DETAILED PROJECT REPORT

DERIK, CHIJAGANG, LOWER BONGBONG & UPPER PAKREK WATERSHEDS

EAST GARO HILLS, INTEGRATED WATERSHED MANAGEMENT PROGRAMME

EGH – IWMP –VII

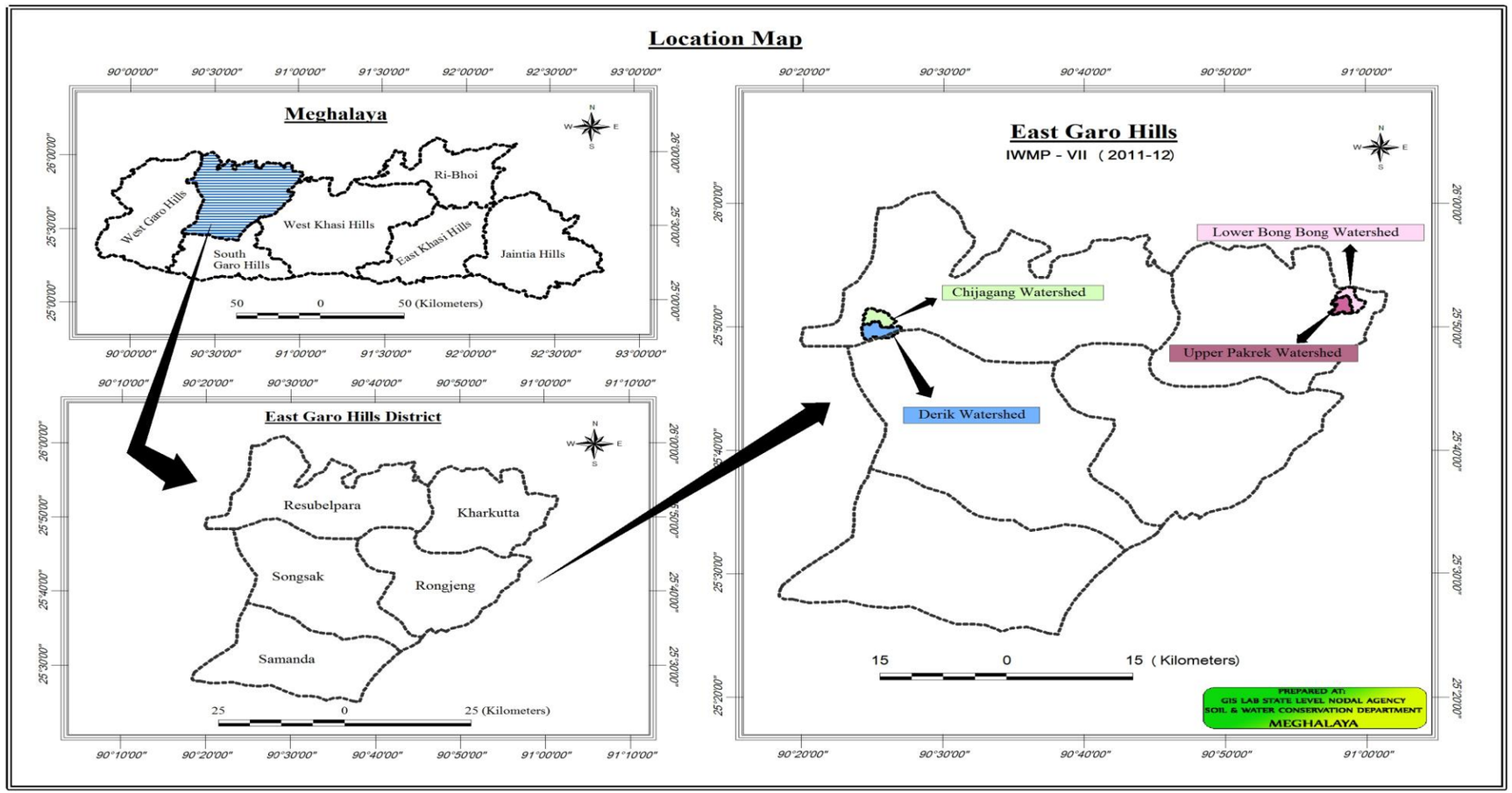
2011– 2012

RESUBELPARA & KHARKUTTA C.& R.D. BLOCK

EAST GARO HILLS DISTRICT

MEGHALAYA

LOCATION MAP


Location Map
Meghalaya
West Garo Hills
Ri-Bhoi
West Khasi Hills
South Garo Hills
East Khasi Hills
Jaintia Hills
50 0 50 (Kilometers)
East Garo Hills District
Resubelpara
Kharkutta
Songsak
Rongjeng
Samanda
25 0 25 (Kilometers)
East Garo Hills
IWMP - VII (2011-12)
Lower Bong Bong Watershed
Chijagang Watershed
Upper Pakrek Watershed
Derik Watershed
15 0 15 (Kilometers)
PREPARED AT:
GIS LAB STATE LEVEL NODAL AGENCY
SOIL & WATER CONSERVATION DEPARTMENT
MEGHALAYA

S U M M A R Y

Name of the State	:	Meghalaya.
Name of the District	:	East Garo Hills District.
Name of the C&RD Block	:	Resubelpara & Kharkutta C&RD Block.
Name of the Villages	:	Bekbekgre, Aruakgre, Korepara Songganget, Korepara Chijagang, Korepara Songgitcham, Adokgre, Norangga, Chigrang & Matchadu.
Name of the Project	:	EGH – IWMP – VII.
Total Geographical Area	:	2551 Ha.
Total Treatment Area	:	2000 Ha.
Total Project Cost	:	300 lakhs.
Project Duration	:	5 Years.
Project Implementing Agency	:	Simsanggre Soil & Water Conservation Division, Williamnagar.

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CHAPTER I

INTRODUCTION AND BACKGROUND

CHAPTER I

INTRODUCTION AND BACKGROUND

1.1 Project Background:

The East Garo Hills IWMP- VII project is located in Resubelpara & Kharkutta C&RD Block, East Garo Hills District of Meghalaya. Consisting of a single micro-watershed, the project area is drained by the Derik, Chijagang, Bongbong & Pakrek Stream and its tributaries flowing in an east to north direction. The total area is 2551 Ha. with 2000 ha to be treated under the Integrated Watershed Management Programme (IWMP).

The Project area (Derik & Chijagang Watershed) is located at a distance of about 40 km and 42 km respectively from Resubelpara Block Head Quarter and about 110 km from Williamnagar the District Headquarter. The Project area (Lower Bongbong & Upper Pakrek Watershed) is located at a distance of about 12 km and 15 km respectively from Kharkutta Block Head Quarter and about 125 km from Williamnagar, the District Headquarter. A total of 9 (nine) villages are covered under the project. These are –

1. Bekbekgre
2. Aruakgre
3. Korepara Chijagang
4. Korepara Songgitcham
5. Korepara Songgangget
6. Adokgre
7. Norangga.
8. Chigrang
9. Matchadu

1.2 Micro-watershed Information:

The micro-watershed code is 3B1B3b3e, 3B1B3b3f, 3B1C1a5a, 3B1C1a5b, 3B1C1a5d & 3B1C1a1d as codified by the North East Space Application Centre (NESAC). The total area of the Micro-watershed is 2551Ha. with 2000 hectares to be treated under the Integrated Watershed Management Programme (IWMP).

1.3 Need and Scope for Watershed Development:

The micro-watershed 3B1B3b3e, 3B1B3b3f, 3B1C1a5a, 3B1C1a5b, 3B1C1a5d & 3B1C1a1d falls under the High Priority category as per the prioritization of watersheds by the North East Space Application Centre (NESAC). Located on the slopes of the East Garo Hills Plateau the 8 villages have no road connectivity but under the construction. The farmers are all marginal and 75 households are below the poverty line, which is 589 of the total households. 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. MGNREGS – Convergence sheet Enclosed

CHAPTER II

BASIC INFORMATION OF THE PROJECT AREA

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BASIC INFORMATION OF THE PROJECT AREA

2.1 Location:

The Project area is located within the area of Aking Land under Resubelpara C&RD Block of Williamnagar, East Garo Hills District. It is situated at a distance of about 40 km from Resubelpara block Head Quarter and about 110 km from Williamnagar the District Headquarter. The Project area is located within the area of Aking Land under Kharkutta C&RD Block of Williamnagar, East Garo Hills District. It is situated at a distance of about 40 km from Kharkutta block Head Quarter and about 125 km from Williamnagar the District Headquarter. The geographical location of Chijagang Watershed is between $25^0$50'00" to $25^0$51'30" Latitude and $90^0$24'15" to $90^0$26'45" Longitude, Derik Watershed is between $25^0$50'00" to $25^0$50'30" Latitude and $90^0$15'00" to $90^0$27'00" Longitude, Upper Pakrek Watershed is between $25^0$51'00" to $25^0$51'15" Latitude and $90^0$58'15" to $91^0$00'00" Longitude, Lower Bongbong Watershed is between $25^0$45'00" to $25^0$53'15" Latitude and $90^0$45'00" to $91^0$00'00" Longitude. There are nine villages within the Watershed which are as follows –

1. Bekbekgre
2. Aruakgre
3. Korepara Songangget
4. Korepara Chijagang
5. Korepara Songgitcham
6. Adokgre
7. Norangga
8. Chigrang
9. Matchadu

Out of the 9 (nine) villages except Korepara Songgitcham, there is no Motorable road. However road construction works are going under MNREGS in some of the villages.

2.2 Physiography:

The physiography of the micro-watersheds is highly undulating. The altitude ranges from a minimum of 62m to a height of 560m above mean sea level. In the lower reaches (valley lands) the slope ranges from 5 to 70%.

Table 2.1: Physiographic details

Elevation (metres)	Slope Range (%)	Order of watershed Sub/Micro-watershed	Major streams	Topography
62-560m	5% -70%	Micro Watershed	Derik, Chijagang, Lower Bongbong & Upper Pakrek	Moderately sloping

Drainage: The major streams draining the micro-watershed are the Derik, Chijagang, Bongbong & Pakrek which is a 3rd order stream flowing in a East-North direction.

The slopes of the micro-watershed are dissected by numerous small tributaries flowing to the Derik, Chijagang, Bongbong & Pakrek.

2.3 Soil: Soil Texture is medium throughout the watershed. Soil depths are quite deep. Soils are permeable and generally acidic in nature. Owing to undulating land form and absence of good vegetation cover, the area is exposed to erosion hazards. The soil nutrient status in the area shows a general trend of low phosphorous content. Soil texture is loamy.

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	East Garo Hills	East Garo Hills IWMP-VII	Water erosion:				
				a	Sheet	2000	2700- 3200	10.50 - 32.50
				b	Rill			
				c	Gully			
				Sub total		2000		
				Wind erosion		Nil	Nil	Nil

2.4 Climate: Th

e area in the foothills or low lying areas and mid-slopes are hot in summer and remain warm throughout the winter. The area on the higher reaches is warm during summer and cold during winter. The average annual rainfall is 3355 mm.

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 Hypothermic Plateau 62-560m	2551 Ha.	East Garo Hills	East Garo Hills IWMP –VII	Loam, Clay Loam.	2551 Ha	3355 mm	Betel nut	350 Ha.
									Betel leaf	-
									Oranges	-
									Paddy	345 Ha.
									Ginger	111 Ha.
									Black pepper	-
									Litchi	-
									Banana	-
									Pineapple	-
								Total	**-**	**806 Ha.**

2.5 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 2 years. The principal agricultural crops grown of the jhum fields are rice, millet, maize, ginger, yam and vegetables. Fruit crops are well suited in the lower reaches which include banana, pineapple and jackfruit. The slopes of the Derik, Chijagang, Lower Bongbong & Upper Pakrek are also very suitable for betel nut, betel leaf etc. which contribute to the income of the people.

Table 2.4: Crop yield and production

Crops	Area (ha)	Average Yield (Qtl) per ha.	Total Production (Qtl.)
Soyabean			
Paddy	345	19.36	6680
Millet			
Yam			
Ginger	111	56	6216
Tapioca			
Betel nut	350	13.50	4725
Betel leaf			
Black Pepper			
Oranges			
Bay Leaf			

2.6 Natural Vegetation: The tree species common to the watershed area includes – Shorea robusta,Schima walichii,Termenalia belerica, Emblica officinalis, Bahunia variegata Duabanga spp. and Ficus spp. However, due to jhum cultivation the forest cover of the area has reduced considerably.

2.7 Socio-Economic Profile: Economically, the area is perhaps one of 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.

Demographic Status: The total households in the watershed project is 589 Nos. with a total population of 3048, of which 1565 are male and 1483 are female. The detail of the household in each of the villages in the watershed project is as follows:

1.	Bekbekgre	-	119 Nos.
2.	Aruakgre	-	112 Nos.
3.	Korepara Chijagang	-	40 Nos.
4.	Korepara Songgitcham	-	88 Nos.
5.	Korepara Songangget	-	46 Nos.
6.	Adokgre	-	56 Nos.
7.	Norangga	-	62 Nos.
8.	Chigrang	-	25 Nos.
9.	Matchadu	-	41 Nos.
	TOTAL		**589 Nos.**

Infrastructure facilities **:**

2.1.1 *Roads:* All the villages within the Project Area are connected by road.

2.1.2 *School:* there are only 9 L.P Schools & 5 Nos. U.P. Schools within the Project Area run either by the Mission or by the Government.

2.1.3 *Electricity :* There is electricity connection to the villages.

2.1.4 *Health :* There is CHC & PHC in the Project area. The nearest PHC is Kharkutta & Bajengdoba.

2.1.5 *Water Supply :* Natural stream. Drinking Water facility is not yet provided in any of the villages. The villager are getting potable water

2.1.6 *Market :* There is a weekly market held once in a week at Adokgre & Gokgol . However, the main markets where the people sell their produce are at Bajengdoba & Kharkutta.

Table 2.5: Infrastructure Status.

1	*2*	*3*		*4*			
Name of District	Name of Project	Parameters:		Status			
East Garo Hills	East Garo Hills –IWMP- VII	(i)	No. of villages connected to the main road by an all-weather road.	Adokgre, Norangga, Aruakgre , Bekbekgre, Korepara Chijagang & Korepara Songangget.			
		(ii)	No. of village provided with electricity	NIL			
		(iii)	No. of households without access to drinking water	NIL, but potable drinking water is not available.			
		(iv)	No. of educational institutions: Primary (P)/ Secondary (S)/ Higher Secondary (HS)/ Vocational institution (VI)	(P)	(S)	(HS)	(VI)
				9 Nos.	1 No.	-	-
		(v)	No. of village with access to Primary Health Centre	9 Nos.			
		(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	9 Nos.			
		(ix)	No. of village with access Markets/ mandis	9 Nos.			
		(x)	No. of village with access Agro-Industries	Nil			
		(xi)	Total quantity of surplus milk	Nil			
		(xii)	No. of milk collection centres (e.g. Union (U)/ Society (S)/ Private agency (PA)/ Others (O))	(U)	(S)	(PA)	(O)
				Nil	Nil	Nil	Nil
		(xiii)	No. of villages with access to Aganwadi Centres	9 Nos.			
		(xiv)	Any other facilities with no. of villages (please specify)	Nil			

2.8 Livestock: there are only 4(four) kinds of livestock farming being farmed in the area viz. Piggery, Poultry, Cattle Rearing, & Goattery.

Table 2.6: Existing livestock population

Type of Animal	Population
Piggery	358
Poultry	5077
Cattle Rearing	861
Goattery	21
Total	**6317**

2.9 Land ownership: There are primarily 1(one) types of land holding system, namely Aking Land.

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
East Garo Hills	East Garo Hills – IWMP-VII	(i) Large	Nil	Nil	Nil	Nil	Nil
		(ii) Small	Nil	Nil	Nil	Nil	Nil
		(iii) Marginal	514 Nos.	Nil	Nil	724 Ha.	724 Ha.
		(iv) Landless	Nil	75 Nos.	Nil	Nil	Nil
		Sub – Total :	514 Nos.	75 Nos.	Nil	724 Ha.	724 Ha.

Table 2.8: 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)
East Garo Hills	East Garo Hills – IWMP-VII	(i) Wasteland/ degraded land	-	-	-	185 Ha.	-	-	-	611 Ha.
		(ii) Pastures	-	-	-	-	-	-	-	-
		(iii) Private Agriculture land	724 Ha.	-	-	-	211.5 Ha.	-	-	-
		(iv) Village woodlot	-	-	-	-	-	-	-	-
		(v) Forest	-	-	-	153 Ha.	-	-	-	565 Ha.
		(vi) Village Ponds/ Tanks	-	-	-	-	-	-	-	-
		(vii) Community Buildings	-	-	-	5 Nos.	-	-	-	-
		(viii) Weekly Markets	-	-	-	-	-	-	-	-
		(ix) Permanent Markets	-	-	-	-	-	-	-	-
		(x) Temples/ Places of worship	-	-	-	7 Nos.	-	-	-	-
		(xi) Others (Pl. specify) Jhum Land	-	-	-	1489 Ha.	-	-	-	612.5 Ha.
		Total	**724 Ha.**	**-**	**-**	**1827 Ha.**	**211.5 Ha.**	**-**	**-**	**1788.5 Ha.**

2.10 Land use and land cover : As per the land use land cover map generated by NESAC, Meghalaya from Satellite Image taken during 2005 – 2006 (LISS – III, Image) the Watershed area has been broadly classified into the following land uses.

a)	Built-up Area	=	57	Ha.
b)	Water bodies-River/Stream-Perennial	=	-	Ha.
c)	Agricultural land-crop land-kharif crop	=	724	Ha.
d)	Tree clad Area-close	=	153	Ha/
e)	Tree clad Area-open	=	1432	Ha.
f)	Wastelands-barren Rocky/Stony waste	=	185	Ha.
	Total	**=**	**2551**	**Ha.**

2.11 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 Broomstick cultivation areas which have further degraded the capability of the land. Mention may also be made here that the land use categorized as Tree-clad Area-open in the land used land cover map generated using Satellite Images of 2005 – 2006 are actually Broom-stick cultivation areas. In other words, unscientific method of cultivation has not only reduced the Jhum cycle, low crop yield but had adversely affected the ecological balance within the area. 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 conducted in all the villages within the Watershed.

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 North Eastern Space Application Centre (NESAC) using the LISS III images (2006). 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*	*3*
Sl.No.	**Scientific criteria/ inputs used**	**No. of projects in which scientific criteria were used**
A.	**Planning**	
	Cluster approach	Yes,
	Whether technical back-stopping for the project has been arranged? If yes, mention the name of the Institute.	Yes, (i) NESAC, Nongsder (ii) SNLA GIS Lab, Shillong
	Baseline survey	Yes
	Hydro-geological survey	No
	Contour mapping	Yes
	Participatory Net Planning (PNP)	Yes

1	*2*	*3*
	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)#	Yes
	Weather Stations	No
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	Yes
	9. Automatic water level recorders & sediment samplers	No
	Any other (please specify)	-

3.2 Project Implementing Agency:

The PIA is the Soil & Water Conservation Territorial Division, Williamnagar, East Garo Hills District of Meghalaya. The Project Manager will be the Divisional Soil and Water Conservation Officer and will be assisted by an Asst. Soil & Water Conservation Officer along with WDT members in which expertise is drawn from the relevant fields for achieving smooth and successful implementation of the project.

1	*2*	*3*	
Names of District	Names of projects	Details of PIA	
East Garo Hills	East Garo Hills – IWMP-VII	(i) Type of organization	Government
		(ii) Name of organization	Simsanggre Soil & Water Conservation (T) Division, Williamnagar.
		(iii) Designation & Address	Divisional Soil & Water Conservation Officer, Simsanggre Division, Williamnagar.
		(iv) Telephone	03658-220228
		(v) Fax	-Do-
		(vi) E-mail	dswcosimsanggre@gmail.com

3.3 Institution Building

i) Watershed Committee (WC)

The Watershed Committee of the East Garo Hills IWMP –VII was constituted with the active involvement of the villagers with strong support of the Traditional Institutions (Village Nokma/Council). The East Garo Hills IWMP –VII Watershed Committee has been registered under the Society Registration Act 1860.

Table 3.2: Details of Watershed Committees (WC):

1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*16*	*17*	*18*
Names of the Districts	Names of projects	Names of WCs	Date of Registration as a Society (dd/mm/ yyyy)	Designation	M/F	SC	ST	SF	MF	LF	Land-less	UG	SHG	GP	Any other	Educa-tional Qualify-cation	Function/s assigned#
East Garo Hills	East Garo Hills – IWMP-VII	East Garo Hills IWMP-VII Watershed Committee		President	4 M	-	ST										A to I
				Secretary	2 M	-	ST										-Do-
				Member	26 M	-	ST										-Do-
				Member	10 F	-	ST										-Do-

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

ii) Self Help Group

Awareness programmes were organized in the villages to inform and sensitize the people on the essence of organizing themselves in to homogenous groups for uplifting their livelihood especially for the women and the landless. Discussions were held at length with the WDT on the scope and procedure of group formation, availing credit, grading of the groups and so on.

Table 3.3: Details of Self Help Groups (SHGs) in the project areas:

1	*2*	*3*				*4*				*5*			*6*		
Names of the District	Names of projects	Total no. of registered SHGs				No. of members				No. of SC/ST in each category			No. of BPL in each category		
		With only Men	With only Women	With both	Total	Categories	M	F	Total	M	F	Total	M	F	Total
East Garo Hills	East Garo Hills IWMP-VII	3	5	2	10	(i) Landless	28	34	62						
						(ii) SF									
						(iii) MF	58	85	143						
						(iv) LF									
TOTAL:		**3**	**5**	**2**	**10**		**86**	**119**	**205**						

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

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
East Garo Hills	East Garo Hills – IWMP-VII	77	14	-	91	(i) Landless	160	24	184	ST	ST				
						(ii) SF				ST	ST				
						(iii) MF	180	40	220	ST	ST				
						(iv) LF				ST	ST				
TOTAL:		**77**	**14**	**-**	**91**	**-**	**340**	**64**	**404**						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*
Names of Project	Amount earmarked for EPA (Rs.)	Entry Point Activities planned	Geographical Location
East Garo Hills IWMP-VII	12.00 Lakhs	Construction of Ringwell. Construction of Farm pond with CC core wall. Construction of kutcha community hall. Construction of RCC Culvert. Construction of Spring Chamber. RCC Footbridges. Water Storage Tank.	Chijagang (90°24'15" - 90°26'45" E Longitude - 25°50'00" - 25°51'30" N Latitude) Derik (90°15'00" - 90°27'00" E Longitude - 25°50'00" - 25°50'30" N Latitude) Upper Pakrek (90°58'15" - 91°00'00" E Longitude - 25°51'00" - 25°51'15" N Latitude) Lower Bongbong (90°45'00" - 91°00'00" E Longitude - 25°45'00" - 25°53'15" N Latitude)

ii) Other activities of Preparatory Phase:

1	*2*	*3*	*4*	*5*	*6*	*7*
Initiation of village level institution	Capacity building	IEC activities	Baseline survey	Hydro-geological survey	Identifying technical support agencies	Resource agreements
4 Nos. Watershed Committees & 4Nos. Watershed Association	8 Nos.	4 Nos.	Participatory Rural Appraisals	N.A	Done	Done

4.2 Watershed Works Phase:

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

(Rs. in Lakhs)

1	*2*	*3*			*4*											
Name of Projects	Type of structures	Pre Project			Proposed Project											
					Augmentation/ repair of existing structures				Construction of new structures				Total target			
		No	Area irrigated (Ha.)	Storage capacity	No.	Area to be treated (Ha.)	Storage capacity	Estimated cost (Rs.)	No.	Area to be treated (Ha.)	Storage capacity (per unit)	Estimated cost (Rs.)	No.	Area to be treated (Ha.)	Storage capacity (m^3)	Estimated cost (Rs.)
East Garo Hills IWMP-VII	(i) Tank	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	(ii) Pond	-	-	-	-	-	-	-	31	172.86 Ha.	-	23.639	31	172.86 Ha.	-	23.639
	(iii) Lake	-	-	-												
	(iv) Check Dam	-	-	-	-	-	-	-	54	378.00 Ha.	-	66.136	54	378.00 Ha.	-	66.136
	(v) Percolation Tank	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	(vi) Channel	-	-	-	-	-	-	-	1	10.00 Ha.	-	0.8795	1	10.00 Ha.	-	0.8795
	(vii) Any others (please specify)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	-	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**86**	**560.86 Ha.**	**-**	**90.6545**	**86**	**560.86 Ha.**	**-**	**90.6545**

4.2.2 Activities related to recharging ground water resources in the project areas:

1	*2*	*3*		*4*							
Names of projects	Type of structures	Pre-project		Proposed target							
		No.	Area irrigated (ha)	Augmentation/ repair of existing recharging structures			Construction of new recharging structures			Total target	
				No.	Area to be irrigated (ha)	Estimated cost	No.	Area to be irrigated (ha)	Estimated cost	Area to be irrigated (ha)	Estimated cost
East Garo Hills IWMP-VII	(i)Open wells		Nil		Nil			Nil		Nil	
	(ii)Bore wells										
	(iii)Any others (Pl. specify)										

4.2.3 Activities executed by User Groups in the Project Areas.

User Groups will be formed accordingly for operation and maintenance of community assets created under the project, like community drinking water source, . The capacity of the user groups will be built through awareness and training programmes. User fees will be charged accordingly and fixed by the User Groups as per the requirement for maintenance of the assets created.

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

Awareness programmes will be conducted to sensitize the people on various aspects of SHGs. Training programmes shall be from time to time to further build the capacity of the SHGs. Besides, skill development training shall also be conducted for promoting income generation of the SHGs such as Piggery, handicrafts, poultry, integrated farming system, fruit processing etc.

4.2.5 Other activities of watershed works phase:

(Rs. in Lakhs)

1	*2*		*3*		*4*		*5*		*6*		*7*		*8*		*9*		*10*		*11*		*12*
Names of projects	Ridge area treatment		Drainage line treatment		Nursery raising		Land development		Improvement Existing Paddy field		Agro Horti (Citrus)		Preliminary & 1st year Plantation Area		Improvement existing degraded Forest		Non-conventional energy		Any other (please specify)		Total Estimated Cost (Rs.)
	(a)	(b)	(a)	(b)	(a)	(b)	(a)	(b)	(a)	(b)	(a)	(b)	(a)	(b)	(a)	(b)	(a)	(b)	(a)	(b)	
East Garo Hills IWMP-VII			737.86 Ha.	99.1615	Rubber 115038	28.7595	38.5 Ha	7.7	173 Ha	7.439	230 Ha	4.6	-	-	565 Ha	20.34			Livelihood, Production System	27.0 30.0	225.0

4.2.6 Details of engineering structures in watershed works:

(Rs. in Lakhs)

1	*2*	*3*			*4*			*5*					
Project	Name of structures	Type of treatment			Type of land			Target					
		(i) Ridge area (R)	(ii) Drainage line (D)	(iii) Land Dev. (L)	(i) Private (P)	(ii) Community	(iii) Others (pl. specify)	No. of units (No./ cum./ rmt)	Estimated cost (Rs.)				Expected month & year of completion (mm/yyyy)
									M	W	O	T	
East Garo Hills IWMP-VII	Staggered trenching												
	Loose boulder Contour bund	-	-	-	-	-	-						
	Graded bunding												
	Bench terracing			L	P			38.5 Ha.				7.7	03/2015
	Masonary stop dams												
	Gully plug												
	Gabion structures		D		P			21 nos.				19.105	03/2015
	Underground dykes												
	Field bunds												
	Any others (pl. specify)												

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

(Rs. in Lakhs)

1	*2*	*3*			*4*			*5*			
Project	Name of structure/ work	Type of treatment			Type of land			Target			
		(i) Ridge area (R)	(ii) Drainage line (D)	(iii) Land dev. (L)	(i) Private	(ii) Community	(iii) Others (pl. specify)	Area (ha)	No. of plants	Estimated cost (Rs. in lakh)	Expected month & year of completion (mm/ yyyy)
East Garo Hills IWMP-VII	Afforestation										
	Regeneration										
	Agro-forestry										
	Fuel wood										
	Fodder										
	Agro-Horticulture					✓		230		4.6	03/2015
	Pasture dev.										
	Nursery raising	Arecanut									
	Nusery Raising	Rubber				✓		255.64	115038	28.7595	03/2015

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.

4.2.8 Details of allied / other activities:

(Rs. in Lakhs)

1	*2*	*3*			*4*	
Project	Name of activity @	Type of land			Target	
		(i) Private	(ii) Community	(iii) Others (landless)	Estimated cost (Rs.)	Expected month & year of completion (mm/yyyy)
East Garo Hills IWMP-VII	Tailoring		✓	124 Units	9.92	03/2015
	Carpentry/ Agri-implements/ Basket making etc – 110 nos.		✓	61 Units	3.05	03/2015
	Turmaric plantation	✓		30 Units	3.75	03/2015
	Backyard poultry					
	Stabilized Mud Block					
	Piggery	✓		84 Units	9.8	03/2015
	Pisciculture	✓	✓	93 Units	3.13	03/2015
	Kitchen gardening	✓	✓	223Units	13.9	03/2015
	Rice Mill	✓		1Unit	0.5	03/2015
	Ginger plantation	✓		52 units	11.7	03/2015
	Cableway taxiing					
	Weaving/Handloom		✓	10units	1.25	03/2015

@ The activities given in this column are merely indicative and States are free to choose any other activity suited to the project area.

4.3 Consolidation and withdrawal phase

Details of activities in the CPRs in the project areas:

1	*2*	*3*	*4*	*5*			
Names of projects	Name(s) of the villages	CPR particulars	Activity proposed	Target			
				Target area under the activity (ha)	Estimated expenditure (Rs.)	Expected no. of beneficiaries	Estimated contribution to WDF (Rs.)
East Garo Hills IWMP - VII	1.Bekbekgre 2. Aruakgre 3. Korepara Songgangget 4. Korepara Chijagang 5. Korepara Songgitcham 6. Adokgre 7. Norangga 8. Chigrang 9. Matchadu	Community assets	Maintenance Works	0.45	-	589 nos.	9.0 lakh

CHAPTER V
PROJECT PHASING & BUDGETING

CHAPTER – V
PROJECT PHASING & BUDGETING
ACTION PLAN OF IWMP - VII
SIMSANGGRE SOIL & WATER CONSERVATION DIVISION, WILLIAMNAGAR.

Name of District : East Garo Hills **No. of Villages : 5 Nos.**
Name of C & RD Block : Kharkutta and Resubelpara. **Project Area : 2000 Ha.**

	Activities	TOTAL				1St Year				2nd Year				3rd Year				4th Year				5th Year			
		Physical			Fin.	Physical			Fin.	Physical			Fin.	Physical			Fin.	Physical			Fin.	Physical			Fin.
		Ha.	Nos.	Rmt.		Ha.	Nos.	Rmt.		Ha.	Nos.	Rmt.		Ha.	Nos.	Rmt.		Ha.	Nos.	Rmt.		Ha.	Nos.	Rmt.	
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*16*	*17*	*18*	*19*	*20*	*21*	*22*	*23*	*24*	*25*	*26*
I	**Administrative Cost**																								
i.	Honourarium of WDT Members @ Rs. 8000/ month – 1 no.	0	0	0	5.76								1.92				1.92				1.92				
ii.	Hon[rm] of Watershed Volunteers @ Rs. 2500/- month – 3 nos.	0	0	0	1.2												1.2								
iii.	Hon[rm] WCO's @ Rs.1000/month x 36 months	0	0	0	0.72												0.72								
iv.	Hon[rm] WCM @ Rs.200 x 22 Nos. members/ month for 38 months	0	0	0	3.168								1.056				1.056				1.056				
v	Hon[rm] Office assistance @Rs.5000/month x 36	0	0	0	3.6												3.6								

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
vi	Hon[rm] Chartered Accountant	0	0	0	1.6								0.4				0.4				0.8				
vii	TA/DA of Field Asstt. @ 5000/ month.	0	0	0	1.2												1.2								
viii	Hiring charges of office building @ 1500/-	0	0	0	2.16								0.72				0.72				0.72				
ix.	Hiring charges of vehicle @ 5000/month.	0	0	0	2.2								0.4				1				0.8				
x	Office expenses, POL, Stationeries, printing of SHG's books, pamphlets, tea, snacks etc, cost of camera.	0	0	0	8.392								1.504				3.184				3.704				
II	**Monitoring & Evalution**																								
i.	Cost of Honorarium to evaluator.	0	0	0	3								0.6				1.5				0.9				
ii.	Cost of printing report etc.	0	0	0	3								0.9				1.5				0.6				
	Sub Total (I+II)	**0**	**0**	**0**	**36**								**7.5**				**18**				**10.5**				
III	**Preparatory Phase**																								
	EPA																								
i.	Construction of Spring Chamber at Reserve stream.	0	1	0	0.608 25		1		0.608 25																
ii	R.C.C Footbridge across Reserve stream.	0	1	0	0.560 15		1		0.560 15																

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
iii.	R.C.C Footbridge across Ranbak stream.	0	1	0	0.61435		1		0.61435																
iv.	R.C.C Footbridge across Chigrang stream.	0	1	0	0.91725		1		0.91725																
v	Water Storage Tank.	0	1	0	0.3		1		0.3																
vi	Construction of R.C.C. Culvert at Adokgre.	0	1	0	1.9338		1		1.9338																
vii	Construction of Spring Chamber at Adokgre.	0	1	0	0.3808		1		0.3808																
viii	Construction of Spring Chamber at Norangga.	0	1	0	0.3854		1		0.3854																
ix	Construction of Spring Chamber at Norangga.	0	1	0	0.3		1		0.3																
x	Construction of Ringwell.	0	3	0	1.55		3		1.55																
xi	Construction of Farm Pond with C.C.Core wall.	0	1	0	1.174		1		1.174																
xii	Construction of Kutcha Community Hall.	0	1	0	1.376		1		1.376																
xiii	Construction of Spring Chamber with plateform.	0	2	0	1.9		2		1.9																
	DPR																								
i.	Cost of Resources Inventories works	0	0	0	0.5				0.5																

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
ii.	Cost of PRA Exercises	0	0	0	1				1																
iii.	Cost of Land use Survey works	0	0	0	0.5				0.5																
iv.	Cost of formulating	0	0	0	1				1																
	Institutional &Capacity Building																								
i.	Administrative Expenses	0	0	0	0.6				0.6																
ii.	Awareness Campaign & Capacity building	0	8	0	2.00						4		1		4		1								
iii.	Exposure visits – off. Campus	0	12	0	2.4		4		1.2		4		0.6						**4**		**0.6**				
iv.	Capacity building of SHG's/ UG's.	0	40	0	4						20		2		20		2								
v.	Capacity building of WC Members.	0	32	0	3		8		0.6		16		1.2						8		1.2				
vi	Capacity of WDT/WV	0	32	0	3		8		0.6		16		1.2						8		1.2				
	Sub-Total of III	**0**	**140**	**0**	**30**	**0**	**36**	**0**	**18**	**0**	**60**	**0**	**6**	**0**	**24**	**0**	**3**	**0**	**20**	**0**	**3**	**0**	**0**	**0**	**0**
IV	**Work Phase**																								
A	**Arable Land Treament**																								
i.	1) Bench terrace @Rs.20000/- per ha.	38.5	0	0	7.7					3			0.6	27			5.4	8.5			1.7				
ii.	2) Improvement existing Paddy field @Rs.4300/- per ha.	173	0	0	7.439					6			0.258	95			4.085	72			3.096				

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
iii.	3) Agro Horticulture @Rs.2000/-per ha.	230	0	0	4.6					35			0.7	100			2	95			1.9				
	Sub-Total Of A	**441.5**	**0**	**0**	**19.739**	**0**	**0**	**0**	**0**	**44**	**0**	**0**	**1.558**	**222**	**0**	**0**	**11.485**	**175.5**	**0**	**0**	**6.696**	**0**	**0**	**0**	**0**
B	**Non-Arable Land**																								
i.	1) Creation of Rubber Nursery(polybag) @Rs.25 each.	255.64	115038	0	28.7595					54	24300		6.075	185.64	83538		20.8845	16	7200		1.8				
ii.	2) Improvement existing degraded Forest. Preliminary 1st year. @Rs. 3600/-per ha.	565	0	0	20.34					130			4.68	335			12.06	100			3.6				
	Sub-Total of B	**820.64**	**115038**	**0**	**49.0995**	**0**	**0**	**0**	**0**	**184**	**24300**	**0**	**10.755**	**520.64**	**83538**	**0**	**32.9445**	**116**	**7200**	**0**	**5.4**	**0**	**0**	**0**	**0**
C	**Drainage Line Treament**																								
i	C.C.Check Dam.	49	8	0	9.91					4	1		1.1	35	6		8	10	1		0.81				
ii	Boulder Sausage Protection wall.	162	24	0	20.805					4	1		0.66	115	16		15.65	43	7		4.495				
iii.	Stone Masonry Protection wall.	10	2	0	1.9									7	1		1.15	3	1		0.75				
iv.	Improvement of Fishery Pond	30	5	0	5.25									30	5		5.25								
v	Extension and repairing of C.C.Check dam.	6	1	0	0.6									6	1		0.6								
vi	Water Harvesting Structure	73	10	0	12.582					12	1		1.632	39	7		8.25	22	2		2.7				
vii	C.C. Irrigation Dam.	13	1	0	1.8									13	1		1.8								

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
viii	Dugout Pond	105	17	0	11.0905					30	3		1.17	40	7		4.6915	35	7		5.229				
ix	C.C.Dam with Channel.	175	7	0	20.7925					35	2		5.625	90	3		10.3475	50	2		4.82				
x	Water Harvesting with C.C. core wall.	55	6	0	5.3475									45	4		3.5475	10	2		1.8				
xi	Water Harvesting Farm Pond.	37.86	8	0	6.8475									25	6		5.0475	12.86	2		1.8				
xii	Earthen Channel.	22	2	0	2.2365									22	2		2.2365								
	Sub-Total of C	**737.86**	**91**	**0**	**99.1615**	**0**	**0**	**0**	**0**	**85**	**8**	**0**	**10.187**	**467**	**59**	**0**	**66.5705**	**185.86**	**24**	**0**	**22.4404**	**0**	**0**	**0**	**0**
D	**Livelihood**																								
	Tailoring @ Rs. 8000/- unit	0	124	0	9.92						18		1.44		38		3.04		68		5.44				
ii	Carpentry @ Rs. 5000/-unit.	0	61	0	3.05						6		0.3		23		1.15		32		1.6				
iii.	Kitchen Gardening @ Rs. 2500/- unit	0	186	0	4.65						40		1		58		1.45		88		2.2				
iv.	Pisciculture @ Rs. 1000/ unit	0	91	0	2.53						1		0.01		72		1.26		18		1.26				
v	Piggery/Poultry @Rs. 8000/- unit.	0	70	0	5.6										20		1.6		50		4				
vi	Weaving @Rs. 12500/- unit.	0	10	0	1.25						2		0.25		4		0.5		4		0.5				
	Sub-Total of D	**0**	**542**	**0**	**27**	**0**	**0**	**0**	**0**	**0**	**67**	**0**	**3**	**0**	**215**	**0**	**9**	**0**	**260**	**0**	**15**	**0**	**0**	**0**	**0**
E	**Production System**																								
i	Piggery @ Rs. 30000/- unit.	0	14	0	4.2										8		2.4		6		1.8				
ii	Pisciculture @ Rs. 30000/ unit	0	2	0	0.6										2		0.6		0		0				
iii.	Ricemill @Rs. 50000/- unit.	0	1	0	0.5						1		0.5						0		0				

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
iv.	Ginger Plantation @Rs.22500/- unit.	0	52	0	11.7										10		2.25		42		9.45				
v	Turmeric Plantation @Rs.12,500/- unit	0	30	0	3.75						2		0.25		14		1.75		14		1.75				
vi	Kitchen Gardening @ Rs. 25000/- unit	0	37	0	9.25						9		2.25		8		2		20		5				
	Sub-total of E	**0**	**136**	**0**	**30**	**0**	**0**	**0**	**0**	**0**	**12**	**0**	**3**	**0**	**42**	**0**	**9**	**0**	**82**	**0**	**18**	**0**	**0**	**0**	**0**
	Sub-total of IV(A+B+C+D+E)	**2000**	**115807**	**0**	**225**	**0**	**0**	**0**	**0**	**313**	**2438 7**	**0**	**28.5**	**1209. 64**	**838 54**	**0**	**129**	**477. 36**	**756 6**	**0**	**67.5**	**0**	**0**	**0**	**0**
IV	**Consolidation Phase**																								
i	Repairs, Maintenance of CPR's.	0	0	0	5.2																				5.2
ii	Improving the sustainability of various Interventions	0	0	0	1.65																				1.65
iii.	Documentation of successful experiences & Preparation of Completion Report	0	0	0	2.15																				2.15
	Sub-Total of V	**0**	**0**	**0**	**9**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**9**
	Grand Total (I+II+III+IV+V)	**2000**	**115947**	**0**	**300**	**0**	**36**	**0**	**18**	**313**	**2444 7**	**0**	**42**	**1209. 64**	**838 78**	**0**	**150**	**477. 36**	**758 6**	**0**	**81**	**0**	**0**	**0**	**9**

ACTION PLAN OF DERIK & CHIJAGANG WATERSHED UNDER IWMP - VII
SIMSANGGRE SOIL & WATER CONSERVATION DIVISION, WILLIAMNAGAR.

