DETAILED PROJECT REPORT

RONGMA & MERONGDIK WATERSHED

NORTH GARO HILLS, INTEGRATED WATERSHED MANAGEMENT PROGRAMME

NGH - IWMP – IV

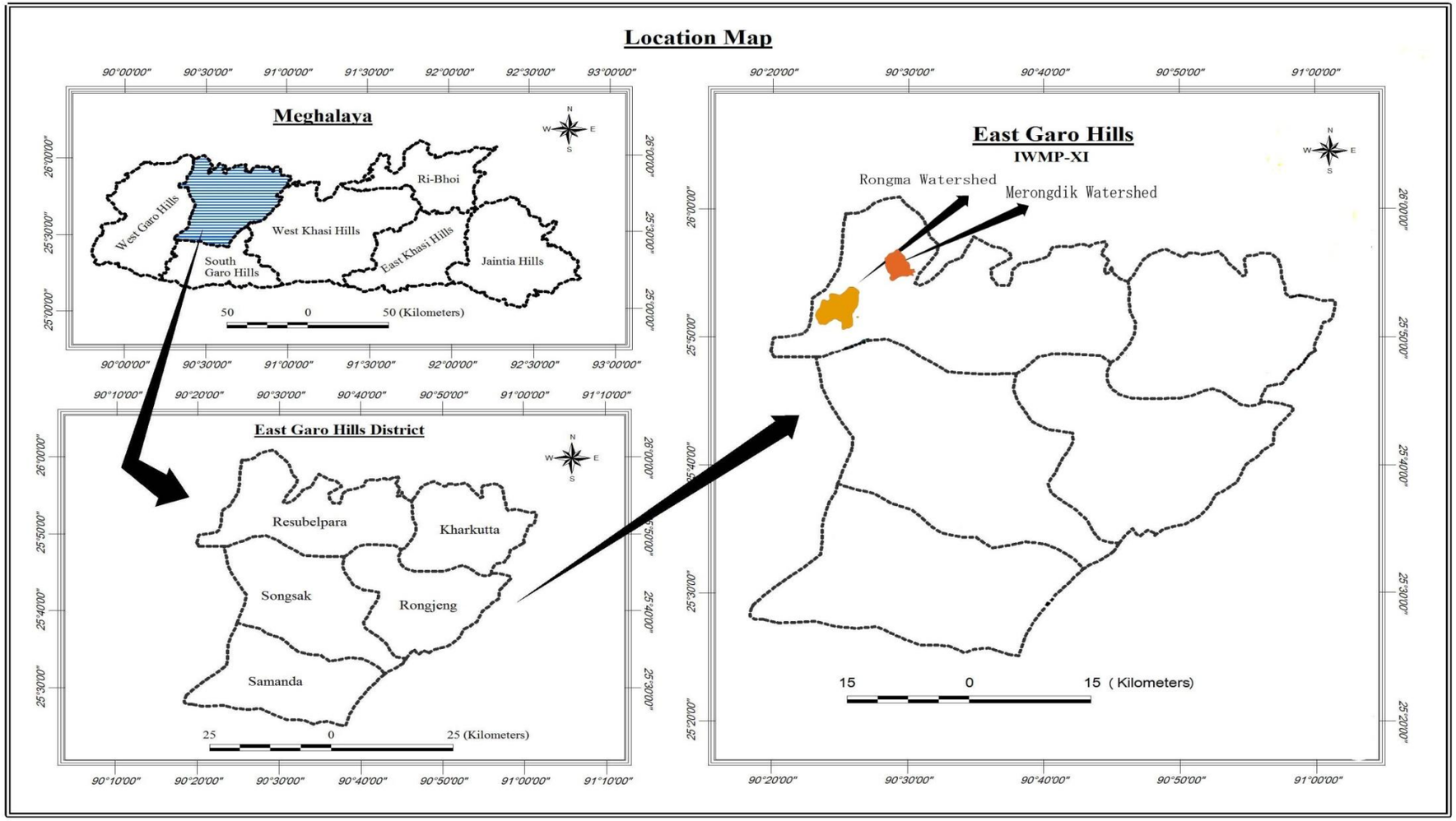
2013– 2014

RESUBELPARA C.& R.D. BLOCK

NORTH GARO HILLS DISTRICT

MEGHALAYA

LOCATION MAP



SUMMARY

Name of the Sate	:	Meghalaya.
Name of the District	:	North Garo Hills District.
Name of the C&RD Block	:	Resubelpara C&RD Block.
Name of the Villages	:	(1) Merongdik, (2) Garo Thorikakona, (3) Samkalak Rongsep, (4) Samkalak Songma, (5) Samkalak Jongdik, and (6) Lower Samkalak
Name of the Project	:	North Garo Hills – IWMP – IV
Total Geographical Area	:	2820 Ha.
Total Treatment Area	:	2300 Ha.
Total Project Cost	:	345.00 lakh.
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 NGH-IWMP- IVproject is located in Resubelpara,C&RD Block,North Garo Hills District of Meghalaya. Consisting of two micro-watersheds, the project area is drained by the Merongdik and RongmaStream and its tributaries flowing in a North to East & North to South direction.The total geographical area is2820Ha.with2300 Ha.to be treated under the Integrated Watershed Management Programme (IWMP).

