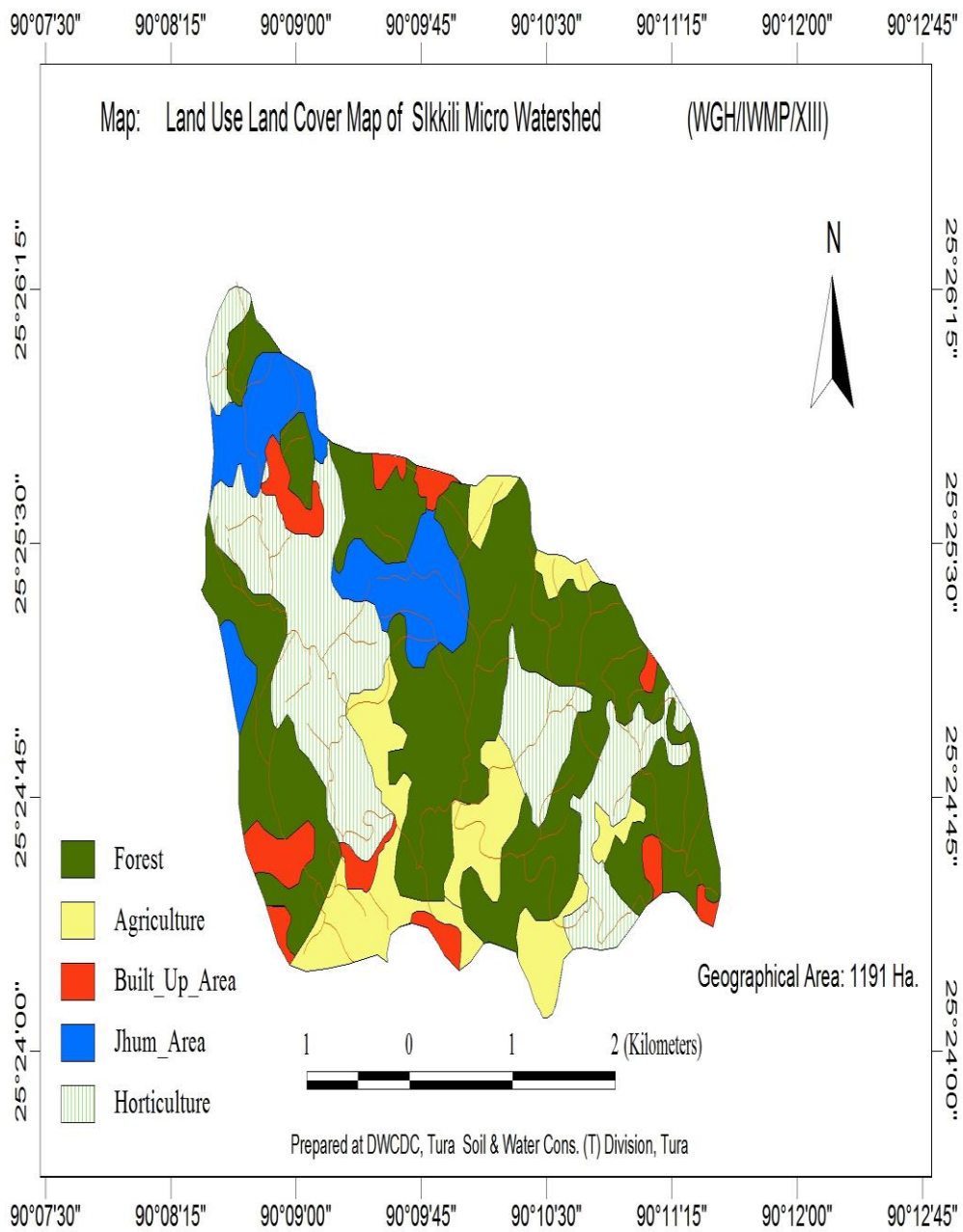
ANNEXURE I

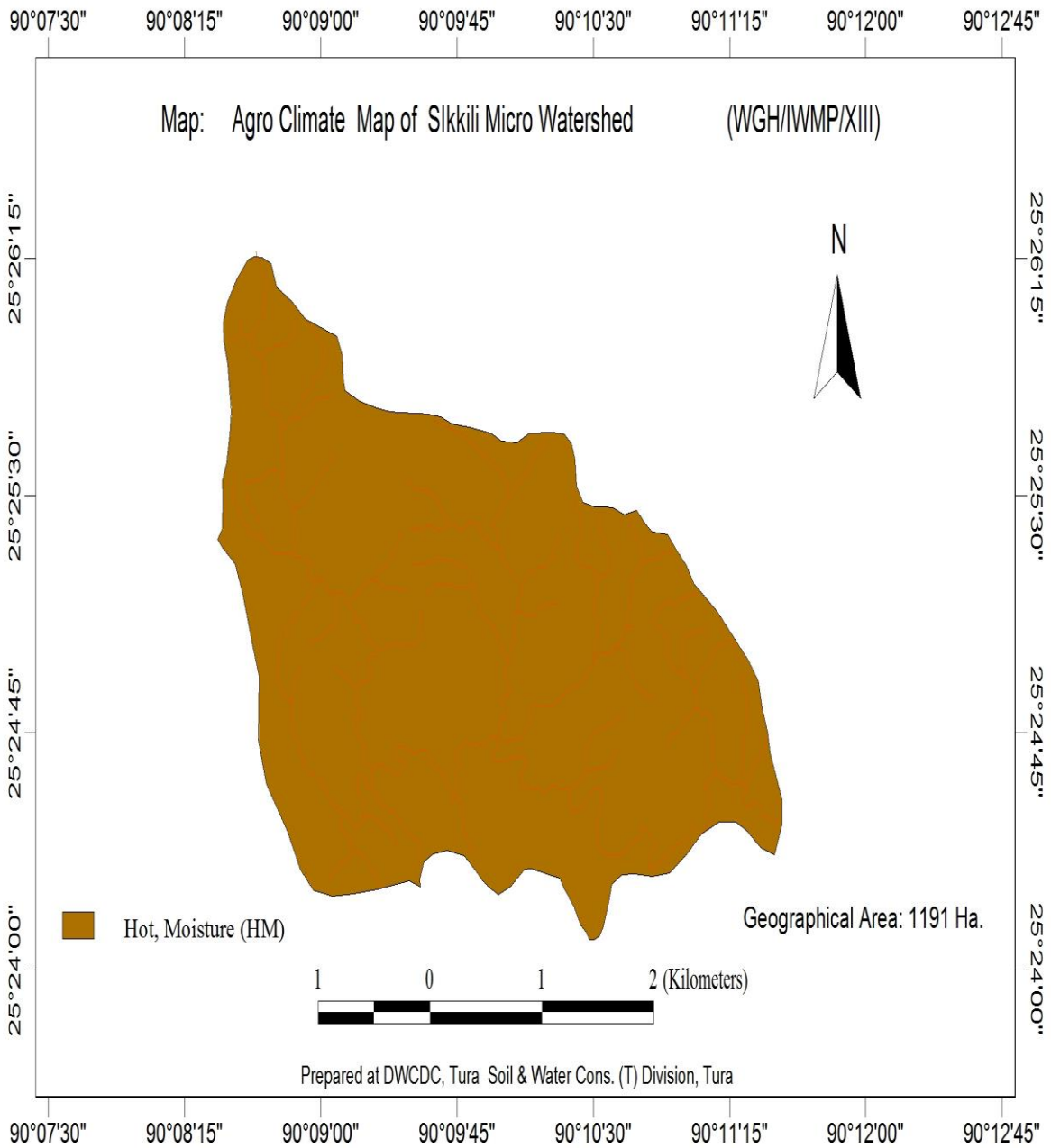
MAPS

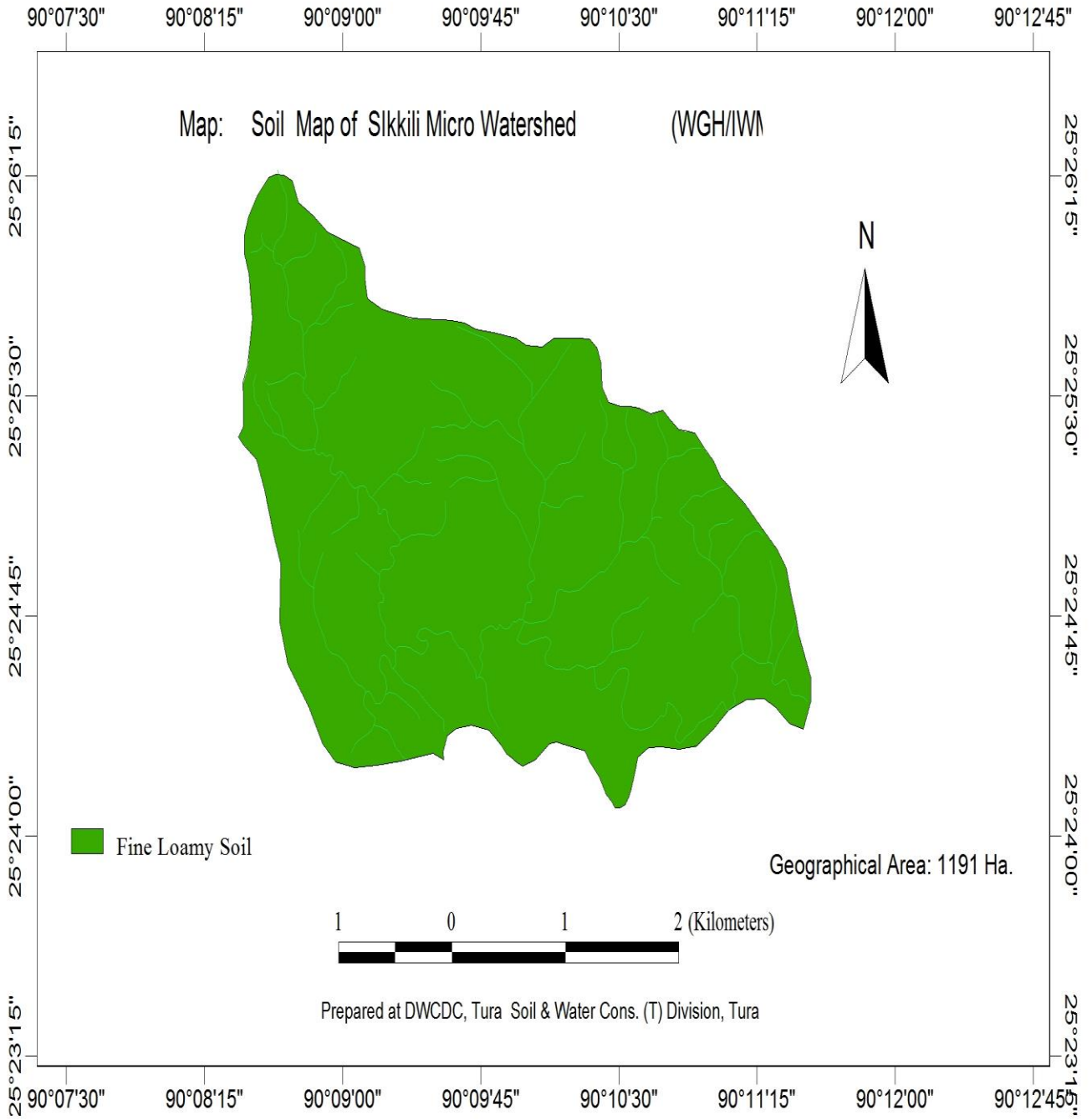
LIST OF MAPS OF W.G.H. IWMP-XIII

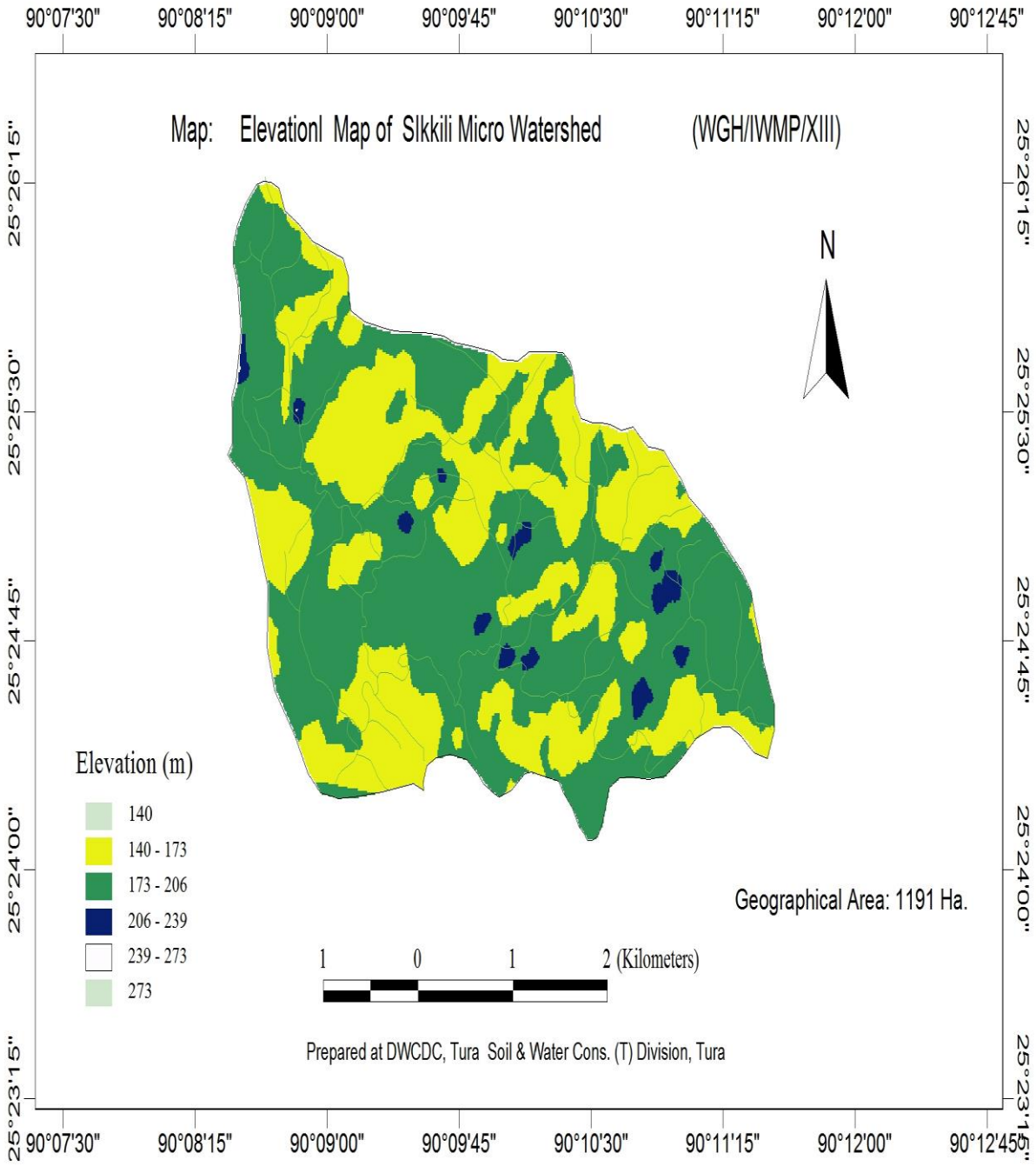
- 1. Sikkli Micro Watershed Maps.**
- 2. Sokchon Micro Watershed Maps.**
- 3. Wadro Micro Watershed Maps.**
- 4. Mecheng Micro Watershed Maps.**