Name of District : East Garo Hills **No. of Villages : 5 Nos.**
Name of C & RD Block : Resubelpara. **Project Area : 1000 Ha.**

	Activities	TOTAL				1St Year				2nd Year				3rd Year				4th Year				5th Year			
		Physical			Fin.	Physical			Fin.	Physical			Fin.	Physical			Fin.	Physical			Fin.	Physical			Fin.
		Ha.	Nos.	Rmt.		Ha.	Nos.	Rmt.		Ha.	Nos.	Rmt.		Ha.	Nos.	Rmt.		Ha.	Nos.	Rmt.		Ha.	Nos.	Rmt.	
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*16*	*17*	*18*	*19*	*20*	*21*	*22*	*23*	*24*	*25*	*26*
I	**Administrative Cost**																								
i.	Honourarium of WDT Members @ Rs. 8000/ month – 1 no.	0	0	0	2.88								0.96				0.96				0.96				
ii.	Hon[rm] of Watershed Volunteers @ Rs. 2500/- month – 3 nos.	0	0	0	0.60												0.60								
iii.	Hon[rm] WCO's @ Rs.1000/month x 36 months	0	0	0	0.36												0.36								
iv.	Hon[rm] WCM @ Rs.200 x 22 Nos. members/ month for 38 months	0	0	0	1.584								0.528				0.528				0.528				
v	Hon[rm] Office assistance @Rs.5000/month x 36	0	0	0	1.80												1.80								
vi	Hon[rm] Chartered Accountant	0	0	0	0.80								0.20				0.20				0.40				

1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*16*	*17*	*18*	*19*	*20*	*21*	*22*	*23*	*24*	*25*	*26*
vii	TA/DA of Field Asstt. @ 5000/ month.	0	0	0	0.60												0.60								
viii	Hiring charges of office building @ 1500/-	0	0	0	1.08								0.36				0.36				0.36				
ix.	Hiring charges of vehicle @ 5000/month.	0	0	0	1.10								0.20				0.50				0.40				
x	Office expenses, POL, Stationeries, printing of SHG's books, pamphlets, tea, snacks etc, cost of camera.	0	0	0	4.196								0.752				1.592				1.852				
II	**Monitoring & Evalution**																								
i.	Cost of Honorarium to evaluator.	0	0	0	1.50								0.30				0.75				0.45				
ii.	Cost of printing report etc.	0	0	0	1.50								0.45				0.75				0.30				
	Sub Total (I+II)	**0**	**0**	**0**	**18**								**3.75**				**9.00**				**5.25**				
III	**Preparatory Phase**																								
	EPA																								
i.	Construction of Ringwell.	0	3	0	1.55		3		1.55																
ii.	Construction of Farm Pond with C.C.Core wall.	0	1	0	1.174		1		1.174																

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
iii.	Construction of Kutcha Community Hall.	0	1	0	1.376		1		1.376																
iv.	Construction of Spring Chamber with platform.	0	2	0	1.90		2		1.90																
	DPR																								
i.	Cost of Resources Inventories works	0	0	0	0.25				0.25																
ii.	Cost of PRA Exercises	0	0	0	0.50				0.50																
iii.	Cost of Land use Survey works	0	0	0	0.25				0.25																
iv.	Cost of formulating	0	0	0	0.50				0.50																
	Institutional &Capacity Building																								
i.	Administrative Expenses	0	0	0	0.30				0.30																
ii.	Awareness Campaign & Capacity building	0	4	0	1.00						2		0.50		2		0.50								
iii.	Exposure visits – off. Campus	0	6	0	1.20		2		0.60		2		0.30						2		0.30				
iv.	Capacity building of SHG's/ UG's.	0	20	0	2.00						10		1.00		10		1.00								
v.	Capacity building of WC Members.	0	16	0	1.50		4		0.30		8		0.60						4		0.60				
vi	Capacity of WDT/WV	0	16	0	1.50		4		0.30		**8**		0.60						4		0.60				
	Sub-Total of III	**0**	**69**	**0**	**15.00**	**0**	**17**	**0**	**9.00**	**0**	**30**	**0**	**3.00**	**0**	**12**	**0**	**1.50**	**0**	**10**	**0**	**1.50**	**0**	**0**	**0**	**0**

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
IV	**Work Phase**																								
A	**Arable Land Treament**																								
i.	1) Bench terrace @Rs.20000/- per ha.	23.5	0	0	4.70									18			3.60	5.5			1.10				
ii.	2) Improvement existing Paddy field @Rs.4300/- per ha.	148	0	0	6.364									83			3.569	65			2.795				
iii.	3) Agro Horticulture @Rs.2000/-per ha.	30	0	0	0.60									30			0.60								
	Sub-Total Of A	**201.5**	**0**	**0**	**11.664**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**131**	**0**	**0**	**7.769**	**70.5**	**0**	**0**	**3.895**	**0**	**0**	**0**	**0**
B	**Non-Arable Land**																								
i.	1) Creation of Rubber Nursery(polybag) @Rs.25 each.	127.64	57438	0	14.3595					30	13500		3.375	97.64	43938		10.9845								
ii.	2) Improvement existing degraded Forest. Preliminary 1st year. @Rs. 3600/- per ha.	225	0	0	8.10					30			1.08	195			7.02								
	Sub-Total of B	**352.64**	**57438**	**0**	**22.4595**	**0**	**0**	**0**	**0**	**60**	**13500**	**0**	**4.455**	**292.64**	**43938**	**0**	**18.0045**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
C	**Drainage Line Treament**																								
i.	Boulder Sausage Protection wall.	91	13	0	9.145									75	10		7.1	16	3		2.045				

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
ii.	Dugout Pond	65	9	0	5.5075					30	3		1.17	15	2		1.4475	20	4		2.89				
iii.	C.C.Dam with Channel.	175	7	0	20.7925					35	2		5.625	90	3		10.3475	50	2		4.82				
iv.	Water Harvesting with C.C. core wall.	55	6	0	5.3475									45	4		3.5475	10	2		1.80				
v.	Water Harvesting Farm Pond.	37.86	8	0	6.8475									25	6		5.0475	12.86	2		1.80				
vi.	Earthen Channel.	22	2	0	2.2365									22	2		2.2365								
	Sub-Total of C	**445.86**	**45**	**0**	**49.8765**	**0**	**0**	**0**	**0**	**65**	**5**	**0**	**6.795**	**272**	**27**	**0**	**29.7265**	**108.86**	**13**	**0**	**13.355**	**0**	**0**	**0**	**0**
D	**Livelihood**																								
i.	Tailoring @ Rs. 8000/- unit	0	84	0	6.72						8		0.64		28		2.24		48		3.84				
ii	Carpentry Agri Implements @ Rs. 5000/-unit.	0	43	0	2.15										11		0.55		32		1.6				
iii.	Kitchen Gardening @ Rs. 2500/- unit	0	156	0	3.90						34		0.85		42		1.05		80		2.00				
iv.	Pisciculture @ Rs. 1000/ unit	0	73	0	0.73						1		0.01		66		0.66		6		0.06				
	Sub-Total of D	**0**	**356**	**0**	**13.50**	**0**	**0**	**0**	**0**	**0**	**43**	**0**	**1.5**	**0**	**147**	**0**	**4.5**	**0**	**166**	**0**	**7.5**	**0**	**0**	**0**	**0**
E	**Production System**																								
i.	Ginger Plantation @Rs.22500/- unit.	0	30	0	6.75										10		2.25		20		4.50				
ii.	Turmeric Plantation @Rs.12,500/- unit	0	24	0	3.00						2		0.25		10		1.25		12		1.50				

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
iii.	Kitchen Gardening @ Rs. 25000/- unit	0	21	0	5.25						5		1.25		4		1.00		12		3.00				
	Sub-total of E	**0**	**75**	**0**	**15.00**	**0**	**0**	**0**	**0**	**0**	**7**	**0**	**1.50**	**0**	**24**	**0**	**4.50**	**0**	**44**	**0**	**9**	**0**	**0**	**0**	**0**
	Sub-total of IV(A+B+C+D+ E)	**1000**	**57914**	**0**	**112.50**	**0**	**0**	**0**	**0**	**125**	**13555**	**0**	**14.25**	**695.64**	**44136**	**0**	**64.5**	**179.36**	**223**	**0**	**33.75**	**0**	**0**	**0**	**0**
IV	**Consolidation Phase**																								
i	Repairs, Maintenance of CPR's.	0	0	0	2.6																				2.60
ii	Improving the sustainability of various Interventions	0	0	0	0.825																				0.825
iii.	Documentation of successful experiences & Preparation of Completion Report	0	0	0	1.075																				1.075
	Sub-Total of V	**0**	**0**	**0**	**4.50**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4.50**
	Grand Total (I+II+III+IV+V)	**1000**	**57983**	**0**	**150**	**0**	**17**	**0**	**9.00**	**125**	**13585**	**0**	**21.00**	**695.64**	**44148**	**0**	**75.00**	**179.36**	**233**	**0**	**40.50**	**0**	**0**	**0**	**4.50**

VILLAGE WISE ACTION PLAN OF DERIK AND CHIJAGANG WATERSHED UNDER IWMP - VII

SIMSANGGRE SOIL & WATER CONSERVATION DIVISION, WILLIAMNAGAR.

Name of District : East Garo Hills **No. of Villages : 5 Nos.**

Name of C & RD Block : Resubelpara. **Project Area : 1000 Ha.**

	Activities	TOTAL				Derik Watershed (500 Ha.)								Chijagang Watershed (500 Ha.)											
						Bekbekgre				Araukgre				Korepara Chijagang				Korepara Songgitcham				Korepara Songgangget			
		Physical				Physical				Physical				Physical				Physical				Physical			
		Ha.	Nos.	Rmt.	Fin.	Ha.	Nos.	Rmt.	Fin.	Ha.	Nos.	Rmt.	Fin.	Ha.	Nos.	Rmt.	Fin.	Ha.	Nos.	Rmt.	Fin.	Ha.	Nos.	Rmt.	Fin.
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*16*	*17*	*18*	*19*	*20*	*21*	*22*	*23*	*24*	*25*	*26*
III	**Preparatory Phase**																								
	EPA																								
i.	Construction of Ringwell.	0	3	0	1.55		1		0.55		1		0.55		1		0.45								
ii.	Construction of Farm Pond with C.C.Core wall.	0	1	0	1.174														1		1.174				
iii.	Construction of Kutcha Community Hall.	0	1	0	1.376																		1		1.376
iv.	Construction of Spring Chamber with platform.	0	2	0	1.90		1		0.95		1		0.95												
	Sub-Total of III	**0**	**7**	**0**	**6.00**	**0**	**2**	**0**	**1.50**	**0**	**2**	**0**	**1.50**	**0**	**1**	**0**	**0.45**	**0**	**1**	**0**	**1.17**	**0**	**1**	**0**	**1.376**
IV	**Work Phase**																								
A	**Arable Land Treament**																								
i.	1) Bench terrace @Rs.20000/- per ha.	23.5	0	0	4.70	7.5			1.50	7			1.4	3			0.60	3			0.60	**3**			0.60

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
ii.	2) Improvement existing Paddy field @Rs.4300/- per ha.	148	0	0	6.364	63			2.709	40			1.72	15			0.645	15			0.645	**15**			0.645
iii.	3) Agro Horticulture @Rs.2000/-per ha.	30	0	0	0.60	18			0.36	12			0.24												
	Sub-Total Of A	**201.5**	**0**	**0**	**11.664**	**88.5**	**0**	**0**	**4.569**	**59**	**0**	**0**	**3.36**	**18**	**0**	**0**	**1.245**	**18**	**0**	**0**	**1.245**	**18**	**0**	**0**	**1.245**
B	**Non-Arable Land**																								
i.	1) Creation of Rubber Nursery(polybag) @Rs.25 each.	127.64	57438	0	14.3595	26.32	11844		2.961	26.32	11844		2.961	25	11250		2.8125	25	11250		2.8125	25	11250		2.8125
ii.	2) Improvement existing degraded Forest. Preliminary 1st year. @Rs. 3600/- per ha.	225	0	0	8.10	60			2.16	60			2.16	35			1.26	35			1.26	35			1.26
	Sub-Total of B	**352.64**	**57438**	**0**	**22.4595**	**86.32**	**11844**	**0**	**5.121**	**86.32**	**11844**	**0**	**5.121**	**60**	**11250**	**0**	**4.0725**	**60**	**11250**	**0**	**4.0725**	**60**	**11250**	**0**	**4.0725**
C	**Drainage Line Treament**																								
i.	Boulder Sausage Protection wall.	91	13	0	9.145	15	4		2.90	20	2		1.4	23	2		1.40					33	5		3.445
ii.	Dugout Pond	65	9	0	5.5075									15	2		1.035	17	3		1.735	33	4		2.7375
iii.	C.C.Dam with Channel.	175	7	0	20.7925	40	2		5.92	45	2		4.525	30	1		4.50	40	1		3.3475	20	1		2.50
iv.	Water Harvesting with C.C. core wall.		6	0										21	2		1.7475	34	4		3.60				
v.	Water Harvesting Farm Pond.	37.86	8	0	6.8475	22.86	4		3.60	15	4		3.2475												

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
vi.	Earthen Channel.	22	2	0	2.2365	12	1		1.357	10	1		0.8795												
	Sub-Total of C	**420.860**	**48**	**0**	**45.699**	**89.86**	**11**	**0**	**13.777**	**120**	**12**	**0**	**11.222**	**89**	**7**	**0**	**8.6825**	**91**	**8**	**0**	**8.6825**	**86**	**10**	**0**	**8.6825**
D	**Livelihood**																								
i.	Tailoring @ Rs. 8000/- unit	0	84	0	6.72		22		1.76		17		1.36		15		1.20		15		1.2		15		1.20
ii	Carpentry Agri Implements @ Rs. 5000/-unit.	0	43	0	2.15		13		0.65		12		0.60		6		0.3		6		0.3		6		0.30
iii.	Kitchen Gardening @ Rs. 2500/- unit	0	156	0	3.90		38		0.95		28		0.7		30		0.75		30		0.75		30		0.75
iv.	Pisciculture @ Rs. 1000/ unit	0	73	0	0.73		40		0.40		33		0.33												
	Sub-Total of D	**0**	**356**	**0**	**13.50**	**0**	**113**	**0**	**3.76**	**0**	**90**	**0**	**2.99**	**0**	**51**	**0**	**2.25**	**0**	**51**	**0**	**2.25**	**0**	**51**	**0**	**2.25**
E	**Production System**																								
i.	Ginger Plantation @Rs.22500/- unit.	0	30	0	6.75		8		1.80		7		1.575		4		0.90		5		1.125		6		1.35
ii.	Turmeric Plantation @Rs.12,500/- unit	0	24	0	3.00		6		0.75		7		0.875		3		0.375		5		0.625		3		0.375
iii.	Kitchen Gardening @ Rs. 25000/- unit	0	21	0	5.30		5		1.25		5		1.25		4		1.05		3		0.75		4		1.00
	Sub-total of E	**0**	**75**	**0**	**15.05**	**0**	**19**	**0**	**3.80**	**0**	**19**	**0**	**3.70**	**0**	**11**	**0**	**2.33**	**0**	**13**	**0**	**2.5**	**0**	**13**	**0**	**2.725**
	Sub-total of IV(A+B+C+D+E)	**1000**	**57914**	**0**	**107.2**	**264.68**	**11987**	**0**	**31.027**	**235.32**	**11962**	**0**	**25.223**	**167**	**11319**	**0**	**18.575**	**169**	**11322**	**0**	**18.75**	**164**	**11324**	**0**	**18.9975**

ACTION PLAN OF LOWER BONGBONG & UPPER PAKREK WATERSHED UNDER IWMP - VII
SIMSANGGRE SOIL & WATER CONSERVATION DIVISION, WILLIAMNAGAR.

Name of District : East Garo Hills **No. of Villages : 4 Nos.**
Name of C & RD Block : Kharkutta. **Project Area : 1000 Ha.**

	Activities	TOTAL				1St Year				2nd Year				3rd Year				4th Year				5th Year			
		Physical				Physical				Physical				Physical				Physical				Physical			
		Ha.	Nos.	Rmt.	Fin.	Ha.	Nos.	Rmt.	Fin.	Ha.	Nos.	Rmt.	Fin.	Ha.	Nos.	Rmt.	Fin.	Ha.	Nos.	Rmt.	Fin.	Ha.	Nos.	Rmt.	Fin.
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*16*	*17*	*18*	*19*	*20*	*21*	*22*	*23*	*24*	*25*	*26*
I	**Administrative Cost**																								
i.	Honourarium of WDT Members @ Rs. 8000/ month – 1 no.	0	0	0	2.88								0.96				0.96				0.96				
ii.	Hon[rm] of Watershed Volunteers @ Rs. 2500/- month – 3 nos.	0	0	0	0.60												0.60								
iii.	Hon[rm] WCO's @ Rs.1000/month x 36 months	0	0	0	0.36												0.36								
iv.	Hon[rm] WCM @ Rs.200 x 22 Nos. members/ month for 38 months	0	0	0	1.584								0.528				0.528				0.528				
v	Hon[rm] Office assistance @Rs.5000/month x 36	0	0	0	1.80												1.80								
vi	Hon[rm] Chartered Accountant	0	0	0	0.80								0.20				0.20				0.40				

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
vii	TA/DA of Field Asstt. @ 5000/ month.	0	0	0	0.60												0.60								
viii	Hiring charges of office building @ 1500/-	0	0	0	1.08								0.36				0.36				0.36				
ix.	Hiring charges of vehicle @ 5000/month.	0	0	0	1.10								0.20				0.50				0.40				
x	Office expenses, POL, Stationeries, printing of SHG's books, pamphlets, tea, snacks etc, cost of camera.	0	0	0	4.196								0.752				1.592				1.852				
II	**Monitoring & Evalution**																								
i.	Cost of Honorarium to evaluator.	0	0	0	1.50								0.30				0.75				0.45				
ii.	Cost of printing report etc.	0	0	0	1.50								0.45				0.75				0.30				
	Sub Total (I+II)	**0**	**0**	**0**	**18.00**								**3.75**				**9.00**				**5.25**				
III	**Preparatory Phase**																								
	EPA																								
i.	Construction of Spring Chamber at Reserve stream.	0	1	0	0.60825		1		0.60825																
ii	R.C.C Footbridge across Reserve stream.	0	1	0	0.56015		1		0.56015																
iii.	R.C.C Footbridge across Ranbak stream.	0	1	0	0.61435		1		0.61435																

1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*16*	*17*	*18*	*19*	*20*	*21*	*22*	*23*	*24*	*25*	*26*
iv.	R.C.C Footbridge across Chigrang stream.	0	1	0	0.91725		1		0.91725																
v	Water Storage Tank.	0	1	0	0.3		1		0.30																
vi	Construction of R.C.C. Culvert at Adokgre.	0	1	0	1.9338		1		1.9338																
vii	Construction of Spring Chamber at Adokgre.	0	1	0	0.3808		1		0.3808																
viii	Construction of Spring Chamber at Norangga.	0	1	0	0.3854		1		0.3854																
ix	Construction of Spring Chamber at Norangga.	0	1	0	0.3		1		0.30																
	DPR																								
i.	Cost of Resources Inventories works	0	0	0	0.25				0.25																
ii.	Cost of PRA Exercises	0	0	0	0.50				0.50																
iii.	Cost of Land use Survey works	0	0	0	0.25				0.25																
iv.	Cost of formulating	0	0	0	0.50				0.50																
	Institutional &Capacity Building																								
i.	Administrative Expenses	0	0	0	0.30				0.30																
ii.	Awareness Campaign & Capacity building	0	4	0	1.00						2		0.50		2		0.50								
iii.	Exposure visits – off. Campus	0	6	0	1.20		2		0.60		2		0.30						2		0.30				

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
iv.	Capacity building of SHG's/ UG's.	0	20	0	2.00						10		1.00		10		1.00								
v.	Capacity building of WC Members.	0	16	0	1.50		4		0.30		8		0.60						4		0.60				
vi	Capacity of WDT/WV	0	16	0	1.50		4		0.30		**8**		0.60						4		0.60				
	Sub-Total of III	**0**	**71**	**0**	**15.00**	**0**	**19**	**0**	**9.00**	**0**	**30**	**0**	**3.00**	**0**	**12**	**0**	**1.50**	**0**	**10**	**0**	**1.50**	**0**	**0**	**0**	**0**
IV	**Work Phase**																								
A	**Arable Land Treament**																								
i.	1) Bench terrace @Rs.20000/- per ha.	15	0	0	3.00					3			0.60	9			1.80	3			0.60				
ii.	2) Improvement existing Paddy field @Rs.4300/- per ha.	25	0	0	1.075					6			0.258	12			0.516	7			0.301				
iii.	3) Agro Horticulture @Rs.2000/-per ha.	200	0	0	4.00					35			0.70	70			1.40	95			1.90				
	Sub-Total Of A	**240**	**0**	**0**	**8.075**	**0**	**0**	**0**	**0**	**44**	**0**	**0**	**1.558**	**91**	**0**	**0**	**3.716**	**105**	**0**	**0**	**2.801**	**0**	**0**	**0**	**0**
B	**Non-Arable Land**																								
i.	1) Creation of Rubber Nursery(polybag) @Rs.25 each.	128	57600	0	14.40					24	10800		2.70	88	39600		9.90	16	7200		1.80				
ii.	2) Improvement existing degraded Forest. Preliminary 1st year. @Rs. 3600/- per ha.	340	0	0	12.24					100			3.60	140			5.04	100			3.60				
	Sub-Total of B	**468**	**57600**	**0**	**26.64**	**0**	**0**	**0**	**0**	**124**	**10800**	**0**	**6.3**	**228**	**39600**	**0**	**14.94**	**116**	**7200**	**0**	**5.4**	**0**	**0**	**0**	**0**

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
C	**Drainage Line Treament**																								
i	C.C.Check Dam.	49	8	0	9.91					4	1		1.10	35	6		8.00	10	1		0.81				
ii	Boulder Sausage Protection wall.	71	11	0	11.66					4	1		0.66	40	6		8.55	27	4		2.45				
iii.	Stone Masonry Protection wall.	10	2	0	1.90									7	1		1.15	3	1		0.75				
iv.	Improvement of Fishery Pond	30	5	0	5.25									30	5		5.25								
v	Extension and repairing of C.C.Check dam.	6	1	0	0.60									6	1		0.60								
vi	Water Harvesting Structure	73	10	0	12.582					12	1		1.632	39	7		8.25	22	2		2.70				
vii	C.C. Irrigation Dam.	13	1	0	1.80									13	1		1.80								
viii	Dugout Pond	40	8	0	5.583									25	5		3.244	15	3		2.339				
	Sub-Total of C	**292**	**46**	**0**	**49.285**	**0**	**0**	**0**	**0**	**20**	**3**	**0**	**3.39**	**195**	**32**	**0**	**36.84**	**77**	**11**	**0**	**9.049**	**0**	**0**	**0**	**0**
D	**Livelihood**																								
i.	Tailoring @ Rs. 8000/- unit	0	40	0	3.20						10		0.80		10		0.80		20		1.60				
ii	Carpentry Agri Implements @ Rs. 5000/-unit.	0	18	0	0.90						6		0.30		12		0.60								
iii.	Kitchen Gardening @ Rs. 2500/- unit	0	30	0	0.75						6		0.15		16		0.40		8		0.20				
iv.	Pisciculture @ Rs. 1000/ unit	0	18	0	1.80										6		0.60		12		1.20				
v	Piggery/Poultry @Rs. 8000/- unit.	0	70	0	5.60										20		1.60		50		4.00				
vi	Weaving @Rs. 12500/- unit.	0	10	0	1.25						2		0.25		4		0.50		4		0.50				
	Sub-Total of D	**0**	**186**	**0**	**13.50**	**0**	**0**	**0**	**0**	**0**	**24**	**0**	**1.50**	**0**	**68**	**0**	**4.50**	**0**	**94**	**0**	**7.50**	**0**	**0**	**0**	**0**

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
E	**Production System**																								
i	Piggery @ Rs. 30000/- unit.	0	14	0	4.20										8		2.40		6		1.80				
ii	Pisciculture @ Rs. 30000/ unit	0	2	0	0.60										2		0.60								
iii.	Ricemill @Rs. 50000/- unit.	0	1	0	0.50						1		0.50												
iv.	Ginger Plantation @Rs.22500/- unit.	0	22	0	4.95														22		4.95				
v	Turmeric Plantation @Rs.12,500/- unit	0	6	0	0.75										4		0.50		2		0.25				
vi	Kitchen Gardening @ Rs. 25000/- unit	0	16	0	4.00						4		1.00		4		1.00		8		2.00				
	Sub-total of E	**0**	**61**	**0**	**15.00**	**0**	**0**	**0**	**0**	**0**	**5**	**0**	**1.5**	**0**	**18**	**0**	**4.5**	**0**	**38**	**0**	**9**	**0**	**0**	**0**	**0**
	Sub-total of IV(A+B+C+D+E)	**1000**	**57893**	**0**	**112.50**	**0**	**0**	**0**	**0**	**188**	**10832**	**0**	**14.25**	**514**	**39718**	**0**	**64.5**	**298**	**7343**	**0**	**33.75**	**0**	**0**	**0**	**0**
IV	**Consolidation Phase**																								
i	Repairs, Maintenance of CPR's.	0	0	0	2.60																				2.60
ii	Improving the sustainability of various Interventions	0	0	0	0.825																				0.825
iii.	Documentation of successful experiences & Preparation of Completion Report	0	0	0	1.075																				1.075
	Sub-Total of V	**0**	**0**	**0**	**4.50**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4.50**
	Grand Total (I+II+III+IV+V)	**1000**	**57964**	**0**	**150.00**	**0**	**19**	**0**	**9.00**	**188**	**10862**	**0**	**21.00**	**514**	**39730**	**0**	**75.00**	**298**	**7353**	**0**	**40.50**	**0**	**0**	**0**	**4.50**

VILLAGE WISE ACTION PLAN OF LOWER BONGBONG AND UPPER PAKREK WATERSHED UNDER IWMP - VII
SIMSANGGRE SOIL & WATER CONSERVATION DIVISION, WILLIAMNAGAR.

Name of District : East Garo Hills **No. of Villages : 4 Nos.**

Name of C & RD Block : Kharkutta. **Project Area : 1000 Ha.**

	Activities	TOTAL				Lower Bongbong Watershed (500 Ha.)								Upper Pakrek (500Ha.)							
						Adokgre				Norangga				Chigrang				Matchadu			
		Physical				Physical				Physical				Physical				Physical			
		Ha.	Nos.	Rm t.	Fin.	Ha.	Nos.	Rm t.	Fin.	Ha.	Nos.	Rm t.	Fin.	Ha.	Nos.	Rm t.	Fin.	Ha.	Nos.	Rm t.	Fin.
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*16*	*17*	*18*	*19*	*20*	*21*	*22*
III	**Preparatory Phase**																				
	EPA																				
i.	Construction of Spring Chamber at Reserve stream.	0	1	0	0.60825														1		0.60825
ii	R.C.C Footbridge across Reserve stream.	0	1	0	0.56015														1		0.56015
iii.	R.C.C Footbridge across Ranbak stream.	0	1	0	0.61435										1		0.61435				
iv.	R.C.C Footbridge across Chigrang stream.	0	1	0	0.91725										1		0.91725				
v	Water Storage Tank.	0	1	0	0.3										1		0.30				
vi	Construction of R.C.C. Culvert at Adokgre.	0	1	0	1.9338		1		1.9338												
vii	Construction of Spring Chamber at Adokgre.	0	1	0	0.3808		1		0.3808												
viii	Construction of Spring Chamber at Norangga.	0	1	0	0.3854						1		0.3854								
ix	Construction of Spring Chamber at Norangga.	0	1	0	0.3						1		0.30								
	Sub-Total of III	**0**	**9**	**0**	**6.00**	**0**	**2**	**0**	**2.31**	**0**	**2**	**0**	**0.6854**	**0**	**3**	**0**	**1.83160**	**0**	**2**	**0**	**1.1684**

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
IV	**Work Phase**																				
A	**Arable Land Treament**																				
i.	1) Bench terrace @Rs.20000/- per ha.	15	0	0	3.00	5			1.00					5			1.00	5			1.00
ii.	2) Improvement existing Paddy field @Rs.4300/- per ha.	25	0	0	1.075	10			0.43	10			0.43	3			0.129	2			0.086
iii.	3) Agro Horticulture @Rs.2000/-per ha.	200	0	0	4.00	50			1.00	50			1.00	50			1.00	50			1.00
	Sub-Total Of A	**240**	**0**	**0**	**8.075**	**65**	**0**	**0**	**2.43**	**60**	**0**	**0**	**1.43**	**58**	**0**	**0**	**2.129**	**57**	**0**	**0**	**2.086**
B	**Non-Arable Land**																				
i.	1) Creation of Rubber Nursery(polybag) @Rs.25 each.	128	57600	0	14.40	32	14400		3.60	32	14400		3.60	32	14400		3.60	32	14400		3.60
ii.	2) Improvement existing degraded Forest. Preliminary 1st year. @Rs. 3600/- per ha.	340	0	0	12.24	85			3.06	85			3.06	85			3.06	85			3.06
	Sub-Total of B	**468**	**57600**	**0**	**26.64**	**117**	**14400**	**0**	**6.66**	**117**	**14400**	**0**	**6.66**	**117**	**14400**	**0**	**6.66**	**117**	**14400**	**0**	**6.66**
C	**Drainage Line Treament**																				
i	C.C.Check Dam.	49	8	0	9.91	39	7		9.10	10	1		0.81								
ii	Boulder Sausage Protection wall.	71	11	0	11.66	41	7		8.96	20	3		1.70	10	1		1.00				
iii.	Stone Masonry Protection wall.	10	2	0	1.90	10	2		1.90												
iv.	Improvement of Fishery Pond	30	5	0	5.25	15	2		1.75									15	3		3.50
v	Extension and repairing of C.C.Check dam.	6	1	0	0.60	6	1		0.60												
vi	Water Harvesting Structure	73	10	0	12.582									54	8		10.382	19	2		2.20

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
vii	C.C. Irrigation Dam.	13	1	0	1.80									13	1		1.80				
viii	Dugout Pond	40	8	0	5.583									25	5		3.4	15	3		2.183
	Sub-Total of C	**292**	**46**	**0**	**49.285**	**111**	**19**	**0**	**22.31**	**30**	**4**	**0**	**2.51**	**102**	**15**	**0**	**16.582**	**49**	**8**	**0**	**7.883**
D	**Livelihood**																				
i.	Tailoring @ Rs. 8000/- unit	0	40	0	3.20		10		0.80		10		0.80		10		0.80		10		0.80
ii	Carpentry Agri Implements @ Rs. 5000/- unit.	0	18	0	0.90		5		0.25		4		0.20		5		0.25		4		0.20
iii.	Kitchen Gardening @ Rs. 2500/- unit	0	30	0	0.75		8		0.20		7		0.175		8		0.20		7		0.175
iv.	Pisciculture @ Rs. 1000/ unit	0	18	0	1.80		5		0.50		4		0.40		5		0.50		4		0.40
v	Piggery/Poultry @Rs. 8000/- unit.	0	70	0	5.60		18		1.44		17		1.36		18		1.44		17		1.36
vi	Weaving @Rs. 12500/- unit.	0	10	0	1.25		3		0.375		2		0.25		3		0.375		2		0.25
	Sub-Total of D	**0**	**186**	**0**	**13.50**	**0**	**49**	**0**	**3.565**	**0**	**44**	**0**	**3.185**	**0**	**49**	**0**	**3.565**	**0**	**44**	**0**	**3.19**
E	**Production System**																				
i	Piggery @ Rs. 30000/- unit.	0	14	0	4.20		3		0.90		5		1.50		1		0.30		5		1.50
ii	Pisciculture @ Rs. 30000/ unit	0	2	0	0.60										2		0.60				
iii.	Ricemill @Rs. 50000/- unit.	0	1	0	0.50		1		0.50												
iv.	Ginger Plantation @Rs.22500/- unit.	0	22	0	4.95		6		1.35		5		1.125		6		1.35		5		1.13
v	Turmeric Plantation @Rs.12,500/- unit	0	6	0	0.75		2		0.25		1		0.125		2		0.25		1		0.125
vi	Kitchen Gardening @ Rs. 25000/- unit	0	16	0	4.00		3		0.75		4		1.00		5		1.25		4		1.00
	Sub-total of E	**0**	**61**	**0**	**15.00**	**0**	**15**	**0**	**3.75**	**0**	**15**	**0**	**3.750**	**0**	**16**	**0**	**3.75**	**0**	**15**	**0**	**3.75**
	Sub-total of IV(A+B+C+D+E)	**1000**	**57893**	**0**	**112.5**	**293**	**14483**	**0**	**38.715**	**207**	**14463**	**0**	**17.535**	**277**	**1448 0**	**0**	**32.686**	**223**	**144 67**	**0**	**23.564**

Convergence of EGH - IWMP Project - VII Derik Watershed with NREGS

Agro - Horti Norms for NREGS

Location & Activities	2nd year of IWMP		1st Year of NREGS		3rd Year of IWMP		2nd Year of NREGS		4th Year of IWMP		3rd Year of NREGS		5th Year of IWMP		4th Year of NREGS		TOTAL (IWMP)		TOTAL (NREGS)	
	Phy .	Fin.	Phy .	Fin.	Phy .	Fin.	Phy .	Fin.	Phy .	Fin.	Phy .	Fin.	Phy .	Fin.	Phy .	Fin.	Phy .	Fin.	Phy .	Fin.
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*16*	*17*	*18*	*19*	*20*	*21*
Bekbekgre																				
Agro - Horti @Rs.2000/- per ha.					18	0.36											**18**	**0.36**	0	0
Preliminary 1st year plantation @Rs.3900/- per ha.							18	0.702									**0**	**0**	18	0.702
2nd Year Maintenace @Rs.2700/- per ha.											(M)	0.486					**0**	**0**	0	0.486
Aruakgre																	**0**	**0**	0	0
Agro - Horti @Rs.2000/- per ha.					12	0.24											**12**	**0.24**	0	0
Preliminary 1st year plantation @Rs.3900/- per ha.							12	0.468									**0**	**0**	12	0.468
2nd Year Maintenace @Rs.2700/- per ha.											(M)	0.324					**0**	**0**	0	0.324
TOTAL	**0**	**0**	**0**	**0**	**30**	**0.6**	**30**	**1.17**	**0**	**0**	**0**	**0.81**	**0**	**0**	**0**	**0**	**30**	**0.6**	30	1.98