The Project area is located at a distance of about30 km from Resubelpara C.& R.D. Block Head Quarter and about 30km from the District Headquarter. A total of 6(Six) villages are covered under the project. These are –

(1) Merongdik, (2) Garo Thorikakona, (3) Samkalak Rongsep, (4) Samkalak Songma, (5) Samkalak Jongdik, and (6) Lower Samkalak

1.2 Micro-watershed Information:

The micro-watershed code is 3B1B3and 3B1B3 as codified by the North East Space Application Centre (NESAC). The total area of the micro-watershed is 2820Ha.with2300 hectares to be treated under the Integrated Watershed Management Programme (IWMP).

1.3 Need and Scope for Watershed Development:

The micro-watershed 90°29'10"to90°32'30", 25°54'10"to 25°56'40" and 90°21'40"to90°25'00", 25°50'50" to25°53'20"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 theNorth Garo Hills Plateau the1(one) villages have no road connectivity but under the construction. The 15 households are below the poverty line, which is363 of the total households. Jhum cultivationis 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 ofAking Land underResubelpara C&RD Block of North Garo Hills District. It is situated at a distance of about 30km from Resubelpara C&RD Block Head Quarter about 30km from the District Headquarter. The geographical location is between Latitude, 90°29'10" to 90°32'30", Longitude 25°54'10"to 25°56'40" Latitude, and 90°21'40" to 90°25'00", Longitude 25°50'50" to 25°53'20" Latitude,

There are 6(Six) villages within the Watershed which are as follows –

(1) Merongdik, (2) Garo Thorikakona, (3) Samkalak Rongsep, (4) Samkalak Songma, (5) Samkalak Jongdik and (6) Lower Samkalak

Out of the 6(Six) villages are5 (five) village are motorable road. However road construction works are going under MNREGS in some of the villages.

2.2. Physiographic:

The physiographic of the Merongdik,micro-watershed is highly undulating. The altitude ranges from a minimum of79m to a high of 420m, above mean sea level.In the lower reaches (valley lands) the slope ranges from7 to 63%.

The physiographic of the Rongma, micro-watershed is highly undulating. The altitude ranges from a minimum of 99m to a high of 280m, above mean sea level. In the lower reaches (valley lands) the slope ranges from 5 to 70%.

Table 2.1: Physiographic details

Name of Micro watershed	Elevation (metres)	Slope Range (%)	Order of watershed Sub/Micro-watershed	Major streams	Topography
Merongdik Watershed	79m – 420m	7% - 63%	Micro Watershed	Merongdik stream	Moderately sloping
Rongma Watershed	99m – 280m	5% - 70%	Micro Watershed	Rongma stream	Moderately sloping

Drainage: The major stream draining the micro-watershed is the Merongdik and Rongma streamwhich is a 3thorder stream flowing in a North-East & North-Southdirection. The slopes of the micro-watershed are dissected by numerous small tributaries flowing to the above said river.

2.3 Soil: Soil Texture is medium throughout the watershed. Soil department 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:

<table>
<tr><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td></tr>
<tr><td>Sl. No.</td><td>Names of State</td><td>Names of District</td><td>Names of Projects</td><td>Cause</td><td>Types of erosion</td><td>Area affected (ha)</td><td>Run-off (mm/ year)</td><td>Average soil loss (Tonnes/ ha/ year)</td></tr>
<tr><td rowspan="6">1</td><td rowspan="6">Meghalaya</td><td rowspan="6">North Garo Hills</td><td rowspan="6">NGH-IWMP-IV</td><td colspan="3">Water erosion:</td><td></td><td></td></tr>
<tr><td>a.</td><td>Sheet</td><td rowspan="3">2300</td><td rowspan="3">1700-2400</td><td rowspan="3">4297.49</td></tr>
<tr><td>b.</td><td>Rill</td></tr>
<tr><td>c.</td><td>Gully</td></tr>
<tr><td colspan="2">Sub total</td><td>2300</td><td>1700-2400</td><td>4297.49</td></tr>
<tr><td colspan="2">Wind erosion</td><td>Nil</td><td>Nil</td><td>Nil</td></tr>
</table>