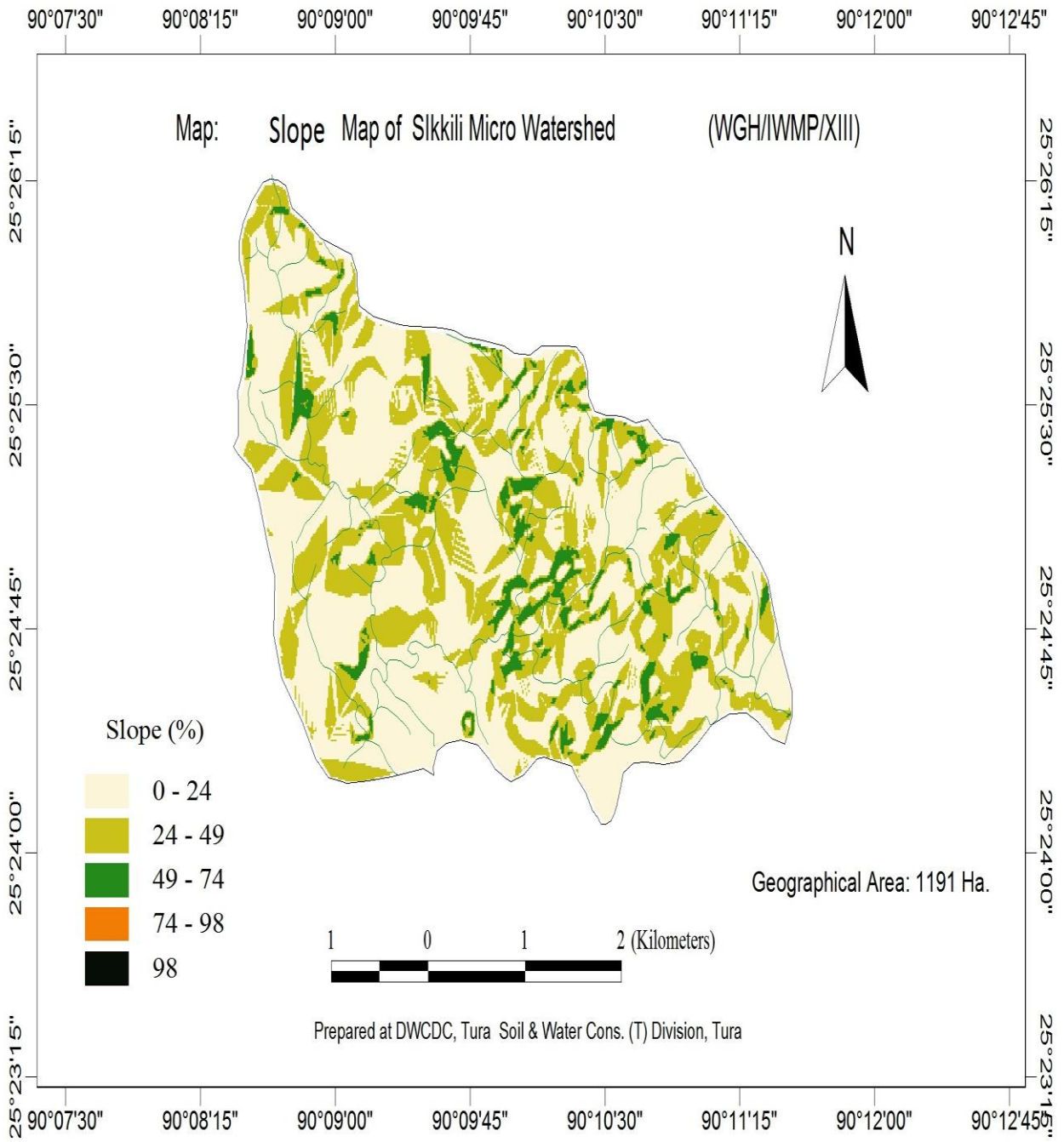


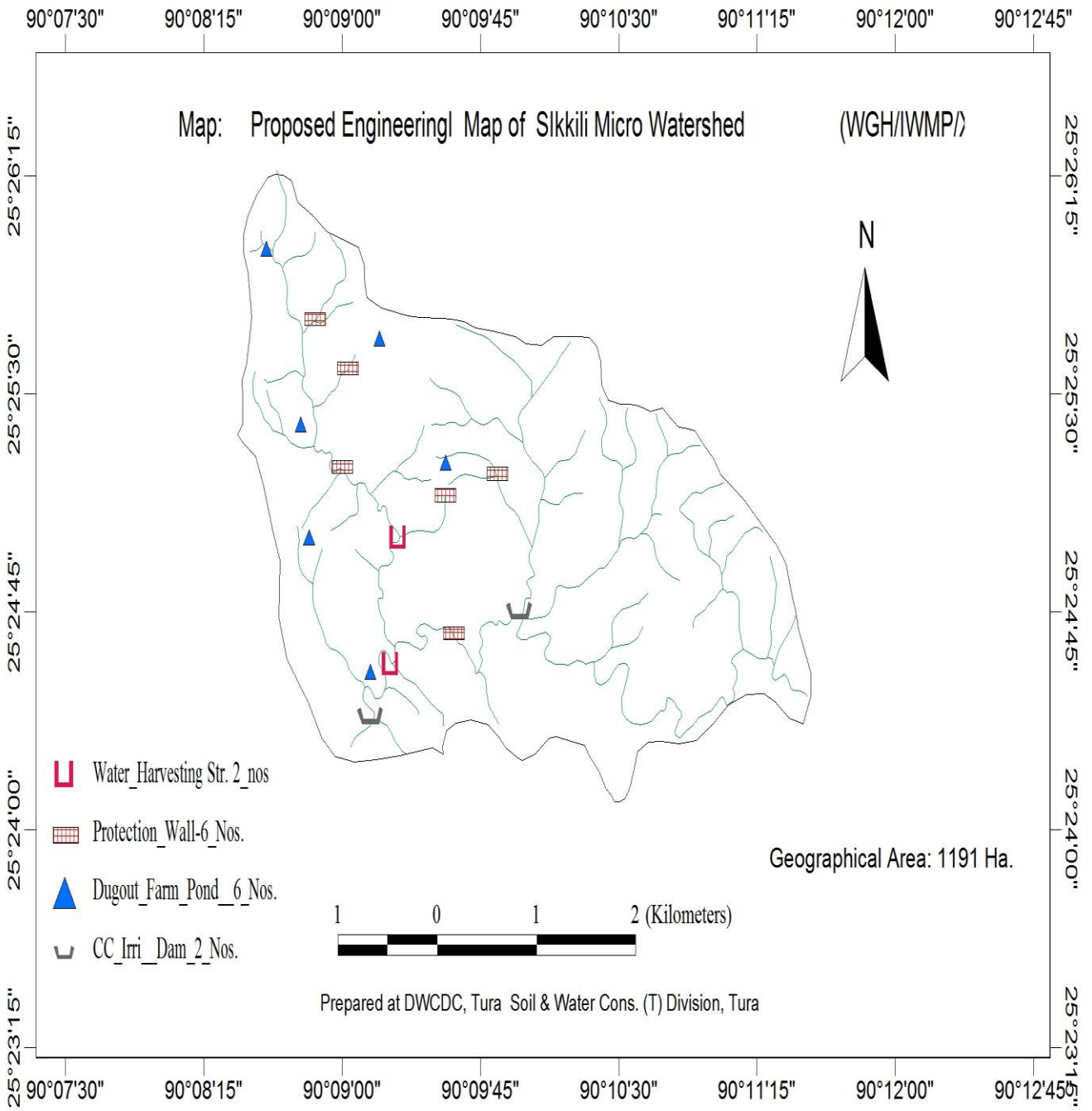


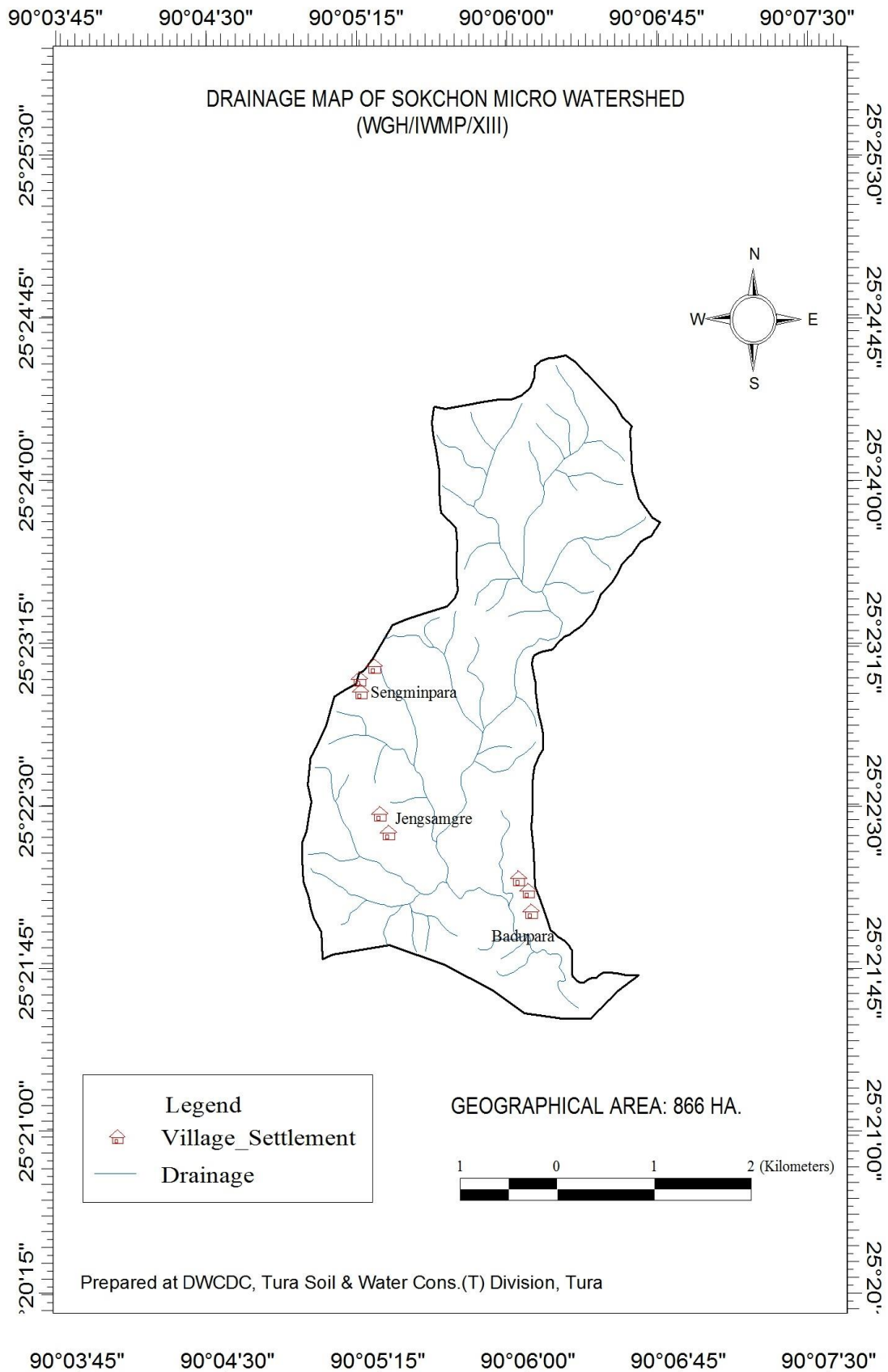


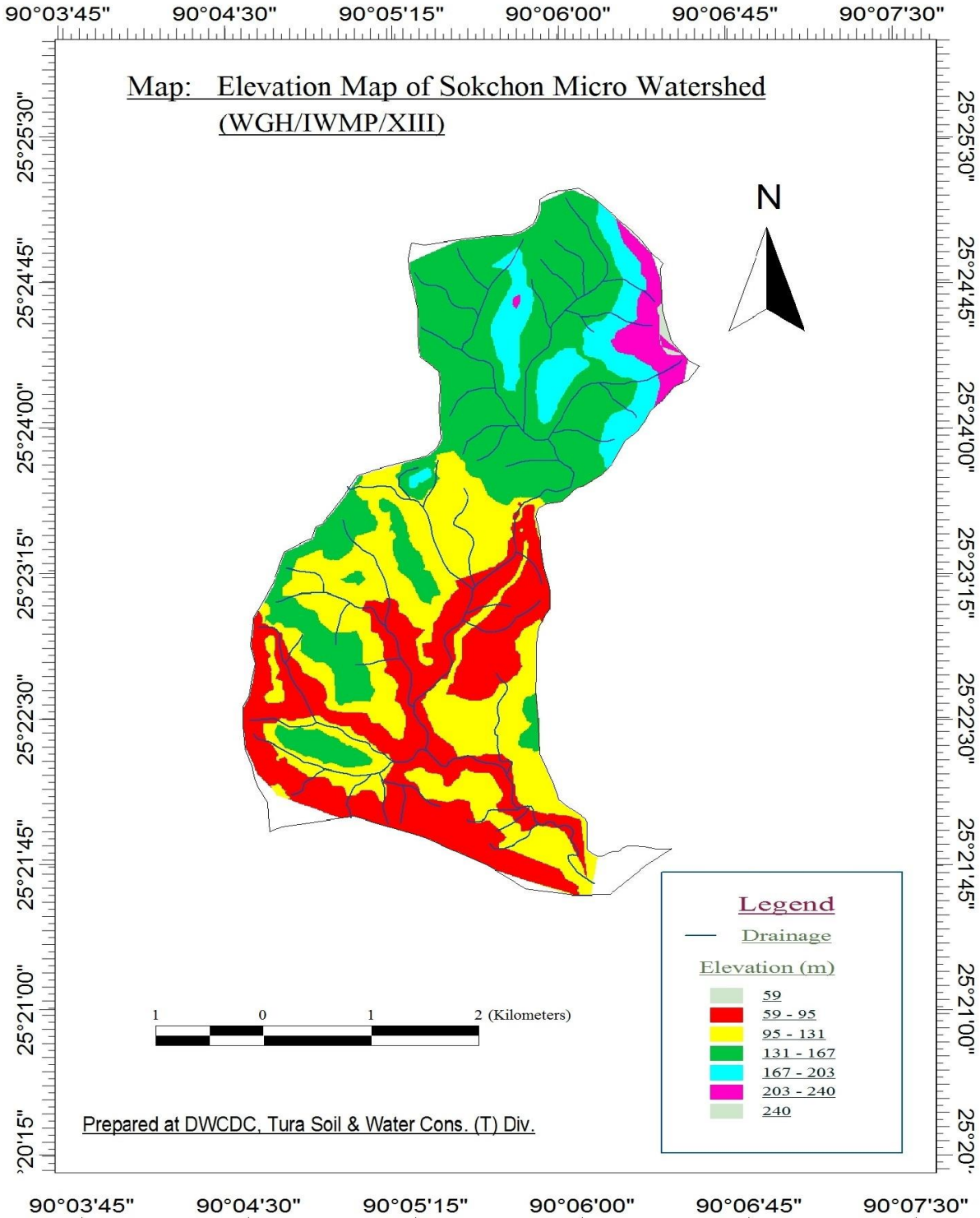


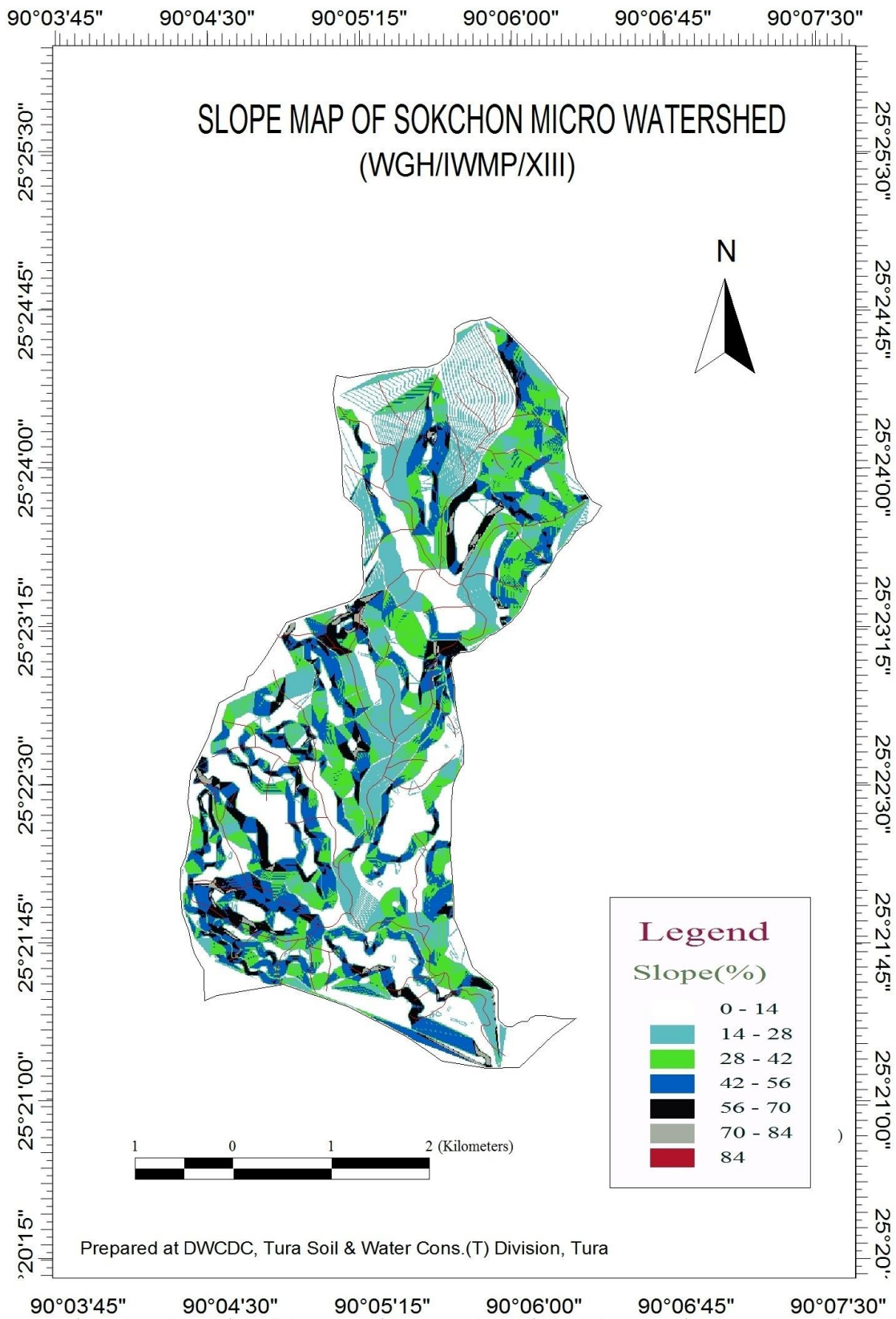


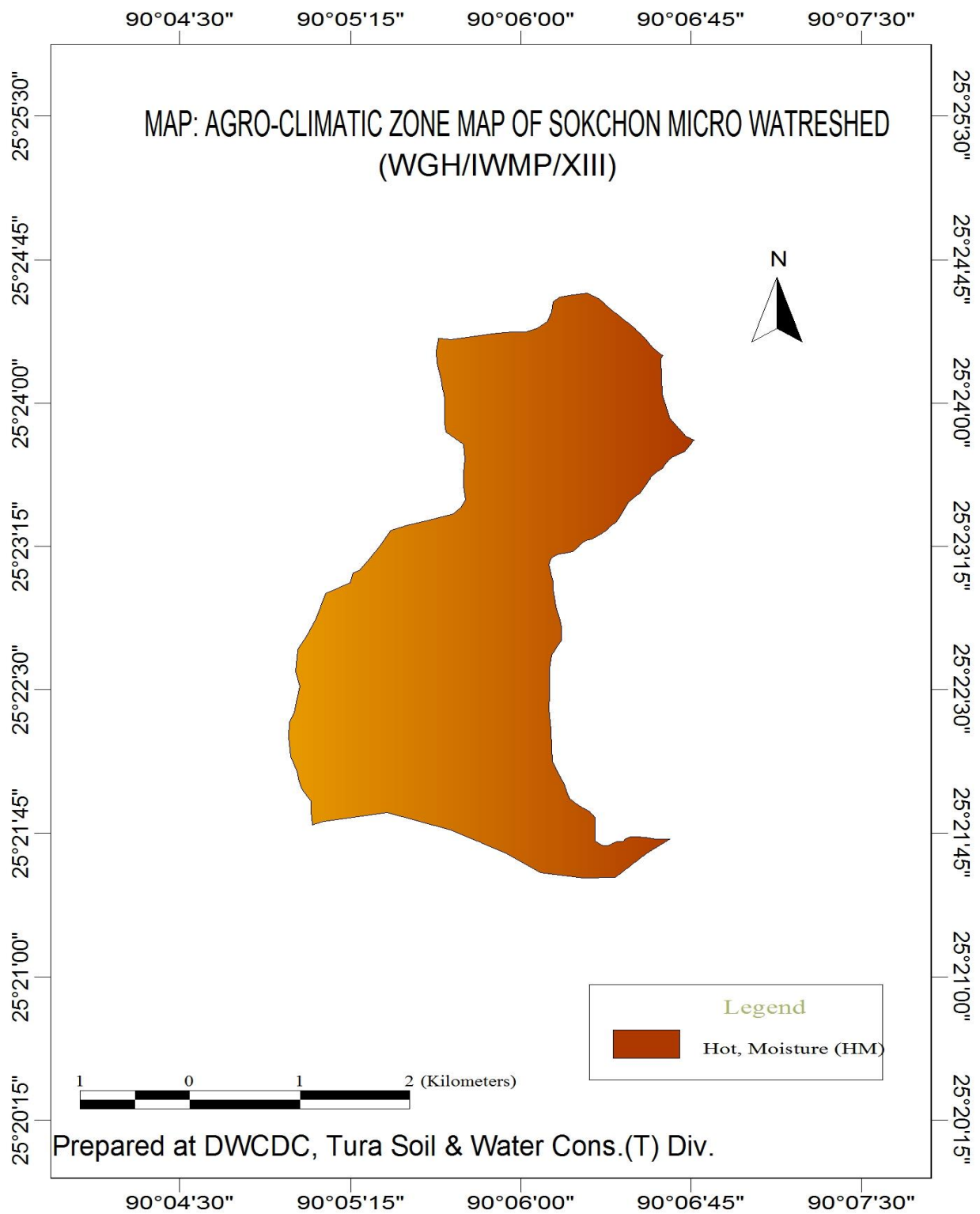


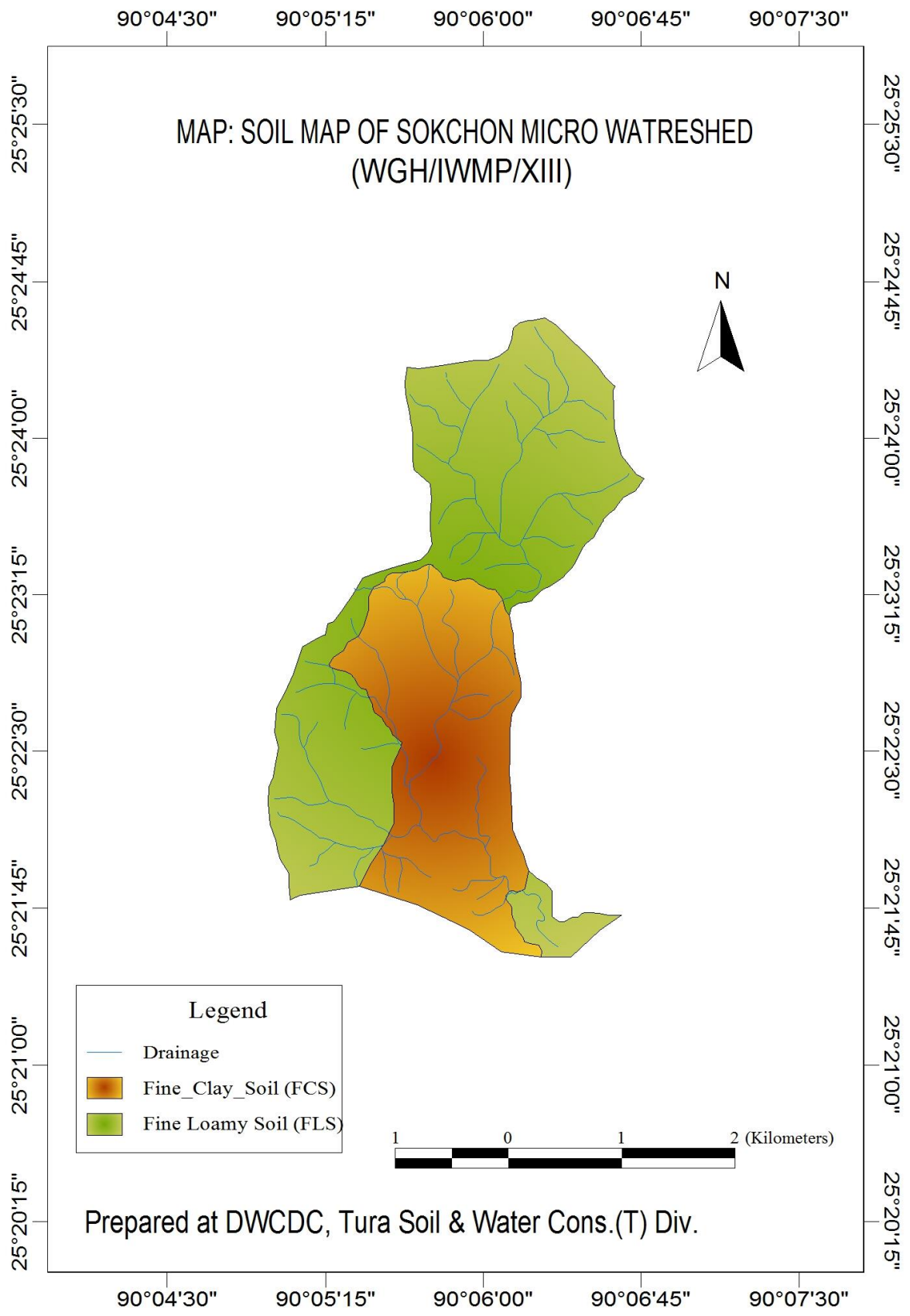


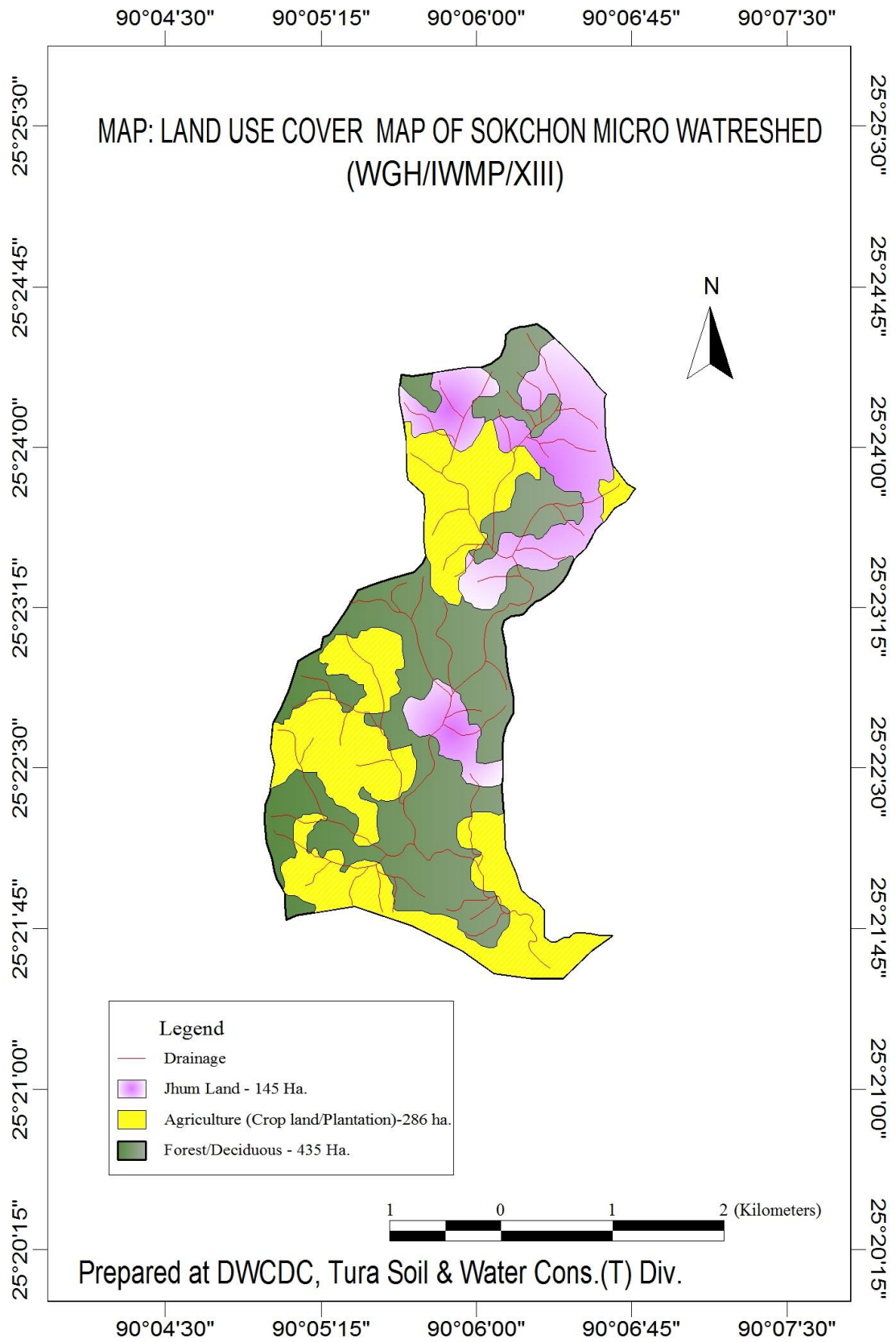


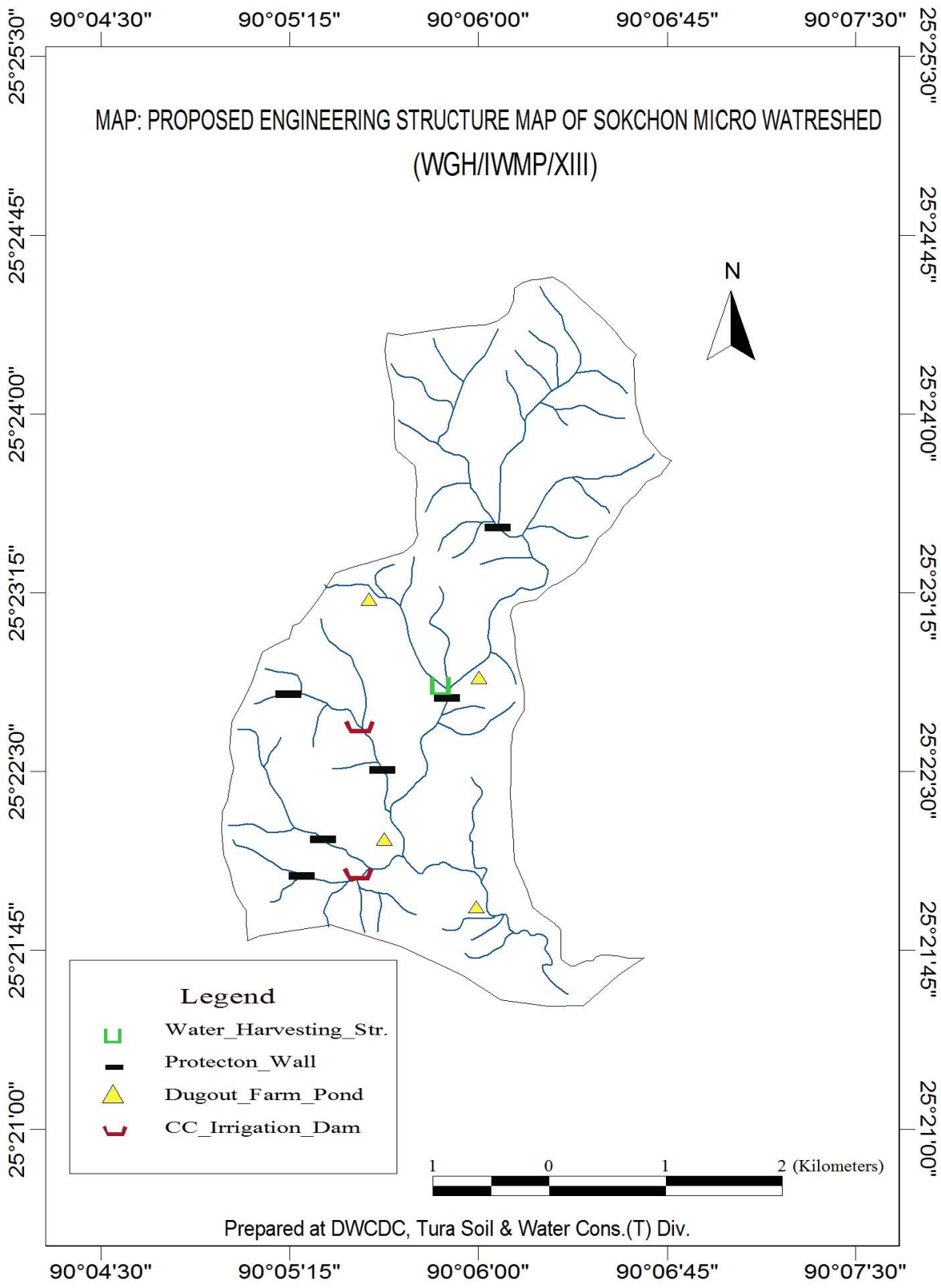