Convergence of EGH IWMP Project - VII Derik Watershed with NREGS

Rubber Plantation Norms for NREGS

Location & Activities	2nd year of IWMP		1st Year of NREGS		3rd Year of IWMP		2nd Year of NREGS		4th Year of IWMP		3rd Year of NREGS		5th Year of IWMP		4th Year of NREGS		TOTAL (IWMP)		TOTAL (NREGS)	
	Phy .	Fin.	Phy .	Fin.	Phy .	Fin.	Phy .	Fin.	Phy .	Fin.	Phy .	Fin.	Phy .	Fin.	Phy .	Fin.	Phy .	Fin.	Phy .	Fin.
Bekbekgre	Ha.		Ha.		Ha.		Ha.		Ha.		Ha.		Ha.		Ha.		Ha.		Ha.	
Creation of Rubber Nusery (Polybag) @Rs.25/- per plant.					11844												11844	0	0	0
					26.32	2.961											26.32	2.961	0	0
Preliminary 1st year plantation @Rs.15760/- per ha. (Material Component)							26.32	4.14802									0	0	26.32	4.14802
Preliminary & 1st Year Wage Component @Rs.51100/-								13.44952									0	0	0	13.44952
2nd Year Maintenace @Rs.1000/- per ha.											(M)	0.2632					0	0	0	0.2632
2nd Year Wage Component. @Rs.35910/-												9.45152					0	0	0	9.45152
Aruakgre																	0	0	0	0
Creation of Rubber Nusery (Polybag) @Rs.25/- per plant.					11844												11844	0	0	0
					26.32	2.961											26.32	2.961	0	0
Preliminary 1st year plantation @Rs.15760/- per ha. (Material Component)							26.32	4.14802									0	0	26.32	4.14802
Preliminary & 1st Year Wage Component @Rs.51100/-								13.44952									0	0	0	13.44952
2nd Year Maintenace @Rs.1000/- per ha.											(M)	0.2632					0	0	0	0.2632
2nd Year Wage Component. @Rs.35910/-												9.45152					0	0	0	9.45152
TOTAL	0	0	0	0	23688	0	0	0	0	0	0	0	0	0	0	0	23688	0	0	0
	0	0	0	0	52.64	5.922	52.64	35.19508	0	0	0	19.42944	0	0	0	0	52.64	5.922	52.64	54.62452

Convergence of EGH IWMP Project - VII Chijagang Watershed with NREGS

Rubber Plantation Norms for NREGS

Location & Activities	2nd year of IWMP		1st Year of NREGS		3rd Year of IWMP		2nd Year of NREGS		4th Year of IWMP		3rd Year of NREGS		5th Year of IWMP		4th Year of NREGS		TOTAL (IWMP)		TOTAL (NREGS)	
	Phy .	Fin.	Phy .	Fin.	Phy .	Fin.	Phy .	Fin.	Phy .	Fin.	Phy .	Fin.	Phy .	Fin.	Phy .	Fin.	Phy .	Fin.	Phy .	Fin.
Koripara Chijagang	Ha.		Ha.		Ha.		Ha.		Ha.		Ha.		Ha.		Ha.		Ha.		Ha.	
Creation of Rubber Nusery (Polybag) @Rs.25/- per plant.	4500				6750												11250	0	0	0
	10	1.125			15	1.6875											25	2.8125	0	0
Preliminary 1st year plantation @Rs.15760/- per ha. (Material Component)			10	1.576			15	2.364									0	0	25	3.94
Preliminary & 1st Year Wage Component @Rs.51100/-				5.11				7.665									0	0	0	12.775
2nd Year Maintenace @Rs.1000/- per ha.							(M)	0.1			(M)	0.15					0	0	0	0.25
2nd Year Wage Component. @Rs.35910/-								3.591				5.3865					0	0	0	8.9775
Koripara Songgitcham																	0	0	0	0
Creation of Rubber Nusery (Polybag) @Rs.25/- per plant.	4500				6750												11250	0	0	0
	10	1.125			15	1.6875											25	2.8125	0	0
Preliminary 1st year plantation @Rs.15760/- per ha. (Material Component)			10	1.576			15	2.364									0	0	25	3.94
Preliminary & 1st Year Wage Component @Rs.51100/-				5.11				7.665									0	0	0	12.775
2nd Year Maintenace @Rs.1000/- per ha.							(M)	0.1			(M)	0.15					0	0	0	0.25
2nd Year Wage Component. @Rs.35910/-								3.591				5.3865					0	0	0	8.9775

Koripara Songgangget																	0	0	0	0
Creation of Rubber Nusery (Polybag) @Rs.25/- per plant.	4500				6750												11250	0	0	0
	10	1.125			15	1.6875											25	2.8125	0	0
Preliminary 1st year plantation @Rs.15760/- per ha. (Material Component)			10	1.576			15	2.364									0	0	25	3.94
Preliminary & 1st Year Wage Component @Rs.51100/-				5.11				7.665									0	0	0	12.775
2nd Year Maintenace @Rs.1000/- per ha.							(M)	0.1			(M)	0.15					0	0	0	0.25
2nd Year Wage Component. @Rs.35910/-								3.591				5.3865					0	0	0	8.9775
TOTAL	13500	0	0	0	20250	0	0	0	0	0	0	0	0	0	0	0	33750	0	0	0
	30	3.375	30	20.058	45	5.0625	45	41.16	0	0	0	16.6095	0	0	0	0	75	8.4375	75	77.8275

Convergence of EGH - IWMP Project - VII Lower Bongbong Watershed with NREGS

Agro - Horti Norms for NREGS

Location & Activities	2nd year of IWMP		1st Year of NREGS		3rd Year of IWMP		2nd Year of NREGS		4th Year of IWMP		3rd Year of NREGS		5th Year of IWMP		4th Year of NREGS		TOTAL (IWMP)		TOTAL (NREGS)	
	Phy .	Fin.	Phy .	Fin.	Phy .	Fin.	Phy .	Fin.	Phy .	Fin.	Phy .	Fin.	Phy .	Fin.	Phy .	Fin.	Phy .	Fin.	Phy .	Fin.
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*16*	*17*	*18*	*19*	*20*	*21*
Adokgre																				
Agro - Horti @Rs.2000/- per ha.	7	0.14			5	0.1			38	0.76							50	1	0	0
Preliminary 1st year plantation @Rs.3900/- per ha.			7	0.273			5	0.195			38	1.482					0	0	50	1.95
2nd Year Maintenace @Rs.2700/- per ha.							(M)	0.189			(M)	0.135			(M)	1.026	0	0	0	1.35
Norangga																	0	0	0	0
Agro - Horti @Rs.2000/- per ha.	8	0.16			5	0.1			37	0.74							50	1	0	0
Preliminary 1st year plantation @Rs.3900/- per ha.			8	0.312			5	0.195			37	1.443					0	0	50	1.95
2nd Year Maintenace @Rs.2700/- per ha.							(M)	0.216			(M)	0.135			(M)	0.999	0	0	0	1.35
TOTAL	**15**	**0.3**	**15**	**0.585**	**10**	**0.2**	**10**	**0.795**	**75**	**1.5**	**75**	**3.195**	**0**	**0**	**0**	**2.025**	**100**	**2**	**100**	**6.6**

Convergence of EGH IWMP Project - VII Lower Bongbong Watershed with NREGS
Rubber Plantation Norms for NREGS

Location & Activities	2nd year of IWMP		1st Year of NREGS		3rd Year of IWMP		2nd Year of NREGS		4th Year of IWMP		3rd Year of NREGS		5th Year of IWMP		4th Year of NREGS		TOTAL (IWMP)		TOTAL (NREGS)	
	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.
Adokgre	Ha.		Ha.		Ha.		Ha.		Ha.		Ha.		Ha.		Ha.		Ha.		Ha.	
Creation of Rubber Nusery (Polybag) @Rs.25/- per plant.	2700				9900				1800								14400	0	0	0
	6	0.675			22	2.475			4	0.45							32	3.6	0	0
Preliminary 1st year plantation @Rs.15760/- per ha. (Material Component)			6	0.9456			22	3.4672			4	0.6304					0	0	32	5.0432
Preliminary & 1st Year Wage Component @Rs.51100/-				3.066				11.242				2.044					0	0	0	16.352
2nd Year Maintenace @Rs.1000/- per ha.							(M)	0.06			(M)	0.22			(M)	0.04	0	0	0	0.32
2nd Year Wage Component. @Rs.35910/-								2.1546				7.9002				1.4364	0	0	0	11.4912
Norangga																	0	0	0	0
Creation of Rubber Nusery (Polybag) @Rs.25/- per plant.	2700				9900				1800								14400	0	0	0
	6	0.675			22	2.475			4	0.45							32	3.6	0	0
Preliminary 1st year plantation @Rs.15760/- per ha. (Material Component)			6	0.9456			22	3.4672			4	0.6304					0	0	32	5.0432
Preliminary & 1st Year Wage Component @Rs.51100/-				3.066				11.242				2.044					0	0	0	16.352
2nd Year Maintenace @Rs.1000/- per ha.							(M)	0.06			(M)	0.22			(M)	0.04	0	0	0	0.32
2nd Year Wage Component. @Rs.35910/-								2.1546				7.9002				1.4364	0	0	0	11.4912
TOTAL	5400	0	0	0	19800	0	0	0	3600	0	0	0	0	0	0	0	28800	0	0	0
	12	1.35	12	8.0232	44	4.95	44	33.8476	8	0.9	8	21.5892	0	0	0	2.9528	64	7.2	64	66.4128

Convergence of EGH - IWMP Project - VII Upper Pakrek Watershed with NREGS

Agro - Horti Norms for NREGS

Location & Activities	2nd year of IWMP		1st Year of NREGS		3rd Year of IWMP		2nd Year of NREGS		4th Year of IWMP		3rd Year of NREGS		5th Year of IWMP		4th Year of NREGS		TOTAL (IWMP)		TOTAL (NREGS)	
	Phy .	Fin.	Phy .	Fin.	Phy .	Fin.	Phy .	Fin.	Phy .	Fin.	Phy .	Fin.	Phy .	Fin.	Phy .	Fin.	Phy .	Fin.	Phy .	Fin.
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*16*	*17*	*18*	*19*	*20*	*21*
Chigrang																				
Agro - Horti @Rs.2000/- per ha.	10	0.2			30	0.6			10	0.2							50	1	0	0
Preliminary 1st year plantation @Rs.3900/- per ha.			10	0.39			30	1.17			10	0.39					0	0	50	1.95
2nd Year Maintenace @Rs.2700/- per ha.							(M)	0.81			(M)	0.27			(M)	0.27	0	0	0	1.35
Matchadu																	0	0	0	0
Agro - Horti @Rs.2000/- per ha.	10	0.2			30	0.6			10	0.2							50	1	0	0
Preliminary 1st year plantation @Rs.3900/- per ha.			10	0.39			30	1.17			10	0.39					0	0	50	1.95
2nd Year Maintenace @Rs.2700/- per ha.							(M)	0.81			(M)	0.27			(M)	0.27	0	0	0	1.35
TOTAL	**20**	**0.4**	**20**	**0.78**	**60**	**1.2**	**60**	**3.96**	**20**	**0.4**	**20**	**1.32**	**0**	**0**	**0**	**0.54**	**100**	**2**	**100**	**6.6**

Convergence of EGH IWMP Project - VII Upper Pakrek Watershed with NREGS
Rubber Plantation Norms for NREGS

Location & Activities	2nd year of IWMP		1st Year of NREGS		3rd Year of IWMP		2nd Year of NREGS		4th Year of IWMP		3rd Year of NREGS		5th Year of IWMP		4th Year of NREGS		TOTAL (IWMP)		TOTAL (NREGS)	
	Phy .	Fin.	Phy .	Fin.	Phy .	Fin.	Phy .	Fin.	Phy .	Fin.	Phy .	Fin.	Phy .	Fin.	Phy .	Fin.	Phy .	Fin.	Phy .	Fin.
Chigrang	Ha.		Ha.		Ha.		Ha.		Ha.		Ha.		Ha.		Ha.		Ha.		Ha.	
Creation of Rubber Nusery (Polybag) @Rs.25/- per plant.	2700				9900				1800								14400	0	0	0
	6	0.675			22	2.475			4	0.45							32	3.6	0	0
Preliminary 1st year plantation @Rs.15760/- per ha. (Material Component)			6	0.9456			22	3.4672			4	0.6304					0	0	32	5.0432
Preliminary & 1st Year Wage Component @Rs.51100/-				3.066				11.242				2.044					0	0	0	16.352
2nd Year Maintenace @Rs.1000/- per ha.							(M)	0.06			(M)	0.22			(M)	0.04	0	0	0	0.32
2nd Year Wage Component. @Rs.35910/-								2.1546				7.9002				1.4364	0	0	0	11.4912
Matchadu																	0	0	0	0
Creation of Rubber Nusery (Polybag) @Rs.25/- per plant.	2700				9900				1800								14400	0	0	0
	6	0.675			22	2.475			4	0.45							32	3.6	0	0
Preliminary 1st year plantation @Rs.15760/- per ha. (Material Component)			6	0.9456			22	3.4672			4	0.6304					0	0	32	5.0432
Preliminary & 1st Year Wage Component @Rs.51100/-				3.066				11.242				2.044					0	0	0	16.352
2nd Year Maintenace @Rs.1000/- per ha.							(M)	0.06			(M)	0.22			(M)	0.04	0	0	0	0.32
2nd Year Wage Component. @Rs.35910/-								2.1546				7.9002				1.4364	0	0	0	11.4912
TOTAL	5400	0	0	0	19800	0	0	0	3600	0	0	0	0	0	0	0	28800	0	0	0
	12	1.35	12	8.0232	44	4.95	44	33.8476	8	0.9	8	21.5892	0	0	0	2.9528	64	7.2	64	66.4128

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

1	*2*	*3*		*4*	*5*	*6*	*7*				*8*				
Names of Projects	Year of sanction	Project duration (dd/mm/ yyyy)		Area of the project to be treated (Treatable Area	Project cost (Rs. In lakh)	Names of Micro watersheds & Code nos. (as per DoLR's unique codification)	Treatable Area (Ha.) (As per LULC)				Area details (Ha.) (falling within the projects) (As per ownership)				
		From	To				Cultivated rainfed area	Cultivated irrigated area	Uncultivated wasteland		Pvt. Agri. Land	Forest land	Community land	Others (pl. specify)	Total area (ha)
									a) Temporary fallow	b) Permanent					
East Garo Hills IWMP-VII	2011-2012	2011 – 2012	2015 - 2016	2000 ha	300 lakhs	East Garo Hills IWMP – VII	724 Ha	--	1827 Ha.	-	724 Ha	153 Ha	1674 Ha	-	2551 Ha

Fund provision for the IWMP projects from all sources:

1	*2*		*3*										*4*
Name of Projects	IWMP Fund		Funds from other sources in addition to IWMP funds										Total
			Convergence funds		PPP		Community		Institutional finance		Others (Pl. specify)		
	Central Share	State Share	Name of Scheme	Amount (Lakhs)	Name of private sector	Financial contri-bution	Name	Financial contri-bution	Name	Financial contri-bution	Name	Financial contri-bution	
East Garo Hills IWMP-VII	270.0 lakhs	30.0 lakhs	NREGS	280.45762	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	580.45762 Lakh

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

1	*2*				*3*				
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.
East Garo Hills IWMP-VII	Yet to be opened	Yet to be obtained	N.A.	Chairman W.C, Secretary W.C, Project Leader / WDT	Derik Watershed Committee Chijagang Watershed Committee Lower Bongbong Watershed Committee Upper Pakrek Watershed Committee	Yet to be opened	Yet to be obtained	N.A.	Chairman W.C, Secretary W.C, Project Leader / WDT

Details of Convergence of IWMP with other Schemes:

	1	2	3	4	5	6	7
Sl. No.	District	Names of projects	Names of Departments with Schemes converging with IWMP	Fund made available to IWMP due to convergence (Rs. in lakhs)	Name of activity/task/structure undertaken with converged funds (a) Structures (b) livelihoods (c) Any other (pl. specify)[#]	Reference no. of activity/ task/ structure in DPR[@]	Level at which decision for convergence was taken[$]
1	East Garo Hills	East Garo Hills – IWMP-VII	* Community Rural Development Department NREGS	280.45762	(i) Agro – Horticulture – 68 ha. (ii) Plantation of Rubber – 90 ha.	List of NREGS Convergence Enclosed	Block Level & District Level

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
S. No	State	Name of the Training Institute	Full Address with contact no., website & e-mail	Name & Designation of the Head of Institute	Type of Institute[#]	Area(s) of specialization[$]
1	Meghalaya	NIRD (NER)	Guwahati	Director	Central Govt.	Remote Sensing, Rural Devt.
2		SIRD	Nongsder	Director	State Govt.	Capacity Building
3		RRTC	Umran	Director	Don-Bosco	Agri-Horti, Animal Husbandry, Entrepreneurship
4		ICAR	Umiam	Director	Central Govt.	Do
5		VTC	Kyrdem Kulai	Director	State Govt.	Animal Husbandry
6		Fruit Garden	Shillong	Director	State Govt.	Agri-Horti, Fruit Processing

- 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 2011-12 as on 31-03-2011 (dd/mm/yyyy)*

1	*2*	*3*	*4*					*5*
Project Stakeholders	**Type of Training / Capacity Building**	**Agency/ Institution to provide Training/ Capacity building**	**No. of Trainings targeted during each financial Year**					**Total**
			2011-12	**2012-13**	**2013-14**	**2014-15**	**2015-16**	
PIA	a) Project Management b) GIS application c) Projectization d) Entrepreneurship	a) NIRD b) SIRD c) ICAR	-	2	1	-	-	**3**
WDT	a) Project concept b) GIS application c) Projectization	a) NIRD b) SIRD c) PIA d) ICAR	8	16	-	8	-	**32**
UG	a) Asset Management	a) PIA	-	8	2	-	-	**10**
SHG	a) SHG concept & management b) Entrepreneurship	a) NGOs b) PIA	-	12	18	-	-	**30**
WC	a) Project Concept & Management b) Natural Resource management c) Livelihood related activities d) Microenterprise & Marketing	a) PIA b) Line Department c) NGOs	8	16	-	8	-	**32**
GP			-	-	-	-	-	-
Community	a) Project Concept & Management b) Natural Resource management c) Livelihood related activities d) Microenterprise & Marketing	a) PIA b) Line Department c)NGOs	-	2	3	-	-	**5**
Others (Pl. specify)	a) Exposure visits	a) ICAR b) RRTC	4	4	-	4	-	**12**
Total :			**20**	**60**	**24**	**20**	**-**	**124**

Table 6.3: Information, Education & Communication (IEC) activities for the year 2011-12 as on 31/03/12 (dd/mm/yyy)*

	1	2	3	4	5
	Activity	**Executing agency**	**Estimated expenditure (Rs.in lakh)**	**Expenditure incurred (Rs.in lakh)**	**Outcome (may quantity, wherever possible)**
1.	Awareness	S&WC (T) Division	2.0	-	
2	Exposure Visits	S&WC (T) Division	2.4	1.2	
3.	Capacity Building	S&WC (T) Division	10	1.2	

CHAPTER VII

EXPECTED OUTCOME

CHAPTER VII
EXPECTED OUTCOME

Table 7.1 Employment related outcomes:

Sl No	Name of Village	*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.	1.Bekbekgre 2. Aruakgre 3. Korepara Songgangget 4. Korepara Chijagang 5. Korepara Songgitcham 6. Adokgre 7. Norangga 8. Chigrang 9. Matchadu	-	64934	-	32466	97400	-	589	-	-	589	-	16	-	6	16

Table 7.2 Migration Details:

1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	
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 form column no. 11, average income from occupation during migration, for the entire country may be given at the end of the Table.

Table 7.3.1 Status of Drinking water:

1			*2*			*3*
Availability of drinking water (no. of monyhs in a year)			**Quality of drinking water**			**Comments**
Pre-project	**Post-project**	**Change in availability**	**Pre-project**	**Post-project**	**Change in quality**	
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 7.3.2 Water Use efficiency:

The over water availability in the project area will improve due to the soil and water conservation measures. Water use efficiency and management will also be better with the active involvement of the people and formation of user groups to maintain the assets created.

Table 7.4 : Vegetation/ crop related outcomes:

Table 7.4.1 Details of Karif crop area and yield in the project areas:

1	*2*						*3*						*4*					
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.**
Millet	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Paddy	-	345	-	19.36	-	6680	-	-	-	-	-	-	-	-	-	-	-	-
Soyabean	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Yam	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ginger	-	111	-	56	-	6216	-	-	-	-	-	-	-	-	-	-	-	-
Tapioca	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Betel nut	-	350	-	13.5	-	4725	-	-	-	-	-	-	-	-	-	-	-	-
Betel leaf	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Black Pepper	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Oranges	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

* 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 7.4.2 Details of Rabi crop area and yield in the project areas:

1	*2*	*3*						*4*						*5*					
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.**
East Garo Hills – IWMP - VII	Paddy	-	-	-	-	-	-	-	-	-	-	-	-	-	575	-	19.36	-	11132
	Ginger	-	260	-	56	-	14560	-	-	-	-	-	-	-	675	-	56	-	73800

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

1	*2*	*3*						*4*						*5*					
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.**
East Garo Hills IWMP - VII						**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 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 7.4.4 Availability of Fodder

1	**2**	**3**			**4**		
Name of Project	**Duration of Project**	**Pre-Project (tones/ha)**			**Post-Project (tones/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**
EGH IWMP-VII	**N /A**						

Table 7.4.5 Increase/ Decrease in Forest/vegetation cover:

1	*2*	*3*			*4*		
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**
East Garo Hills IWMP - VII	5 yrs	Statistical Report, Meghalaya	-	1432	153 Ha.	-	153 Ha

* 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 7.4.6 Increase/ Decrease in area under horticulture:

1	*2*	*3*			*4*		
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**
East Garo Hills IWMP- VII	5 yrs	Field Survey Report	2011	-	230 Ha.	-	-

* 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 7.4.7 Increase/ Decrease in area under fuel-wood:

1	*2*	*3*			*4*		
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**
East Garo Hills IWMP - VII	5 yrs	Nil	Nil	Nil	Nil	Nil	Nil

* 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 7.5 : Livelihood related outcomes:

Table 7.5.1 Details of livestock in the project areas (for fluids please mention in litres, for solids please mention in kgs. and income in Rs.):

1	*2*	*3*			*4*			*5*			*6*
Name of Projects	**Type of Animal**	**Pre-project**			**Mid-term**			**Post-project**			**Remarks**
		No.	**Yield**	**Income**	**No.**	**Yield**	**Income**	**No.**	**Yield**	**Income**	
East Garo Hills IWMP - VII	Milch- animals										
	Piggery										
	Poultry										
	Apiculture in unit										
Total for all projects											

* 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 7.6 : Benefit Cost Analysis

1	*2*	*3*	*4*	*5*	*6*	*9*
District	**Name of project**	**Name of WC**	**Name of structure/ activity**	**Estimated cost (Rs.)**	**Expected quantifiable benefits (Rs.)**	**Benefit Cost ratio[#]**
East Garo Hills	East Garo Hills IWMP VII	East Garo Hills – IWMP -VII Watershed Committee	N.A.	225.0 Lakh	N.A.	1: 1.5

[#] B:C ratio more than 1 – Cost Effective
Less than 1 – Not Cost Effective

A N N E X U R E – I

DETAILS OF SOCIO ECONOMIC

DETAIL OF SOCIO ECONOMIC

Sl. No	Name of the Village	Total Household	Population			Literacy			Occupation	Livestock			
			M	F	T	M	F	T		Cattle	Piggery	Poultry	Goattery
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*
	DERIK WATERSHED												
1	Bekbekgre	119	300	302	602	204	178	382	Farmer	242	84	1446	-
2	Aruakgre	112	301	280	581	114	106	220	Farmer	92	62	667	12
	CHIJAGANG WATERSHED												
3	Korepara Chijagang	40	96	77	173	13	1	14	Farmer	86	16	328	-
4	Korepara Songgitcham	88	222	198	320	51	11	62	Farmer	212	41	704	5
5	Korepara Songgangget	46	103	89	192	27	9	36	Farmer	25	18	304	-
	LOWER BONGBONG WATERSHED												
6	Adokgre	56	169	173	342	130	138	268	Farmer	91	68	461	-
7	Norangga	62	203	191	394	138	119	257	Farmer	32	38	714	-
	UPPER PAKREK WATERSHED												
8	Chigrang	25	55	66	121	43	47	90	Farmer	27	13	154	-
9	Matchadu	41	116	107	223	66	55	212	Farmer	54	18	299	4
TOTAL		**589**	**1565**	**1483**	**3048**	**786**	**664**	**1450**		**861**	**358**	**5077**	**21**

A N N E X U R E – II

NO OBJECTION CERTIFICATE

NO OBJECTION CERTIFICATE

Angni Akingni ningo Soil & Water Conservation Department ni songdong a.chagipa manderangni namgnina kam ka.ani bidingo mamung dakeba golmal aro champengani dongjawa ine mahari madrang aro songni nokni manderang baksa kumong nangrimen kusi ong.been see on enga.

See ongipa Shri Jekman A. Sangma
Nokma III-37 (4)
Aruakgre A'king
East Garo Hills.

Sakkirang :-

1. Jonggaram Marak
2. Bilfresh Marak
3. Helesingson Sangma
4. Jendal Marak

NO OBJECTION CERTIFICATE

Angni Akingni ningo Soil & Water Conservation Department ni songdong a.chagipa manderangni namgnina kam ka.ani bidingo mamung dakeba golmal aro champengani dongjawa ine mahari madrang aro songni nokni ,manderang baksa kumong nangrimen kusi ong.been see on enga.

Shri. Karansing Marak

See Nokma

Nokma
Bekbekgri A'king
East Garo Hills.

Sakkirang :-

1. Shri, Kredin Marak -
2. Shri Singkan Sangma - Sangma
3. Shri Kredin Marak -
4. Shri Mingrang Sangma

NO OBJECTION CERTIFICATE

Angni Akingni ningo Soil & Water Conservation Department –ni songdong a.chagipa manderangni namgnina kam ka.ani bidingo mamung dakeba golmal aro champengani dongjawa ine mahari madrang aro songni nokni ,manderang baksa kumong nangrimen kusi ong.been see on.enga.

See ongipa

Singjin Sangma

Sakkirang :-

1. Ripman Marak
2. Mada Marak
3. Willier Marak
4. Kilnang Marak.

N. O.C

Anga Shri Edward marak Reking A.Kingni Nokma angni A.King ninggo donggipa A.dokgra, Norangga Chigrang aro matchadee Songrango E.D.H. I.W.M.P.-VII projectko Soil Conservision, Department, jakko Ra.e Kam Ka'anio mameng-ba Champengani dongjaowa ine 2011 ni Sept 15 th 'lariko seaniko onenga.

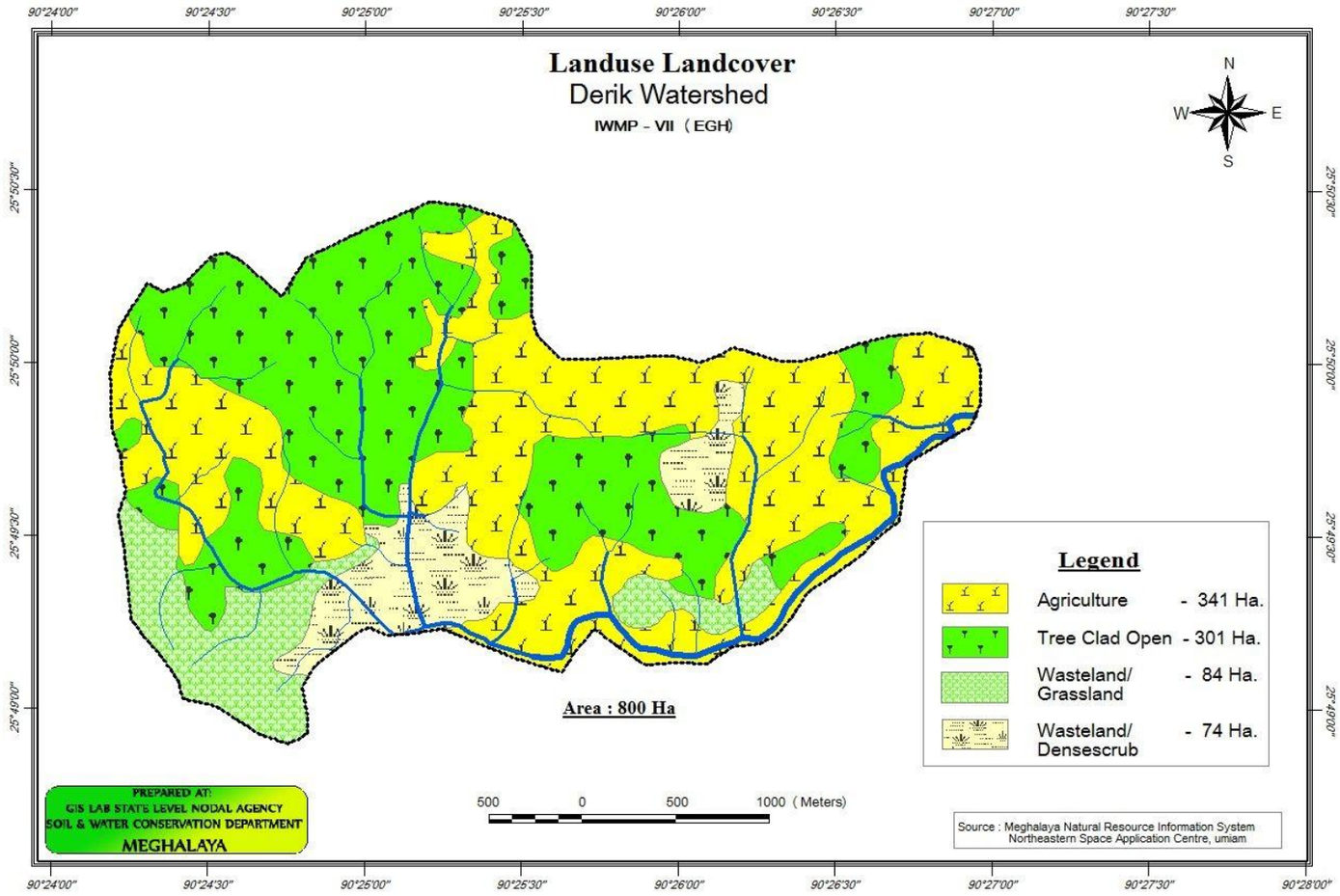
E.D.marak
Shri Edward D. Marak
Nokma IV-[illegible]
Rekhing [illegible]

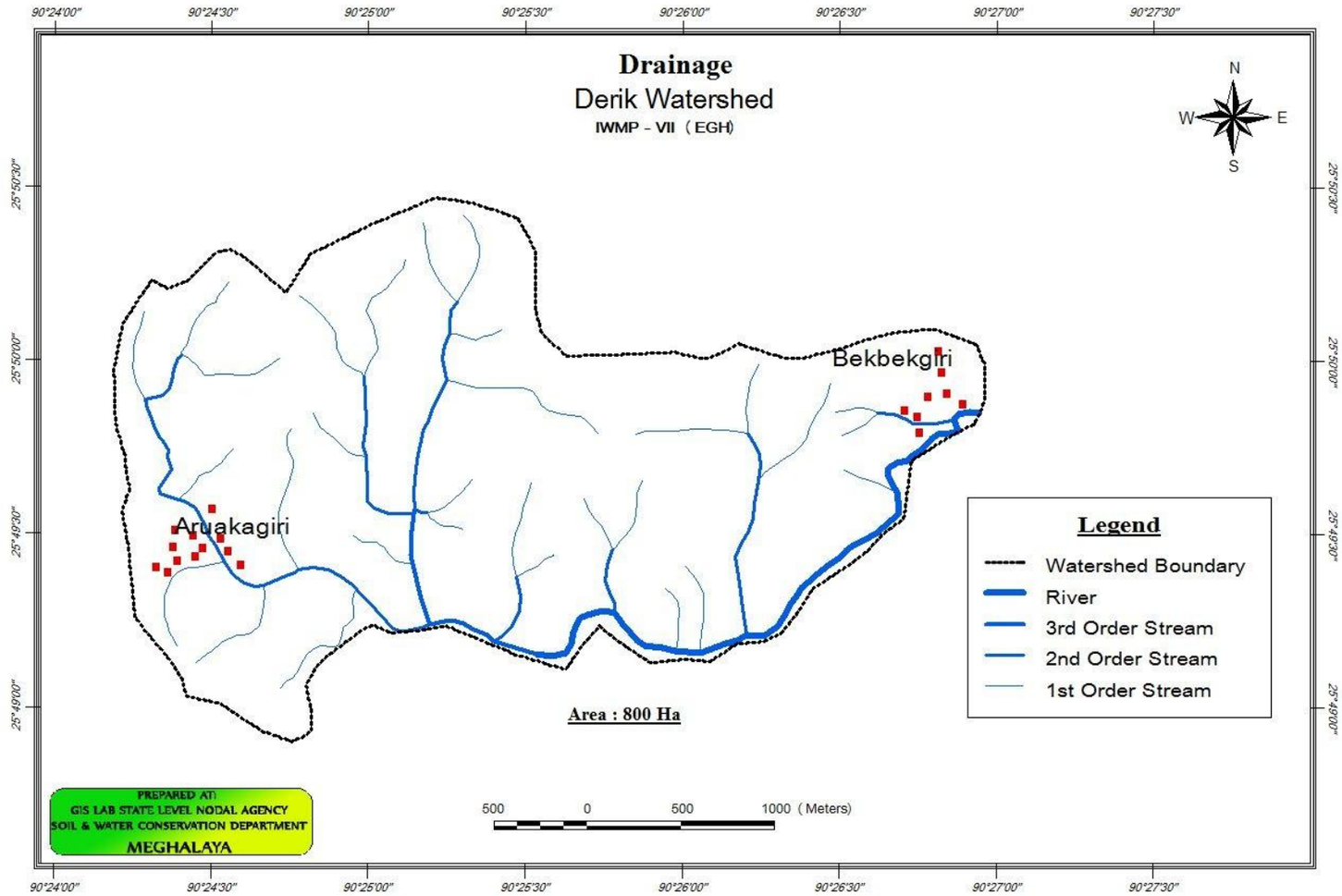
See onenggipa
Shri Edward marak
Nokma of Reking
Date 15.9.2011

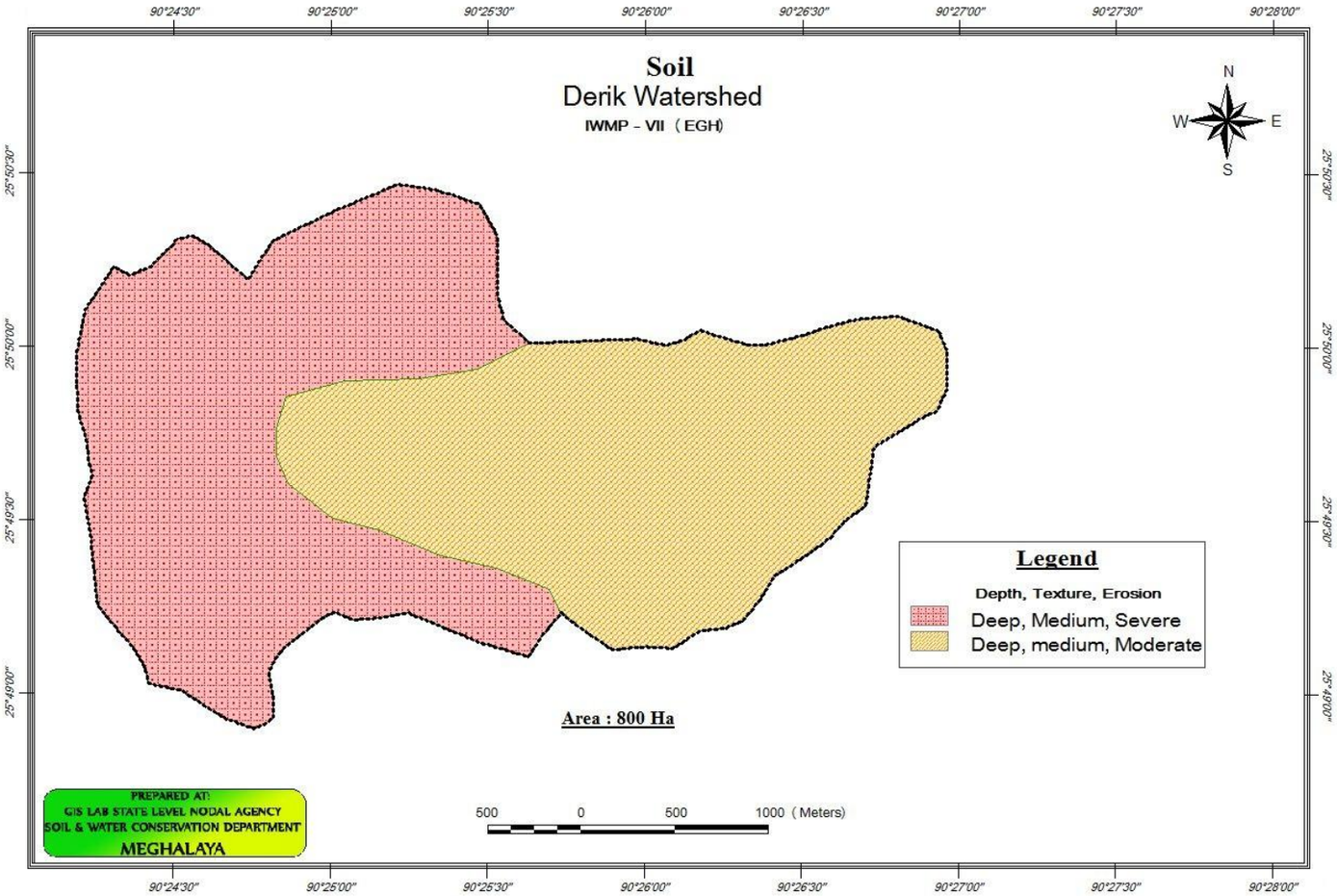
Sakkirangi
(1) Rembash marak
(2) Mareng marak