2.4 Climate: The 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 district	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 199-700m	2300 Ha.	North Garo Hills	NGH-IWMP –IV	Loam, Clay Loam.	2300 Ha	3355 mm	Betel nut	-
									Betel leaf	-
									Oranges	-
									Paddy	954 Ha.
									Ginger	-
									Black pepper	-
									Litchi	-
									Banana	-
									Pineapple	-
								Total		**954 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 includebanana, pineapple and jackfruit. The slopes of the Merongdik and Rongma, 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.)
Paddy	954	19.36	18469.44
Millet			
Soyabean			
Yam			
Ginger			
Tapioca			
Betel nut			
Betel leaf			
Black Pepper			
Oranges			

2.6 Natural Vegetation: The tree species common to the watershed area includes –*Shorea robusta,Schima walichii,Termenalia belerica, Emblica officinalis, Bahunia variegataDuabanga* 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 is363 Nos.1988with a total population of which795are male and 1193are female. The detail of the household in each of the villages in the watershed project is as follows:

(1) Merongdik - - - -	42Nos.
(2) Garo Thorikakona - - -	97Nos.
(3) Samkalak Rongsep - - -	87Nos.
(4) Samkalak Songma - - -	59Nos.
(5) Samkalak Jongdik - - -	34Nos.
(6) Lower Samkalak - - -	44Nos.
TOTAL - - -	**363Nos.**

Infrastructurefacilities **:**

1 ***Roads:*** All the villages within the Project Area are not connected by road.

2 ***School:*** There are only 5 Nos. L.P Schools &2Nos. U.P. Schools within the Project Area run either by the Government.

3 ***Electricity :*** The electricity connection is available under the project area.

4 ***Health :*** There is no CHC & PHC in the Project area. The nearest PHC is Bajengdoba.

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

6 ***Market :*** There is a weekly market held once in a week at Bajengdoba. However, the main market where the people sell their produce are at Resubelpara.

Table 2.5: Infrastructure Status.

1	2	3		4			
Name of District	Name of Project	Parameters:		Status			
North Garo Hills	NGH-IWMP- IV	(i)	No. of villages connected to the main road by an all-weather road.	-			
		(ii)	No. of village provided with electricity	Yes			
		(iii)	No. of households without access to drinking water	NIL, but potable drinking water is available.			
		(iv)	No. of educational institutions: Primary (P)/ Secondary (S)/ Higher Secondary (HS)/ Vocational institution (VI)	(P)	(S)	(HS)	(VI)
				5 Nos.	Nil	Nil	Nil
		(v)	No. of village with access to Primary Health Centre	Nil			
		(vi)	No. of village with access Veterinary Dispensary	Nil			
		(vii)	No. of village with access Post Office	Nil			
		(viii)	No. of village with access Banks	Nil			
		(ix)	No. of village with access Markets/ mandis	Nil			
		(x)	No. of village with access Agro-Industries	Nil			
		(xi)	Total quantity of surplus milk	Nil			
		(xii)	No. of milk collection centers (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	6 Nos.			
		(xiv)	Any other facilities with no. of villages (please specify)	Nil			

2.8 Livestock: There are only 3(three) kinds of livestock farming being farmed in the area viz. Piggery, Poultry, Cattles Rearing.

Table 2.6: Existing livestock population

Type of Animal	Population
Piggery	228
Poultry	1303
Cattles Rearing	221
Total	**1752**

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
North Garo Hills	NGH-IWMP-IV	(i) Large	Nil	Nil	Nil	Nil	Nil
		(ii) Small	20	Nil	Nil	Nil	Nil
		(iii) Marginal	298	Nil	Nil	2820 Ha	2820 Ha
		(iv) Landless	Nil	45	Nil	Nil	Nil
		Sub – Total :	**318**	**45**	**--**	**2820 Ha.**	**2820 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)
North Garo Hills	NGH – IWMP-IV	(i) Wasteland/ degraded land	-	-	-	87ha	-	-	-	87Ha.
		(ii) Pastures	-	-	-		-	-	-	-
		(iii) Private Agriculture land	954Ha.	-	-		300Ha.	-	-	-
		(iv) Village woodlot	-	-	-		-	-	-	-
		(v) Forest	-	-	-	500ha	-	-	-	55 Ha.
		(vi) Village Ponds/ Tanks	-	-	-		-	-	-	-
		(vii) Community Buildings	-	-	-	108ha	-	-	-	-
		(viii) Weekly Markets	-	-	-		-	-	-	-
		(ix) Permanent Markets	-	-	-		-	-	-	-
		(x) Temples/ Places of worship	-	-	-	2ha	-	-	-	-
		(xi) Others (Pl. specify)	-	-	-	1169ha	-	-	-	1858 Ha.
		Total	**-**	**-**	**-**	**2820Ha.**	**-**	**-**	**-**	**2300Ha.**