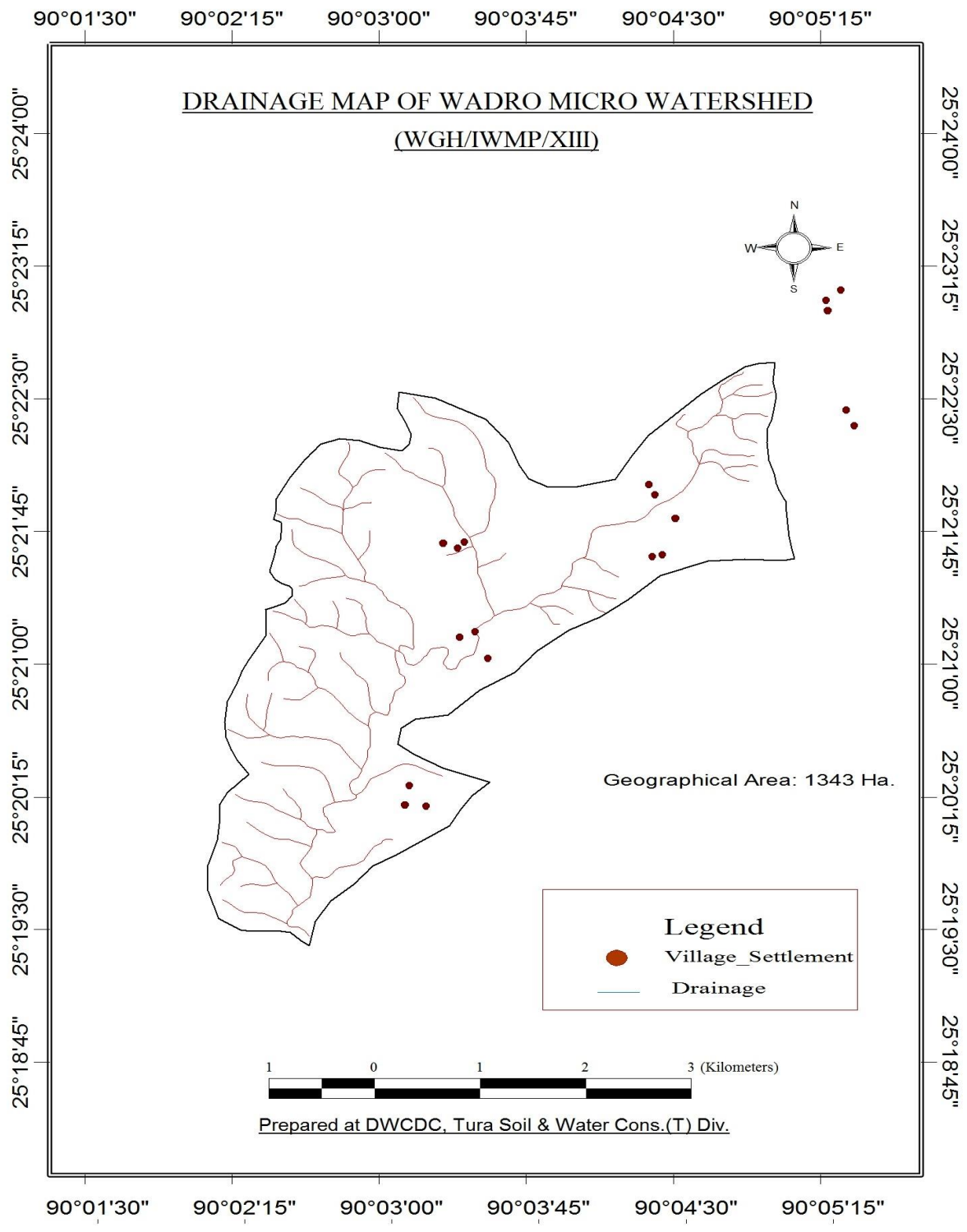


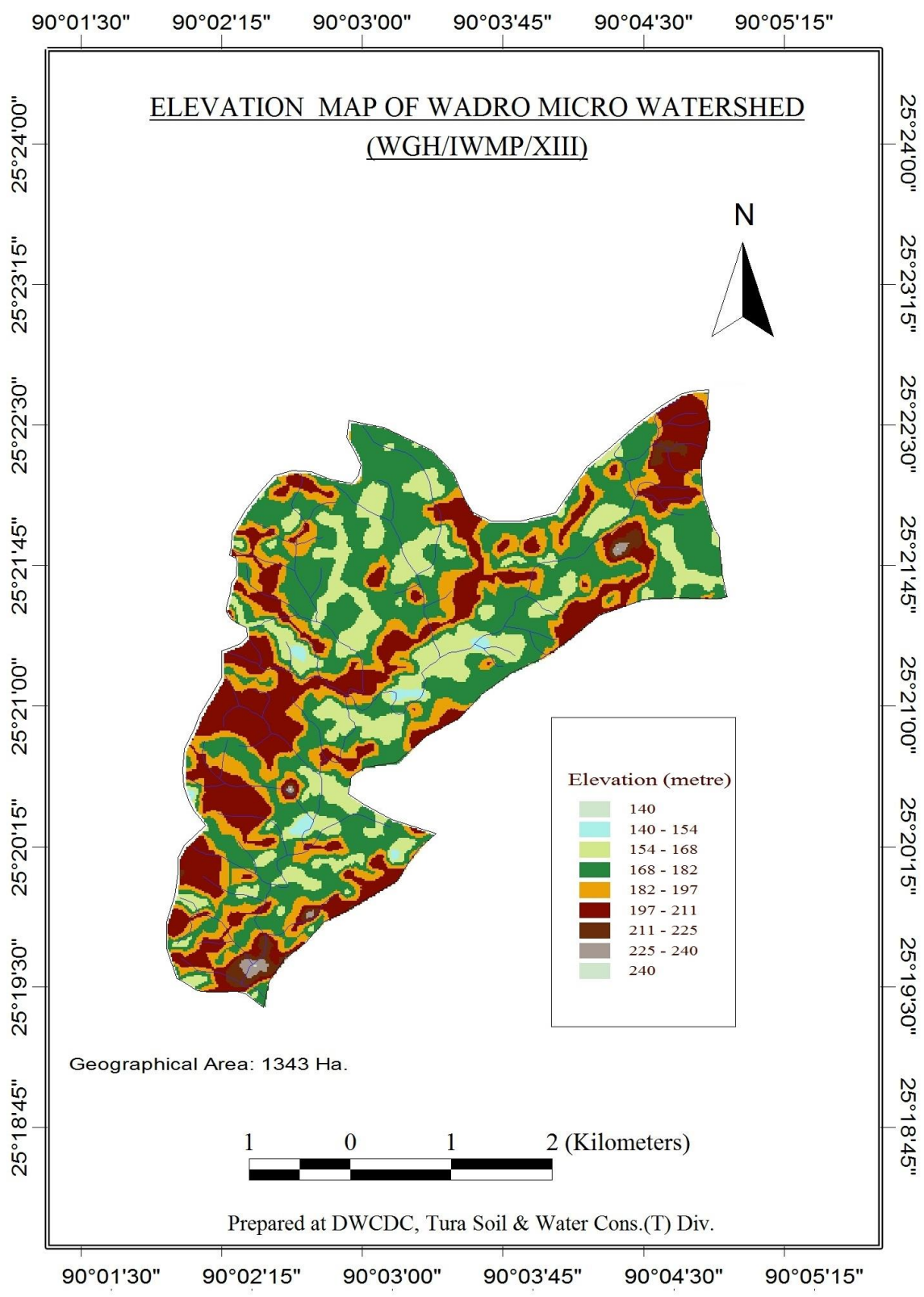


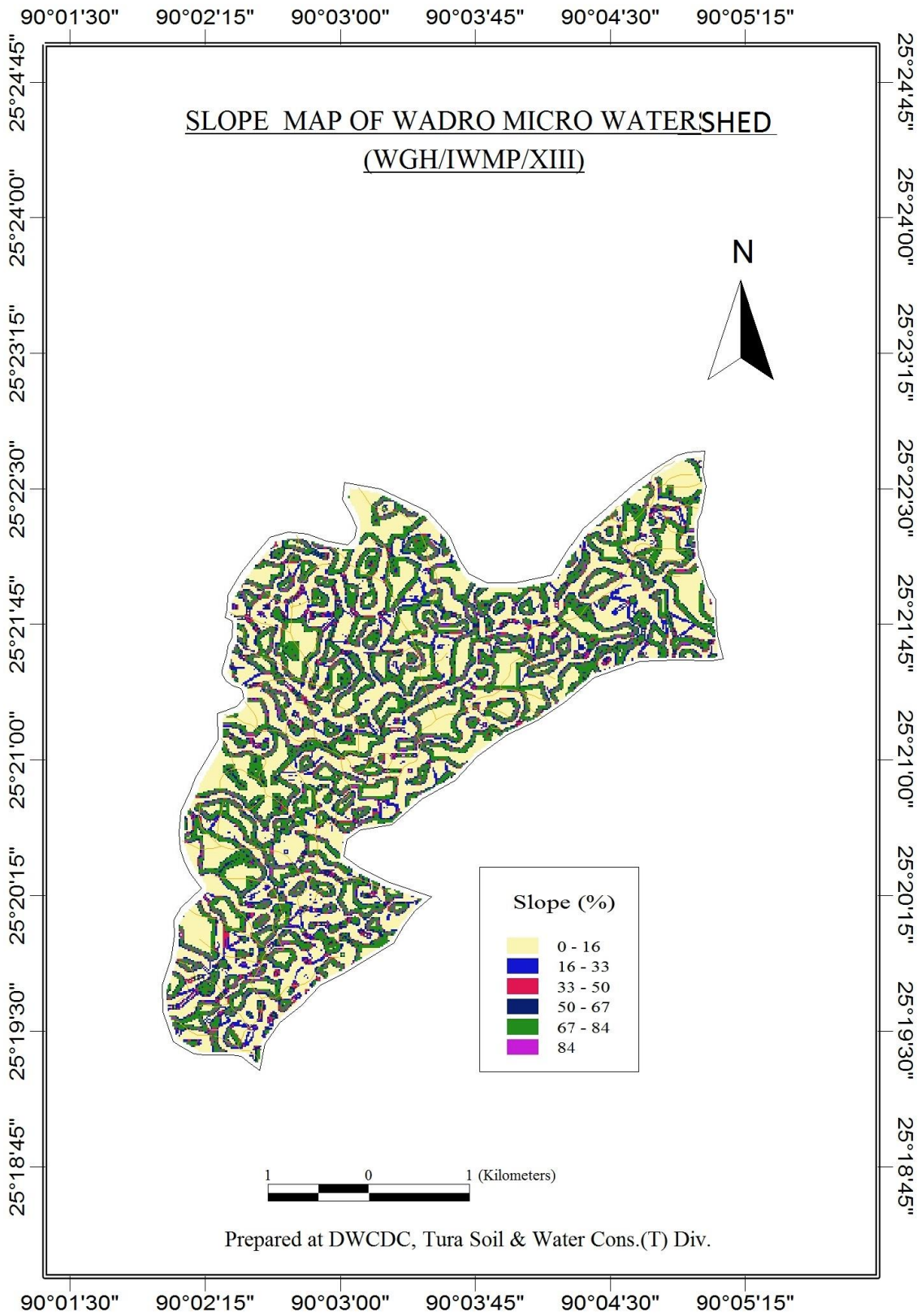


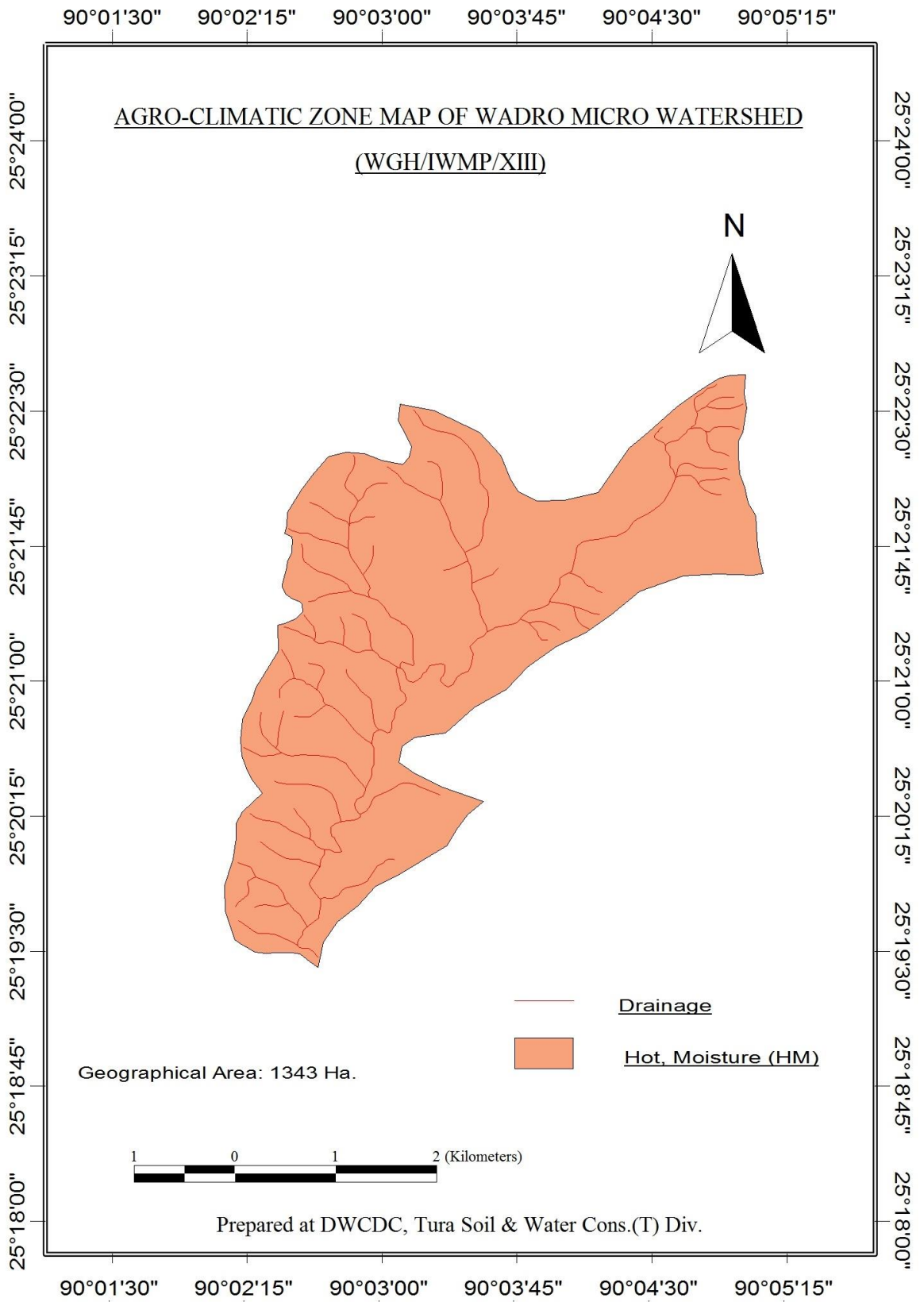


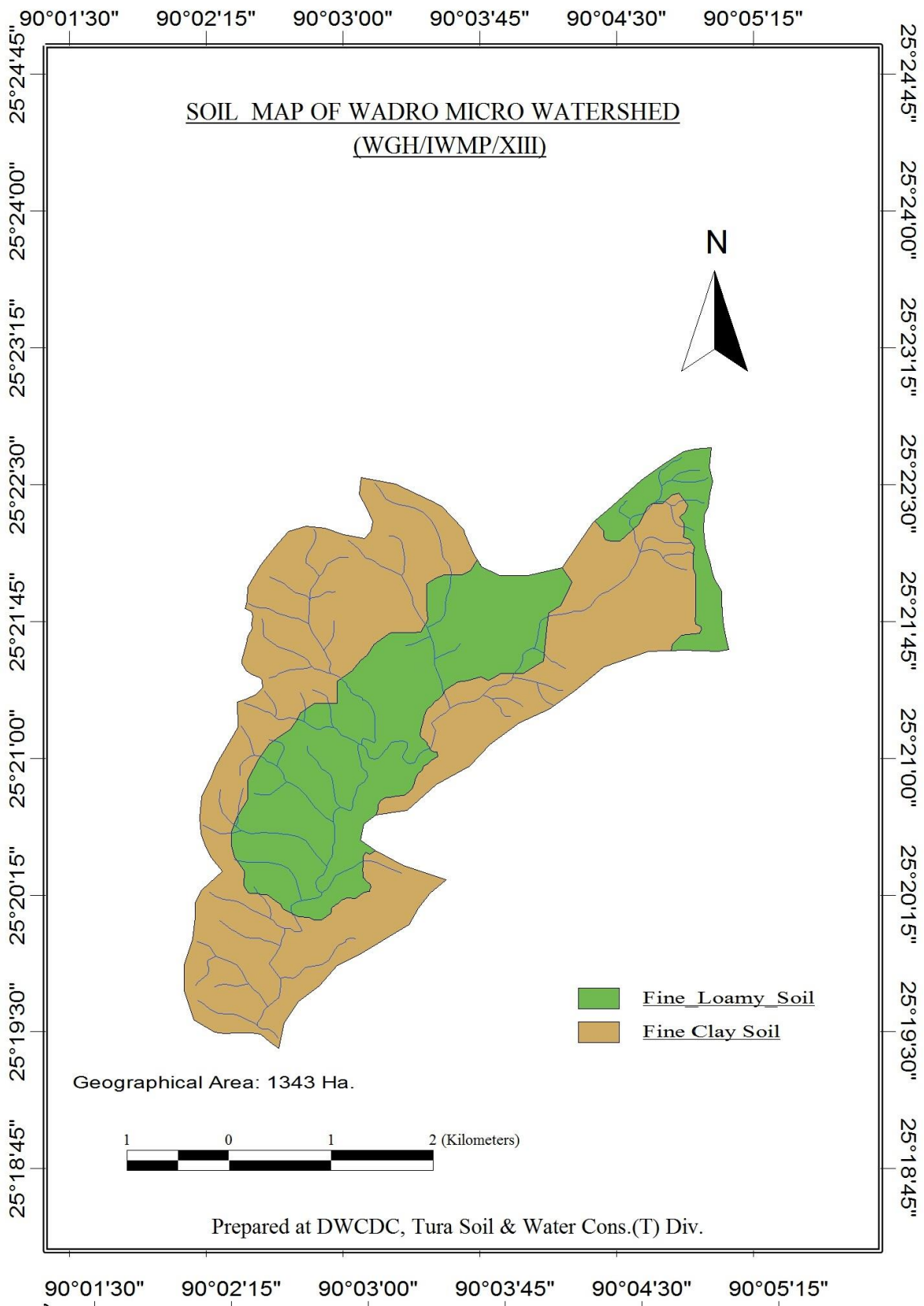


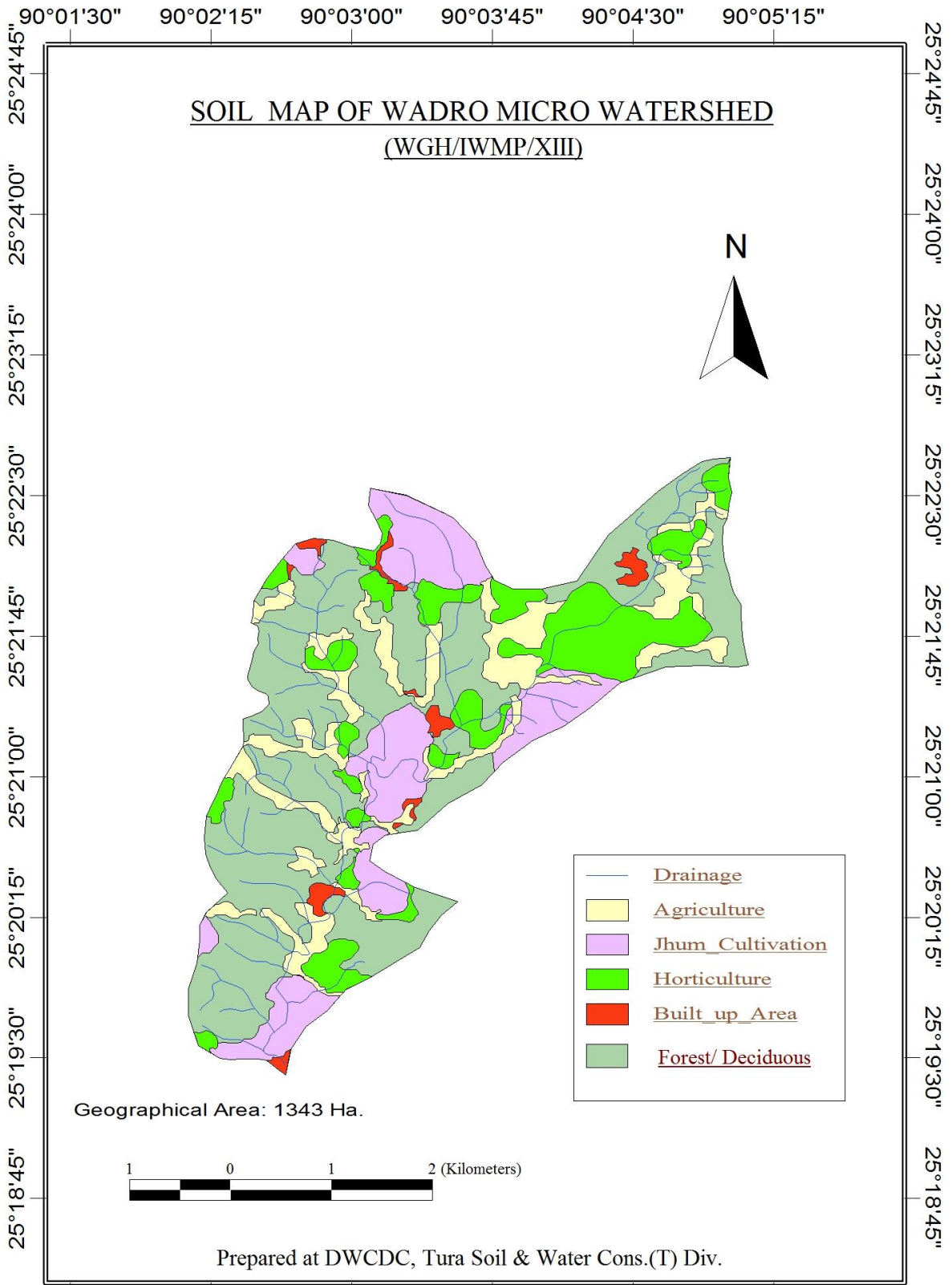


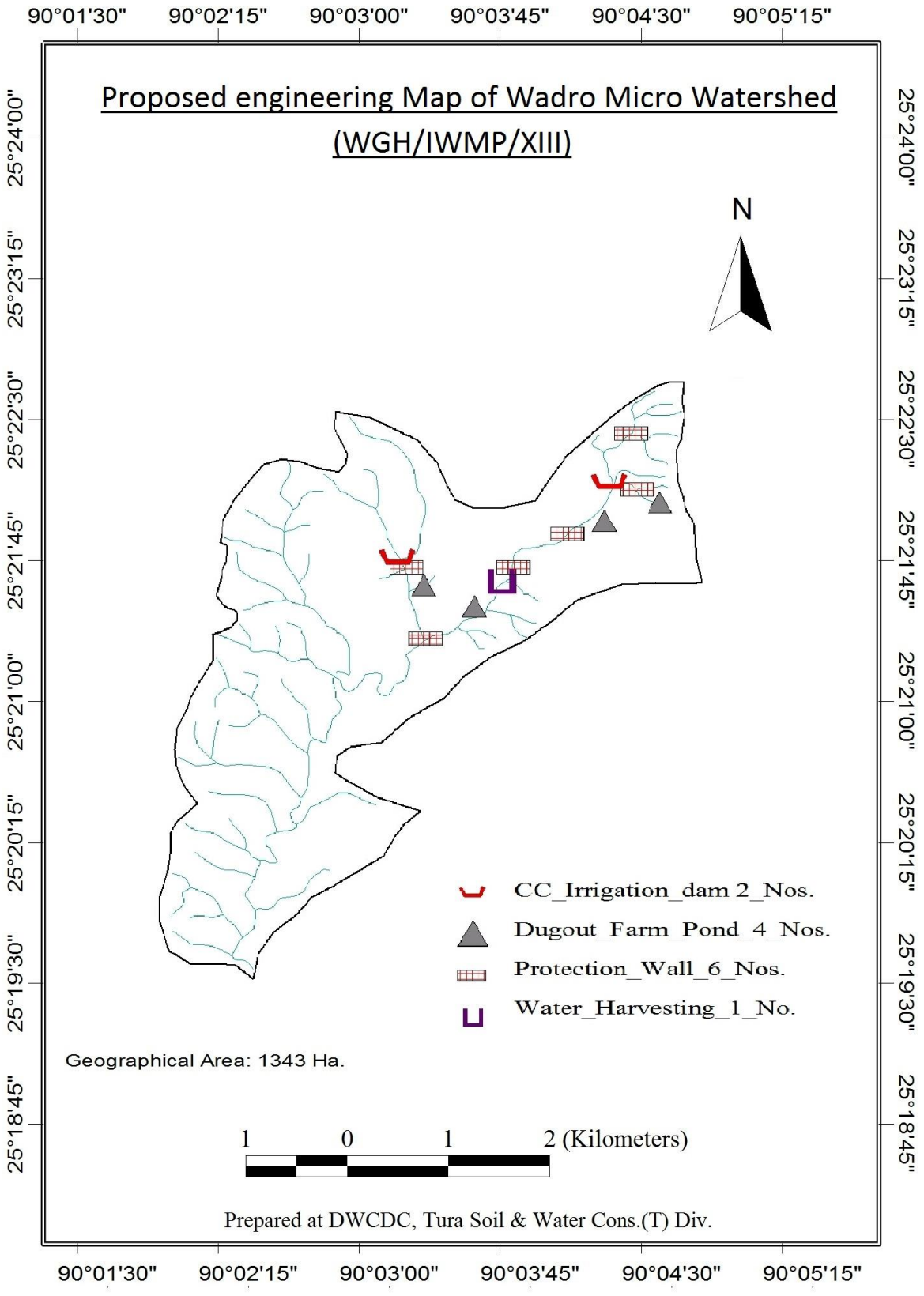














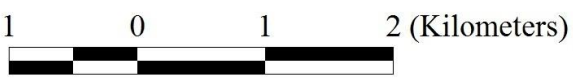


**Proposed engineering Map of Wadro Micro Watershed
(WGH/IWMP/XIII)**