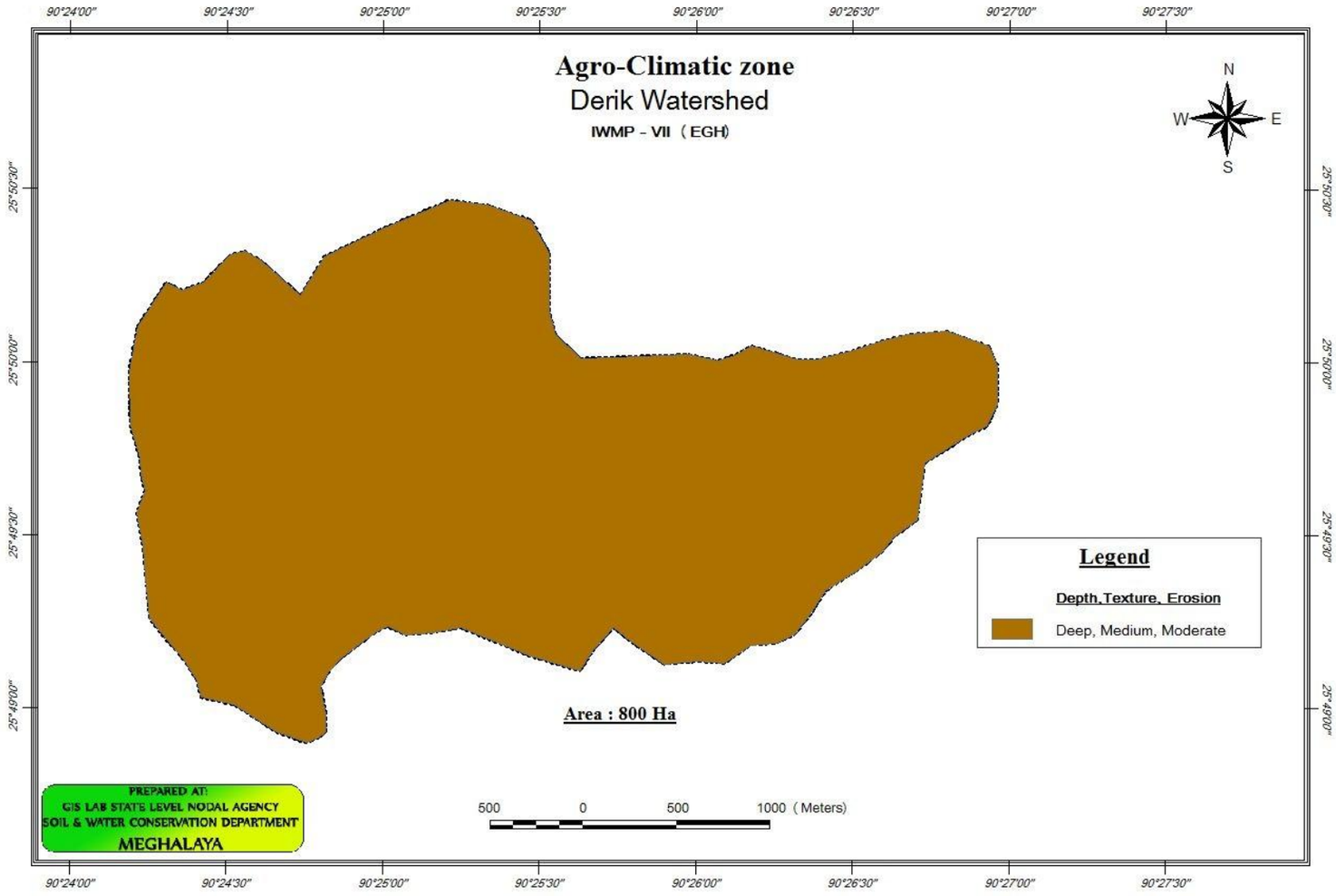
ANNEXURE – III

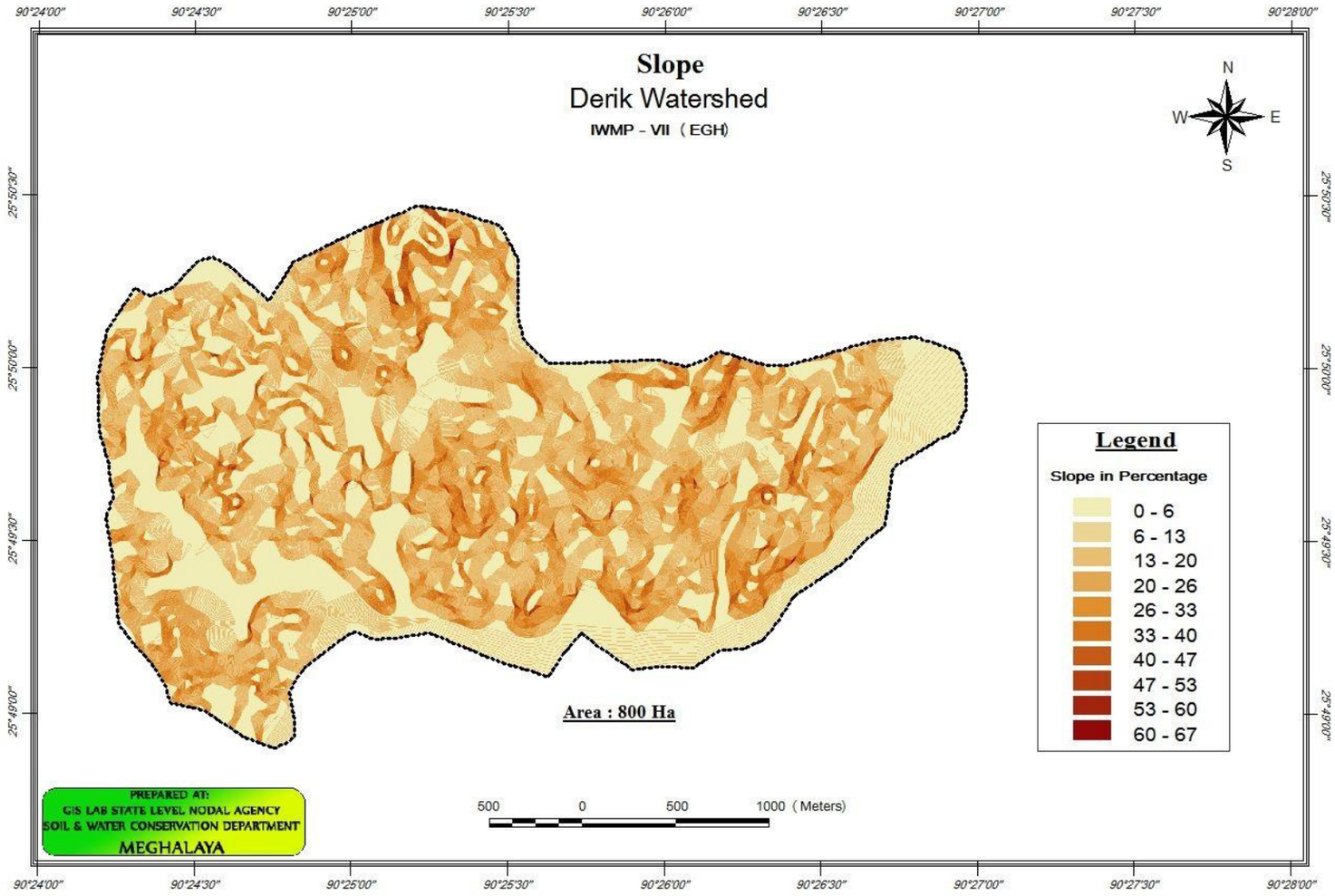
MAPS

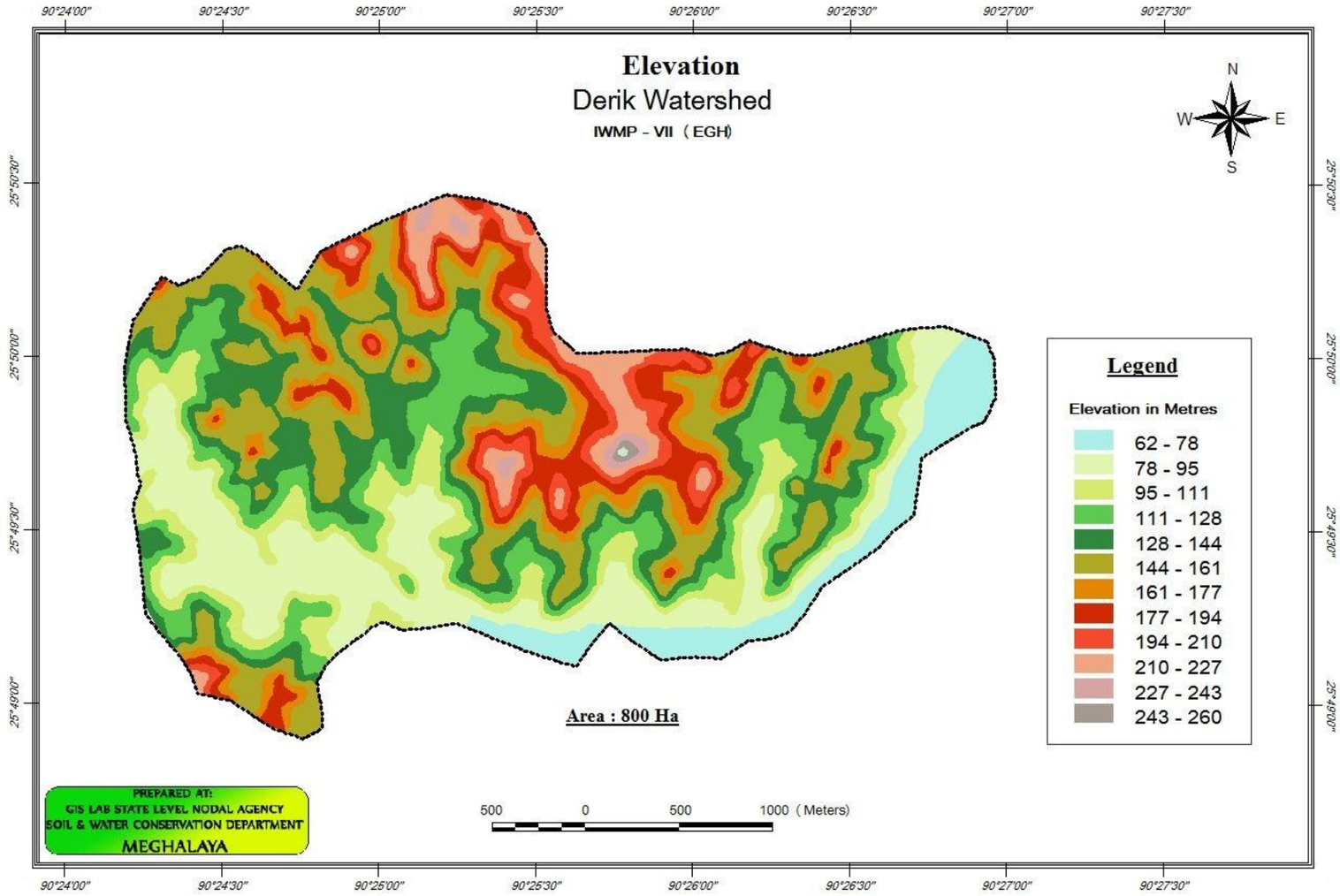

Landuse Landcover
Derik Watershed
IWMP - VII (EGH)
N
W
E
S
90°24'00"
90°24'30"
90°25'00"
90°25'30"
90°26'00"
90°26'30"
90°27'00"
90°27'30"
90°28'00"
25°50'30"
25°50'00"
25°49'30"
25°49'00"
Area : 800 Ha
Legend
Agriculture - 341 Ha.
Tree Clad Open - 301 Ha.
Wasteland/ Grassland - 84 Ha.
Wasteland/ Densescrub - 74 Ha.
PREPARED AT:
GIS LAB STATE LEVEL NODAL AGENCY
SOIL & WATER CONSERVATION DEPARTMENT
MEGHALAYA
500 0 500 1000 (Meters)
Source : Meghalaya Natural Resource Information System
Northeastern Space Application Centre, umiam

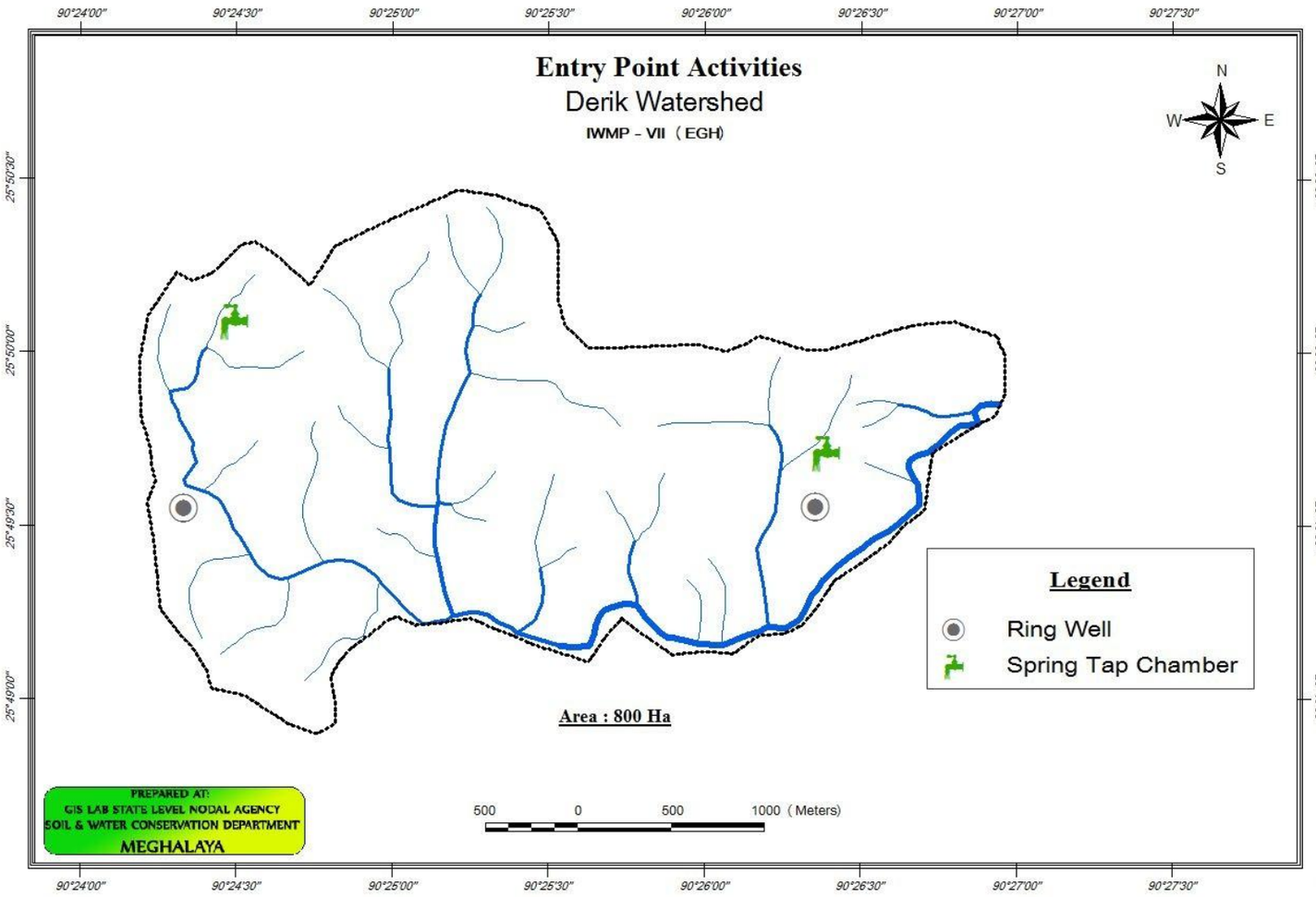

Drainage
Derik Watershed
IWMP - VII (EGH)
N
W
E
S
90°24'00"
90°24'30"
90°25'00"
90°25'30"
90°26'00"
90°26'30"
90°27'00"
90°27'30"
25°50'30"
25°50'00"
25°49'30"
25°49'00"
Bekbekgiri
Aruakagiri
Legend
Watershed Boundary
River
3rd Order Stream
2nd Order Stream
1st Order Stream
Area : 800 Ha
PREPARED AT:
GIS LAB STATE LEVEL NODAL AGENCY
SOIL & WATER CONSERVATION DEPARTMENT
MEGHALAYA
500 0 500 1000 (Meters)

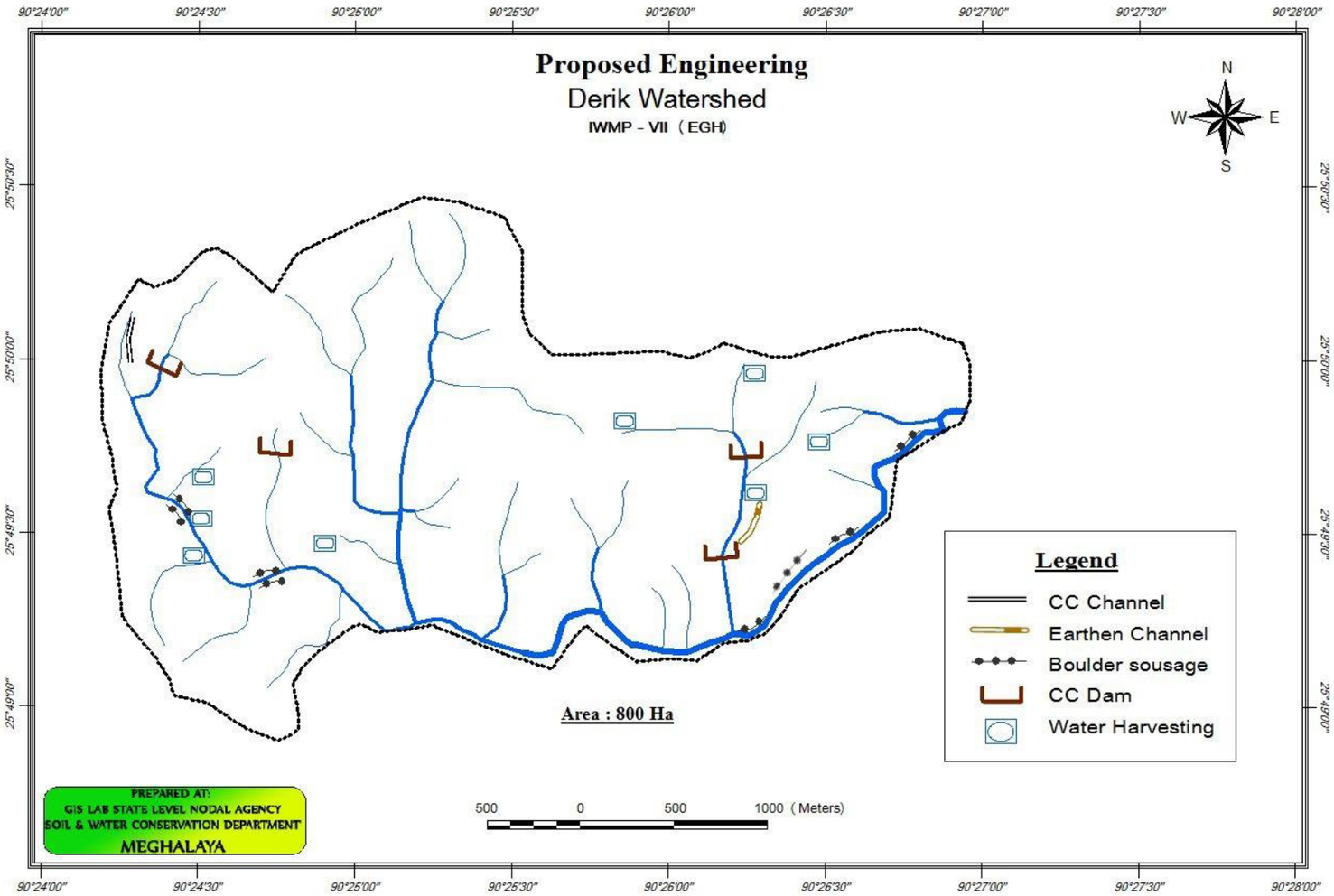

Soil
Derik Watershed
IWMP - VII (EGH)
N
W
E
S
90°24'30"
90°25'00"
90°25'30"
90°26'00"
90°26'30"
90°27'00"
90°27'30"
90°28'00"
25°50'30"
25°50'00"
25°49'30"
25°49'00"
Legend
Depth, Texture, Erosion
Deep, Medium, Severe
Deep, medium, Moderate
Area : 800 Ha
PREPARED AT:
GIS LAB STATE LEVEL NODAL AGENCY
SOIL & WATER CONSERVATION DEPARTMENT
MEGHALAYA
500 0 500 1000 (Meters)

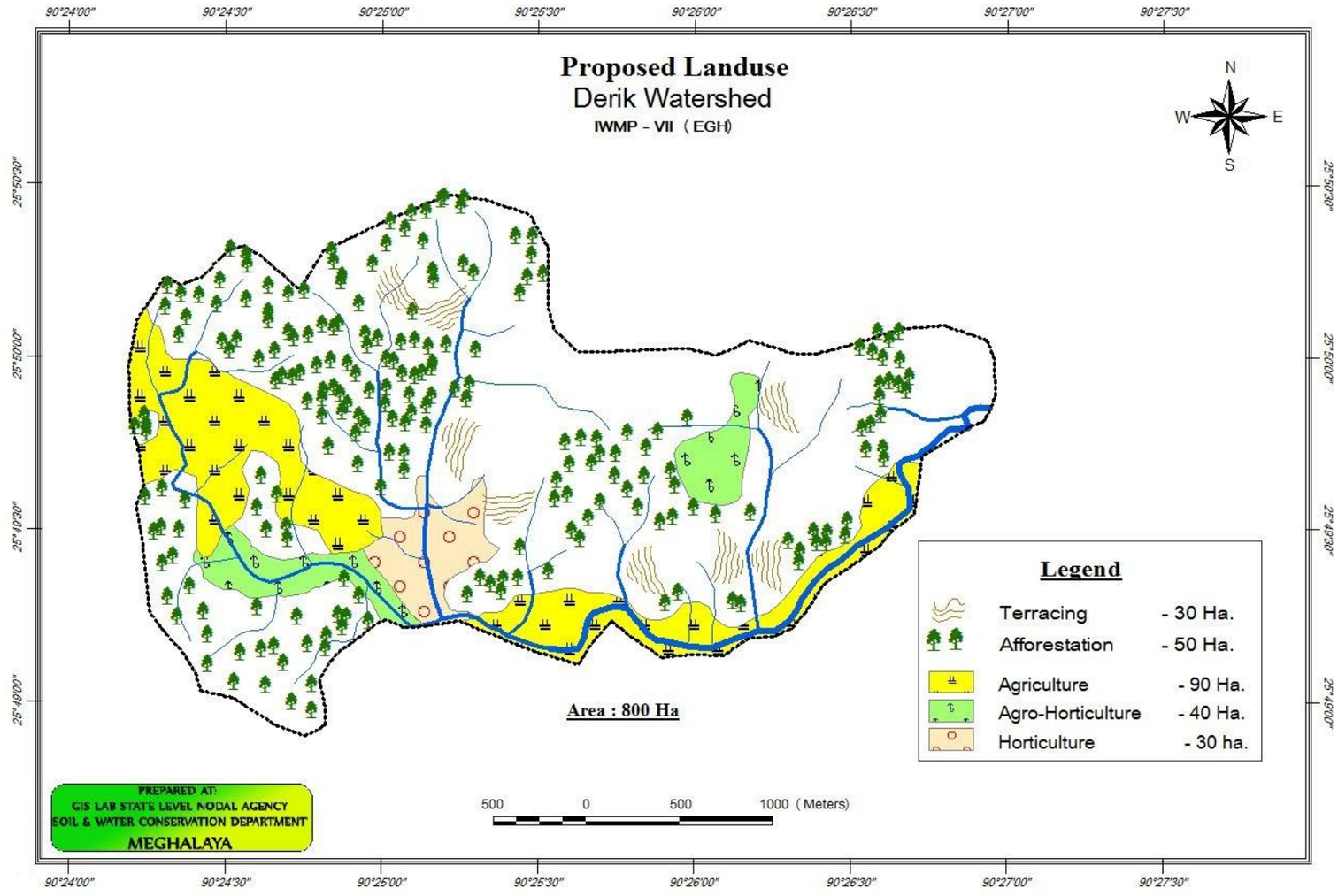

Agro-Climatic zone
Derik Watershed
IWMP - VII (EGH)
N
W
E
S
90°24'00"
90°24'30"
90°25'00"
90°25'30"
90°26'00"
90°26'30"
90°27'00"
90°27'30"
25°50'30"
25°50'00"
25°49'30"
25°49'00"
Legend
Depth, Texture, Erosion
Deep, Medium, Moderate
Area : 800 Ha
PREPARED AT:
GIS LAB STATE LEVEL NODAL AGENCY
SOIL & WATER CONSERVATION DEPARTMENT
MEGHALAYA
500 0 500 1000 (Meters)

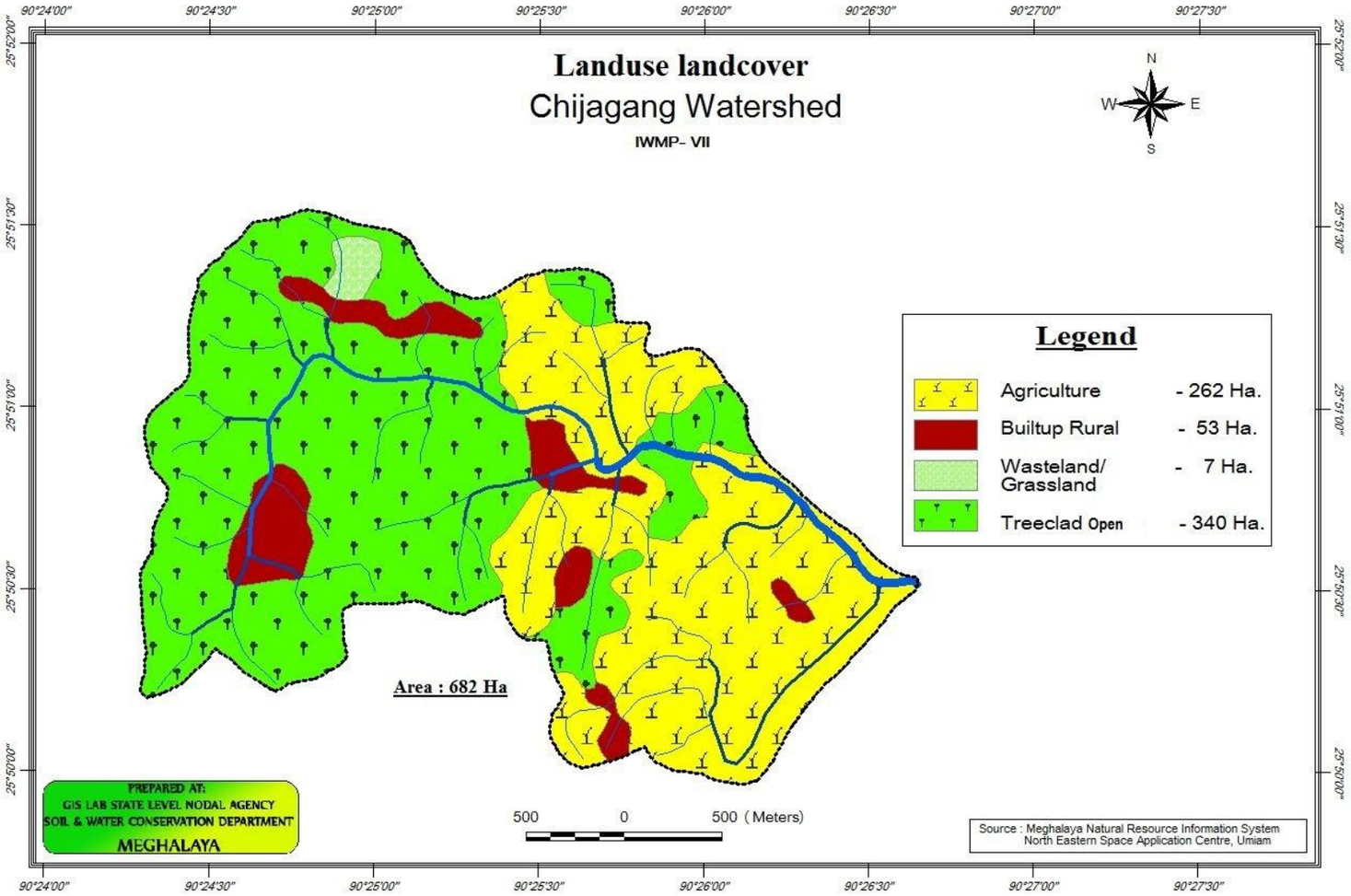

Slope
Derik Watershed
IWMP - VII (EGH)
N
W
E
S
90°24'00"
90°24'30"
90°25'00"
90°25'30"
90°26'00"
90°26'30"
90°27'00"
90°27'30"
90°28'00"
25°50'30"
25°50'00"
25°49'30"
25°49'00"
Area : 800 Ha
Legend
Slope in Percentage
0 - 6
6 - 13
13 - 20
20 - 26
26 - 33
33 - 40
40 - 47
47 - 53
53 - 60
60 - 67
PREPARED AT:
GIS LAB STATE LEVEL NODAL AGENCY
SOIL & WATER CONSERVATION DEPARTMENT
MEGHALAYA
500 0 500 1000 (Meters)

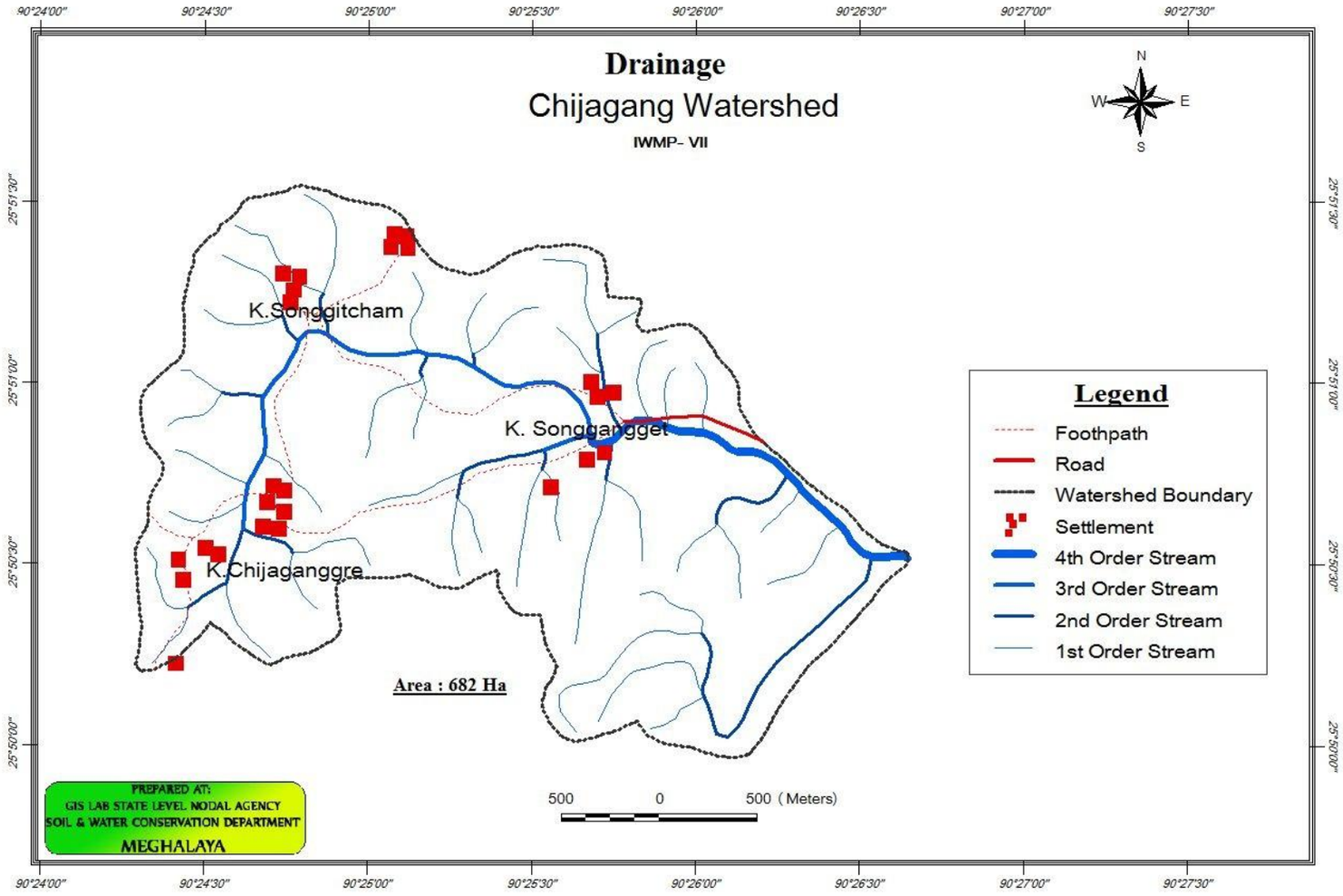

Elevation
Derik Watershed
IWMP - VII (EGH)
N
W
E
S
90°24'00"
90°24'30"
90°25'00"
90°25'30"
90°26'00"
90°26'30"
90°27'00"
90°27'30"
25°50'30"
25°50'00"
25°49'30"
25°49'00"
Legend
Elevation in Metres
62 - 78
78 - 95
95 - 111
111 - 128
128 - 144
144 - 161
161 - 177
177 - 194
194 - 210
210 - 227
227 - 243
243 - 260
Area : 800 Ha
PREPARED AT:
GIS LAB STATE LEVEL NODAL AGENCY
SOIL & WATER CONSERVATION DEPARTMENT
MEGHALAYA
500 0 500 1000 (Meters)

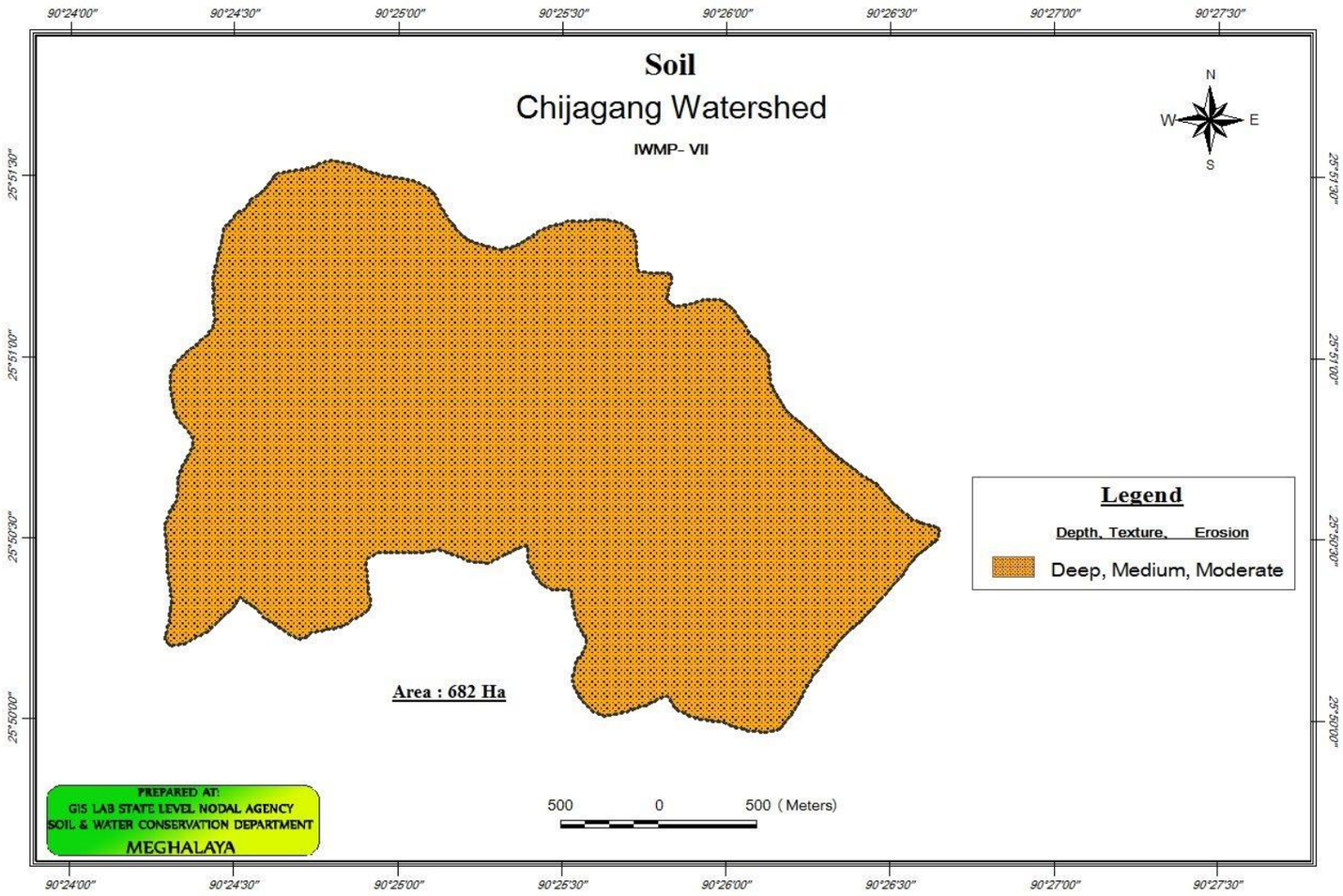

Entry Point Activities
Derik Watershed
IWMP - VII (EGH)
N
W
E
S
90°24'00"
90°24'30"
90°25'00"
90°25'30"
90°26'00"
90°26'30"
90°27'00"
90°27'30"
25°50'30"
25°50'00"
25°49'30"
25°49'00"
Legend
Ring Well
Spring Tap Chamber
Area : 800 Ha
PREPARED AT:
GIS LAB STATE LEVEL NODAL AGENCY
SOIL & WATER CONSERVATION DEPARTMENT
MEGHALAYA
500 0 500 1000 (Meters)