2.10 Land use and land cover: As per the land use land cover map generated by NESAC, Meghalaya from Satellite Image taken during 2009 – 2010 (LISS – III, Image) the Watershed area has been broadly classified into the following land uses.

a) Built-up Area = 108 Ha
b) Tree clad Area-close = 500Ha
c) Tree clad Area-open = 415Ha
d) Abandoned Jhum = 663Ha
e) Agriculture = 954Ha
f) Current Jhum = 180Ha

Total = 2820 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 has 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 2009 – 2010 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

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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 (2009). 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	No
	Participatory Net Planning (PNP)	No

1	*2*	*3*
	Remote sensing data-especially soil/ crop/ run-off cover	Yes
	Ridge to Valley treatment	Yes
	Online IT connectivity between	
	Project and DRDA cell/ZP	Yes
	DRDA and SLNA	Yes
	SLNA and DoLR	Yes
	Availability of GIS layers	
	Cadastral map	No
	Village boundaries	No
	Drainage	Yes
	Soil (Soil nutrient status)	Yes
	Land use	Yes
	Ground water status	No
	Watershed boundaries	Yes
	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**	
	Bio-pesticides	No
	Organic manures	Yes
	Vermi-compost	Yes
	Bio-fertilizer	Yes
	Water saving devices	Yes
	Mechanized tools/ implements	No
	Bio-fencing	Yes
	Nutrient budgeting	Yes
	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,North 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 Districts	Names of projects	Details of PIA	
NorthGaro Hills	NGH – IWMP-IV	(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 theNGH-IWMP–IVwas constituted with the active involvement of the villagers with strong support of the Traditional Institutions (Village Nokma/Council). TheNorth Garo Hills IWMP –IVWatershed 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 District	Names of project	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	EducationalQualification	Function/s assigned#
North Garo Hills	NGH–IWMP-IV	NGH-IWMP-IV Watershed Committee	-	President	2 M	-	ST	-	-	-	-	-	-	-	-	-	A to I
				Secretary	1 M	-	ST	-	-	-	-	-	-	-	-	-	-Do-
				Member	19 M	-	ST	-	-	-	-	-	-	-	-	-	-Do-
				Member	7 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 project	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
NorthGaro Hills	NGH-IWMP-IV	1	3	1	5	(i) Landless									
						(ii) SF									
						(iii) MF	20	15	35	20	15	35	-	-	-
						(iv) LF									

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
North Garo Hills	NGH- IWMP-IV	40	-	30	70	(i) Landless									
						(ii) SF									
						(iii) MF	182	118	300	182	118	300	-	-	-
						(iv) LF									
TOTAL		40	-	30	70		182	118	300	182	118	300	-	-	-

CHAPTER IV

PROJECT ACTIVITIES

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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
NGH- IWMP-IV	13.80 lakh.	R.C.C. Water Storage Tank for Drinking purposes. Construction of Drinking Water Structure/Ringwell. Water Harvesting Farm Pond/Dugout Pond.	--

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
2 Nos. Watershed Committees	32Nos.	-	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											
		Pre Project			Proposed Project											
					Augmentation/ repair of existing structures				Construction of new structures				Total target			
	Type of structures	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.)
NGH-IWMP-IV	(i) Pond	-	-	-	-	-	-	-	36	230 ha	-	25.2	36	230 ha	-	25.2
	(ii) C.C. Dam	-	-	-	-	-	-	-	25	670 ha.	-	52.9825	25	670 ha.	-	52.9825
	(iii) Channel	-	-	-	-	-	-	-	1	30ha.	-	3	1	30ha.	-	3
	(iv) Boulder Sausage /Gabionic Structure	-	-	-	-	-	-	-	14	210.50 ha.	-	11.705	14	210.50 ha.	-	11.705
	(v) Water Harvesting Structure	-	-	-	-	-	-	-	28	453 ha.	-	39.555	28	453 ha.	-	39.555
Total	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	104	1593.50 ha.	-	132.4425	104	1593.50 ha.	-	132.4425

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
NGH-IWMP-IV	(i)Open wells		Nil		Nil			Nil		Nil	
	(ii)Bore wells										
	(iii)Any others (Pl. specify)										
	Total for the project										