-  CC Irrigation_dam 2_Nos.
-  Dugout_Farm_Pond_4_Nos.
-  Protection_Wall_6_Nos.
-  Water_Harvesting_1_No.

Geographical Area: 1343 Ha.



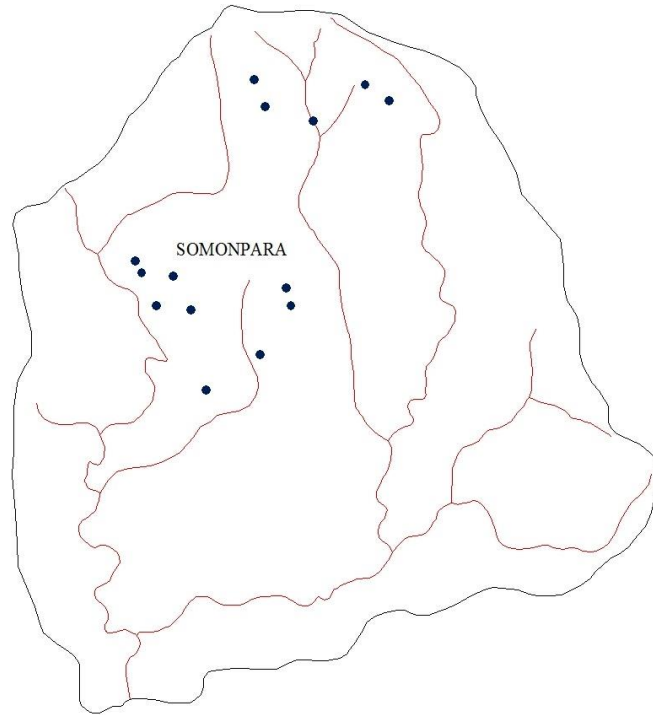
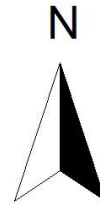
Prepared at DWCDC, Tura Soil & Water Cons.(T) Div.

90°06'00" 90°06'45" 90°07'30" 90°08'15"

25°24'45"
25°24'00"
25°23'15"
25°22'30"
25°21'45"
25°21'00"

25°24'45"