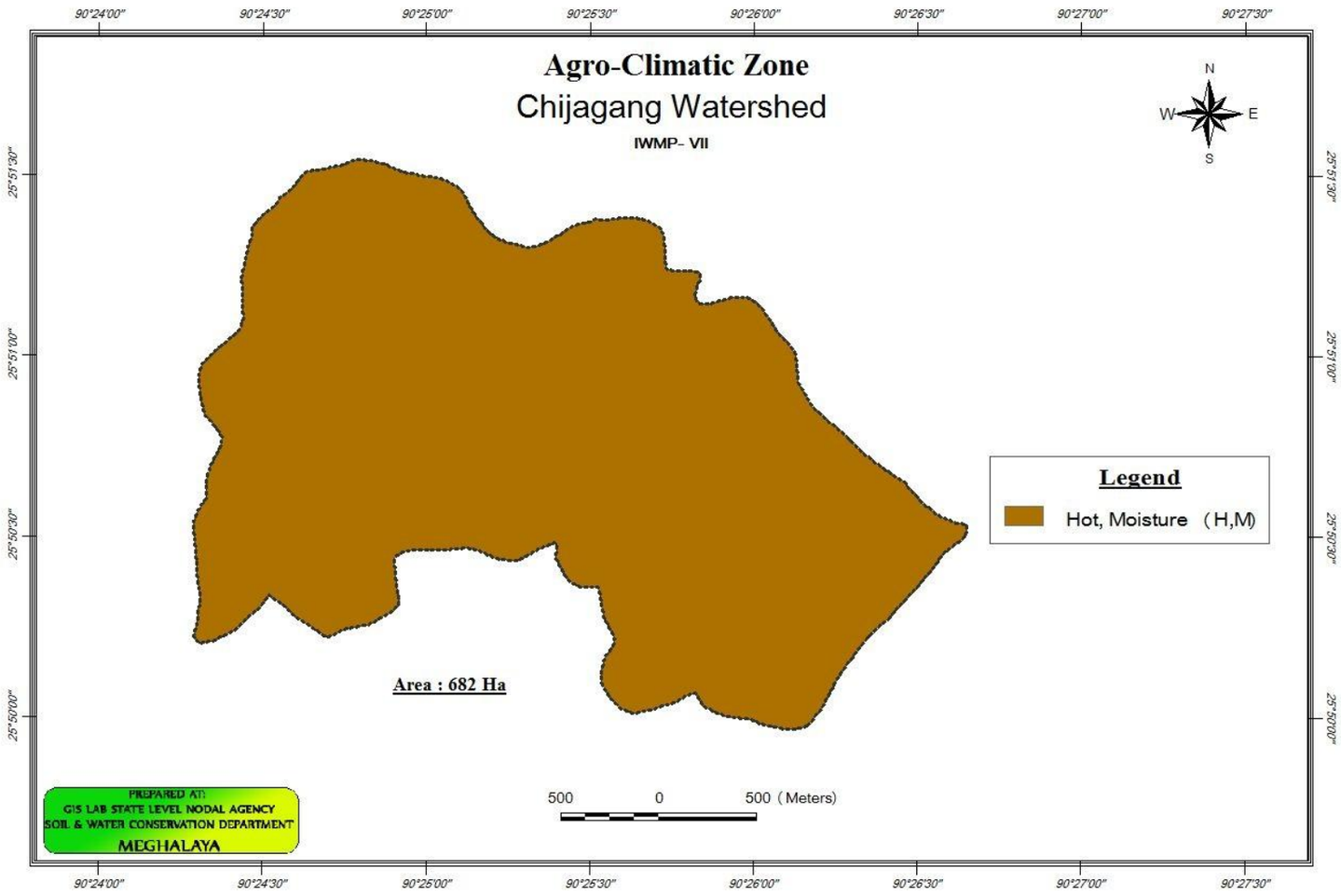

Proposed Engineering
Derik Watershed
IWMP - VII (EGH)
N
W
E
S
90°24'00"
90°24'30"
90°25'00"
90°25'30"
90°26'00"
90°26'30"
90°27'00"
90°27'30"
90°28'00"
25°50'30"
25°50'00"
25°49'30"
25°49'00"
Area : 800 Ha
Legend
CC Channel
Earthen Channel
Boulder sousage
CC Dam
Water Harvesting
PREPARED AT:
GIS LAB STATE LEVEL NODAL AGENCY
SOIL & WATER CONSERVATION DEPARTMENT
MEGHALAYA
500 0 500 1000 (Meters)

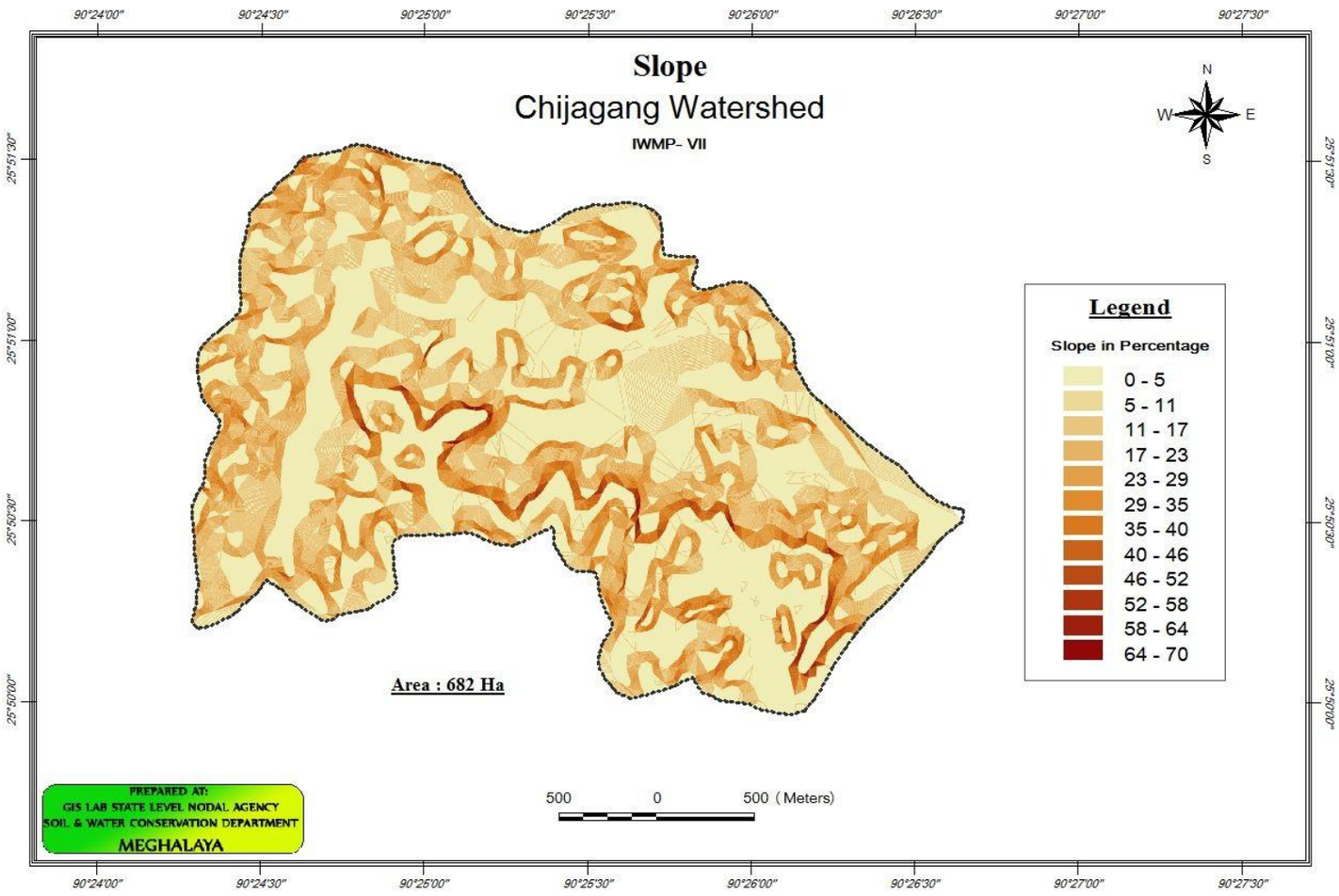

Proposed Landuse
Derik Watershed
IWMP - VII (EGH)
N
W
E
S
90°24'00"
90°24'30"
90°25'00"
90°25'30"
90°26'00"
90°26'30"
90°27'00"
90°27'30"
25°50'30"
25°50'00"
25°49'30"
25°49'00"
Area : 800 Ha
Legend
Terracing - 30 Ha.
Afforestation - 50 Ha.
Agriculture - 90 Ha.
Agro-Horticulture - 40 Ha.
Horticulture - 30 ha.
PREPARED AT:
GIS LAB STATE LEVEL NODAL AGENCY
SOIL & WATER CONSERVATION DEPARTMENT
MEGHALAYA
500 0 500 1000 (Meters)

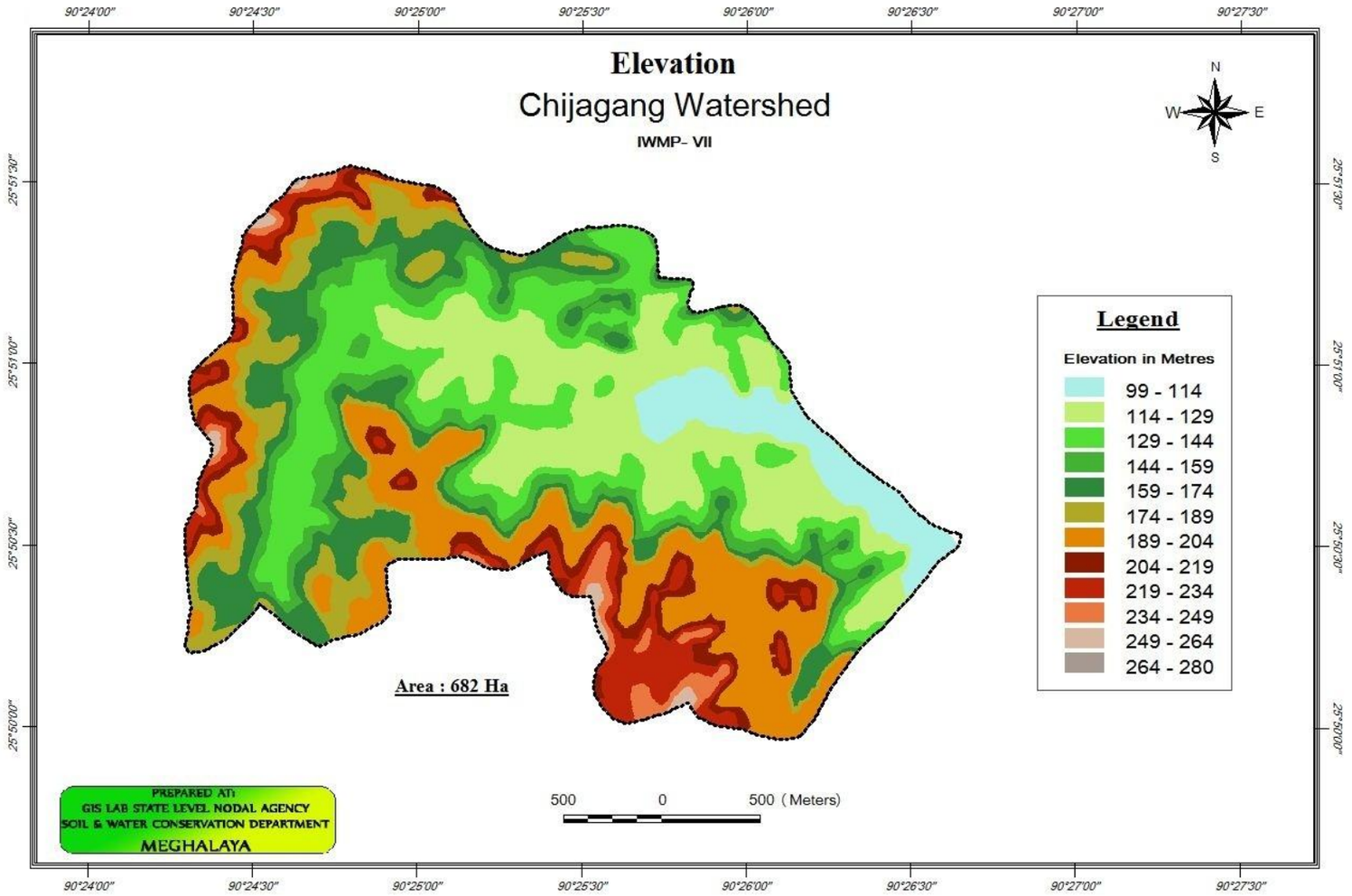

Landuse landcover
Chijagang Watershed
IWMP- VII
N
W
E
S
Legend
Agriculture - 262 Ha.
Builtup Rural - 53 Ha.
Wasteland/ Grassland - 7 Ha.
Treeclad Open - 340 Ha.
Area : 682 Ha
PREPARED AT:
GIS LAB STATE LEVEL NODAL AGENCY
SOIL & WATER CONSERVATION DEPARTMENT
MEGHALAYA
500 0 500 (Meters)
Source : Meghalaya Natural Resource Information System
North Eastern Space Application Centre, Umiam
90°24'00"
90°24'30"
90°25'00"
90°25'30"
90°26'00"
90°26'30"
90°27'00"
90°27'30"
25°52'00"
25°51'30"
25°51'00"
25°50'30"
25°50'00"

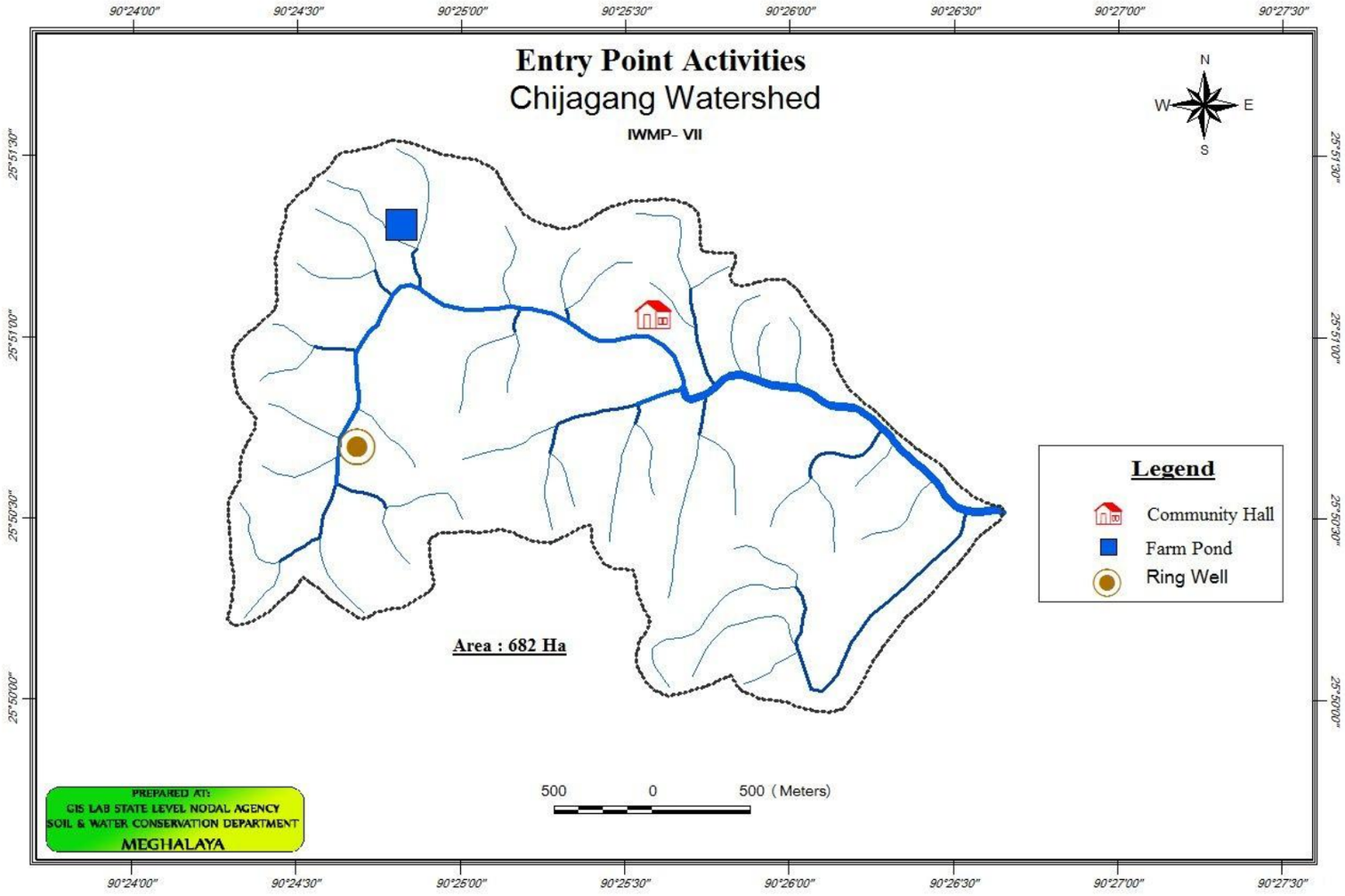

Drainage
Chijagang Watershed
IWMP- VII
N
W
E
S
90°24'00"
90°24'30"
90°25'00"
90°25'30"
90°26'00"
90°26'30"
90°27'00"
90°27'30"
25°51'30"
25°51'00"
25°50'30"
25°50'00"
K.Songgitcham
K. Songgangget
K.Chijaganggre
Area : 682 Ha
Legend
Foothpath
Road
Watershed Boundary
Settlement
4th Order Stream
3rd Order Stream
2nd Order Stream
1st Order Stream
PREPARED AT:
GIS LAB STATE LEVEL NODAL AGENCY
SOIL & WATER CONSERVATION DEPARTMENT
MEGHALAYA
500 0 500 (Meters)

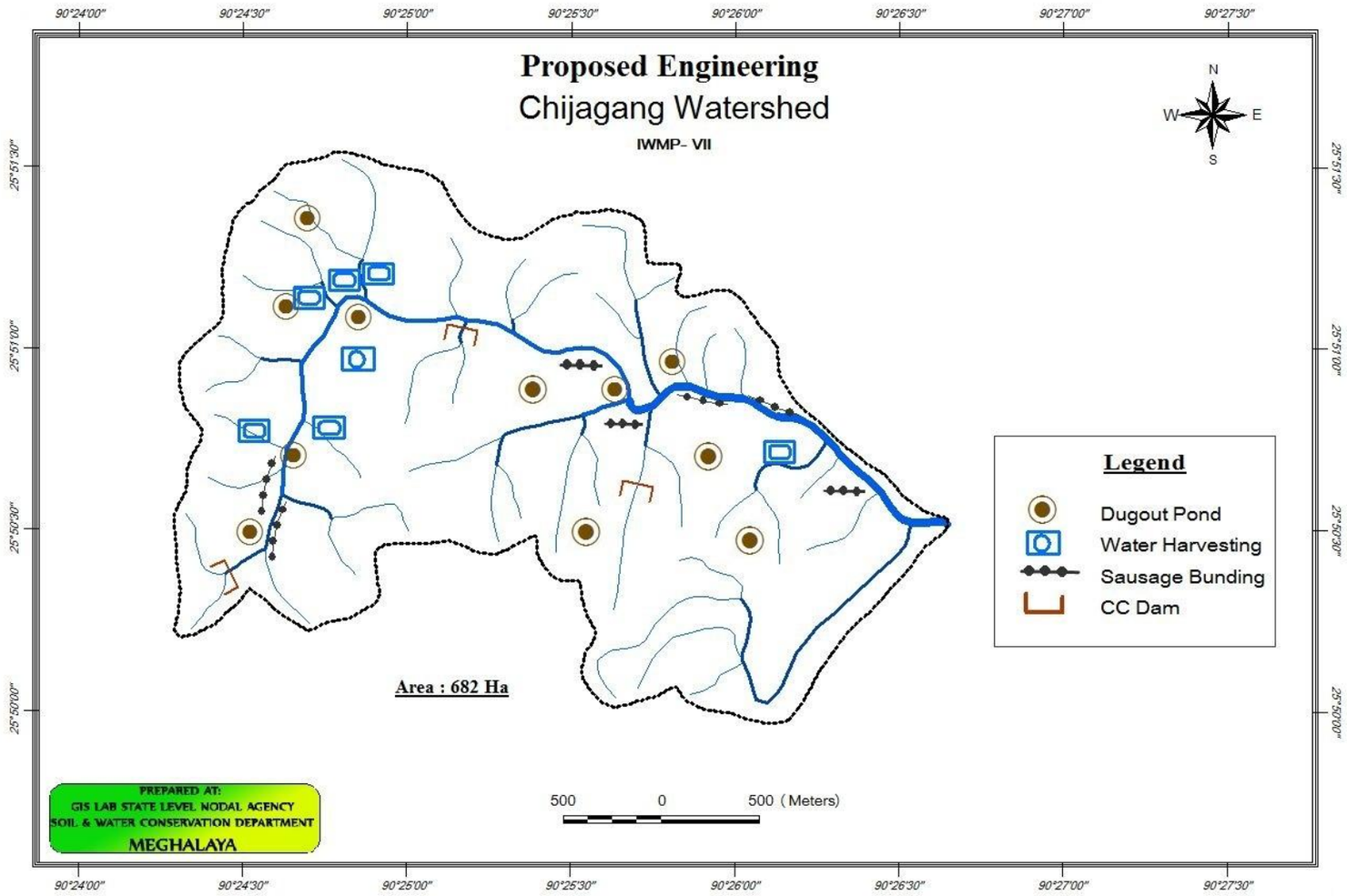

Soil
Chijagang Watershed
IWMP- VII
N
W
E
S
90°24'00"
90°24'30"
90°25'00"
90°25'30"
90°26'00"
90°26'30"
90°27'00"
90°27'30"
25°51'30"
25°51'00"
25°50'30"
25°50'00"
Legend
Depth, Texture, Erosion
Deep, Medium, Moderate
Area : 682 Ha
PREPARED AT:
GIS LAB STATE LEVEL NODAL AGENCY
SOIL & WATER CONSERVATION DEPARTMENT
MEGHALAYA
500 0 500 (Meters)

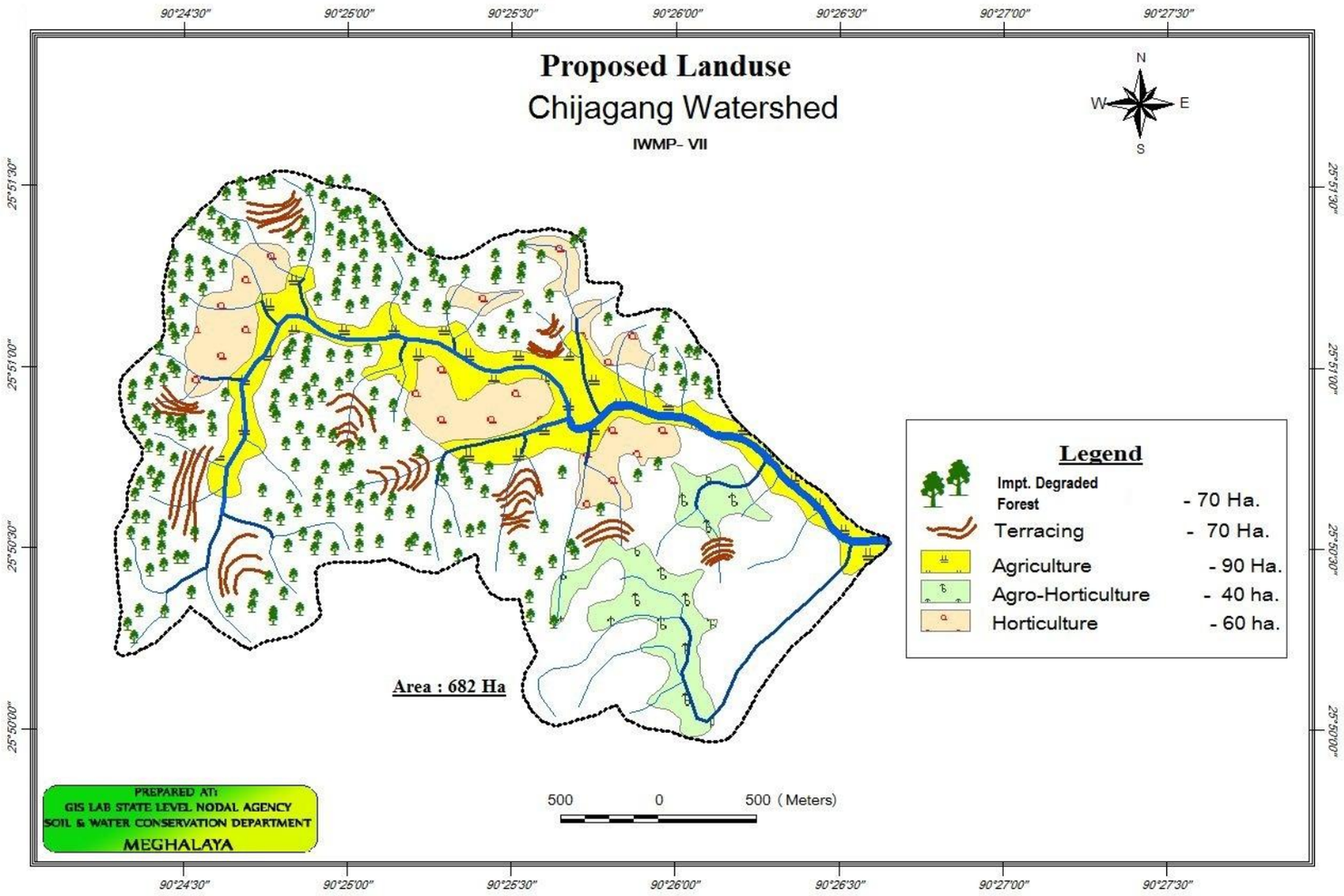

Agro-Climatic Zone
Chijagang Watershed
IWMP- VII
N
W
E
S
90°24'00"
90°24'30"
90°25'00"
90°25'30"
90°26'00"
90°26'30"
90°27'00"
90°27'30"
25°51'30"
25°51'00"
25°50'30"
25°50'00"
Legend
Hot, Moisture (H,M)
Area : 682 Ha
500 0 500 (Meters)
PREPARED AT:
GIS LAB STATE LEVEL NODAL AGENCY
SOIL & WATER CONSERVATION DEPARTMENT
MEGHALAYA

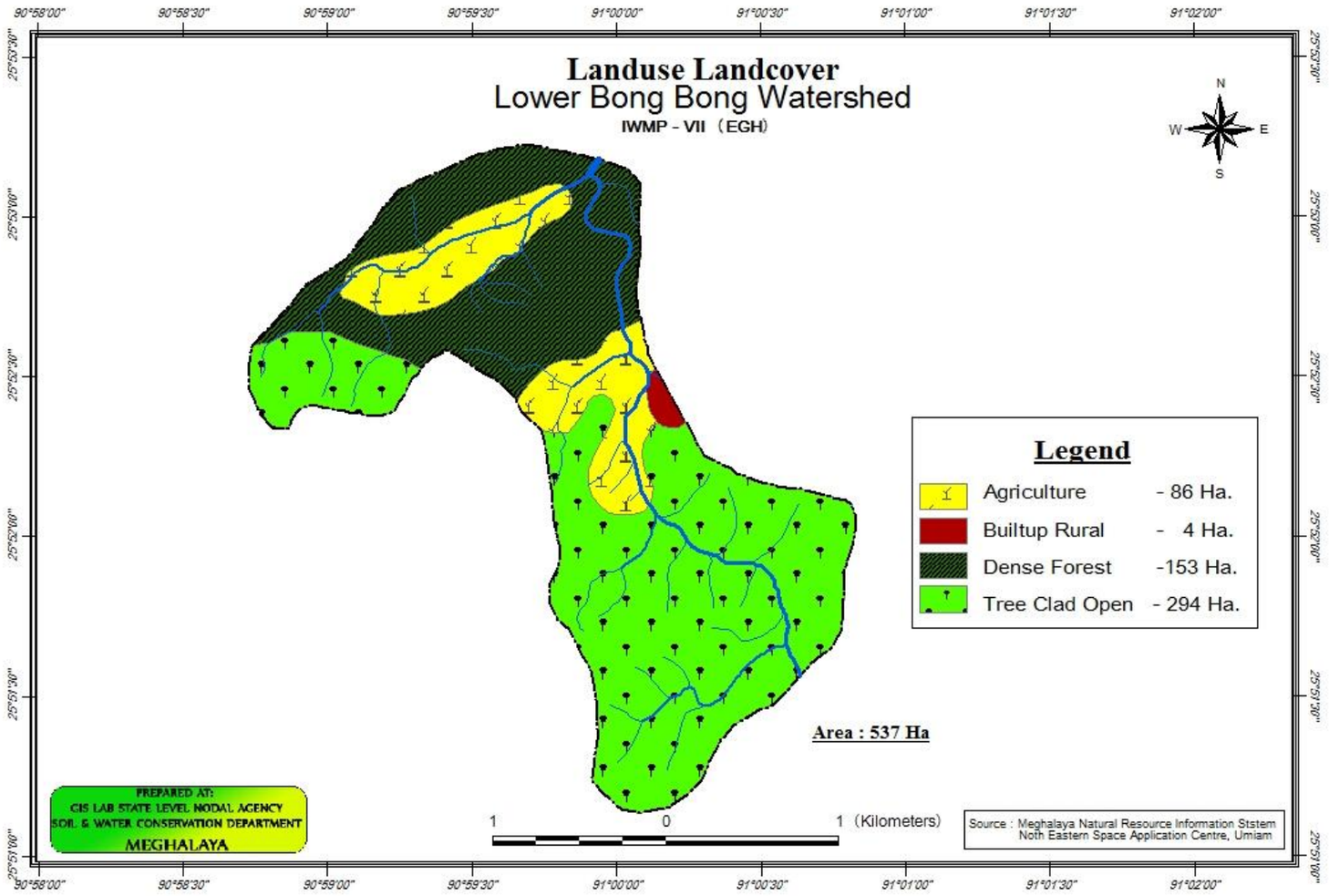

Slope
Chijagang Watershed
IWMP- VII
N
W
E
S
Legend
Slope in Percentage
0 - 5
5 - 11
11 - 17
17 - 23
23 - 29
29 - 35
35 - 40
40 - 46
46 - 52
52 - 58
58 - 64
64 - 70
Area : 682 Ha
PREPARED AT:
GIS LAB STATE LEVEL NODAL AGENCY
SOIL & WATER CONSERVATION DEPARTMENT
MEGHALAYA
500 0 500 (Meters)
90°24'00"
90°24'30"
90°25'00"
90°25'30"
90°26'00"
90°26'30"
90°27'00"
90°27'30"
25°51'30"
25°51'00"
25°50'30"
25°50'00"

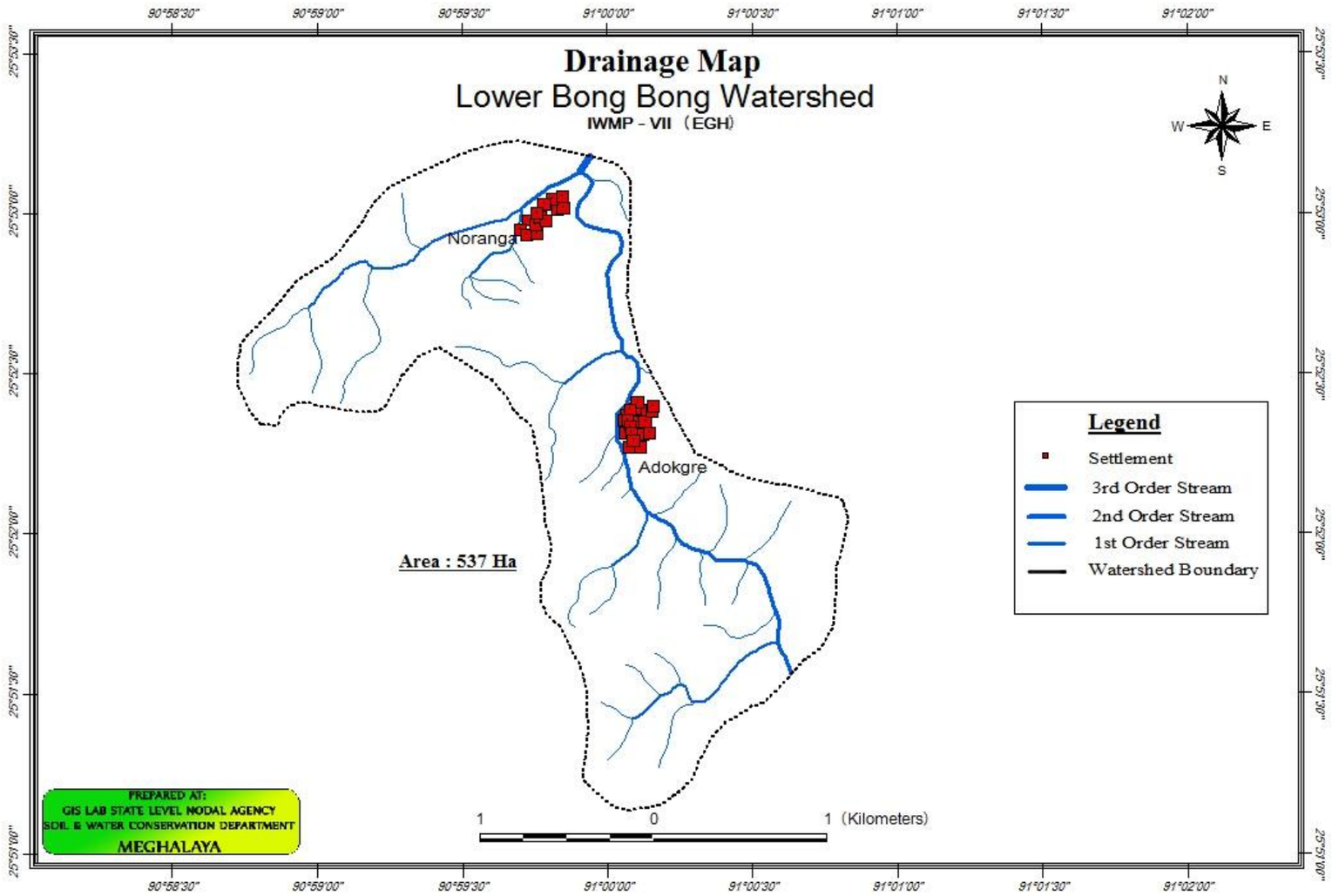

Elevation
Chijagang Watershed
IWMP- VII
N
W
E
S
90°24'00"
90°24'30"
90°25'00"
90°25'30"
90°26'00"
90°26'30"
90°27'00"
90°27'30"
25°51'30"
25°51'00"
25°50'30"
25°50'00"
Legend
Elevation in Metres
99 - 114
114 - 129
129 - 144
144 - 159
159 - 174
174 - 189
189 - 204
204 - 219
219 - 234
234 - 249
249 - 264
264 - 280
Area : 682 Ha
500 0 500 (Meters)
PREPARED AT:
GIS LAB STATE LEVEL NODAL AGENCY
SOIL & WATER CONSERVATION DEPARTMENT
MEGHALAYA

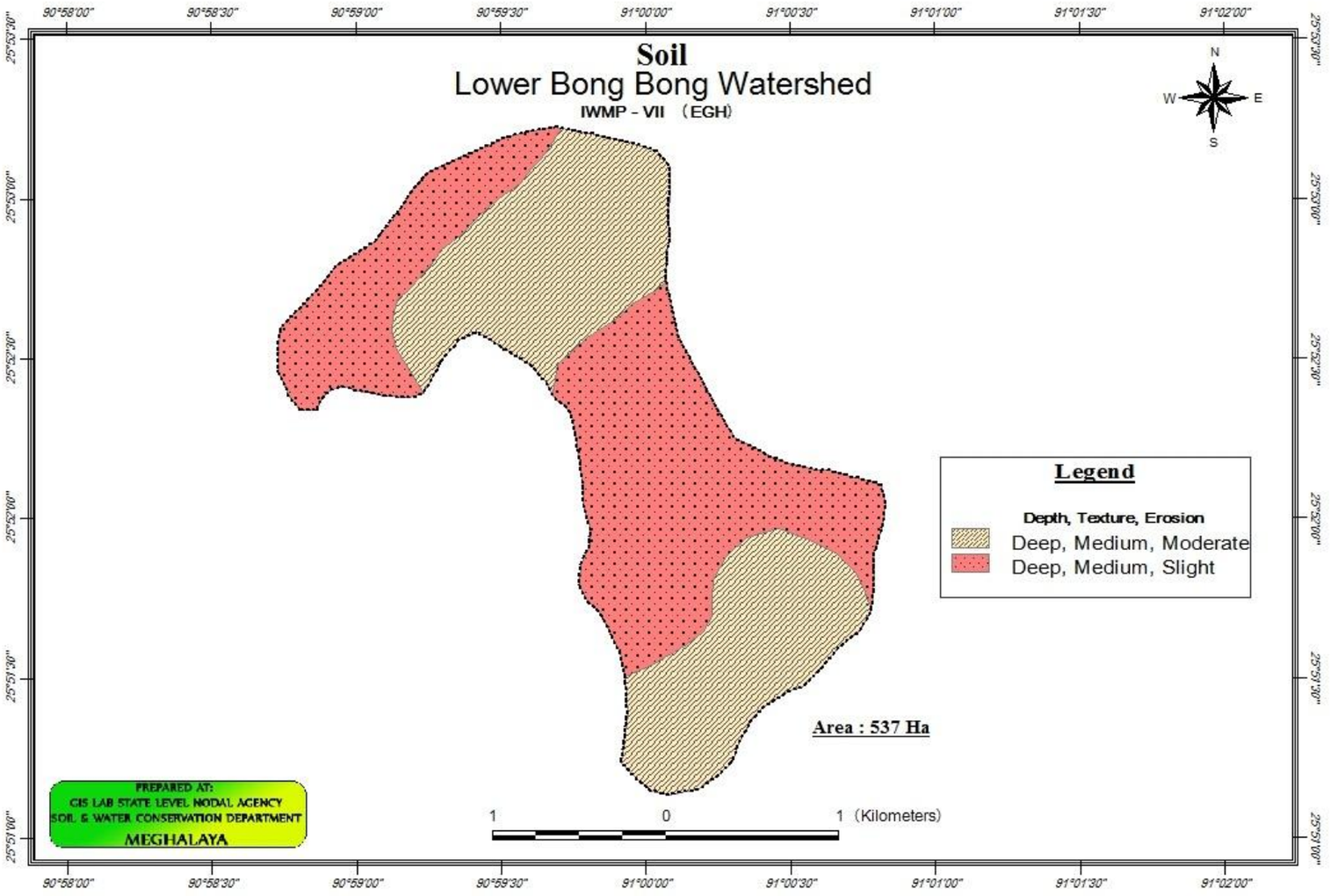

Entry Point Activities
Chijagang Watershed
IWMP- VII
N
W
E
S
90°24'00"
90°24'30"
90°25'00"
90°25'30"
90°26'00"
90°26'30"
90°27'00"
90°27'30"
25°51'30"
25°51'00"
25°50'30"
25°50'00"
Legend
Community Hall
Farm Pond
Ring Well
Area : 682 Ha
500 0 500 (Meters)
PREPARED AT:
GIS LAB STATE LEVEL NODAL AGENCY
SOIL & WATER CONSERVATION DEPARTMENT
MEGHALAYA

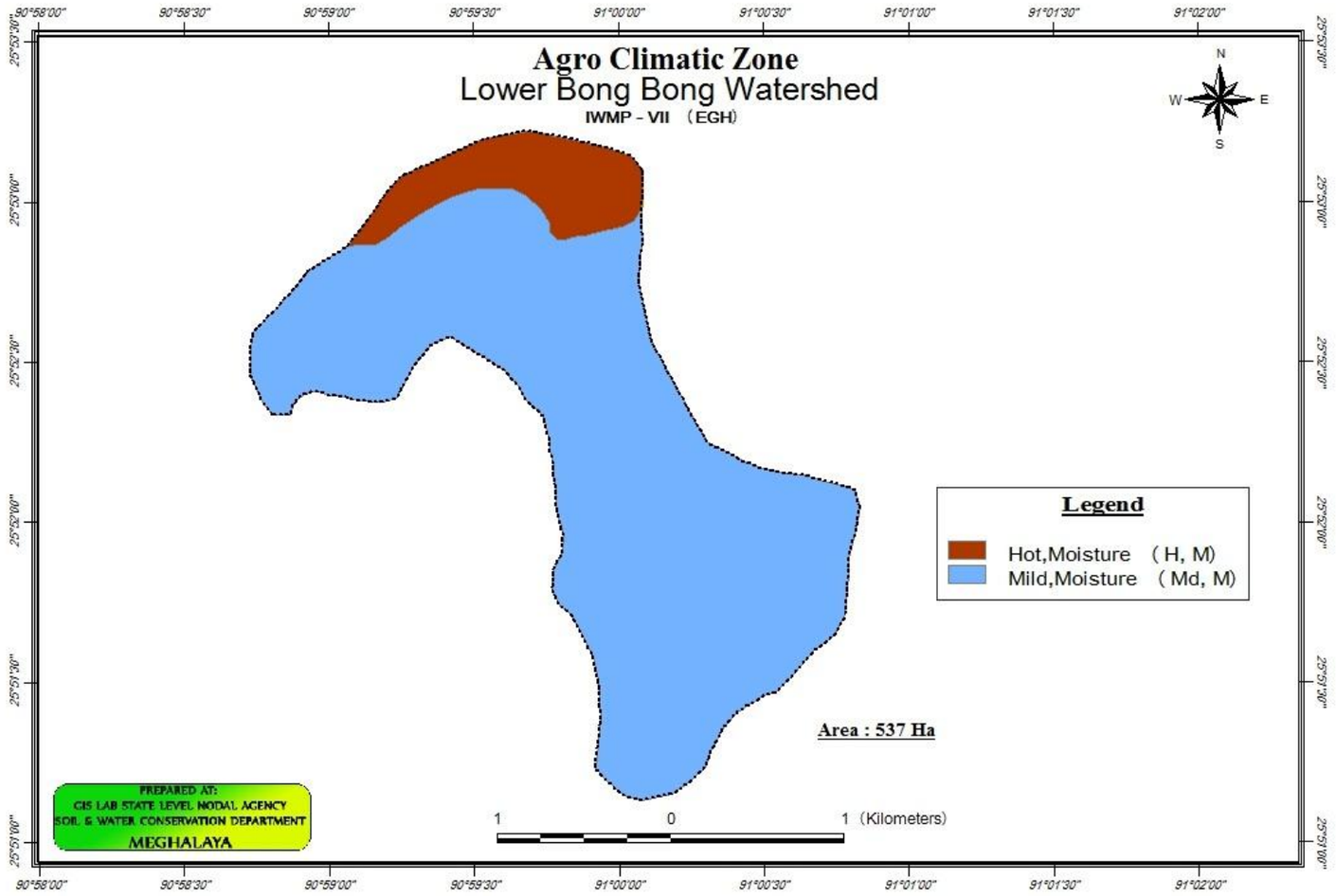

Proposed Engineering
Chijagang Watershed
IWMP- VII
N
W
E
S
90°24'00"
90°24'30"
90°25'00"
90°25'30"
90°26'00"
90°26'30"
90°27'00"
90°27'30"
25°51'30"
25°51'00"
25°50'30"
25°50'00"
Legend
Dugout Pond
Water Harvesting
Sausage Bunding
CC Dam
Area : 682 Ha
PREPARED AT:
GIS LAB STATE LEVEL NODAL AGENCY
SOIL & WATER CONSERVATION DEPARTMENT
MEGHALAYA
500 0 500 (Meters)

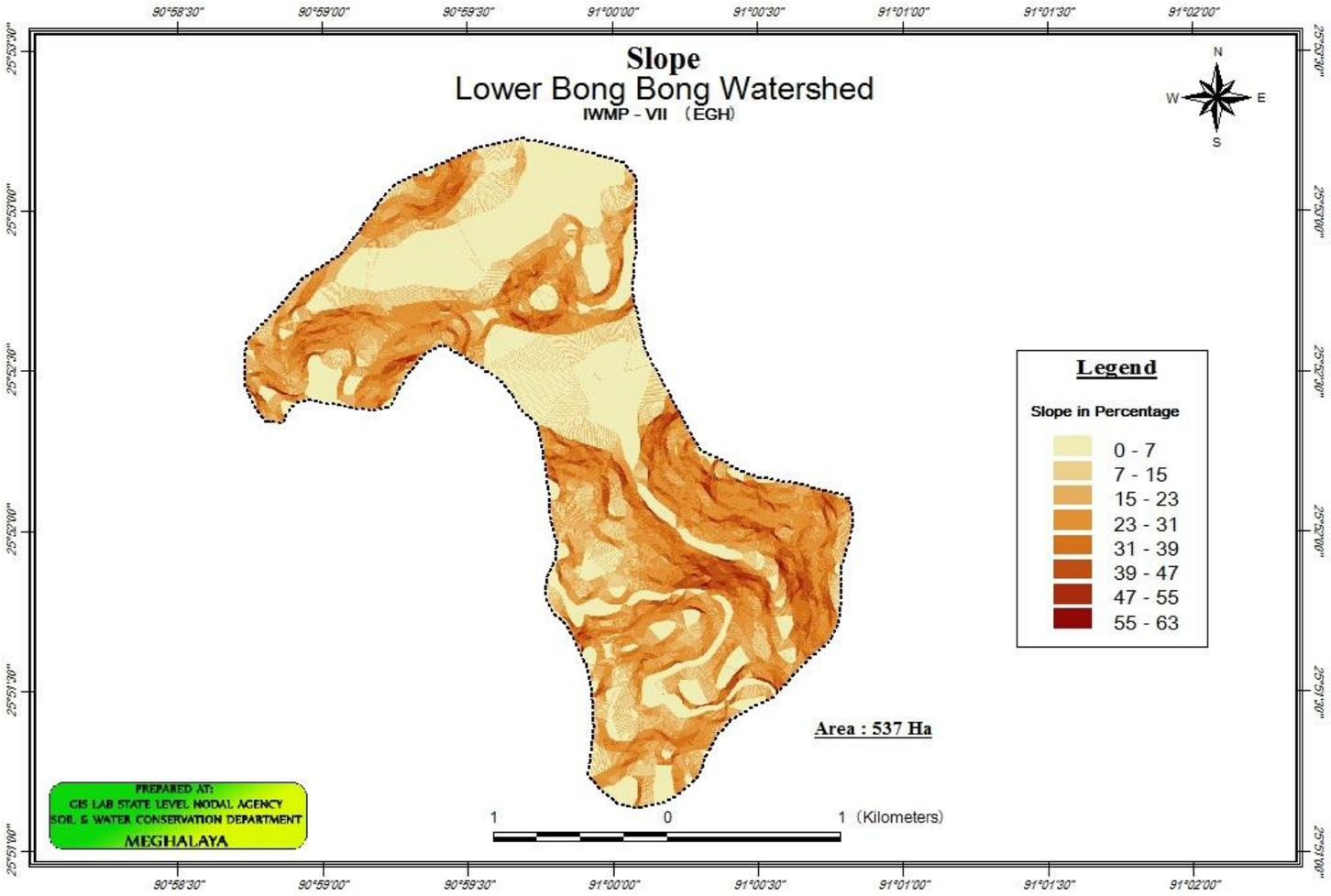

Proposed Landuse
Chijagang Watershed
IWMP- VII
N
W
E
S
90°24'30"
90°25'00"
90°25'30"
90°26'00"
90°26'30"
90°27'00"
90°27'30"
25°51'30"
25°51'00"
25°50'30"
25°50'00"
Legend
Impt. Degraded Forest - 70 Ha.
Terracing - 70 Ha.
Agriculture - 90 Ha.
Agro-Horticulture - 40 ha.
Horticulture - 60 ha.
Area : 682 Ha
PREPARED AT:
GIS LAB STATE LEVEL NODAL AGENCY
SOIL & WATER CONSERVATION DEPARTMENT
MEGHALAYA
500 0 500 (Meters)


Landuse Landcover
Lower Bong Bong Watershed
IWMP - VII (EGH)
N
W
E
S
Legend
Agriculture - 86 Ha.
Builtup Rural - 4 Ha.
Dense Forest -153 Ha.
Tree Clad Open - 294 Ha.
Area : 537 Ha
1 0 1 (Kilometers)
PREPARED AT:
GIS LAB STATE LEVEL NODAL AGENCY
SOIL & WATER CONSERVATION DEPARTMENT
MEGHALAYA
Source : Meghalaya Natural Resource Information Ststem
Noth Eastern Space Application Centre, Umiam
90°58'00"
90°58'30"
90°59'00"
90°59'30"
91°00'00"
91°00'30"
91°01'00"
91°01'30"
91°02'00"
25°55'30"
25°55'00"
25°54'30"
25°54'00"
25°53'30"
25°53'00"
25°52'30"
25°52'00"
25°51'30"
25°51'00"


Drainage Map
Lower Bong Bong Watershed
IWMP - VII (EGH)
N
W
E
S
Noranga
Adokgre
Area : 537 Ha
Legend
Settlement
3rd Order Stream
2nd Order Stream
1st Order Stream
Watershed Boundary
PREPARED AT:
GIS LAB STATE LEVEL NODAL AGENCY
SOIL & WATER CONSERVATION DEPARTMENT
MEGHALAYA
1 0 1 (Kilometers)
90°58'30"
90°59'00"
90°59'30"
91°00'00"
91°00'30"
91°01'00"
91°01'30"
91°02'00"
25°53'30"
25°53'00"
25°52'30"
25°52'00"
25°51'30"
25°51'00"


Soil
Lower Bong Bong Watershed
IWMP - VII (EGH)
N
W
E
S
Legend
Depth, Texture, Erosion
Deep, Medium, Moderate
Deep, Medium, Slight
Area : 537 Ha
PREPARED AT:
GIS LAB STATE LEVEL NODAL AGENCY
SOIL & WATER CONSERVATION DEPARTMENT
MEGHALAYA
1 0 1 (Kilometers)
90°58'00"
90°58'30"
90°59'00"
90°59'30"
91°00'00"
91°00'30"
91°01'00"
91°01'30"
91°02'00"
25°53'30"
25°53'00"
25°52'30"
25°52'00"
25°51'30"
25°51'00"


Agro Climatic Zone
Lower Bong Bong Watershed
IWMP - VII (EGH)
N
W
E
S
Legend
Hot,Moisture (H, M)
Mild,Moisture (Md, M)
Area : 537 Ha
PREPARED AT:
GIS LAB STATE LEVEL NODAL AGENCY
SOIL & WATER CONSERVATION DEPARTMENT
MEGHALAYA
1 0 1 (Kilometers)
90°58'00"
90°58'30"
90°59'00"
90°59'30"
91°00'00"
91°00'30"
91°01'00"
91°01'30"
91°02'00"
25°53'30"
25°53'00"
25°52'30"
25°52'00"
25°51'30"
25°51'00"


Slope
Lower Bong Bong Watershed
IWMP - VII (EGH)
N
W
E
S
Legend
Slope in Percentage
0 - 7
7 - 15
15 - 23
23 - 31
31 - 39
39 - 47
47 - 55
55 - 63
Area : 537 Ha
PREPARED AT:
GIS LAB STATE LEVEL NODAL AGENCY
SOIL & WATER CONSERVATION DEPARTMENT
MEGHALAYA
1 0 1 (Kilometers)
90°58'30"
90°59'00"
90°59'30"
91°00'00"
91°00'30"
91°01'00"
91°01'30"
91°02'00"
25°53'30"
25°53'00"
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25°52'00"
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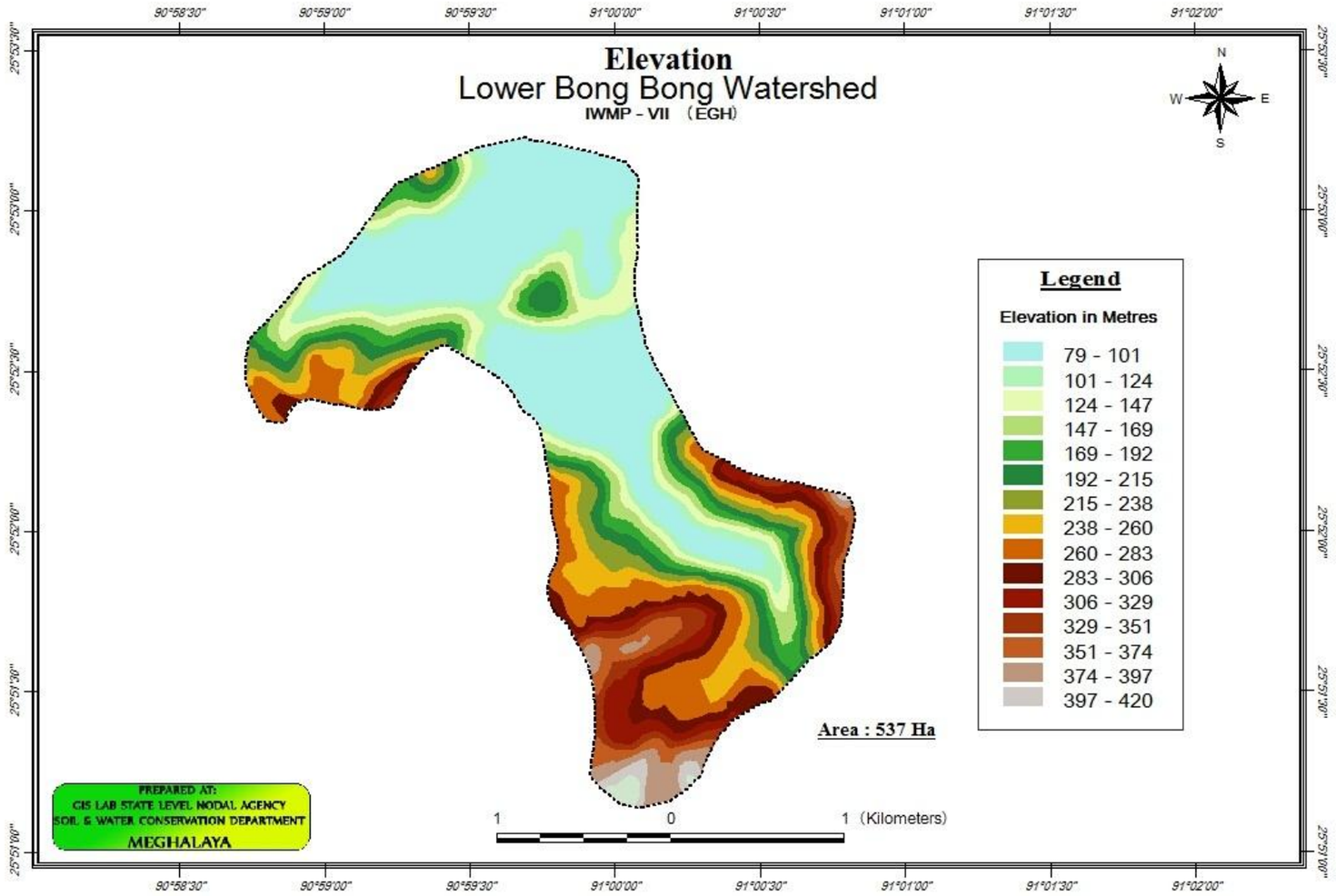
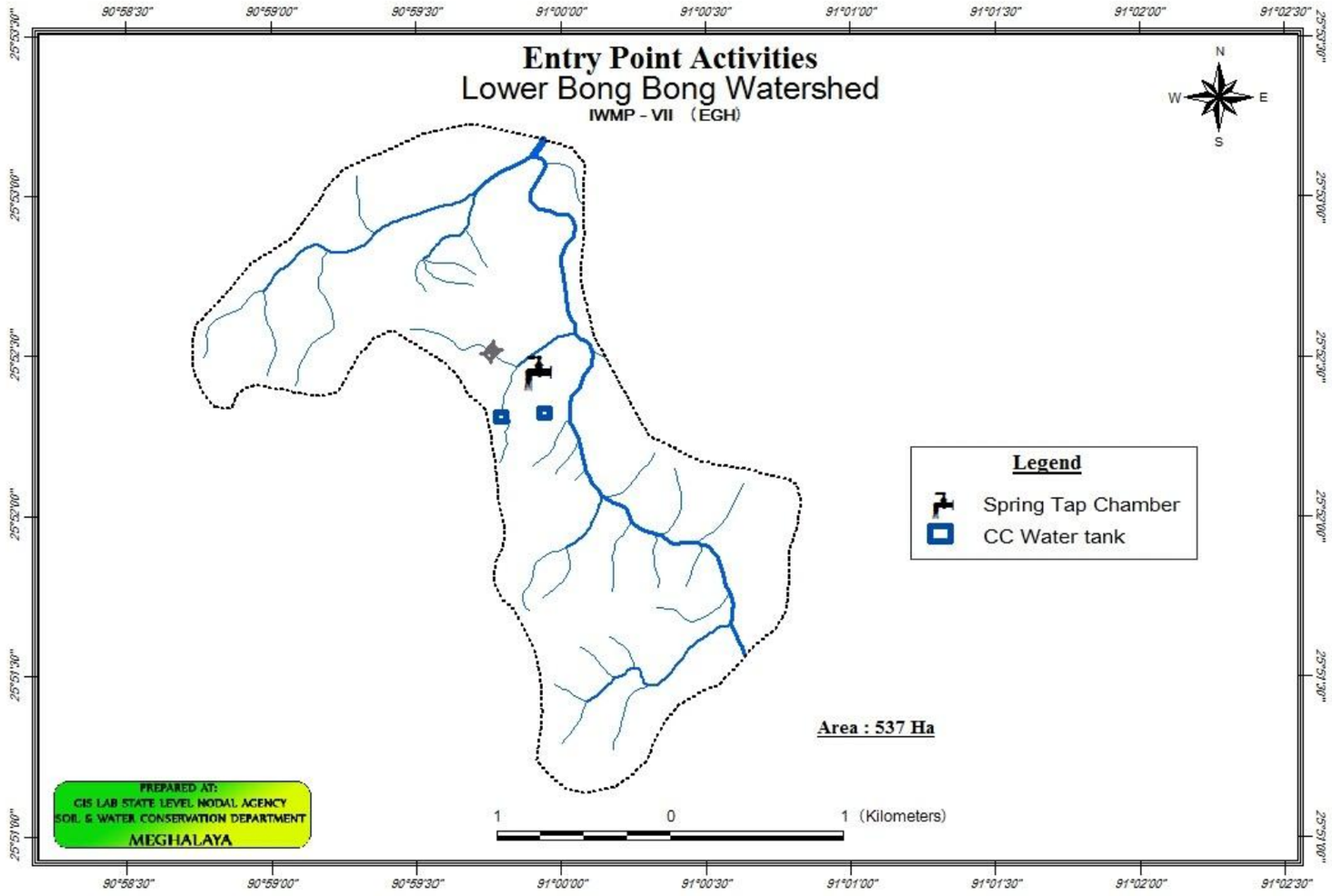
25°51'00"


Elevation
Lower Bong Bong Watershed
IWMP - VII (EGH)
N
W
E
S
Legend
Elevation in Metres
79 - 101
101 - 124
124 - 147
147 - 169
169 - 192
192 - 215
215 - 238
238 - 260
260 - 283
283 - 306
306 - 329
329 - 351
351 - 374
374 - 397
397 - 420
Area : 537 Ha
PREPARED AT:
GIS LAB STATE LEVEL NODAL AGENCY
SOIL & WATER CONSERVATION DEPARTMENT
MEGHALAYA
1 0 1 (Kilometers)
90°58'30"
90°59'00"
90°59'30"
91°00'00"
91°00'30"
91°01'00"
91°01'30"
91°02'00"
25°53'30"
25°53'00"
25°52'30"
25°52'00"
25°51'30"
25°51'00"


Entry Point Activities
Lower Bong Bong Watershed
IWMP - VII (EGH)
N
W
E
S
Legend
Spring Tap Chamber
CC Water tank
Area : 537 Ha
PREPARED AT:
GIS LAB STATE LEVEL NODAL AGENCY
SOIL & WATER CONSERVATION DEPARTMENT
MEGHALAYA
1 0 1 (Kilometers)
90°58'30"
90°59'00"
90°59'30"
91°00'00"
91°00'30"
91°01'00"
91°01'30"
91°02'00"
91°02'30"
25°53'30"
25°53'00"
25°52'30"
25°52'00"
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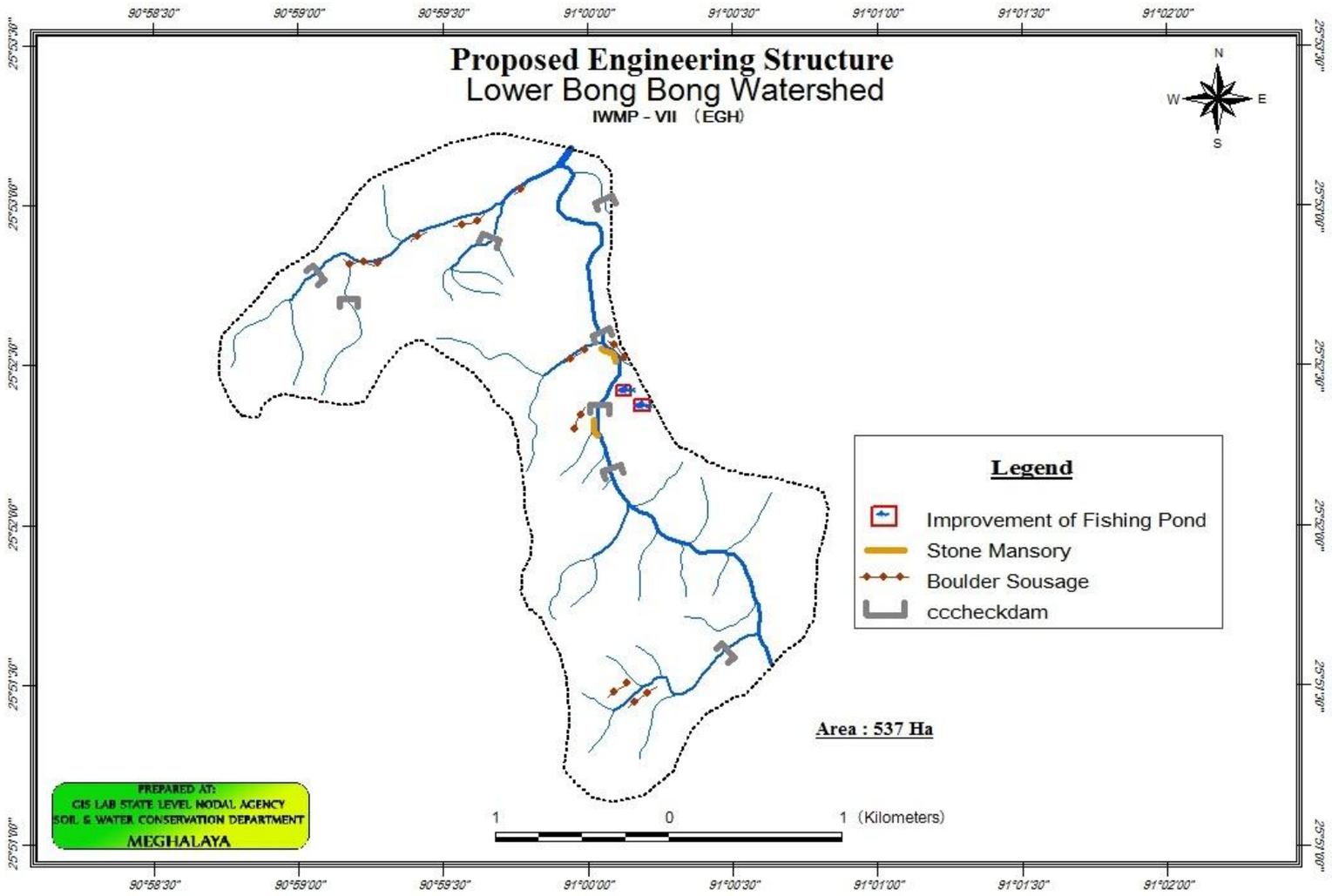
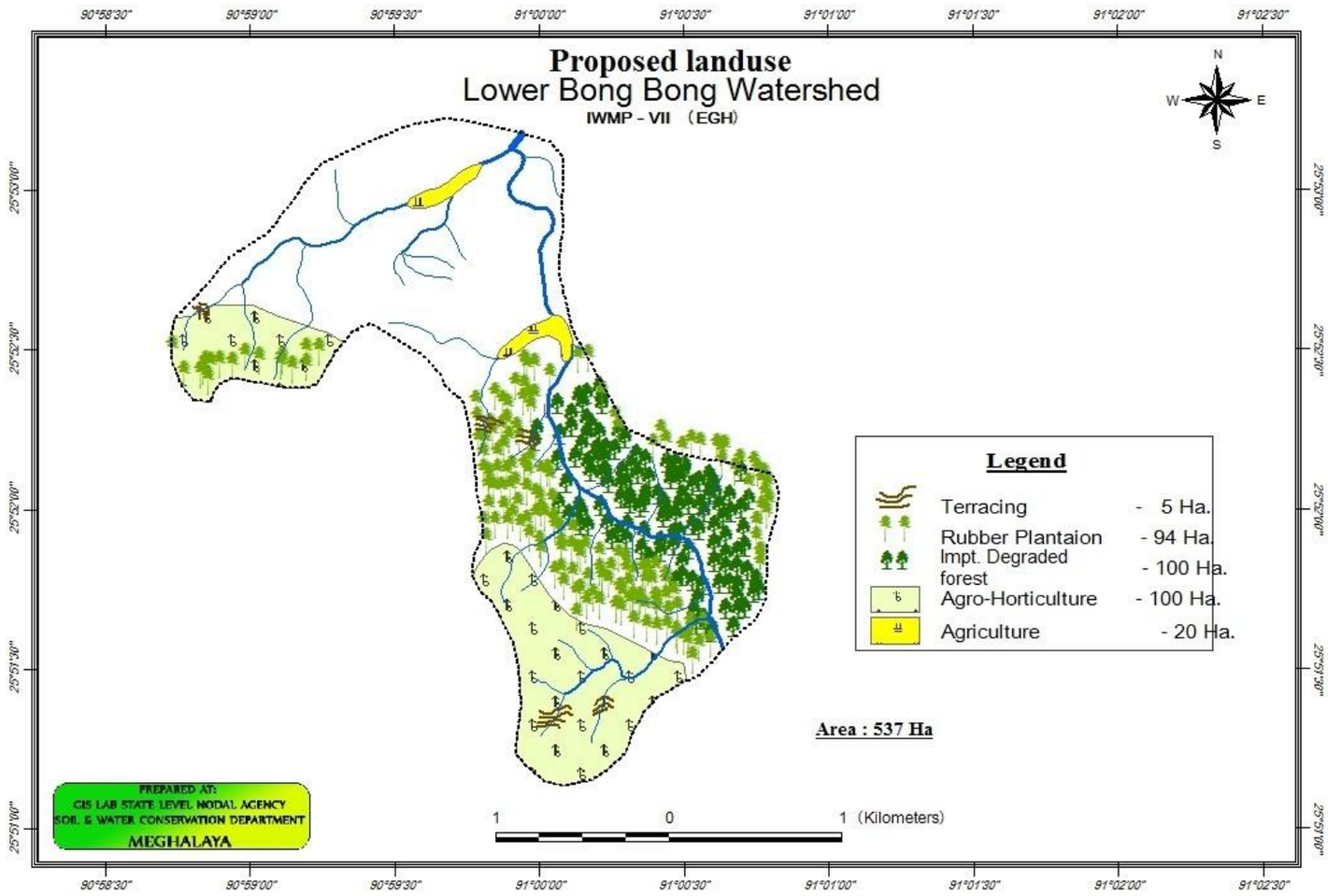
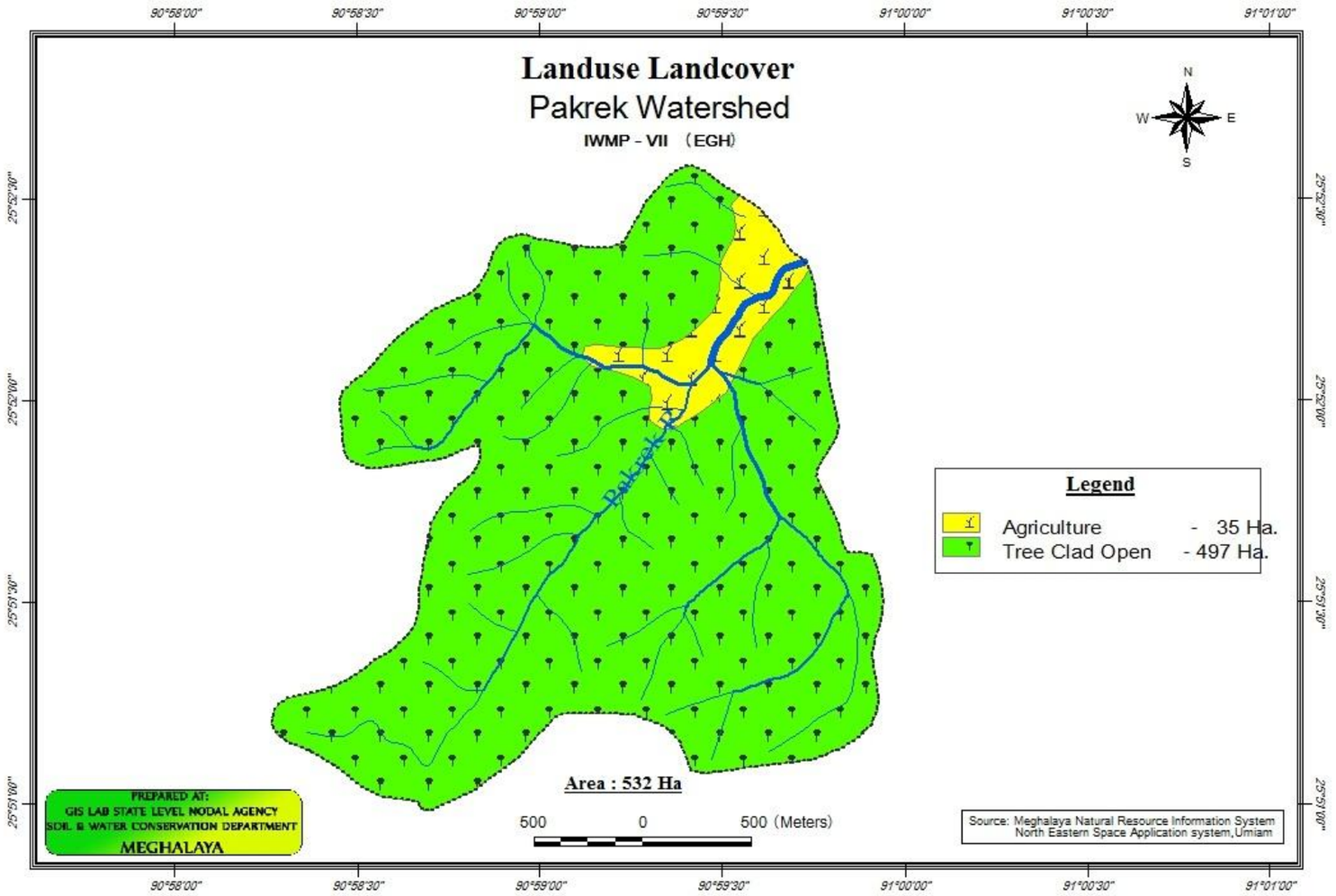
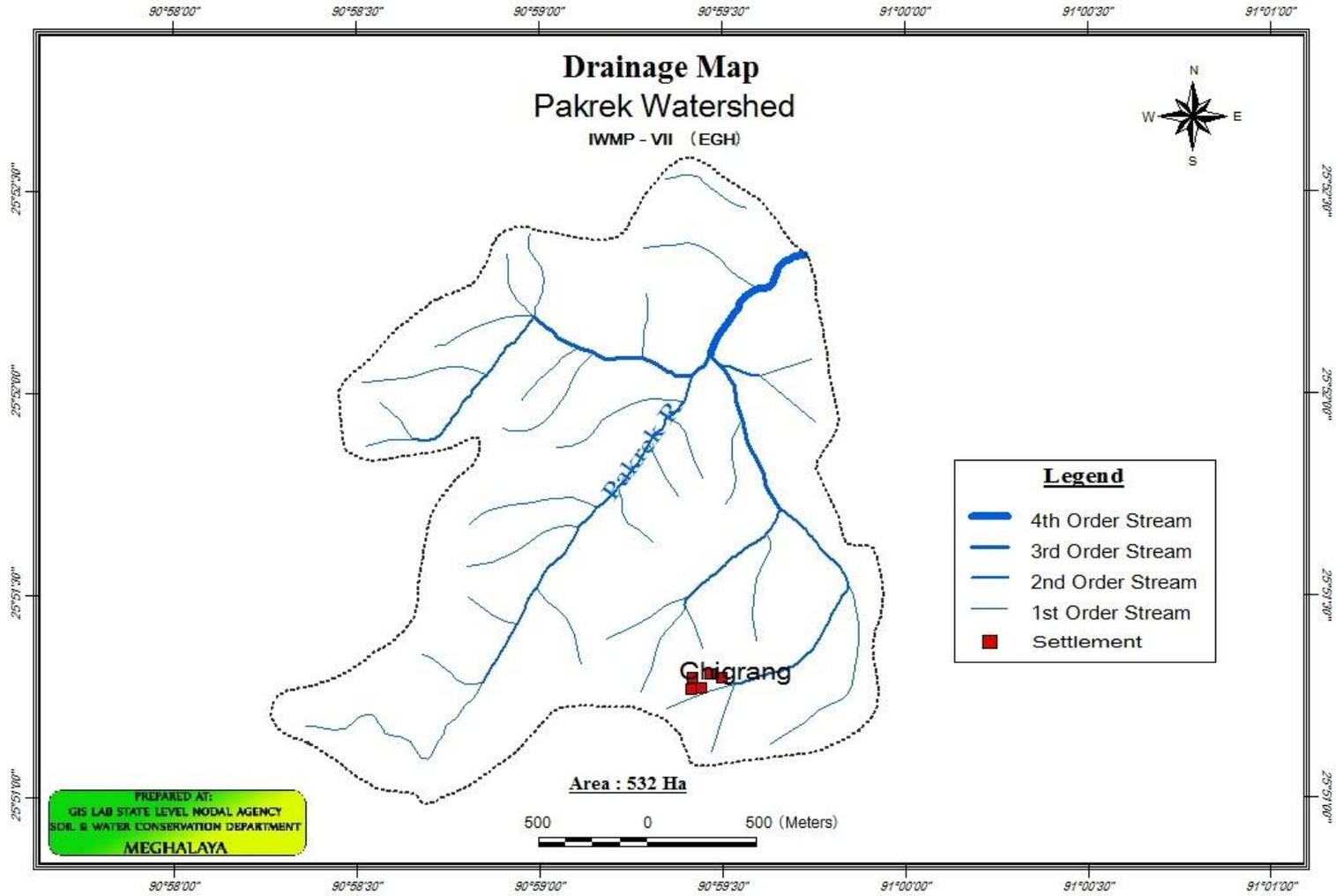
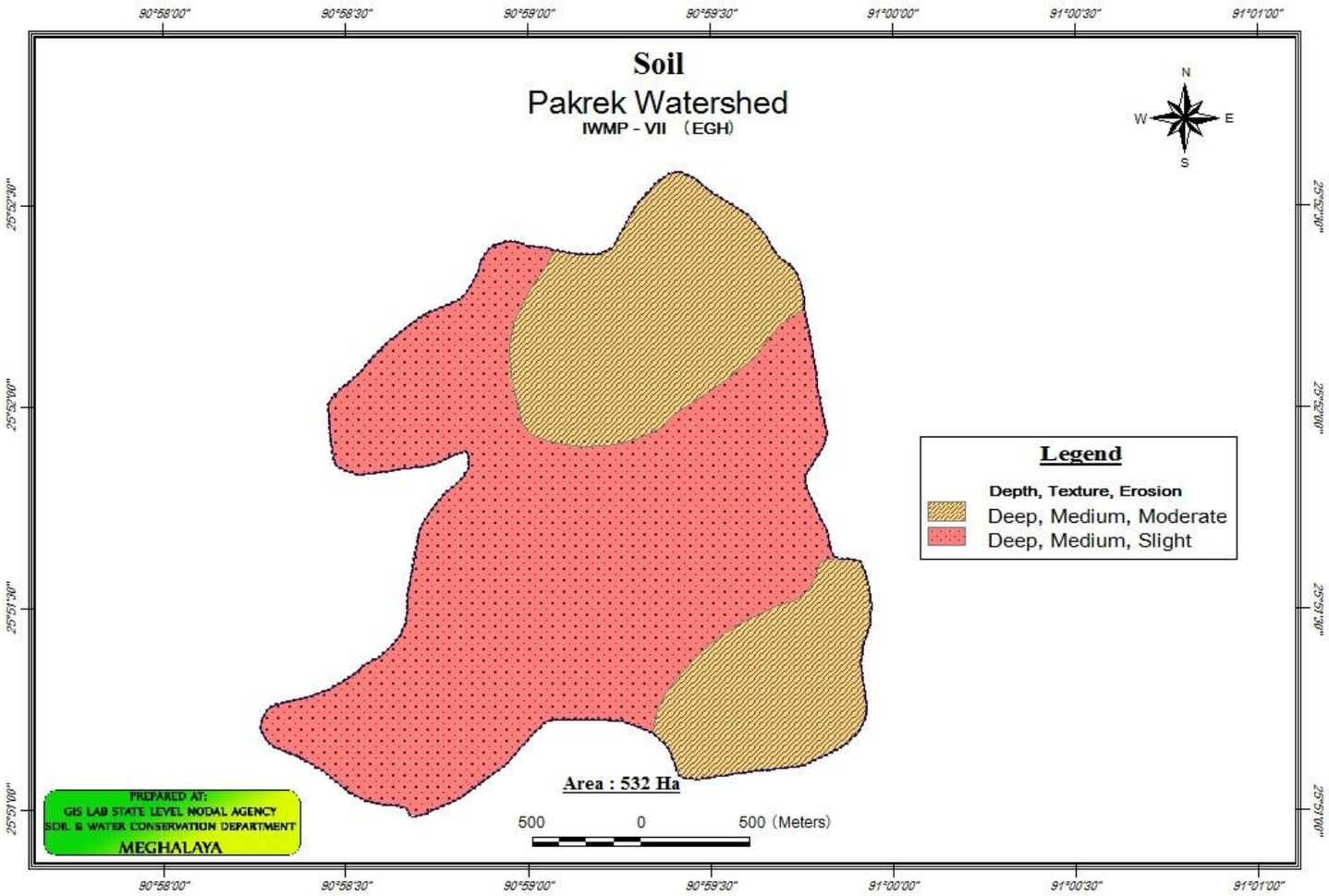
25°51'00"