25°24'00"
25°23'15"
25°22'30"
25°21'45"
25°21'00"

MAP: DRAINAGE MAP OF MECHENG MICRO WATERSHED (WGH/IWMP/XIII)



Geographical Area : 887 Ha.



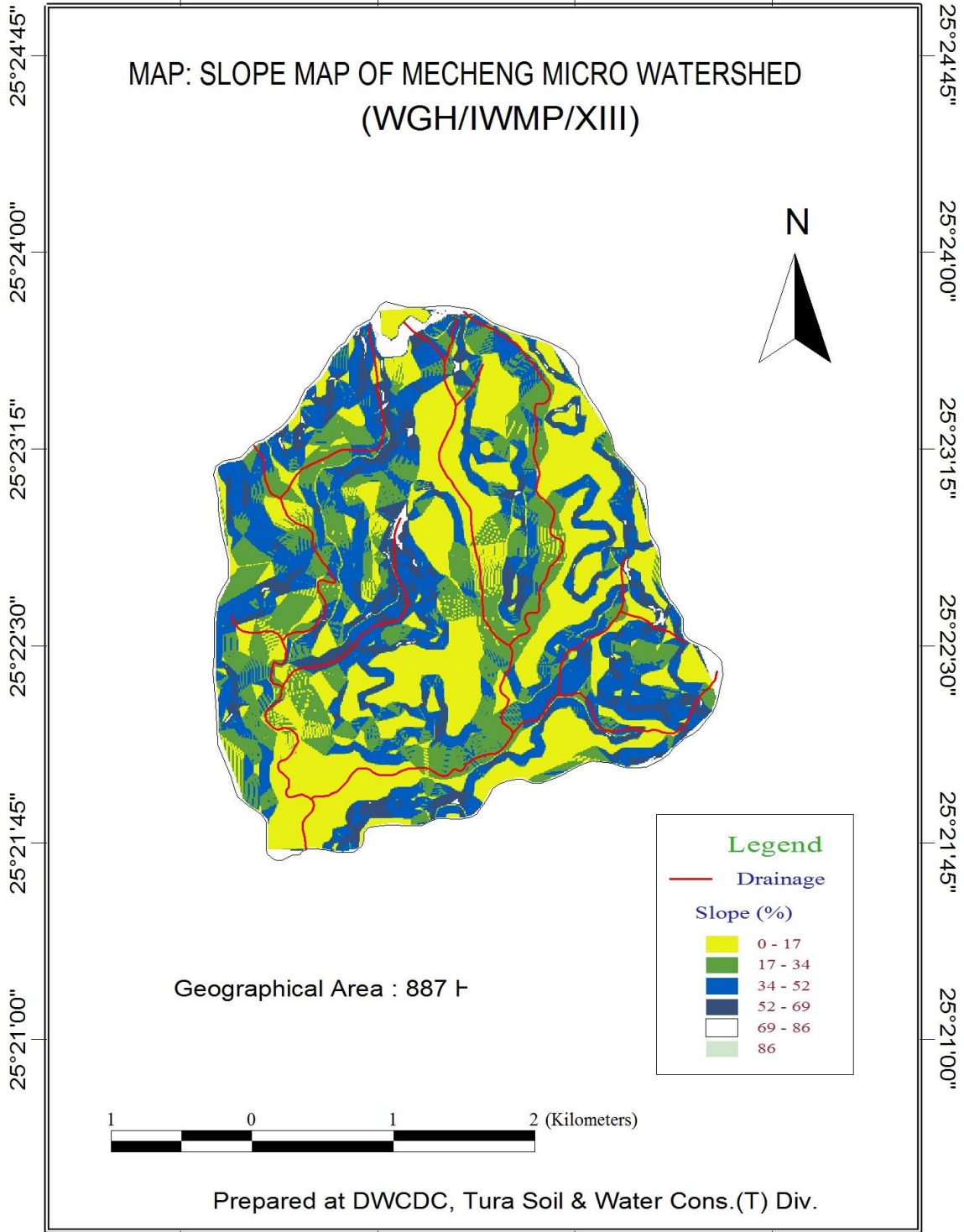
Legend

- SETTLEMENT
- DRAINAGE

Prepared at DWCDC, Tura Soil & Water Cons.(T) Div.

90°06'00" 90°06'45" 90°07'30" 90°08'15"

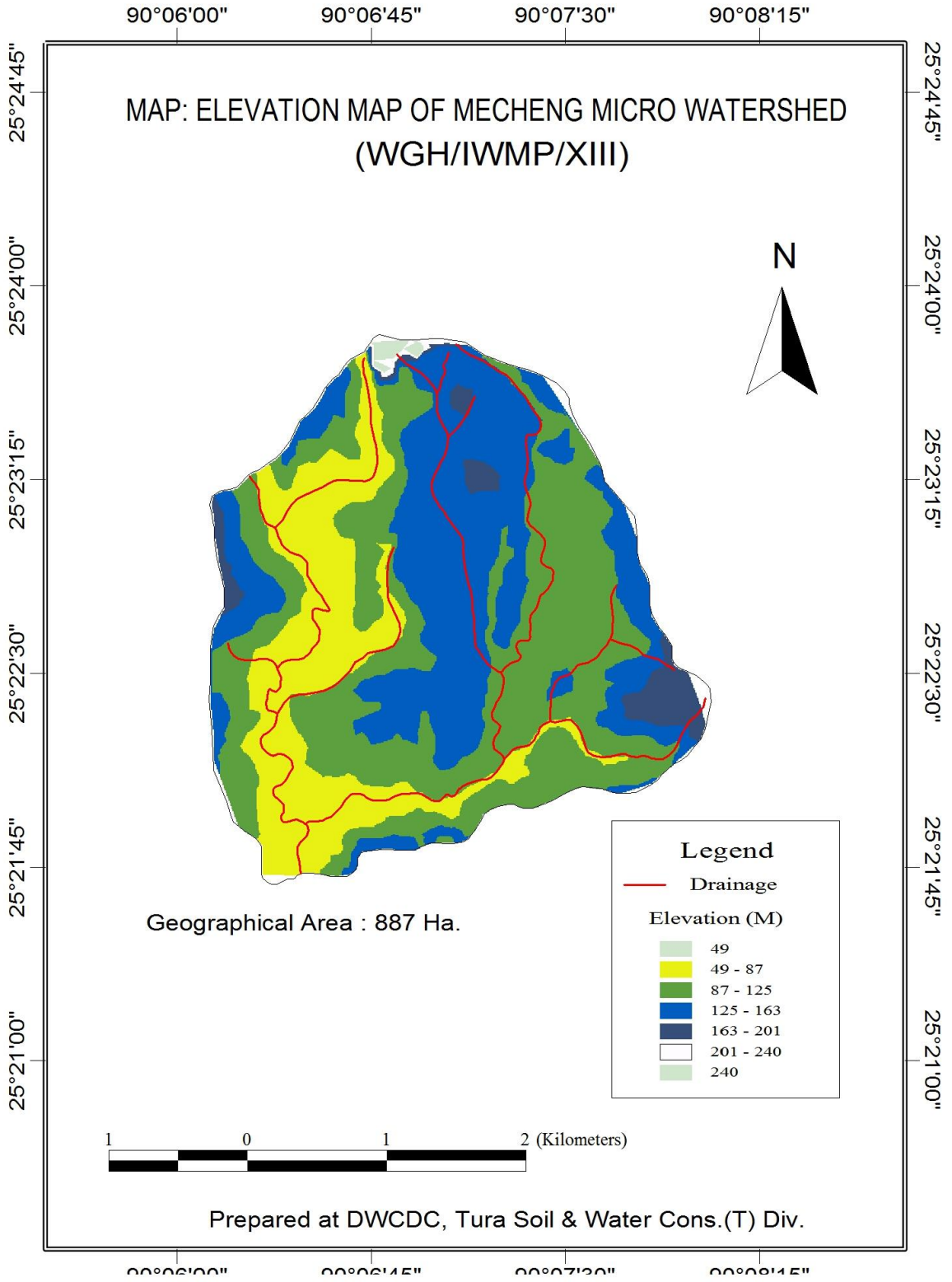
90°06'00" 90°06'45" 90°07'30" 90°08'15"