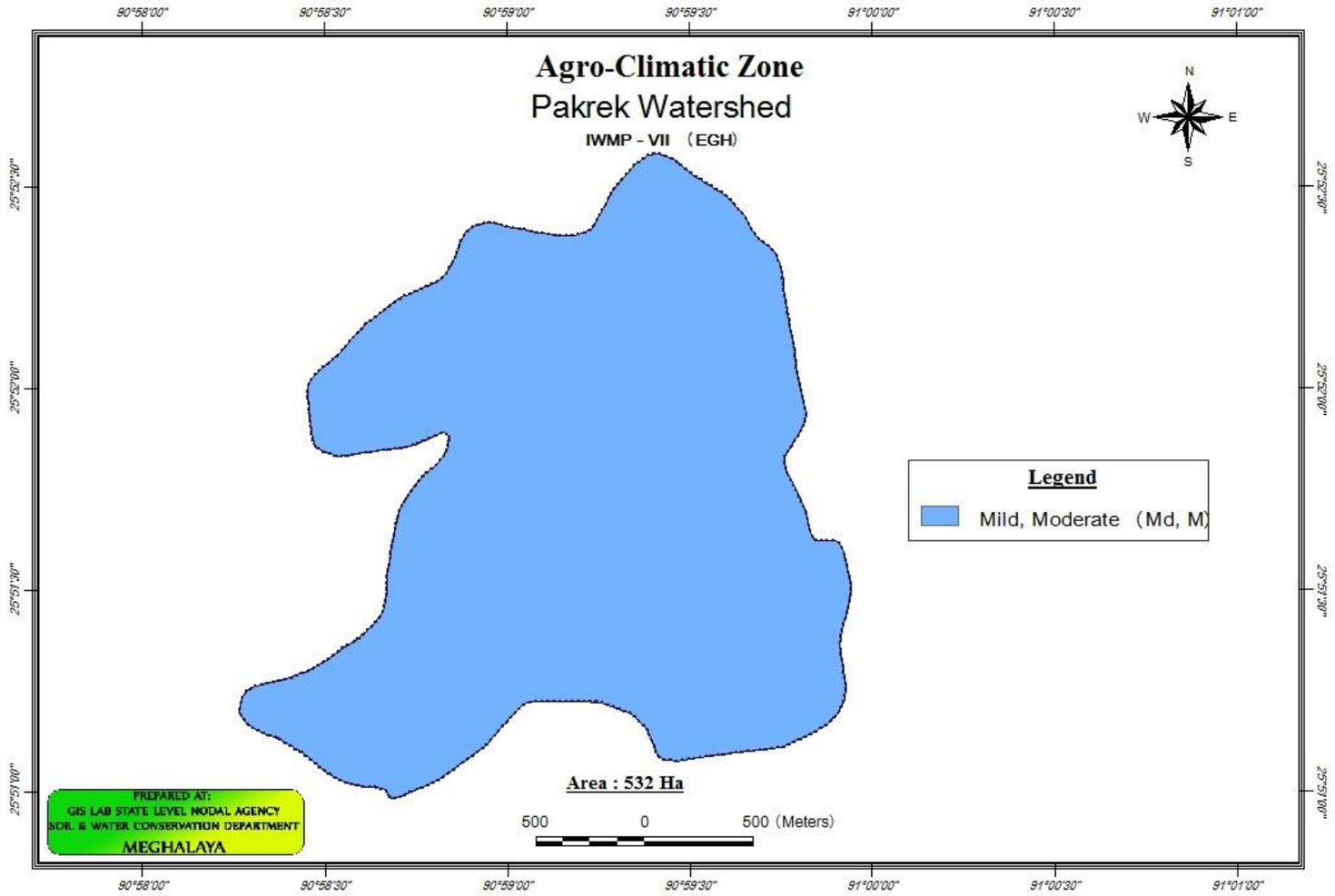

Proposed Engineering Structure
Lower Bong Bong Watershed
IWMP - VII (EGH)
N
W
E
S
Legend
Improvement of Fishing Pond
Stone Mansory
Boulder Sousage
cccheckdam
Area : 537 Ha
PREPARED AT:
GIS LAB STATE LEVEL NODAL AGENCY
SOIL & WATER CONSERVATION DEPARTMENT
MEGHALAYA
1 0 1 (Kilometers)
90°58'30"
90°59'00"
90°59'30"
91°00'00"
91°00'30"
91°01'00"
91°01'30"
91°02'00"
25°53'30"
25°53'00"
25°52'30"
25°52'00"
25°51'30"
25°51'00"

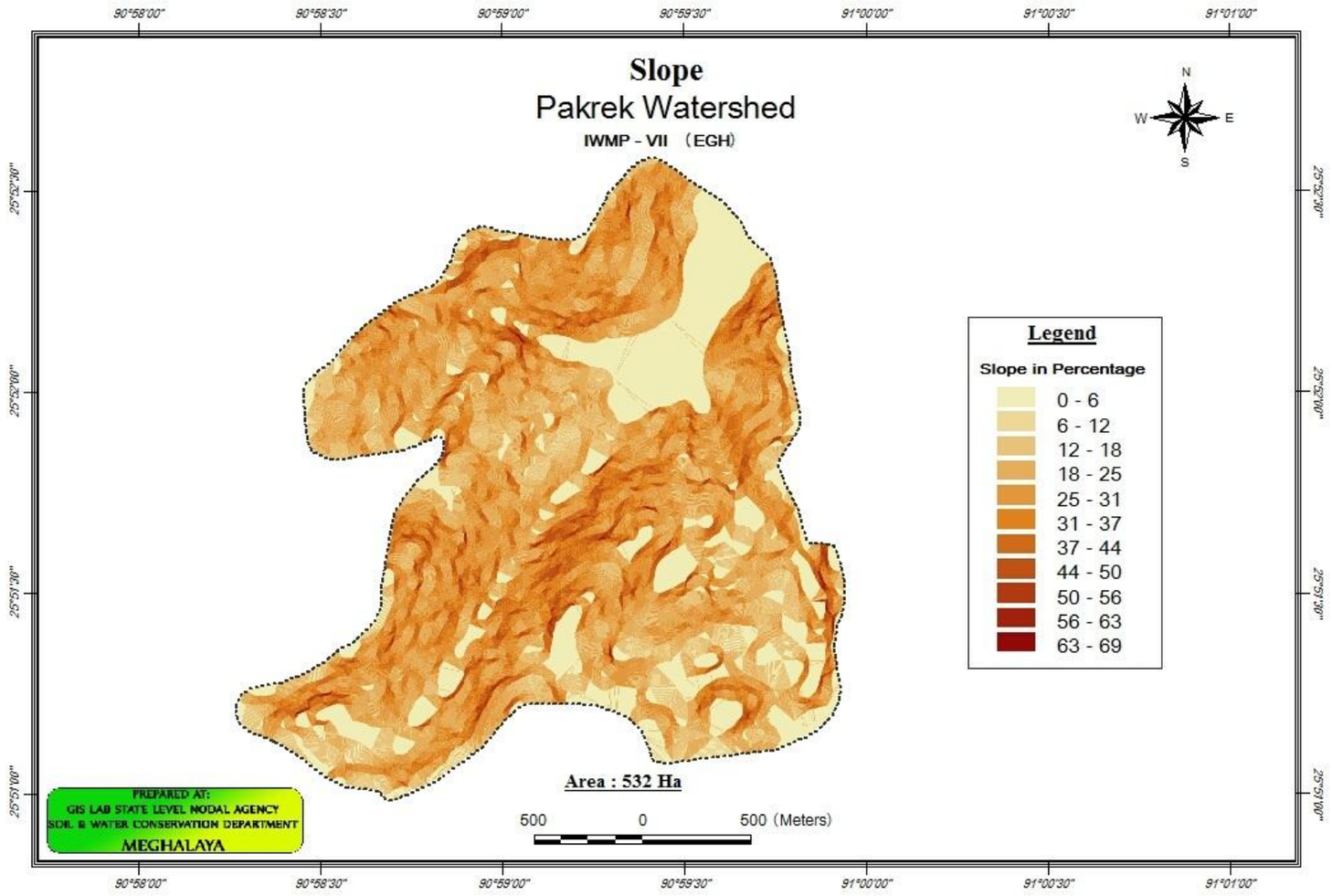

Proposed landuse
Lower Bong Bong Watershed
IWMP - VII (EGH)
N
W
E
S
Legend
Terracing - 5 Ha.
Rubber Plantaion - 94 Ha.
Impt. Degraded forest - 100 Ha.
Agro-Horticulture - 100 Ha.
Agriculture - 20 Ha.
Area : 537 Ha
PREPARED AT:
GIS LAB STATE LEVEL NODAL AGENCY
SOIL & WATER CONSERVATION DEPARTMENT
MEGHALAYA
1 0 1 (Kilometers)
90°58'30"
90°59'00"
90°59'30"
91°00'00"
91°00'30"
91°01'00"
91°01'30"
91°02'00"
91°02'30"
25°53'00"
25°52'30"
25°52'00"
25°51'30"
25°51'00"

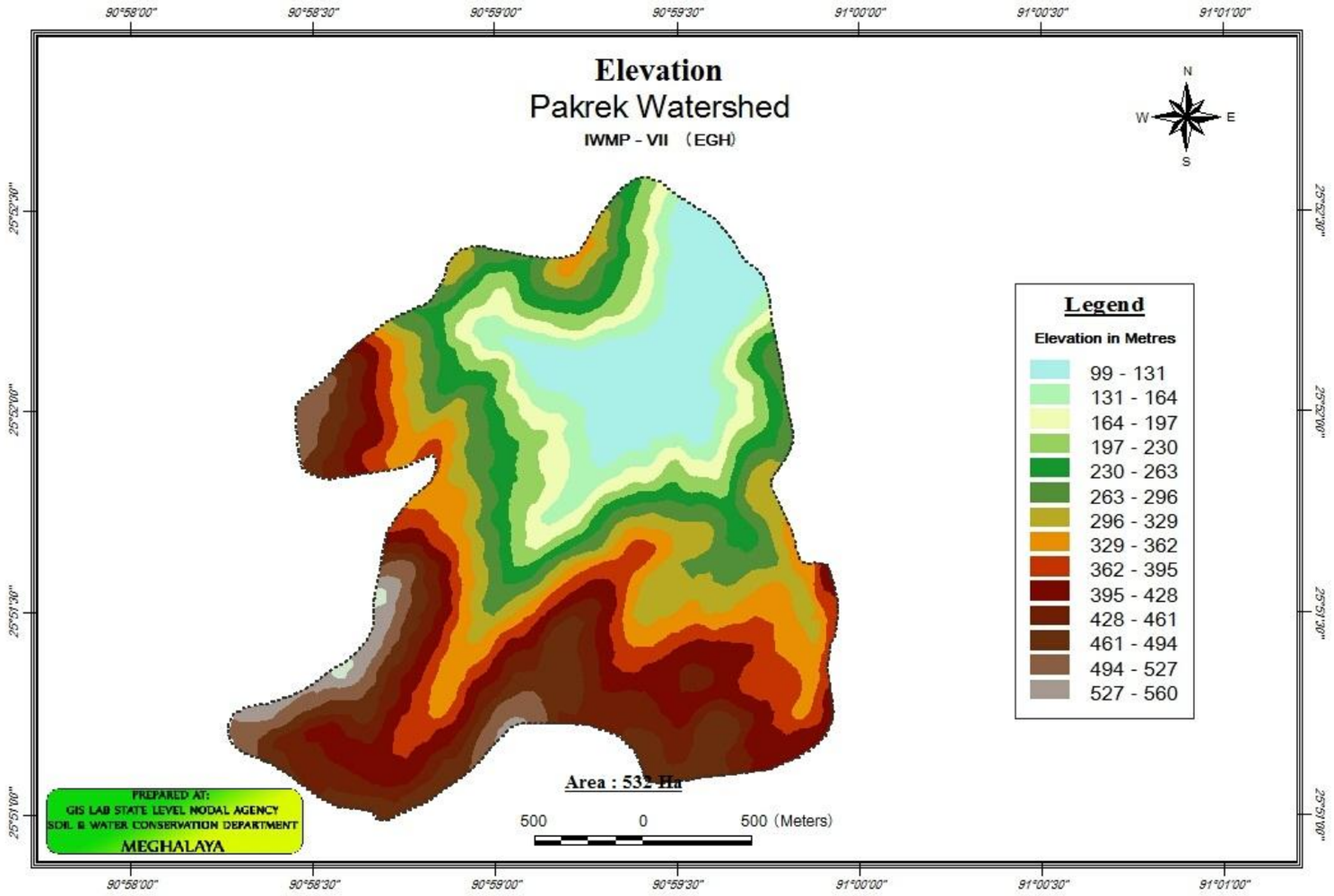

Landuse Landcover
Pakrek Watershed
IWMP - VII (EGH)
N
W
E
S
90°58'00"
90°58'30"
90°59'00"
90°59'30"
91°00'00"
91°00'30"
91°01'00"
25°52'30"
25°52'00"
25°51'30"
25°51'00"
Pakrek R.
Legend
Agriculture - 35 Ha.
Tree Clad Open - 497 Ha.
Area : 532 Ha
500 0 500 (Meters)
PREPARED AT:
GIS LAB STATE LEVEL NODAL AGENCY
SOIL & WATER CONSERVATION DEPARTMENT
MEGHALAYA
Source: Meghalaya Natural Resource Information System
North Eastern Space Application system, Umiam

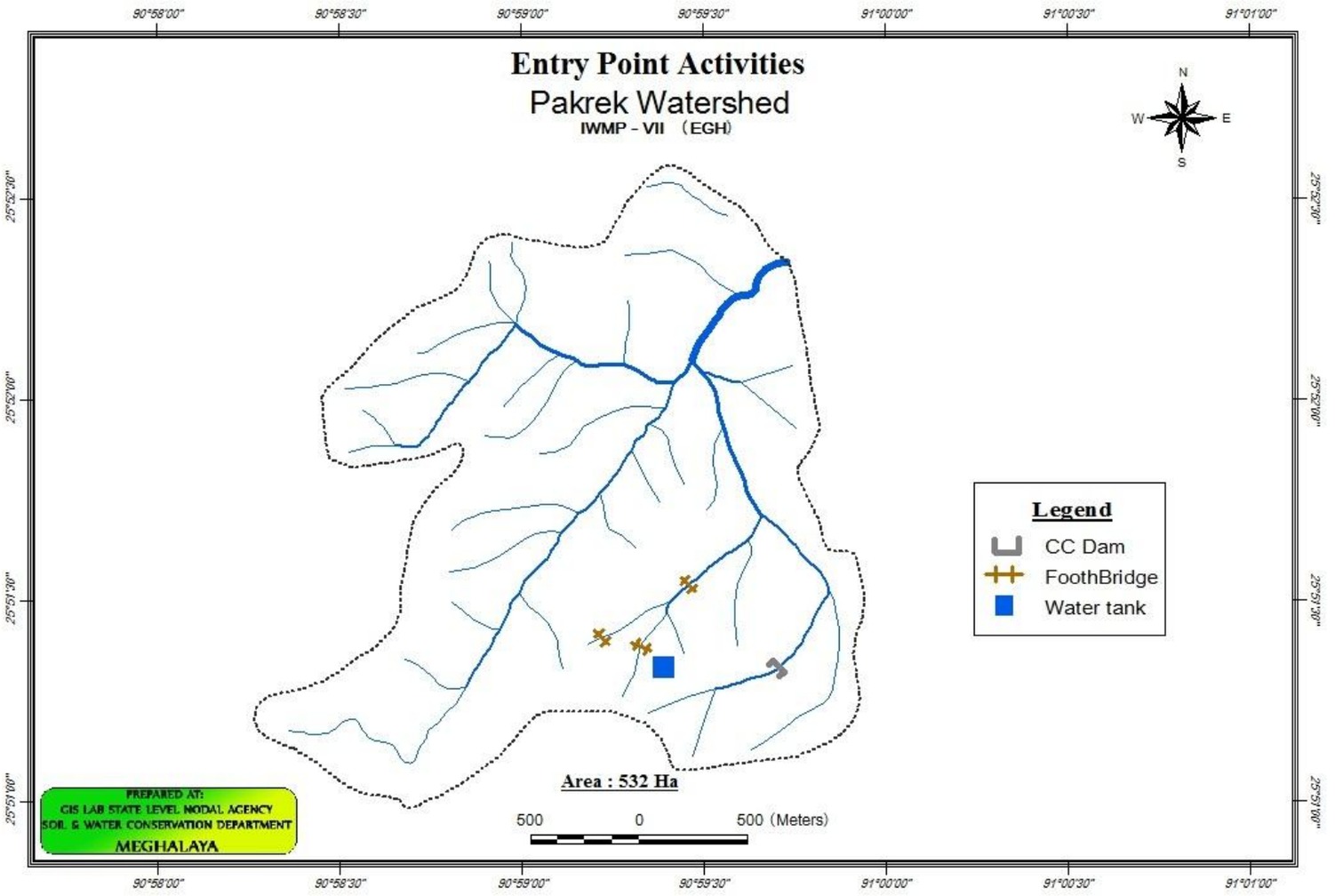

Drainage Map
Pakrek Watershed
IWMP - VII (EGH)
N
W
E
S
90°58'00"
90°58'30"
90°59'00"
90°59'30"
91°00'00"
91°00'30"
91°01'00"
25°52'30"
25°52'00"
25°51'30"
25°51'00"
Pakrek R.
Chigrang
Legend
4th Order Stream
3rd Order Stream
2nd Order Stream
1st Order Stream
Settlement
Area : 532 Ha
500 0 500 (Meters)
PREPARED AT:
GIS LAB STATE LEVEL NODAL AGENCY
SOIL & WATER CONSERVATION DEPARTMENT
MEGHALAYA

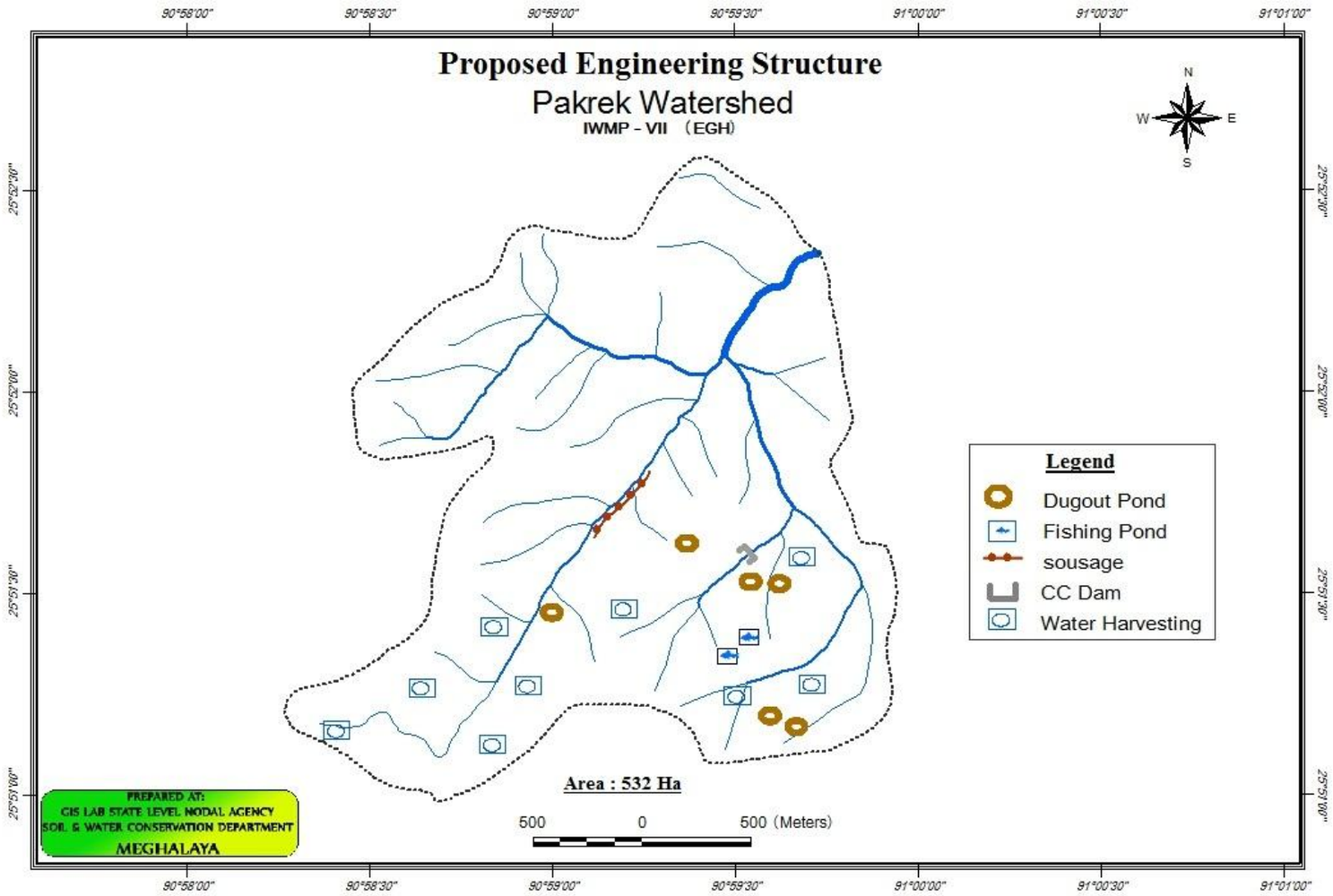

Soil
Pakrek Watershed
IWMP - VII (EGH)
N
W
E
S
Legend
Depth, Texture, Erosion
Deep, Medium, Moderate
Deep, Medium, Slight
Area : 532 Ha
500 0 500 (Meters)
PREPARED AT:
GIS LAB STATE LEVEL NODAL AGENCY
SOIL & WATER CONSERVATION DEPARTMENT
MEGHALAYA
90°58'00"
90°58'30"
90°59'00"
90°59'30"
91°00'00"
91°00'30"
91°01'00"
25°52'30"
25°52'00"
25°51'30"
25°51'00"

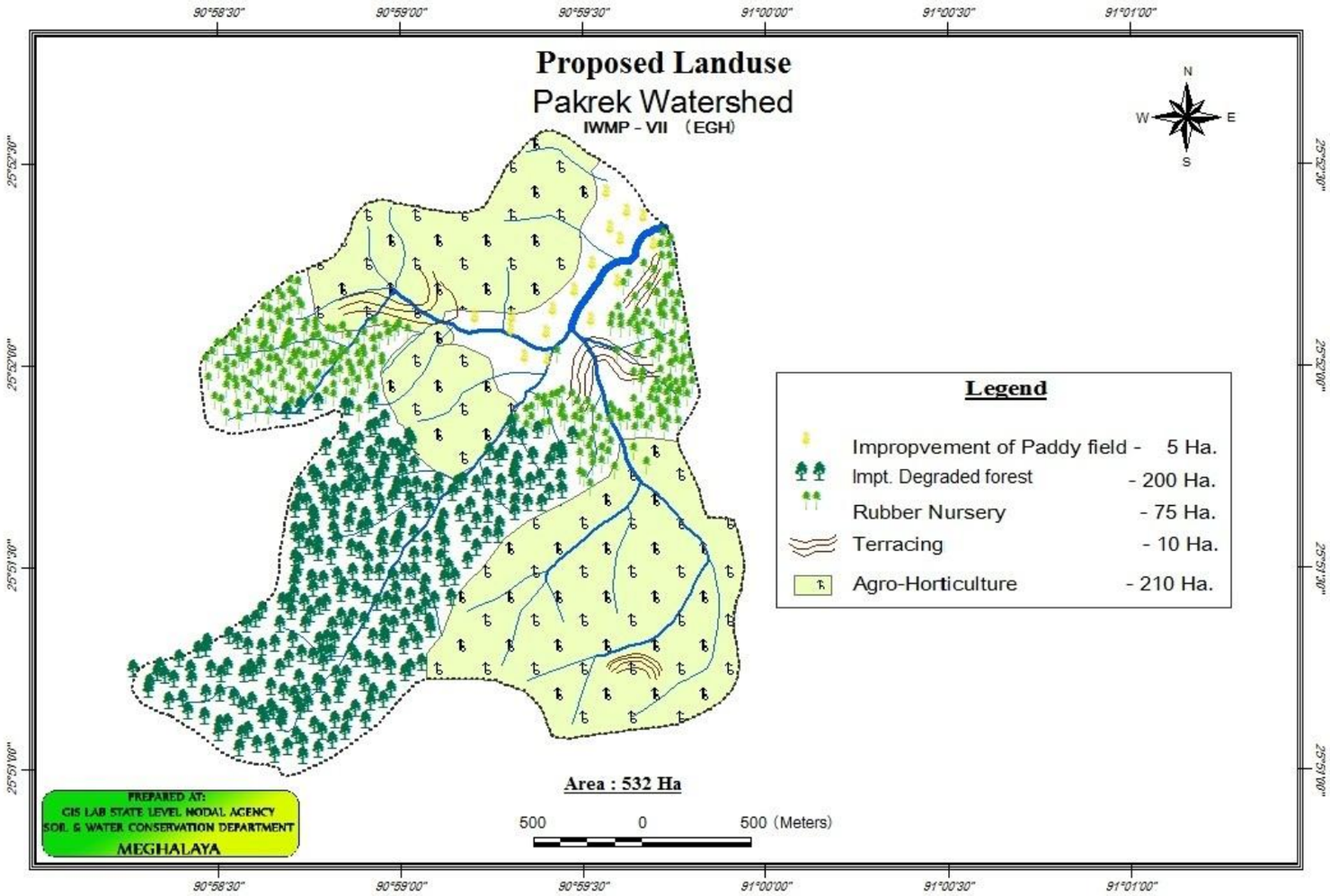

Agro-Climatic Zone
Pakrek Watershed
IWMP - VII (EGH)
N
W
E
S
Legend
Mild, Moderate (Md, M)
Area : 532 Ha
500 0 500 (Meters)
PREPARED AT:
GIS LAB STATE LEVEL NODAL AGENCY
SOIL & WATER CONSERVATION DEPARTMENT
MEGHALAYA
90°58'00"
90°58'30"
90°59'00"
90°59'30"
91°00'00"
91°00'30"
91°01'00"
25°52'30"
25°52'00"
25°51'30"
25°51'00"


Slope
Pakrek Watershed
IWMP - VII (EGH)
N
W
E
S
Legend
Slope in Percentage
0 - 6
6 - 12
12 - 18
18 - 25
25 - 31
31 - 37
37 - 44
44 - 50
50 - 56
56 - 63
63 - 69
Area : 532 Ha
500 0 500 (Meters)
PREPARED AT:
GIS LAB STATE LEVEL NODAL AGENCY
SOIL & WATER CONSERVATION DEPARTMENT
MEGHALAYA
90°58'00"
90°58'30"
90°59'00"
90°59'30"
91°00'00"
91°00'30"
91°01'00"
25°52'30"
25°52'00"
25°51'30"
25°51'00"


Elevation
Pakrek Watershed
IWMP - VII (EGH)
N
W
E
S
90°58'00"
90°58'30"
90°59'00"
90°59'30"
91°00'00"
91°00'30"
91°01'00"
25°52'30"
25°52'00"
25°51'30"
25°51'00"
Legend
Elevation in Metres
99 - 131
131 - 164
164 - 197
197 - 230
230 - 263
263 - 296
296 - 329
329 - 362
362 - 395
395 - 428
428 - 461
461 - 494
494 - 527
527 - 560
Area : 532 Ha
500 0 500 (Meters)
PREPARED AT:
GIS LAB STATE LEVEL NODAL AGENCY
SOIL & WATER CONSERVATION DEPARTMENT
MEGHALAYA


Entry Point Activities
Pakrek Watershed
IWMP - VII (EGH)
N
W
E
S
90°58'00"
90°58'30"
90°59'00"
90°59'30"
91°00'00"
91°00'30"
91°01'00"
25°52'30"
25°52'00"
25°51'30"
25°51'00"
Legend
CC Dam
FoothBridge
Water tank
Area : 532 Ha
500 0 500 (Meters)
PREPARED AT:
GIS LAB STATE LEVEL NODAL AGENCY
SOIL & WATER CONSERVATION DEPARTMENT
MEGHALAYA


Proposed Engineering Structure
Pakrek Watershed
IWMP - VII (EGH)
N
W
E
S
Legend
Dugout Pond
Fishing Pond
sousage
CC Dam
Water Harvesting
Area : 532 Ha
500 0 500 (Meters)
PREPARED AT:
GIS LAB STATE LEVEL NODAL AGENCY
SOIL & WATER CONSERVATION DEPARTMENT
MEGHALAYA
90°58'00"
90°58'30"
90°59'00"
90°59'30"
91°00'00"
91°00'30"
91°01'00"
25°52'30"
25°52'00"
25°51'30"
25°51'00"


Proposed Landuse
Pakrek Watershed
IWMP - VII (EGH)
N
W
E
S
90°58'30"
90°59'00"
90°59'30"
91°00'00"
91°00'30"
91°01'00"
25°52'30"
25°52'00"
25°51'30"
25°51'00"
Legend
Impropvement of Paddy field - 5 Ha.
Impt. Degraded forest - 200 Ha.
Rubber Nursery - 75 Ha.
Terracing - 10 Ha.
Agro-Horticulture - 210 Ha.
Area : 532 Ha
500 0 500 (Meters)
PREPARED AT:
GIS LAB STATE LEVEL NODAL AGENCY
SOIL & WATER CONSERVATION DEPARTMENT
MEGHALAYA

A N N E X U R E – IV

COST ESTIMATE

MODEL ESTIMATE FOR CONSTRUCTION OF C.C. CHECK DAM FOR I.W.M.P. PROJECT
As per P.W.D. Schedule of Rates for Roads Bridges, E & D works for the year 2009-2010.

1/8.3/61(A)	Earth work in excavation for foundation of structure upto 3m depth, as per drawing and technical specification.			
	Dam	= 12.00m x 0.85m x 0.80m	= 8.16m^3	
	W/Wall	= 2 Nos. x 5.00m x 0.80m x 0.50m	= 4.00m^3	
	L/Channel	= 1 No. x 10.00m x 0.80m x 0.80m	= 6.40m^3	
	Apron	= 1 No. x 2.40m x 2.00m x 0.50m	= 2.40m^3	
			= 20.96m^3	
	@ ₹. 63.00/m^3			₹. 1,320.48
2/14.1/97	Providing and laying boulder apron for bed protection with stone/boulder of minimum size and weight as not less than 25kg laid dry complete, as per drawing and technical specification.			
	Dam	= 12.00m x 0.85m x 0.10m	= 1.02m^3	
	W/Wall	= 2 Nos. x 5.00m x 0.80m x 0.10m	= 0.80m^3	
	L/Channel	= 1 No. x 10.00m x 0.80m x 0.10m	= 0.80m^3	
	Apron	= 1 No. x 2.40m x 2.00m x 0.40m	= 1.92m^3	
			= 4.54m^3	
	@ ₹. 1086/m^3			₹. 4,930.44

3/9.9/75 Plain cement concrete M10(1:3:6) nominal size in leveling course below open foundation of head walls, as per drawing and technical specification.

Dam	=	12.00m x 0.65m x 0.70m	= 5.46 m^3
		12.00m x $\frac{0.65+0.45}{2}$ x 1.20m	= 7.92 m^3
		2 Nos. x 4.80m x 0.45m x 0.45m	= 1.944m^3
Apron	=	2.40m x 1.70m x 0.10m	= 0.408m^3
		2.40m x 1.00m x 0.10m	= 0.24 m^3
		2 Nos. x 1.00m x 0.45m x 0.20m	= 0.18 m^3
		2 Nos. x 1.70m x 0.45m x 0.20m	= 0.306m^3
		1 No. x 2.40m x 1.15m x 0.20m	= 0.552m^3
L/Channel	=	10.00m x 0.80m x 0.10m	= 0.80 m^3
		2 Nos. x 10.00m x 0.60m x 0.10m	= 1.20 m^3
			= 19.01 m^3

@ ₹. 3505.00/m^3 ..... ₹. 66,630.05

4/8.4/62 Providing regular stone Masonry in retaining wall, wingwall, breast wall, coursed with hammer dressed stone of heavy section not less than 25cm x 25cm x 30cm with proper key..... set in cement mortar 1:5 including carriage of stone with in 200m.