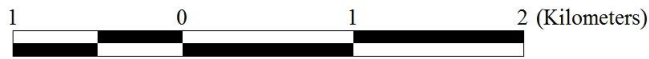
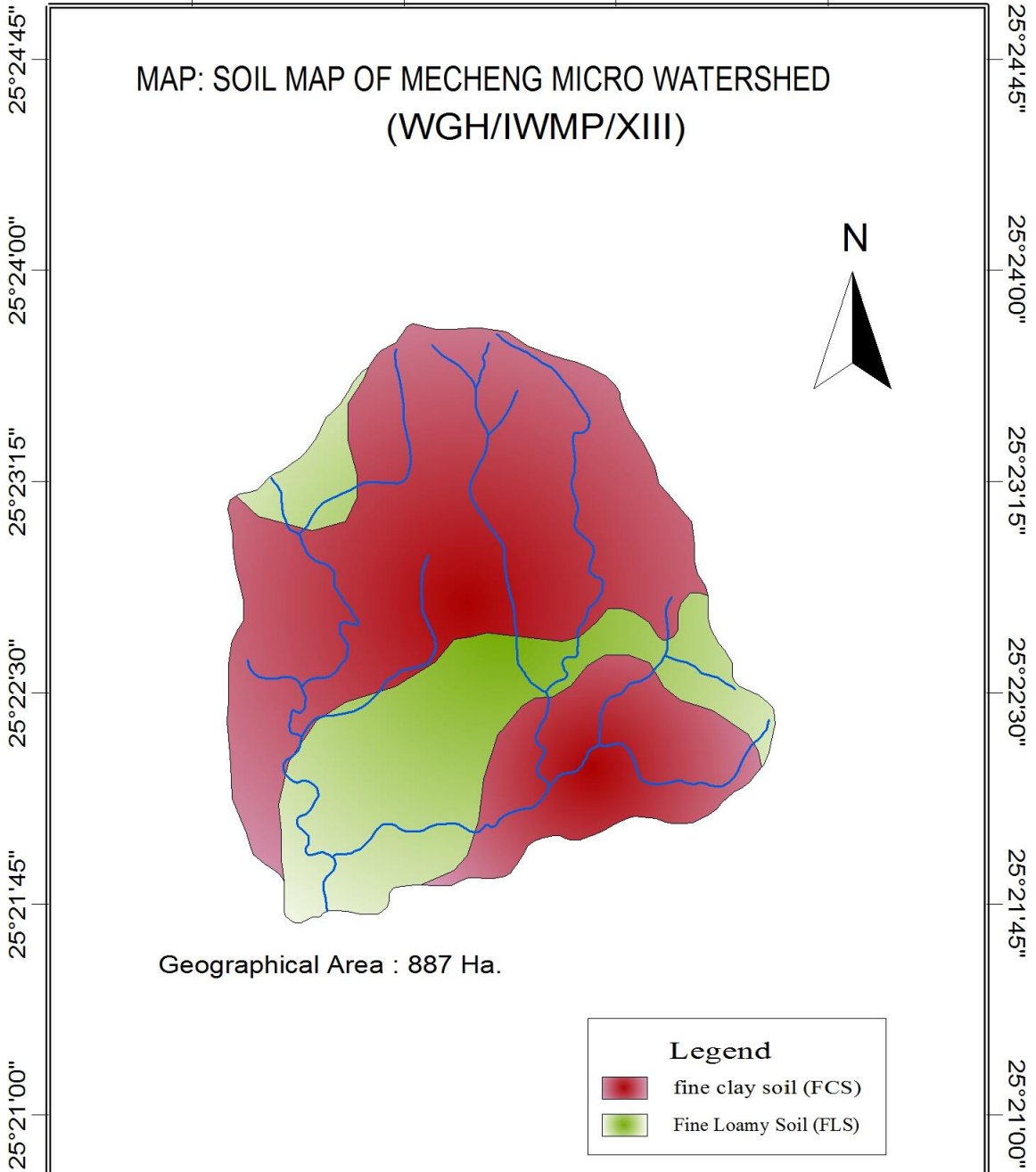
1 0 1 2 (Kilometers)

90°06'00" 90°06'45" 90°07'30" 90°08'15"

25°24'45" 25°24'00" 25°23'15" 25°22'30" 25°21'45" 25°21'00"

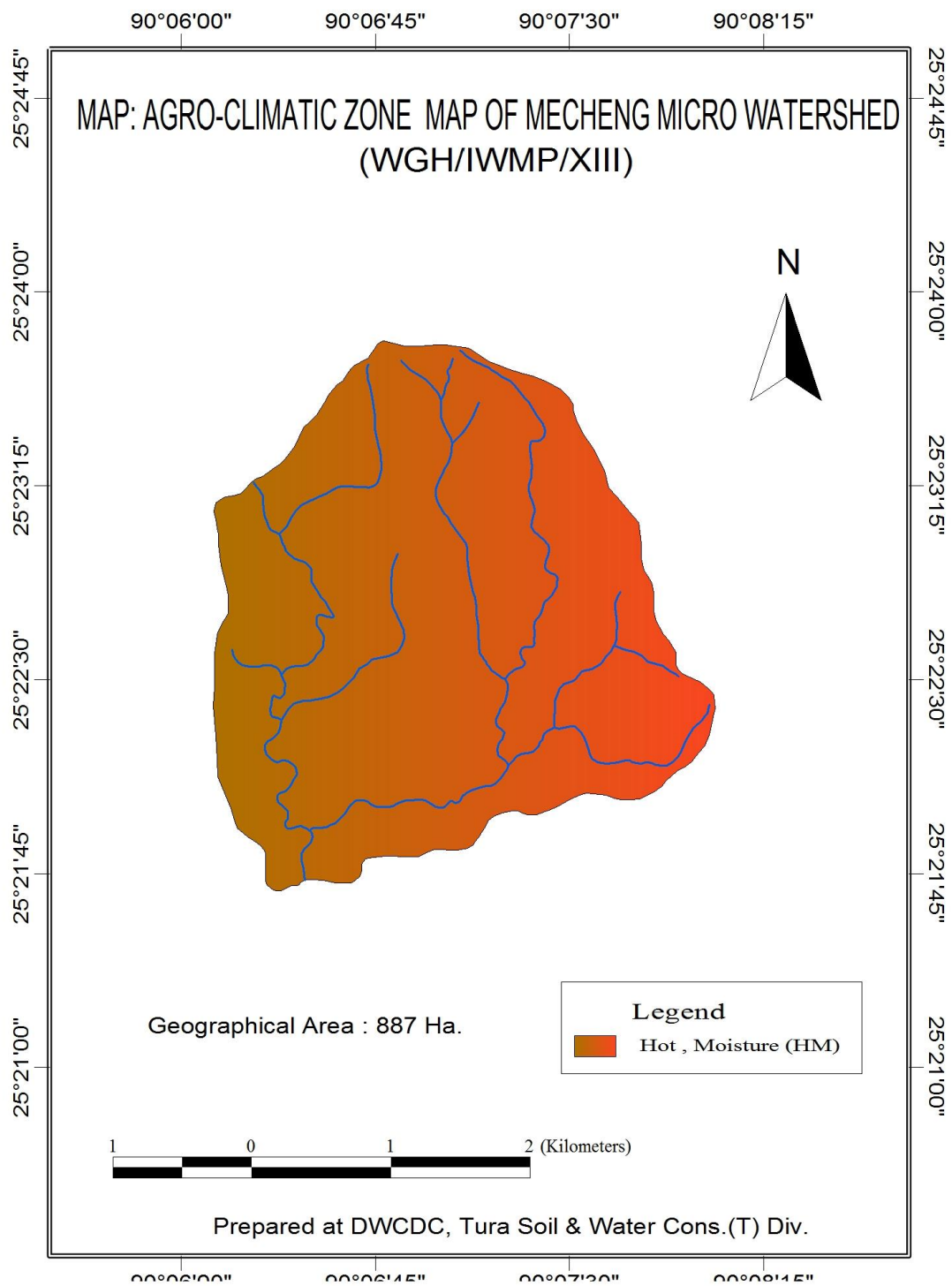


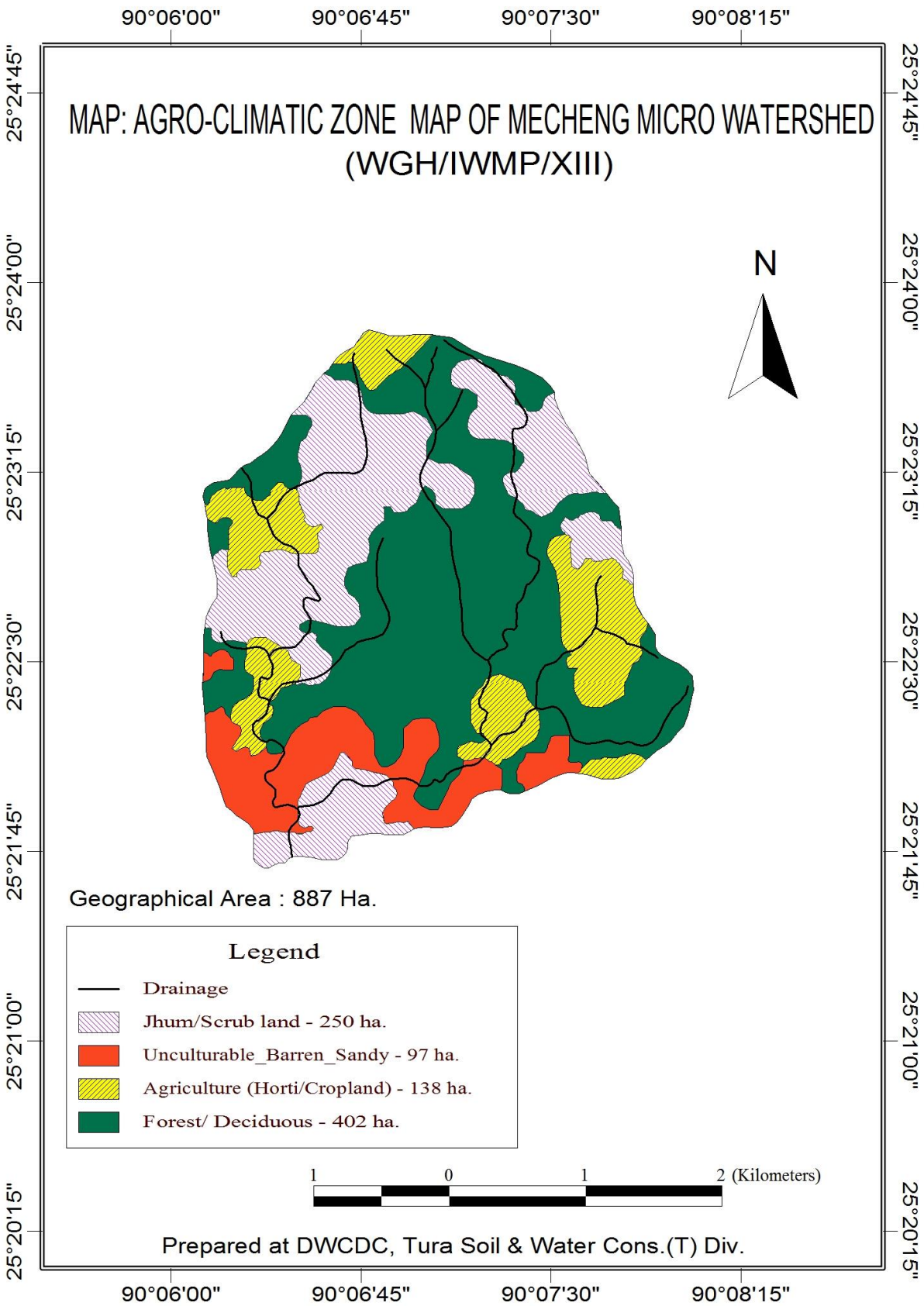
90°06'00" 90°06'45" 90°07'30" 90°08'15"

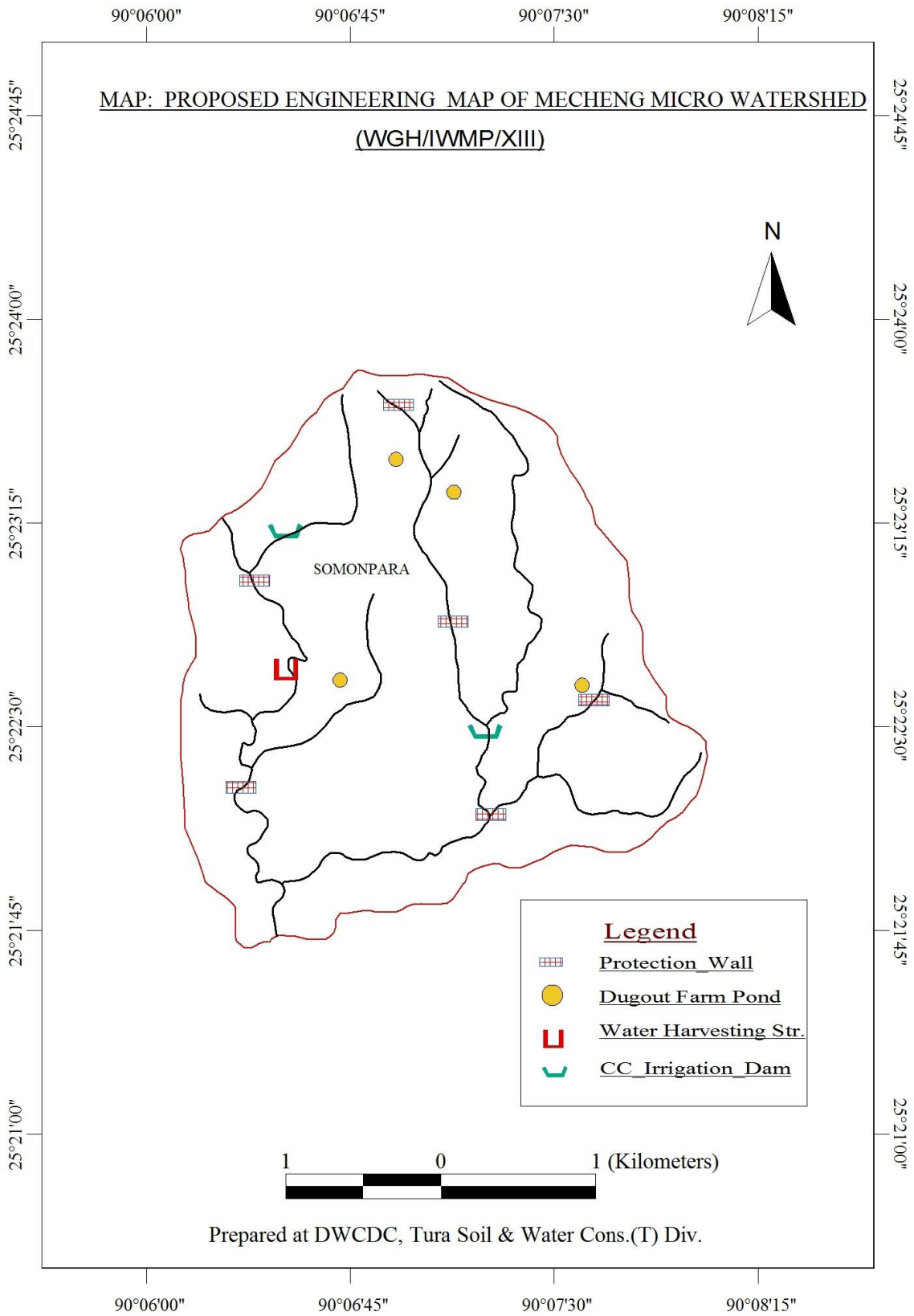


Prepared at DWCDC, Tura Soil & Water Cons.(T) Div.

90°06'00" 90°06'45" 90°07'30" 90°08'15"







ANNEXTURE –II
COST ESTIMATE

MODEL NORMS PER HACTARE FOR TERRACING (IWMP)

A. Technical Parameters .

i) Average terrace width recommended (m)	15.00
ii) Vertical Interval (VI) = $W \times S/100 - S$	2.5
iii) Terrace Length (m) = $A/W + VI$	767.00
iv) Earthwork = $12.50 \times W \times S \text{ m}^3$	1200.00
v) Shoulder Bund Length	779.00
vi) Shoulder Bund Length x-section (m^2)	0.08
vii) Earthwork for shoulder Bund (m^3)	62.32
viii) Area available for cultivation (Ha.)	0.87

B. Cost estimate .

	Amount.
i) Jungle clearance including uprooting of stumps (L/s)	2000.00
ii) Cost of terracing @ Rs. 10/- m^3	15000.00
iii) Cost of shoulder Bund @ Rs. 7/- m^3	850.00
iv) Dressing, shaping and grading of terrace	950.00
v) Water Disposal structure (L/s)	1200.00
G. Total	20000.00

(Rupees twenty thousand) only .

MODEL NORMS PER HA. FOR IMPROVEMENT OF DEGRADED FOREST (IWMP).

(Rate as per PWD SOR for R & B for 2008-09)

A. Preliminary works .

i) site clearance 3 mandays @ Rs. 100/- each	Rs.	300.00
ii) Pit digging (0.30 x 0.30 x 0.30) m 100 nos. @ Rs. 4/- each	<u>Rs.</u>	<u>400.00</u>
sub - total	Rs.	700.00

B. I st year Planting .

i) Cost of planting material 100 nos. @ Rs. 8/- each	Rs.	800.00
ii) Cost of planting 100 nos. @ Rs. 2/- each	Rs.	200.00
iii) Round weeding 4 times - 5 mandays @ Rs. 100/- each	Rs.	500.00
iv) Plant protection measures 4 mandays @ Rs. 100/- each	<u>Rs.</u>	<u>400.00</u>
sub-total	Rs.	1900.00

C. II year Planting .

i) Refilling 10%	Rs.	100.00
ii) Round weeding - 4 times- 5 mandays @ Rs. 100/- each	Rs.	500.00
iii) Plant protection measures - 4 mandays @ Rs. 100/- each	<u>Rs.</u>	<u>400.00</u>
Sub-total	Rs.	1000.00
Grand Total	Rs.	3600.00

(Rupees three thousand six hundred) only.

Model norms

COST ESTIMATE PER UNIT FOR INTEGRATED FARMING SYSTEM (IWMP).

A.	<i>Piggery ;</i>		
	<i>i) Construction of sty @ Rs. 20000/- each</i>	<i>Rs.</i>	<i>20000.00</i>
	<i>ii) Cost of Piglets - 10 nos. @ Rs. 20000/- each</i>	<i>Rs.</i>	<i>20000.00</i>
	<i>iii) Cost of feeds for 6 months (L/s)</i>	<i>Rs.</i>	<i>10000.00</i>
B.	<i>Construction of Dug out Pond (as per estimate)</i>	<i>Rs.</i>	<i>85000.00</i>
C.	<i>Supply of fingerlings -1500 nos. @ Rs.3000/- per 1000 nos. (L/s)</i>	<i>Rs.</i>	<i>4500.00</i>
D.	<i>Kitchen Garden ;</i>		
	<i>i) Site preparation including Bunding, shaping etc.</i>	<i>Rs.</i>	<i>3500.00</i>
	<i>ii) cost of F.Y.M. including cost of applicaton</i>	<i>Rs.</i>	<i>4000.00</i>
	<i>iii) Cost of equipmqnts and tools etc.</i>	<i>Rs.</i>	<i>1500.00</i>
	<i>iv) Cost of seeds including sowing etc.</i>	<i>Rs.</i>	<i>1500.00</i>
			<hr/>
	G. Total	Rs.	150000.00

(Rupees one lakh fifty thousand) only.

ESTIMATE FOR THE CONSTRUCTION OF WATER HARVESTING STRUCTURE

(Rates as P.W.D. S.O.R. for Roads, Bridges and. E&D works, 2011 – 2012)

1/134.

Excavation for structures.

(I) Ordinary Soil.
A. Manual means.
(i) Upto 3.00m depth.

Core wall - $1 \times 23.00 \times 1.20 \times 1.30 = 35.88\text{m}^3$
 L/Channel $1 \times 12.00 \times 1.40 \times 1.15 = 19.32\text{m}^3$
 = 55.20m^3

@ ₹. 50/- m³ ₹. 2,760.00

2/137.

Providing cement concrete work in 1:3:6
 foundation.....etc.

Core wall :- $1 \times 23.00 \times 1.20 \times 0.172 = 4.75\text{m}^3$

@ ₹. 4262/- m³ ₹. 20,244.50

3/141.

Plain cement concrete in open
 Foundation.....etc.

Core wall :- $1 \times 23.00 \times \frac{(0.40 + 1.00)}{2} \times 4.00 = 64.40\text{m}^3$

Channel - $2 \times 12.00 \times 0.20 \times 1.15 = 5.52\text{m}^3$
 $1 \times 12.00 \times 1.00 \times 0.10 = 1.20\text{m}^3$
 = 71.12m^3

@ ₹. 4798/- m³ ₹.3,41,233.76

4/28.

Construction of embankment.....etc.
 Dam (embankment)-

Dam :- $1 \times 23.00 \times \frac{(2.50 + 9.50)}{2} \times 3.50 = 483.00\text{m}^3$

Less - $1 \times 23.00 \times \frac{(0.40 + 0.80)}{2} \times 3.00 = (-) 41.40\text{m}^3$
 = 441.60m^3

@ ₹. 82/- m³ ₹.36,211.20

5/100

Providing and laying pitching on slopes with
Stone boulder.....etc.

Dam (U/S)-

$$1 \times 23.00 \times 4.95 \times 0.25 = 28.46\text{m}^3$$

Channel -

$$1 \times 12.00 \times 1.00 \times 0.25 = 3.00\text{m}^3$$

$$= 31.46\text{m}^3$$

$$\text{@ ₹. 1316/- m}^3 \quad \dots \quad \dots \quad \text{₹. 41,401.36}$$

6/37.

Turfing with sods.

Dam (Embankment)


$$D/S \quad 1 \times 23.00 \times 4.95 = 113.85\text{m}^2$$

$$\text{@ ₹. 72/- m}^2 \quad \dots \quad \dots \quad \text{₹. 8,197.20}$$

GRAND TOTAL: ₹. 4,50,048.02

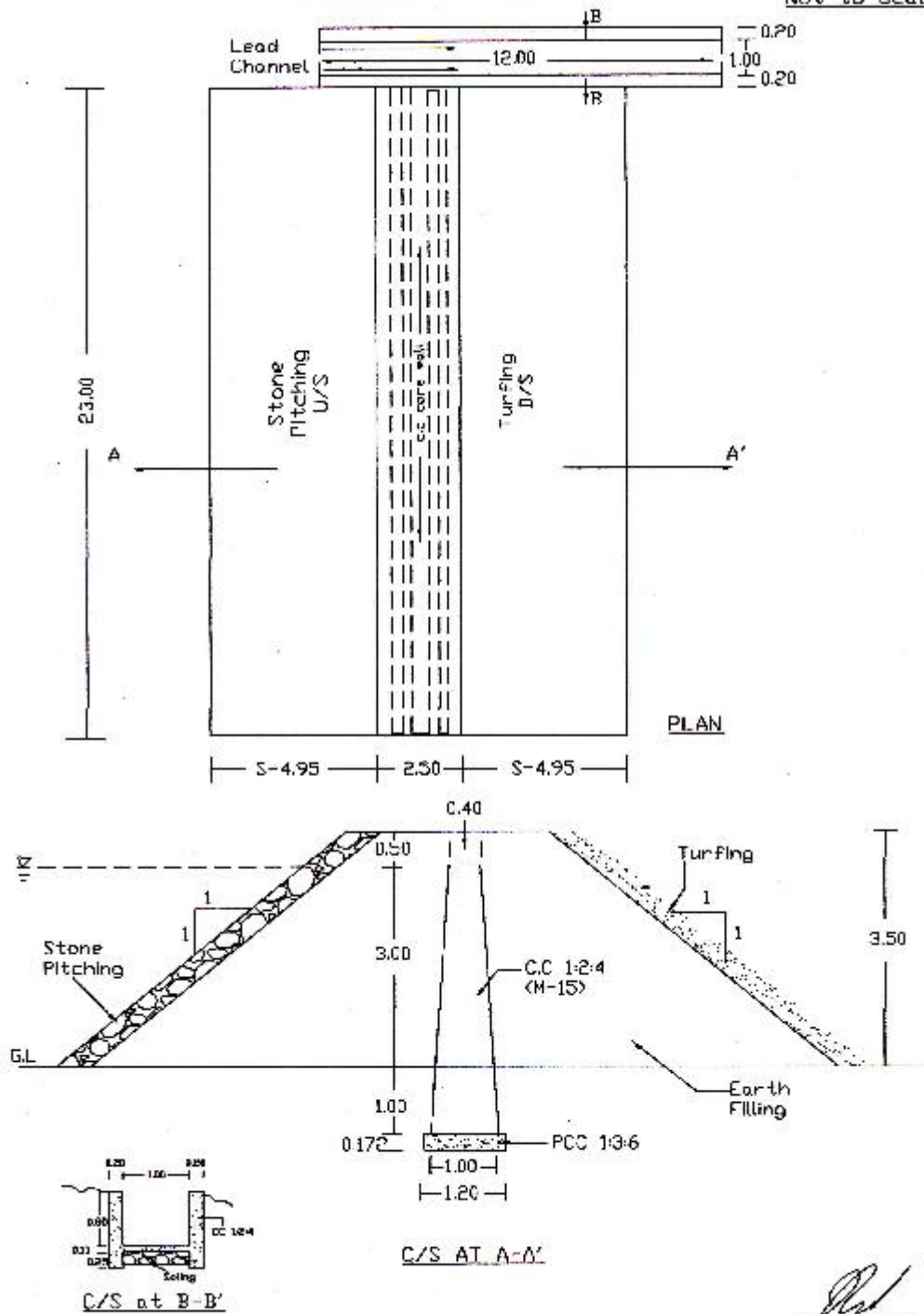
Say, ₹. 4,50,000/-

(Rupees Four lakh fifty thousand) only.


Ms. I. R. Murak
Range Officer,
Soil & Water Conservation
Range Murkhanpatti
West Garo Hills.

DRAWING OF WATER HARVESTING STRUCTURE.

Not to Scale



NB: All Dimension are in Metre

[Signature]
 Ms. I. R. Marak
 Range Officer,
 Soil & Water Conservation
 Range Machangpara
 West Garo Hills.

ESTIMATE FOR THE CONSTRUCTION OF DUG OUT POND.
(Rate as per P.W.D's S.O.R. for Roads,Bridges and E & D Works, 2011-2012)

1/30(i) Excavation in cutting in soil by manual means for
Dug Out Farm Pond:-

$$\frac{2.00(30.00 \times 25.00) + 4(28.00 \times 23.00) + (26.00 \times 21.00)}{6}$$

= 1290.67m³
@ ₹.49/-m³ ₹.63,242.83

2/ 140(b) Stone masonry work in cement mortar 1:3 in foundation.....etc.

Outlet: 1 x 7.85 x 1.80 x 0.45 = 6.36m³
2 x 7.85 x 0.60 x 0.60 = 5.65m³

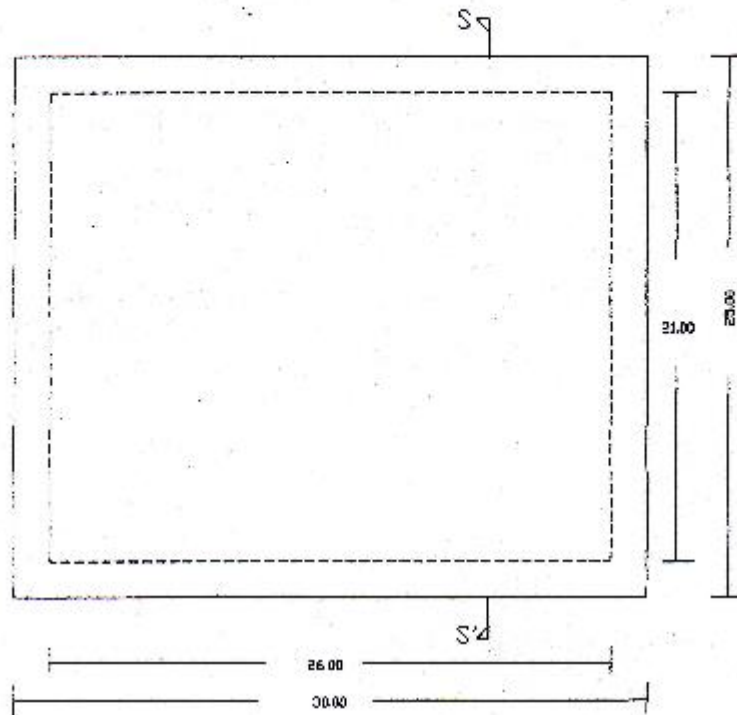
12.01m³
@ ₹.3061/ m³ ₹.36,762.61

GRAND TOTAL: ₹.1,00,005.44

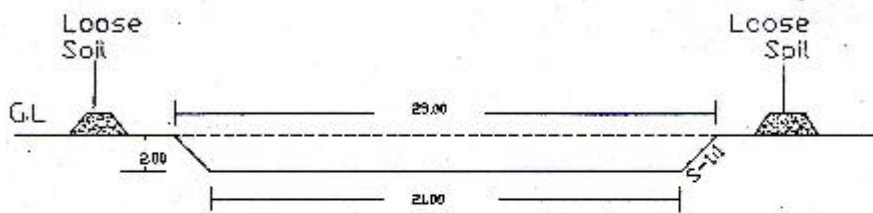
Say, ₹.1,00,000/- (Rupees One lakh)only.


Ms. I. R. Marak
Range Officer,
Soil & Water Conservation
Range Machangpuri
West Garo Hills.

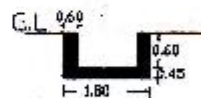
DUG OUT POND
Not to Scale



PLAN



C/S AT S-S'



C/S OF OUTLET CHANNEL.

[Signature]
Ms. I. R. Marak
Range Officer,
Soil & Water Conservation
Range Machangpant
West Garo Hills.

ESTIMATE FOR THE CONSTRUCTION OF C.C. IRRIGATION DAM WITH DISPOSAL CHANNEL.

(Rates as per P.W.D. S.O.R. for Roads, Bridges and. E&D works 2011 - 2012).

1/134.	Excavation for structures. 1) Ordinary Soil. [A] Manual Means. (i) Upto 3m depth.		
	M/Dam :	$1 \times 9.00 \times 1.20 \times 1.40$	$= 15.12m^3$
	G/wall :	$2 \times 4.60 \times 0.60 \times 1.00$	$= 5.52m^3$
	W/wall :	$2 \times 5.00 \times 0.60 \times 1.00$	$= 6.00m^3$
	I/wall :	$1 \times 6.60 \times 0.50 \times 1.20$	$= 3.96m^3$
	Apron :	$1 \times 4.60 \times 6.00 \times 0.35$	$= 9.66m^3$
	O/channel :	$1 \times 8.00 \times 1.40 \times 1.15$	$= 12.88m^3$
			$= 53.14m^3$
		@ ₹. 50/- m ³	₹. 2,657.00

2/137.	P.C.C 1:3:6 in foundation.....etc.		
	Main/Dam :	$1 \times 9.00 \times 1.20 \times 0.25$	$= 2.70m^3$
		@ ₹. 4262/- m ³	₹. 11,507.40

3/141.	Plain/reinforced c.c in open foundation complete. (A) P.C.C M- 15.		
	M/Dam :	$1 \times 9.00 \times 1.00 \times 1.10$	$= 9.90m^3$
		$1 \times 9.00 \times \frac{0.50 + 1.00}{2} \times 2.00$	$= 13.50m^3$
		$2 \times 1.50 \times 0.50 \times 0.75$	$= 1.13m^3$
	G/wall :	$2 \times 4.60 \times 0.60 \times 1.00$	$= 5.52m^3$

	$2 \times 5.50 \times \frac{0.30 + 0.60}{2} \times 2.75$	= 13.61m ³
Less :	$2 \times \frac{1}{2} \times 3.00 \times \frac{0.30 + 0.43}{2} \times 1.25$	= (-) 1.37m ³
	$2 \times \frac{1}{2} \times 0.50 \times \frac{0.50 + 1.00}{2} \times 2.00$	= (-) 0.75m ³
W/wall :	$2 \times 5.00 \times 0.60 \times 1.00$	= 6.00m ³
	$2 \times 5.00 \times \frac{0.30 + 0.60}{2} \times 2.75$	= 12.38m ³
less :	$1 \times 1.00 \times 0.50 \times 0.85$	= (-) 0.43m ³
T/wall :	$1 \times 6.60 \times 0.40 \times 1.20$	= 3.17m ³
Apron :	$1 \times 6.05 \times 6.00 \times 0.15$	= 5.45m ³
D/channel :	$2 \times 8.00 \times 0.20 \times 1.15$	= 3.68m ³
	$1 \times 8.00 \times 1.00 \times 0.10$	= 0.80m ³
		<hr/>
		= 72.59m ³

@ ₹. 5343/- m³ ₹3,87,848.37

4/140(b). Stone masonry work in cement mortar 1:3 in foundation
Complete as drawing and technical.

Apron :	$1 \times 6.00 \times 4.60 \times 0.25$	= 6.90m ³
	$1 \times 6.00 \times \frac{1}{2} \times 1.50 \times 2.00$	= 9.00m ³
D/channel :	$1 \times 8.00 \times 1.00 \times 0.25$	= 2.00m ³
		<hr/>
		= 17.90m ³

@ ₹. 3061/- m³ ₹54,791.90

5/30(i) Excavation in cutting in soil by means with lead upto 50m.

E/channel :	$1 \times 705.50 \times \frac{1.50 + 1.00}{2} \times 1.00$	= 881.88m ³
-------------	--	------------------------

@ ₹. 49/- m³ ₹ 43,212.12

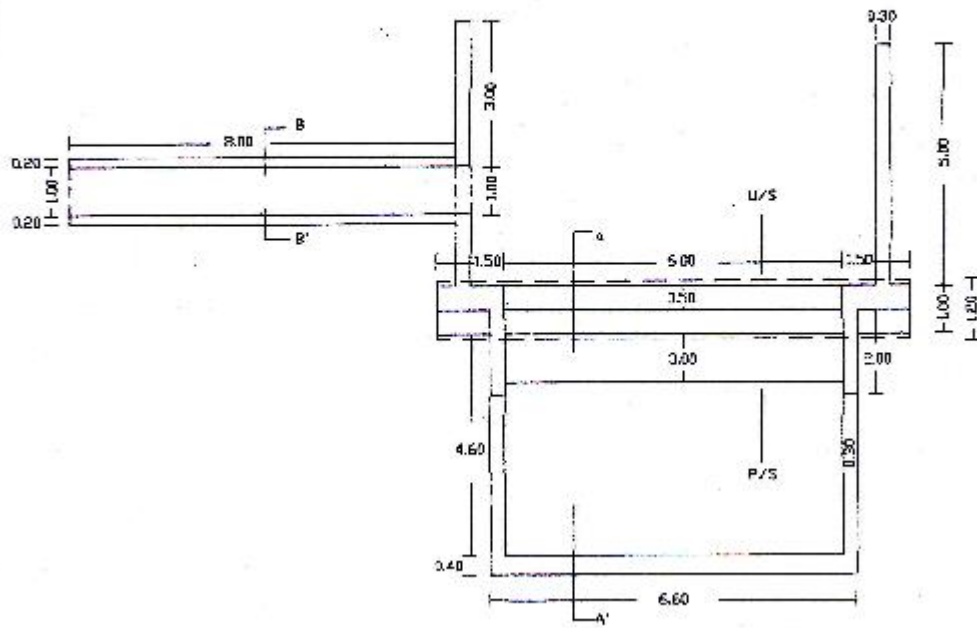
GRAND TOTAL = Rs.5,00,016.79

Say, ₹5,00,000/- (Rupees Five lakhs) only.