W/Wall	=	2 Nos. x 5.00m x 0.65m x 0.40m	= 2.60m^3
		2 Nos. x 5.00m x $\frac{0.65+0.45}{2}$ x 1.20m	= 6.60m^3
Apron	=	1 No. x 2.40m x 1.00m x $\frac{0.00+1.10m}{2}$	= 1.32m^3
			= 10.52m^3

@ ₹.2536.00/m^3 ..... ₹. 26,678.72

5/39(a) Providing shuttering with dressed planks not less than 25mm thick properly joined including battons props to the level and removing the same after complete hardens etc.

Dam	=	2 Nos. x 12.00m x 0.70m	= 16.80m²
		2 Nos. x 12.00m x 1.65m	= 39.60m²
L/Channel	=	1 No. x 2 sides x 10.00m x 0.60m	= 12.00m²
Apron	=	2 Nos. x 2.40m x 0.10m	= 0.48m³
		1 No. x 2.40m x 0.10m	= 0.24m²
			69.12m²

@ ₹. 149.00/m² ..... ₹. 10,298.88

6/13.3/176 12mm thick cement plastering including cleaning the surface prop 1:3 including carriage of sand with 200m.

Dam	=	1 side x 12.00m x 1.65m	= 19.80 m²
		1 side x 12.00m x 0.45m	= 5.40 m²
W/Wall	=	2 sides x 5.00m x 1.20m	= 12.00 m²
		2 sides x 5.00m x 0.45m	= 4.50 m²
Apron	=	2 sides x 2.45m x 0.45m	= 2.205m²
		1 side x 2.00m x 0.45m	= 0.90 m²
		1 side x 2.00m x 1.00m	= 2.00 m²
		1 side x 2.00m x 1.70m	= 3.40 m²
L/Channel	=	2 sides x 10.00m x 0.60m	= 12.00 m²
			= 62.205m²

@ ₹. 83.00/m² ..... ₹. 5,163.01

Total : - ₹.115,021.58

Say, ₹. 115,000.00

(Rupees one lakh fifteen thousand) only.

MODEL ESTIMATE FOR CONSTRUCTION OF BOULDER SAUSAGE PROTECTION WALL FOR EAST GARO HILLS IWMP PROJECT

As per P.W.D. Schedule of Rates for Roads Bridges, E & D works for the year 2009-2010.

****

1/9.1/67 Earth work in excavation in hilly area by manual means including cutting and trimming of side slopes and disposing of excavated earth with a lift upto 1.5m and a lead upto 20m as per drawing and technical specification.

1 no. x 15.35m x 0.90m x 0.40m = 5.526m^3

@₹. 101.00/m^3 - - - - - - - ₹. 558.12

2/14.2/98 Providing and laying boulder apron in wire crates with 4mm dia G.I. wire conforming to IS 280 and IS 4826 in 100mm x 100mm mesh specification.

1 no. x 15.35m x 0.90m x 0.90m = 12.43m^3

∴ 12.43m^3 x 3 tier = 37.29m^3

@₹. 1755.00/m^3 - - - - - - - ₹. 65443.95

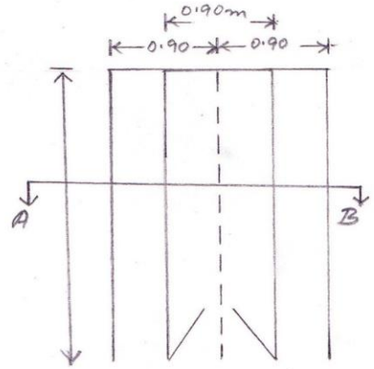
Total : - ₹. 66002.07

Say, - ₹. 66000.00

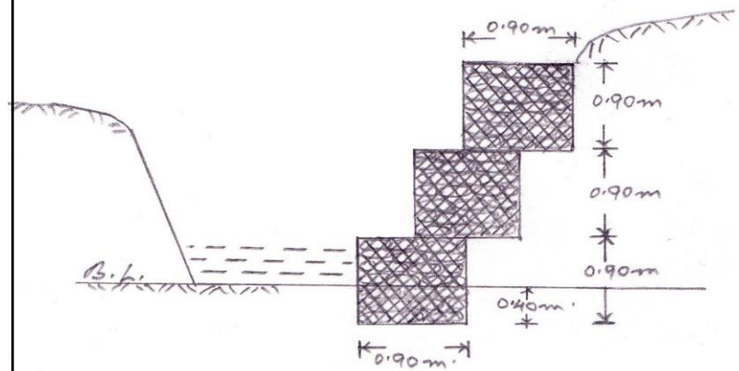
(Rupees Sixty-six thousand) only.

MODEL PLAN FOR CONSTRUCTION OF GABIONIC PROTECTION WALL FOR IWMP PROJECT

NOT TO SCALE



GROUND PLAN



CROSS SECTION AT AB

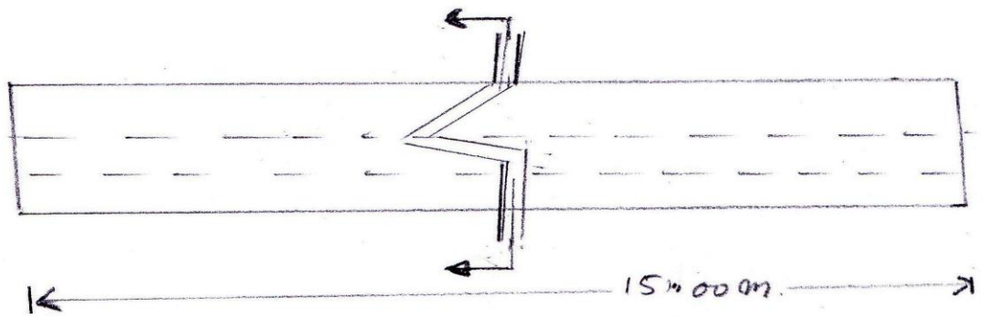
MODEL ESTIMATE FOR CONSTRUCTION OF STONE MASONRY PROTECTION WALL FOR EAST GARO HILLS IWMP PROJECT

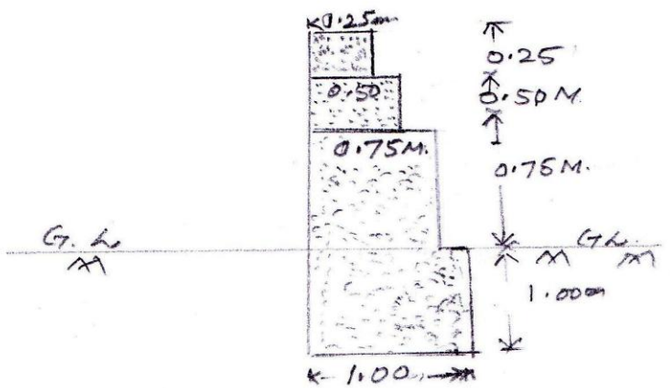
As per P.W.D. Schedule of Rates for Roads Bridges, E & D works for the year 2009-2010.

****

1.	Site preparation. - L.S. - - - - -		₹. 295.00
2/8.4/62(i)	Earth work in excavation for foundation of protection wall.		
	18.90m x 1.20m x 0.95m = 21.54m³		
	@₹. 101/m³ - - - - - - - -		₹. 2175.54
3/9.11/76(A)	Stone masonry work in cement mortar in foundation.		
	18.90m x 1.20m x 0.20m = 4.53m³		
	@₹. 2764/m³ - - - - - - - -		₹. 12520.92
4/12.7/140(b)	Stone masonry work in mortar 1:3 in the structure.		
	18.90m x 0.75m x 1.00m = 14.17m³		
	18.90m x 1.50m x $\frac{1.00m + 0.60m}{2}$ = 22.68m³		
	Total : = 36.85m³		
	@₹. 2714/m³ - - - - - - - -		₹. 100010.90
		Total : -	₹. 115002.36
		Say, -	₹. 115000.00
		(Rupees One lakh, fifteen thousand) only.	

PLAN FOR PROTECTION WALL





CROSS-SECTION ON AB PROTECTION WALL.

MODEL ESTIMATE FOR IMPROVEMENT OF FISHERY POND FOR EAST GARO HILLS IWMP PROJECT
As per P.W.D. Schedule of Rates for Roads Bridges, E & D works for the year 2009-2010.

1	Site preparation - L.S. - - - - -		₹. 698.00
2/12.1/134	Earth work in excavation for foundation of C.C.core wall including removal of spoils etc.		
	16.50m x 1.30m x 0.60m x 1 no. = 12.87m^3 5.00m x 1.00m x 0.70m x 1 no. = 3.50m^3 = 16.37m^3		
	@₹. 47.00/m^3 - ₹. 769.39 or say - - - -		₹. 769.00
3/14.1/97	Providing and laying boulder apron protection with stone minimum sixe and weight not less than 25kg laid dry complete.		
	16.50m x 0.60 x 0.10m = 0.99m^3 5.00m x 1.00m x 0.10m = 0.50m^3 = 1.49m^3		
	@₹. 1086.00/m^3 - ₹. 1618.14 or say - - -		₹. 1618.00

4/9.9/75 Plain cement concrete M10(1:3:6) nominal size in leveling cover below open foundation of lead walls etc.

16.50m x 0.40m x 1.20m x 1 no. = 7.92m^3
16.50m x $\frac{0.20 + 0.40}{2}$ x 1.80m x 1 no. = 8.91m^3
5.00m x 0.60m x 0.20m x 1 no. = 0.60m^3
5.00m x 0.60m x 0.10m x 1 no. = 0.30m^3
= 17.73m^3

@₹. 3505.00/m^3 - ₹. 62143.65 or say - - - ₹. 62144.00

5/39(a) Providing shuttering with dressed planks not less than 25mm thick proporly joined including battan props to the proper level and removal of the rames after concrete hardness etc.

16.50m x 3.00m x 2 sides = 99.00m^2
3.00m x 0.30m x 2 sides = 1.80m^2
= 100.80m^2

@₹. 149.00/m^2 - ₹. 15019.20 or say - - - ₹. 15019.00

6/3.3/28 Providing earth filling for embankment over C.C.core wall inmcluding ramming dressing the side slope etc.

16.50m x $\frac{2.00 + 7.50}{2}$ x 2.00m = 156.75m^3

@₹. 71.00/m^3 - ₹. 11129.25 or say - - - - ₹. 11129.00

7/14.5/100 Providing and lying stone pitching on the side slopes including filling the intersties etc.

$\sqrt{(3.00)^2 + (2.00)^2}$ x 16.50m x 0.15m = 8.91m³

@₹. 1086.00/m³ - ₹. 9676.26 or say - - - ₹. 9676.00

8/3.12/37 Furnishing and lying of the line soads on the side slopes including ramming and joining them with bamboo etc.

$\sqrt{(2.50)^2 + (2.00)^2}$ x 16.50m = 52.80m²
16.50m x 2.00m x 1 no. = 33.00m²
= 85.80m²

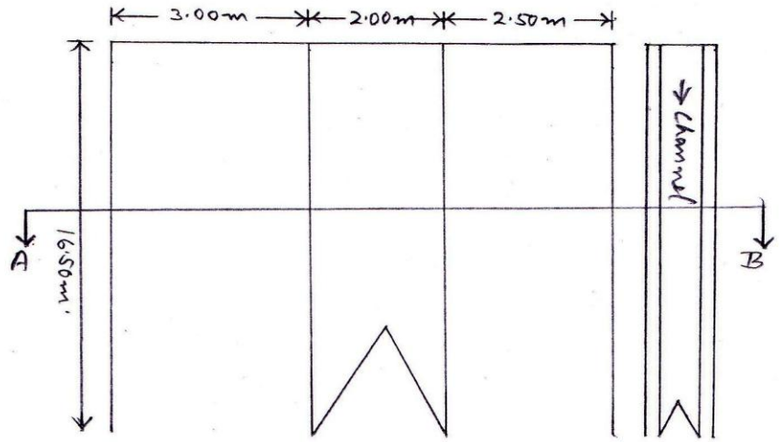
@₹. 46.00/m³ - ₹. 3946.80 or say - - - - ₹. 3947.00

Total : - ₹. 105000.00

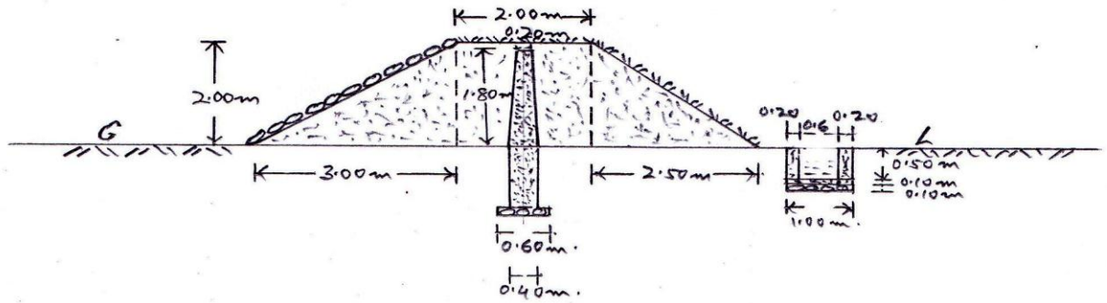
(Rupees One lakh, five thousand) only.

PLAN FOR CONSTRUCTION OF FISHERY POND FOR I.W.M.P. PROJECT

NOT TO SCALE



GROUND PLAN



CROSS SECTION AT AB WITH C.C. CHANNEL

MODEL ESTIMATE FOR CONSTRUCTION OF WATER HARVESTING STRUCTURE FOR EAST GARO HILLS IWMP PROJECT

As per P.W.D. Schedule of Rates for Roads Bridges, E & D works for the year 2009-2010.

1.	Site preparation - -	L.S. - - - -		₹. 698.00
2/12.1/134	Earth work in excavation for foundation of C.C. core wall including removal of spoils etc.			
	16.50m x 1.30m x 0.60m x 1 no.	= 12.87m³		
	5.00m x 1.00m x 0.70m x 1 no.	= 3.50m³		
	Total : -	= 16.37m³		
	@₹. 47.00/m³ -	₹. 769.39 Or Say - - -		₹. 769.00
3/14.1/97	Providing and laying boulder apron for protection with stone minimum size and weight not less than 25kg laid dry complete.			
	16.50m x 0.60m x 0.10m x 1 no.	= 0.99m³		
	5.00m x 1.00m x 0.10m x 1 no.	= 0.50m³		
	Total : -	= 1.49m³		
	@₹. 1086.00/m³ -	₹. 1618.14 Or Say - - -		₹. 1618.00

4/9.9/75 Plain cement concrete M10(1:3:6) nominal size in leveling course below open foundation of lead walls etc.

16.50m x 0.40m x 1.20m x 1 no. = 7.92m³
16.50m x $\frac{0.20 + 0.40}{2}$ x 1.80m x 1 no. = 8.91m³
5.00m x 0.60m x 0.20m x 1 no. = 0.60m³
5.00m x 0.60m x 0.10m x 1 no. = 0.30m³
Total : - = 17.73m³

@₹. 3505.00/m³ - ₹. 62,143.65 Or say - - - ₹. 62,144.00

5/39a Providing shuttering with dressed planks not less than 25mm thick properly joined including battan props to the proper level and removal of the same after the concrete hardness etc.

16.50m x 3.00m x 2 sides = 99.00m²
3.00m x 0.30m x 2 sides = 1.80m²
Total : - = 100.80m²

@₹. 149.00/m² - ₹. 15,019.20 Or say - - - ₹. 15,019.00

6/3.3/28 Providing earth work in filling for embankment in C.C.core wall including ramming dressing and leveling etc.

16.50m x 2.00 + 7.50 x 2.00m = 156.75m3

@₹. 71.00/m³ - ₹. 11,129.25 Or say - - - ₹. 11,129.00

7/14.5/100 Providing and laying stone pitching over the size slope including filling the interstices etc. complete.

$\sqrt{(3.00m)^2 + (2.00m)^2}$ x 16.50m x 0.15m = 8.91m^3

@₹. 1086.00/m^3 - ₹. 9676.26 Or say - - - ₹. 9676.00

8/3.12/37 Furnishing and laying of the line sods on the side slopes including ramming and pinning them with small bamboo pegs etc. complete.

$\sqrt{(2.50m)^2 + (2.00m)^2}$ x 16.50m x 1 side = 52.80m^2

16.50m x 2.00m x 1 side = 33.00m^2

Total : - = 85.80m^2

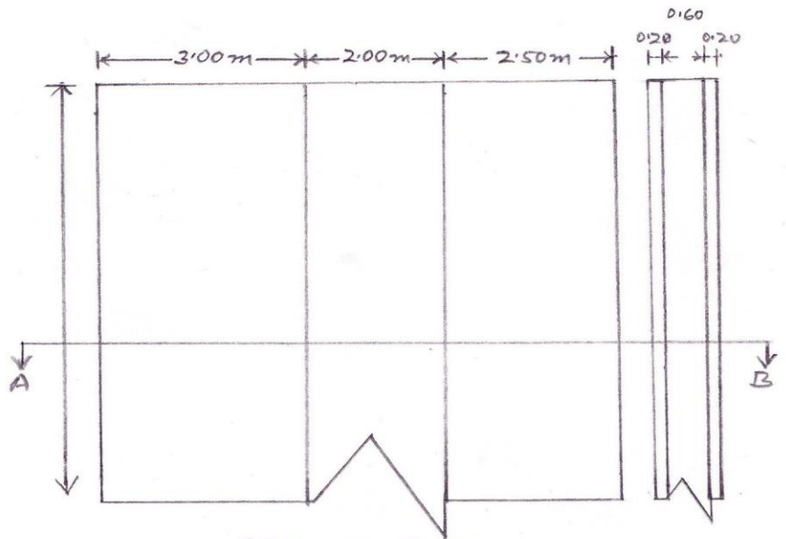
@₹. 46.00/m^2 - ₹. 3946.80 Or say - - - - ₹. 3947.00

Total : - ₹. 105,000.00

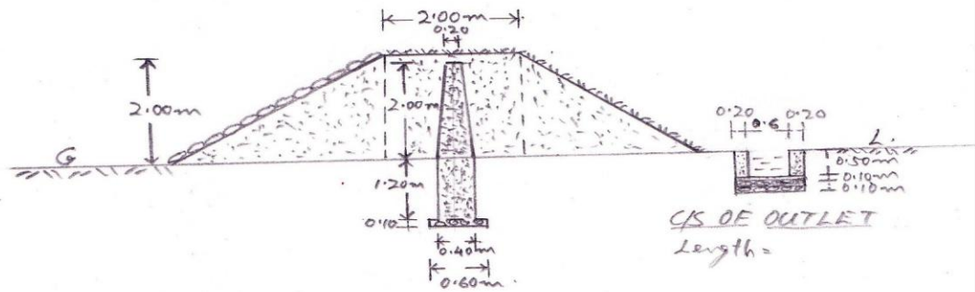
(Rupees One lakh and five thousand) only.

MODEL PLAN FOR CONSTRUCTION OF THE WATER HARVESTING STRUCTURE FOR I.W.M.P

NOT TO SCALE



GROUND PLAN



C/S OF OUTLET

Length=

CROSS SECTION AT AB

MODEL ESTIMATE FOR CONSTRUCTION OF DUGOUT POND FOR EAST GARO HILLS IWMP PROJECT
As per P.W.D. Schedule of Rates for Roads Bridges, E & D works for the year 2009-2010.

1/12.1/134 Earth work in excavation for foundation of structures upto 3m depth as per drawing and technical specification.

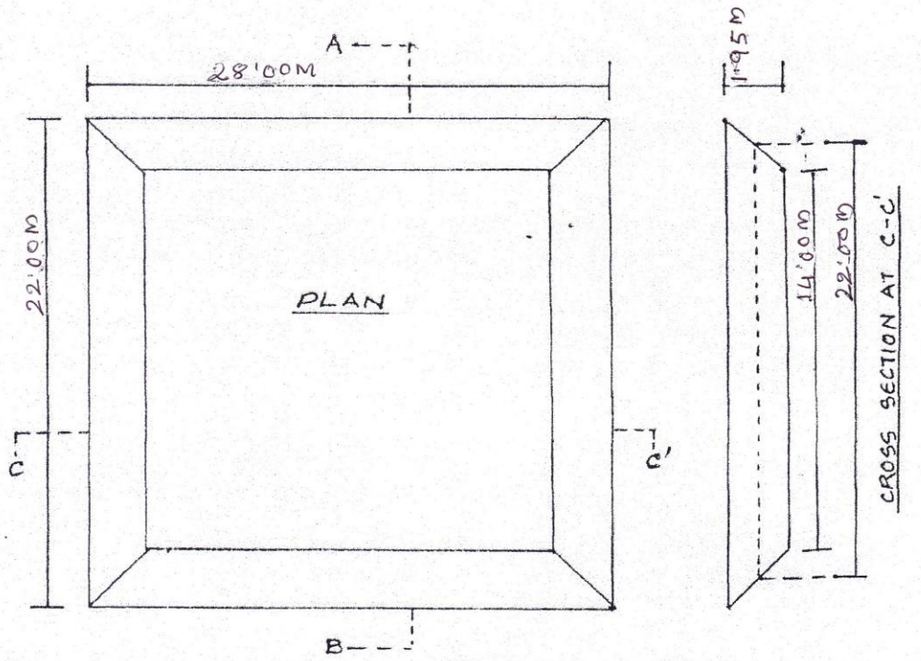
d/6 (28.00m x 22.00m) + 4(24.00m x 18.00m) + (20.00m x 14.00m)
= d/6 (616.00m + 1728.00m + 280.00m)
= d/6 x 2624.00m^3
= 1.95/6 x 2624.00m^3
= 852.80m^3

@₹. 47.00/m^3 - - - - - - - - ₹. 40,081.60

Say ₹. 40,000.00 (Rupees forty thousand) only.

MODEL

PLAN FOR CONSTRUCTION OF DUG-OUT FARM POND



NOT TO THE SCALE.

MODEL ESTIMATE FOR CONSTRUCTION OF C.C. DAM WITH CHANNEL FOR I.W.M.P. PROJECT
As per P.W.D. Schedule of Rates for Roads Bridges, E & D works for the year 2009-2010.

1/8.3/61(A) Earth work in excavation for foundation of structure upto 3m depth, as per drawing and technical specification.

Dam	= 12.00m x 0.85m x 0.90m	= 9.18m^3
W/Wall	= 2 Nos. x 3.90m x 0.80m x 0.50m	= 3.12m^3
L/Channel	= 1 No. x 5.00m x 0.80m x 0.80m	= 6.40m^3
Apron	= 1 No. x 2.40m x 2.00m x 0.50m	= 2.40m^3
		= 21.10m^3

@ ₹. 63.00/m^3 ..... ₹. 1329.30

2/14.1/97 Providing and laying boulder apron for bed protection with stone/boulder of minimum size and weight as not less than 25kg laid dry complete, as per drawing and technical specification.

Dam	= 12.00m x 0.85m x 0.10m	= 1.02 m^3
W/Wall	= 2 Nos. x 3.90m x 0.80m x 0.10m	= 0.624m^3
L/Channel	= 1 No. x 5.00m x 0.80m x 0.10m	= 0.80 m^3
Apron	= 1 No. x 2.40m x 2.00m x 0.40m	= 1.92 m^3
		= 4.364m^3

@ ₹. 1086/m^3 ..... ₹. 4739.30

3/9.9/75 Plain cement concrete M10(1:3:6) nominal size in leveling course below open foundation of head walls, as per drawing and technical specification.

Dam	=	12.00m x 0.85m x 0.10m	= 1.02 m^3
		12.00m x 0.65m x 0.70m	= 5.46 m^3
		12.00m x $\frac{0.65+0.45}{2}$ x 1.20m	= 7.92 m^3
		2 Nos. x 4.80m x 0.45m x 0.45m	= 1.944m^3
Apron	=	2.40m x 1.70m x 0.10m	= 0.408m^3
		2.40m x 1.00m x 0.10m	= 0.24 m^3
		2 Nos. x 1.00m x 0.45m x 0.20m	= 0.18 m^3
		2 Nos. x 1.70m x 0.45m x 0.20m	= 0.306m^3
		2 Nos. x 1.00m x 0.45m x 0.20m	= 0.18 m^3
		2 Nos. x 2.40m x 1.15m x 0.20m	= 0.552m^3
L/Channel =		5.00m x 0.80m x 0.10m	= 0.40 m^3
		2 Nos. x 5.00m x 0.60m x 0.10m	= 0.60 m^3
			= 19.21 m^3

@ ₹. 3505.00/m^3 ..... ₹. 67331.05

4/8.4/62 Providing regular stone Masonry in retaining wall, wingwall, breast wall, coursed with hammer dressed stone of heavy section not less than 25cm x 25cm x 30cm with proper key..... set in cement mortar 1:5 including carriage of stone with in 200m.

W/Wall =		2 Nos. x 3.90m x 0.65m x 0.40m	= 2.028m^3
		2 Nos. x 3.90m x $\frac{0.65+0.45}{2}$ x 1.20m	= 5.148m^3
Apron	=	1 No. x 2.40m x 1.00m x $\frac{0.00+1.10m}{2}$	= 1.32m^3
			= 8.496m^3

@ ₹.2536.00/m^3 ..... ₹. 21545.28

5/39(a) Providing shuttering with dressed planks not less than 25mm thick properly joined including battons props to the level and removing the same after complete hardens etc.

Dam	=	2 Nos. x 12.00m x 0.70m	= 16.80m²
		2 Nos. x 12.00m x 1.65m	= 39.60m²
L/Channel	=	2 Nos. x 2 sides x 5.00m x 0.60m	= 12.00m²
Apron	=	2 Nos. x 2.40m x 0.10m	= 0.48m³
		1 No. x 2.40m x 0.10m	= 0.24m²
			69.12m²

@ ₹. 149.00/m² ..... ₹. 10298.88

6/13.3/176 12mm thick cement plastering including cleaning the surface prop 1:3 including carriage of sand with 200m.

Dam	=	2 nos. x 12.00m x 1.65m	= 19.80 m²
		1 no. x 12.00m x 0.45m	= 5.40 m²
		2 nos. x $\frac{0.65 + 0.45}{2}$ x 1.65m	= 1.815m²
W/Wall	=	2 nos. x 3.90m x 1.20m	= 9.36 m²
		2 nos. x 3.90m x 0.45m	= 3.51 m²
Apron	=	2 nos. x 2.45m x 0.45m	= 2.205m²
		1 no. x 2.00m x 0.45m	= 0.90 m²
		1 no. x 2.00m x 1.00m	= 2.00 m²
		1 no. x 2.00m x 1.70m	= 3.40 m²
L/Channel	=	2 sides x 5.00m x 0.60m	= 6.00 m²
		1 side x 5.00m x 0.60m	= 3.00 m²
			= 57.39 m²

@ ₹. 83.00/m² ..... ₹. 4763.37

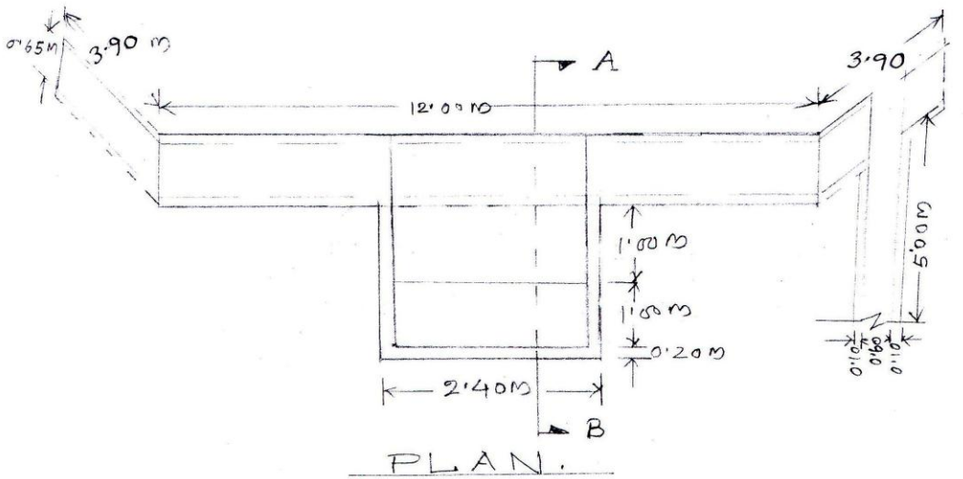
Total : - ₹. 110007.18

Say, ₹. 110000.00

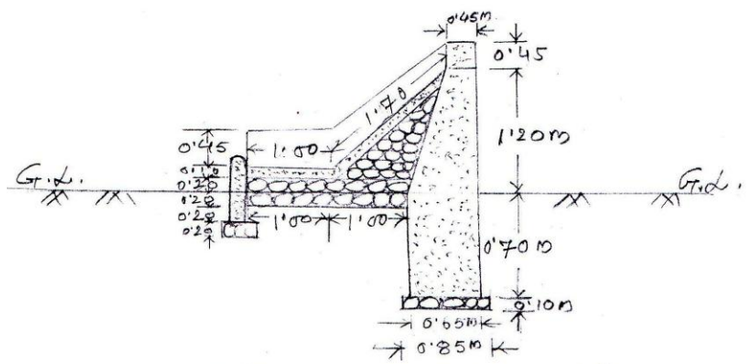
(Rupees one lakh, ten thousand) only.

PLAN AND CROSS-SECTION FOR CONSTRUCTION OF C.C. CHECK DAM WITH C.C. LEAD CHANNEL.

NOT TO SCALE.



PLAN.



CROSS-SECTION - AB.

MODEL ESTIMATE FOR CONSTRUCTION OF WATER HARVESTING FARM POND WITH C.C.CORE WALL FOR EAST GARO HILLS IWMP PROJECT

As per P.W.D. Schedule of Rates for Roads Bridges, E & D works for the year 2009-2010.

****

1	Site preparation - L.S. - - - - -		₹. 400.00
2/8.3/61(A)	Earth work in excavation in soil in hilly area by manual means including cutting and trimming of side slopes and disposing of excavated earth with a lift upto 1.5m and a lead upto 20m as per drawing and technical specification.		
	1 no. x 24.90m x 0.60m x 1.20m = 17.92m³		
	1 no. x 9.00m x 1.20m x 0.85m = 9.18m³		
	2 nos. x 9.00m x 0.20m x 0.35m = 1.26m³		
	Total : = 28.36m³		
	@₹. 63.00/m³ - - - - - - -		₹. 1786.68
3/14.1/97	Providing and laying boulder apron for bed protection with stone/boulder of minimum size and weight, as per table 1300, 1no. fragment weighing less than 25kg. laid dry complete as per drawing and technical specification.		
	1 no. x 9.00m x 0.80 x 0.15 = 1.08m³		
	@₹. 1086.00/m³ - - - - - - -		₹. 1172.88
4/14.5/100	Providing and laying pitching on slopes over prepared fitter media, as per drawing and technical specification.		
	1 no. x 24.90m x 4.47m x 0.20 = 22.26m³		
	@₹. 1086.00/m³ - - - - - - -		₹. 24174.36

5/3.3/28 Providing earth work in filling for embankment with approved materials obtained from borrow pits with lift upto 1.5m and transportation to side spreading grading to required slope and complete etc.

$24.90m \times \frac{8.80 + 1.80}{2} \times 1.85m = 244.14m^3$

Deduction for core wall.

$24.90m \times \frac{0.40 + 0.20}{2} \times 1.50 (-) = 11.24m^3$

Total : $= 232.94m^3$

@₹. 71.00/m^3 - - - - - - - ₹. 16538.74

6/9.9/75 Plan cement concrete (1:3:6) nominal size in leveling course below open foundation of head walls, as per drawing and technical specification.

$24.90m \times 0.60m \times 0.10m$	$= 1.49m^3$
$24.90m \times 0.40m \times 1.10m$	$= 10.95m^3$
$24.90m \times \frac{0.40 + 0.20}{2} \times 1.50m$	$= 11.20m^3$
$2 \text{ nos.} \times 9.00m \times 1.20m \times 0.20m$	$= 4.32m^3$
$1 \text{ no.} \times 9.00m \times 0.80m \times 0.10m$	$= 0.72m^3$
Total :	$= 28.68m^3$

@₹. 3505.00/m^3 - - - - - - - ₹. 100523.40

7/39/(a) Providing with dressed planks for shuttering not less than 25mm thick properly joined including battons props to the level and removing the same after complete hardness etc.

2 sides x 24.90m x 1.50 = 74.70m²

@₹. 149.00/m² - - - - - - - ₹. 11130.30

8/3.12/37 Furnishing and laying of the live soads of prenial truf forming grass an embankment slope, verges or other location, shown on the drawing or per technical specification and including staking the soads complete.

1 no. x 24.90m x 3.16m = 78.68m²
1 no. x 24.900m x 1.80m = 44.82m²
Total : = 123.50m²

@₹. 46.00/m² - - - - - - - ₹. 5681.00

9/13.3/176 12mm thick cement plastering including cleaning the surface prop.1:3 including carriage of sand within 200m.

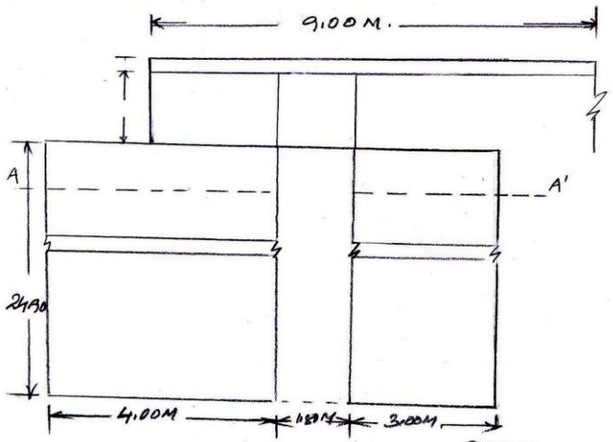
2 sides x 9.00m x 0.60 = 10.80m²
1 side x 9.00m x 0.80 = 7.20m²
2 sides x 9.00m x 0.20 = 3.60m²
Total : = 21.60m²

@₹. 83.00/m² - - - - - - - ₹. 1792.80

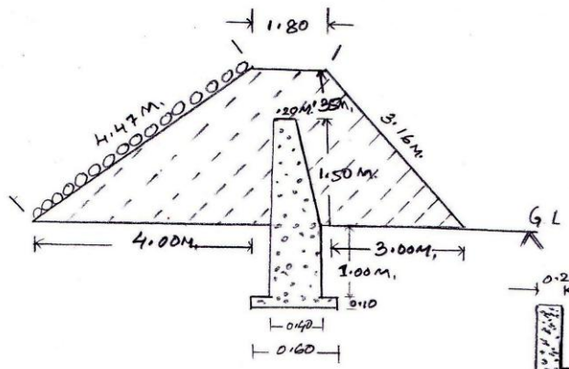
Total : - ₹. 163200.16
Say, - ₹. 163200.00

(Rupees One lakh, sixty-three thousand and two hundred) only.

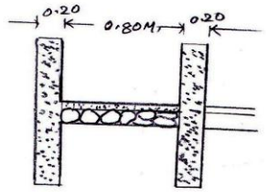
PLAN AND CROSS SECTION FOR CONSTRUCTION OF WATER, HARVESTING STRUCTURE



PLAN



CROSS SECTION AT AA'



CROSS SECTION OF OVERFLOW OUTLET

MODEL ESTIMATE FOR CONSTRUCTION OF EARTHEN CHANNEL FOR EAST GARO HILLS IWMP PROJECT

As per P.W.D. Schedule of Rates for Roads Bridges, E & D works for the year 2009-2010.

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1/8.1/67 Earth work in excavation for construction the earthen channel as per drawing and removal of stumps etc.

1 No. x 395 x $\frac{1.40 + 1.00}{2}$ x 1.10 = 521.40m^3

@₹. 101/m^3 - - - - - - - - ₹. 52661.40

2/3.3/28 Earth work in filling with approved materials deposited at site from road ways cutting and excavated etc.

2 Nos. x 395.00m x $\frac{1.00 + 0.50}{2}$ x 0.50 = 296.25m^3

@₹. 71/m^3 - - - - - - - - ₹. 21033.75

3/3.12/37 Furnishing and lying of line sods of perennials turf farming grass on embankment and excavated etc.

2 Nos. x 395.00m x 1.05m = 829.50m^3

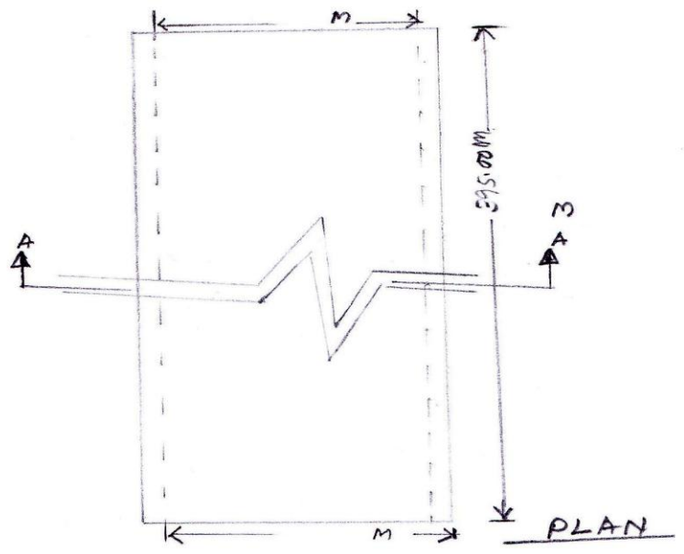
@₹. 46/m^3 - - - - - - - - ₹. 38157.00

Total : - ₹. 111852.15

Say, - ₹. 111825.00

(Rupees One lakh, eleven thousand, eight hundred and twenty-five) only.

PLAN AND GROSS-SECTION FOR CONSTRUCTION OF EARTHEN CHANNEL



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