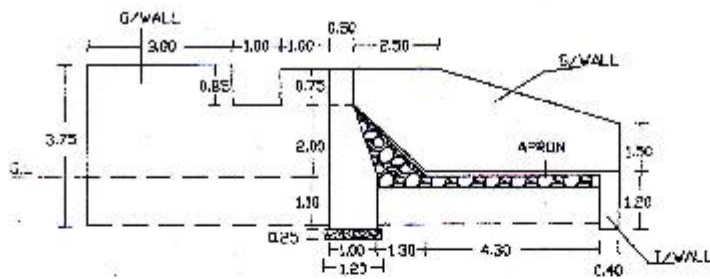

Ms. A. R. Marek
Range Officer,
Soil & Water Conservation
Range Muchangpur,
West Garo Hills.

C.I. IRRIGATION DAM WITH DISPOSAL CHANNEL

Not to Scale



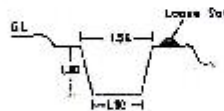
PLAN



C/S at A-A



C/S at B-B



C/S of S/Channel

[Signature]
Mr. I. R. Mank
 Range Officer,
 Soil & Water Conservation
 Range Machanapur
 West Goro Hills.

ESTIMATE FOR THE CONSTRUCTION OF C.C.PROTECTION WALL .
(Rate as per P.W.D's S.O.R. for Roads, Bridges and E&D Works,2011-2012)

1/134 Excavation for structures.

1. Ordinary soil.

A. Manual means.

(i) Upto 3.00m. depth.

1 x 12.00 x 1.00 x 1.00 = 12.00m³
@ ₹.50/-m³ ₹. 600.00

2/137PCC 1:3:6 in foundation.....etc.

1 x 12.00 x 1.00 x 0.12 = 1.44m³
@ ₹. 4262/-m³ ₹. 6,137.28

3/141 Plain cement concrete in open foundation.....etc.

(A) PCC-M15.

1 x 12.00 x 0.80 x 0.90 = 8.64m³

1 x 12.00 x $\frac{0.40 + 0.80}{2}$ x 1.50 = 10.80m³

.....
19.44m³
@ ₹. 4798/-m³ ₹. 93,273.12

GRAND TOTAL: ₹.1,00,010.40

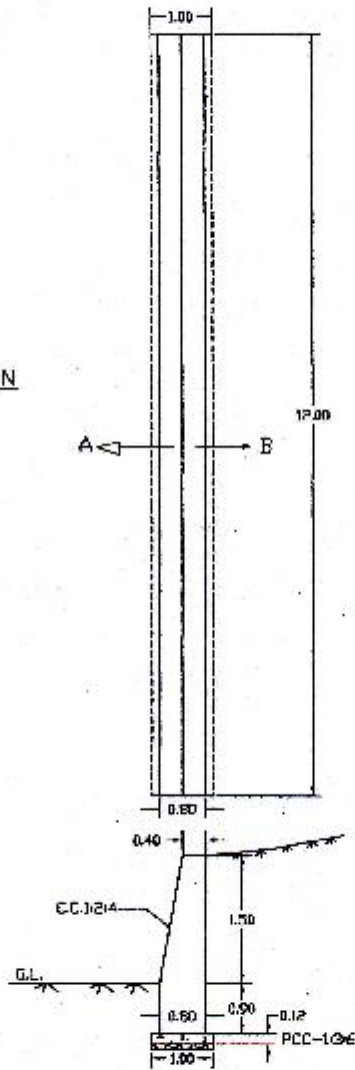
Say, ₹.1,00,000/- (Rupees One lakh)only.


Mrs. L. R. Marak
Range Officer,
Soil & Water Conservation
Range, Mochangpasi
West Garo Hills.

DRAWING OF C.C. PROTECTION WALL.

NOT TO SCALE.

PLAN



C/S. AT A-B.

NOTE: All dimensions are in metre

[Signature]
Mr. L. R. Marik
Range Officer,
Soil & Water Conservation
Range Machhindrapur
West Chiro Hills.

ESTIMATE FOR THE CONSTRUCTION OF SPRING CHAMBER WITH RESERVOIR TANK AT _____
 (Reference:- MPWD's Schedule of Rates for Building works, 2010-2011).

1/1.1	Earthwork in excavation in foundation.....etc.		
	(b)Hard soil or soil mixed with moorum gravels,boulders, etc.		
	Dam: 1 x 3.00 x 0.80 x 0.85 =	2.04m ³	
	2 x 1.00 x 0.80 x 0.85 =	1.36m ³	
	Reservoir		
	Tank : 2 x 2.70 x 0.25 x 0.50 =	0.68m ³	
	2 x 2.50 x 0.25 x 0.50 =	0.63m ³	
	1 x 2.50 x 2.50 x 0.25 =	1.56m ³	
		<hr/>	
		6.27m ³	
	@ Rs. 77/-m ³	Rs. 482.79
2/2.1	Providing and laying cement concrete in prop. 1:4:8...etc.		
	Dam: 1 x 3.00 x 0.80 x 0.10 =	0.24m ³	
	2 x 1.00 x 0.80 x 0.10 =	0.16m ³	
	Reservoir		
	Tank : 2 x 2.70 x 0.25 x 0.10 =	0.14m ³	
	2 x 2.50 x 0.25 x 0.10 =	0.13m ³	
		<hr/>	
		0.67m ³	
	@ Rs. 3859/-m ³	Rs. 2,585.53
3/4.5	Providing 100mm thick soling with approved quality of stones.		
	Reservoir		
	Tank : 1 x 2.50 x 2.50 =	6.25m ²	
	@ Rs. 166/-m ²	Rs. 1,037.50
4/2.9(a)	Providing shuttering including centering.....etc.		
	Dam: 2 x 3.00 x 0.75 =	4.50m ²	
	4 x 1.00 x 0.75 =	3.00m ²	
	2 x 3.00 x 1.20 =	7.20m ²	
	4 x 1.00 x 1.20 =	4.80m ²	
		<hr/>	
		19.50m ²	
	@ Rs. 217/-m ²	Rs. 4,231.50

Contd.....?/-

5/2.4(a) Providing and laying of cement concrete in prop. 1:2:4.....etc.

Dam:	$1 \times 3.00 \times 0.60 \times 0.75$	=	$1.35m^3$
	$1 \times 3.00 \times \frac{0.30 + 0.60}{2} \times 1.20$	=	$1.62m^3$
			2
	$2 \times 1.00 \times 0.60 \times 0.75$	=	$0.90m^3$
	$2 \times 1.00 \times \frac{0.30 + 0.60}{2} \times 1.20$	=	$1.08m^3$
			2
Deduct:	$1 \times 1.00 \times 0.30 \times 0.20$	=(-)	$0.06m^3$
Reservoir			
Tank	$1 \times 2.50 \times 2.50 \times 0.10$	=	$0.63m^3$

5.52m³

@ Rs. 4738/-m³ Rs. 26,153.76

6/3.9(a) Providing first class brick in required thickness in cement mortar

1:6.....etc.

Reservoir			
Tank	$2 \times 2.70 \times 0.25 \times 0.40$	=	$0.54m^3$
	$2 \times 2.50 \times 0.25 \times 0.40$	=	$0.50m^3$

1.04m³

@ Rs. 4983/-m³ Rs. 5,182.32

(b)(ii) Thickness- 12.50cm.

Reservoir			
Tank	$2 \times 2.70 \times 1.00$	=	$5.40m^2$
	$2 \times 2.50 \times 1.00$	=	$5.00m^2$

10.40m²

@ Rs. 668/-m² Rs. 6,947.20

7/4.1 Providing 12mm thick cement plaster including cleaning the surface.....etc.

(b) Proportion- 1:3.

Dam:	$2 \times 3.00 \times 1.20$	=	$7.20m^2$
	$4 \times 1.00 \times 1.20$	=	$4.80m^2$

Contd...3/-

Reservoir			
Tank	4 x 2.73 x 1.00 =	10.80m ²	
	4 x 2.50 x 1.00 =	10.00m ²	
	1 x 2.50 x 2.50 =	6.25m ²	

39.05m²

@ Rs. 135/-m² Rs. 5,271.75

8/11.22 Providing and fixing 25mm dia pipe including necessary sockets...etc.

(a) G.I. Pipe.

Length = 168.00 metres.

@ Rs. 213/-m. Rs. 35,784.00

9/ 11. 18 Providing and fixing 15mm dia G.I. Pipe with necessary sockets, etc.

(a)(i) G.I. Pipe.

2 nos. x 1.00 = 2.00 metres.

@ Rs. 142/-m. Rs. 284.00


10/11.20 Supplying and fitting pipe fitting complete as directed.

(b) 12mm dia bib cock (brass).

2 nos. @ Rs. 304/-each. Rs. 608.00

GRAND TOTAL: Rs. 88,568.35

Say, Rs. 88,500/- (Rupees eighty eight thousand five hundred) only.


Mr. T. R. Murak
Range Officer,
Soil & Water Conservation
Range Machanagoud
West Gero Hills.

ANNEXTURE –III

MoA, SUB COMMITTEE DETAILS

Smt. Kimje Ch. Sangma

Nokma

Chigitchakgre A'king II-14(51)

P.O. Gambegre

Dist. West Garo Hills

Meghalaya



Date : _____

Nokmani See on ani

Anga Smt. Kimje Ch. Sangma, Chigitchakgre A. Kingri Nokma indake see oning chongmotan angri. A. Kingri ringo Soil & Water conservation Department Water shed Project-ko ra. ani bidingo maonungbe kenchakani ba Champungani dongjana. Anga angri Chua Mahari baksa kumong nangrima gisik in been bimang an. Senge see oning.

Iako see on. enggibe,

Smt. Kimje Ch. Sangma
Nokma II-14 (51)
Chigitchakgre A'king
West Garo Hills

Ms. Chelme Ch. Marak

Nokma

Gamboge, Achapara A-king II-14 (41, 49)
P.O. Gamboge,
West Garo Hills,
Meghalaya.



Date: 16-4-2012

To whom it may concern,
Execution No objection certificate

Anga Smt. Chelme Ch. Marak of
Gamboge King Nokma Mechi, P.O. Gam-
boge, P. S. Tura, State of Meghalaya Jomo
Soll Dept. of Development in district
Schemraungto Gamboge Pongna
Kabal dakena gita, sic orang. Je
nasmaga budi, dang tungtung Schem-
rang Nongachim, lat angto angni akung
dang gita, Gamboge Pongna Kabang
development kamrangto gabrangto angna
nasmaga complian no objection dangja
mitela

R. T. J.



16/4/2012

Signature
Smt. J. Ch. Saroma
Secretary
Gamboge King Nokma II-14(41, 49)
P.O. Gamboge
West Garo Hills, Meghalaya.

Ms. C Ch. Marak
Nokma II-14 (41 49)
Gamboge, Achapara A-king
West Garo Hills.

Shri Jonsing Marak

Nokma

Rakuapara A-king II-18 (19)

P.O. Chenggapara

Dist. West Garo Hills,

Meghalaya



Date: _____

Nokmani Lu on. ani

Anga Shri. Jonsing Marak Rakuapara
A-kingri Nokma, P.O. Chenggapara, West
Garo Hills, Meghalaya, indaki see
on. engga Chongmotan Soil & water
conservation department watershed
Project-na ma. ani bidding namung.
ba complain ba Champengani
dongjawa.

Jonsing Marak

Pe J N Marak
Nokma II-18 (19)
Rakuapara A King
West Garo Hills.

Pa Debilson D. Sangma

Nokma

Sumonpara A-king II-19 (27)
P.O. Gambegre,
Dist. West Garo Hills,
Meghalaya.



Date: _____

Nokmani See on. ani

Anga Pa. Debilson D. Sangma Sumonpara
A-king-ni Nokma indake See on. enga
je angri A-kingni ningo soil & water
conservation department watershed
project-na raani bidingo mamungke
Champengani ba kenchakna nangni
dongjawa ine anga been bimang ni-
Senge Chua Mahavi baksa aganchan
Chizuki See on. enga

Tako See on. engga

Pa. Debilson Sangma.

Nokma
Shri, Debilson D. Sangma
Somonpara A. king
West Garo Hills.

Khiljan Marak
Kokma
Badupara Aking II-18(17)
P.O. Chenggapara
Dist. West Garo Hills
Meghalaya.




Date: _____

Sub:- Soil conservation na

Det: Ba-ania-ba-je Shime
Ba-ba, en. a amani gimin
Nehma. No Comment Su
on. ani: -

Anga. angni Abingni ningeniko
Soil conservation office na ba departh-
ment na. a. ako. Nehma ni Shem sangna
anga. on. eng. uni gimin gearangni
(ba) departhment ni kesako. mamung-
complaint dongjawa wo ben. Chahoni
dongjawa inu anga. No Comment Su
on. atenga. Ja. No Comment ko. Su on-
atgipa. Ba Dupara Abingni Nehma:

Shri. Khiljan - Marak -

General Sely - 
General Secretary
Badupara, West Garo Hills


LT 114
Shri. Khiljan M. Marak
Aking Mekan, V.O. Badupara
West Garo Hills

Shri Nangson Pangma

Nokma

Sengminpara A-king II - 19 (26)
P.O. Chenggapara,
West Garo Hills,
Meghalaya.



Date: _____

Nokmari See on ani

Anga Shri Nangson Pangma Sengmin-
para A-king-ii Nokma, indaku see
on eng je anga A-king-ii rings
Soil & Water Conservation Department
Water Shed Project - ko raani bidings
ma onung Chonopengani be Komplain
dongjawa. Iako anga be on bhang
an ring see on eng.

Iako see on engi pa

Shri N. Nangson
Sengminpara A-king II - 19 (26)
P.O. Chenggapara,
West Garo Hills

AGREEMENT FOR CONVERGENCE OF SCHEME

The Village Employment Councils (VEC) and the Communities of Gambegre
Villages, Gambegre Blocks, West Garo Hills, Meghalaya have no objection to the
Convergence of MGNREGS with Integrated Management Project (IWMP) at Gambegre
& Sikuli villages/Village Under Sikuli Micro
Watershed, WGH IWMP XIV being implemented by Tura Soil & Water Conservation (T) Division.

We also agreed to allocate and commit Funds for Wage as well as material component under
MGNREGS in our Annual Work Plan for various Soil & Water Conservation Works which shall be taken up
during the Project Period (2013 to 2017). The wage and material component
under MGNREGS shall be utilized for following works.

1. Dugout Pond.
2. Wet Terrace.
3. Areca nut Plantation.
4. Rubber Plantation.
5. Stone Masonry Protection Wall.
6. Earthen Irrigation channel.


President,
Gambegre V. E. C.
West Garo Hills.


Secretary,
Gambegre V. E. C.
West Garo Hills.

AGREEMENT FOR CONVERGENCE OF SCHEME

The Village Employment Councils (VEC) and the Communities of Gambagra
Villages, Gambagra Blocks, West Garo Hills, Meghalaya have no objection to the
Convergence of MGNREGS with Integrated Management Project (IWMP) at Gambagra
& Chikhi villages/Village under Gambagra Micro
Watershed. WGH-IWMP XIII being Implemented by Tura Soil & Water Conservation (I) Division.

We also agreed to allocate and commit Funds for Wage as well as material component under
MGNREGS in our Annual Work Plan for various Soil & Water Conservation Works which shall be taken up
during the Project Period (2013 to 2018). The wage and material component
under MGNREGS shall be utilized for following works.

1. Dugout Pond.
2. Wet Terrace.
3. Areca nut Plantation.
4. Rubber Plantation.
5. Stone Masonry Protection Wall.
6. Earthen Irrigation channel.


President,
Gambagra V. E. C.
West Garo Hills.


Secretary,
Gambagra V. E. C.
West Garo Hills.

AGREEMENT FOR CONVERGENCE OF SCHEME

The Village Employment Councils (VEC) and the Communities Sungmaipara Villages, Gambaga Blocks, West Garo Hills, Meghalaya have no objection to the Convergence of MGNREGS with Integrated Management Project (IWMP) at Sungmaipara & _____ villages/Village under Asokan Micro Watershed, WGH-IWMP XIII being implemented by Tura Soil & Water Conservation (T) Division.

We also agreed to allocate and commit Funds for Wage as well as material component under MGNREGS in our Annual Work Plan for various Soil & Water Conservation Works which shall be taken up during the Project Period (2012 to 2014). The wage and material component under MGNREGS shall be utilized for following works.

1. Dugout Pond.
2. Wet Terrace.
3. _____
4. Areca nut Plantation.
5. _____
6. Rubber Plantation.
7. _____
8. Earthen irrigation channel.


Secretary
Sungmaipara V.E.C.
West Garo Hills.

Shri Nangson Sangma



President
Sungmaipara V.E.C.
West Garo Hills.

L.T.J.D.

AGREEMENT FOR CONVERGENCE OF SCHEME

The Village Employment Councils (VEC) and the Communities Jengchamgru & Jengchamgru
Villages, Ganbegri Blocks, West Garo Hills, Meghalaya have no objection to the
Convergence of MGNREGS with Integrated Management Project (IWMP) at Jengchamgru
& Jengchamgru villages/Village under Sokchou Micro
Watershed, WGH-IWMP being implemented by Tura Soil & Water Conservation (S) Division.

We also agreed to allocate and commit Funds for Wage as well as material component under
MGNREGS in our Annual Work Plan for various Soil & Water Conservation Works which shall be taken up
during the Project Period (_____ to _____). The wage and material component
under MGNREGS shall be utilized for following works.

1. Dugout Pond,
2. Wet Terrace,
3. Areca nut Plantation,
4. Rubber Plantation,
5. Stone Masonry Protection Wall,
6. Earthen Irrigation channel.

Ranjit Sangma
President
Jengchamgru V.E.C.
West Garo Hills.

Jengchamgru
Secretary,
Jengchamgru V.E.C.
West Garo Hills.