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:

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. In lakhs)
	(a)	(b)	(a)	(b)	(a)	(b)	(a)	(b)	(a)	(b)	(a)	(b)	(a)	(b)	(a)	(b)	(a)	(b)	(a)	(b)	
NGH- IWMP-IV	--	--	1593.50 ha	132.4425	R-315 ha	35.4375	56.50 ha.	11.30	280 ha.	12.04	--	--	--	--	55 ha.	1.98	--	--	Livelihood, Production System	31.05 34.50	258.75

4.2.6 Details of engineering structures in watershed works:

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. in lakh)				Expected month & year of completion (mm/yyyy)
									M	W	O	T	
NGH- IWMP-IV	Staggered trenching												
	Loose boulder Contour bund												
	Graded bunding												
	Bench terracing	R		L	P			56.50ha.				11.30	03/2018
	C.C. checks dams												
	Water harvesting structure		D			Yes		453 ha.				39.555	03/2018
	C.C. Channel		D			Yes		30 ha.				3	03/2018
	C.C. Irrigation Dam		D			Yes		670 ha.				52.9825	03/2018
	Boulder Sausage		D			Yes		210.50ha.				11.705	03/2018
	Dugout Pond.	R		L	P			230 ha				25.20	03/2018
	Any others (pl. specify)												

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

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)
NGH-IWMP- IV	Afforestation										
	Regeneration	(R)				✓		55 ha		1.98	03/2018
	Agro-forestry										
	Fuel wood										
	Fodder										
	Agro-Horticulture										
	Pasture dev.										
	Nursery raising			(L)		✓		315 ha.	141750	35.4375	03/2018

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:

1	2	3			4	
Project	Name of activity@	Type of land			Target	
		(i) Private	(ii) Community	(iii) Others (landless)	Estimated cost (Rs. in lakh)	Expected month & year of completion (mm/yyyy)
NGH- IWMP-IV	Tailoring	111 Unit	-	-	8.88	03/ 2018
	Carpentry/Agri-implements/Basket making etc.	-	-	39 Unit	1.95	03/ 2018
	Pisciculture	8 Unit	22 Unit	-	7.40	03/ 2018
	Piggery/Poultry	76 Unit	50 Unit	-	24.12	03/ 2018
	Rice Mill	-	4 Unit	-	2.00	03/ 2018
	Weaving/Handloom	20Unit	-	-	2.50	03/ 2018
	Kitchen gardening	312 Unit	28 Unit	-	14.80	03/ 2018
	Power Tiller	-	2 Unit	-	3.90	03/ 2018

@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.)
NGH-IWMP-IV	Merongdik	Drinking Water	R.C.C. Water Storage Tank and Ringwell.	-	6.80	Community	0.439
	Thorikaakona						
	Samkalak Rongsep						
	Samkalak Songma						
	Samkalak Jongdik	Forest	Improvement of degraded Forest	55 ha	1.98	Community	
	Lower Samkalak						

CHAPTER V

PROJECT PHASING & BUDGETING

BATCH-WISE ACTION PLAN OF NGH - IWMP - XI & XII UNDER SIMSANGGRE SOIL & WATER CONSERVATION DIVISION, WILLIAMNAGAR.

Name of C & R.D. Block : RESUBELPARA & KHARKUTTA **Project Area - 4500 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.	
I	**Administrative Cost**																								
i.	Honourarium of WDT Members @ Rs. 12000/ month – 2 nos.	0	0	0	23.04								10.08				7.2				5.76				
ii.	Hon^{rm}of Watershed Volunteers @ Rs. 2500/- month – 6 nos.	0	0	0	11.7								0.9				9.9				0.9				
iii.	Hon^{rm}WCO's @ Rs.1000/month x 36 months	0	0	0	1.8								0.24				1.32				0.24				
iv.	Hon^{rm}WCM @ Rs.200 x 44 Nos. members/month for 38 months	0	0	0	6.688								0.528				5.896				0.264				
v	Hon^{rm}Office assistance @Rs.5000/month x 36 months.	0	0	0	7.2								0.25				2.58				4.37				
vi	Hon^{rm}Chartered Accountant	0	0	0	1.81								0.142				1.568				0.1				
vii	TA/DA of Field Asstt. @ 5000/month.	0	0	0	7.5								0.46				1.9				5.14				
viii	Hiring charges of office building @ 1500/month.	0	0	0	1.62								0.72				0.5				0.4				
ix.	Hiring charges of vehicle @ 5000/month.	0	0	0	1.6												0.9				0.7				
x	Office expenses, POL, Stationeries, printing of SHG's books, pamphlets, tea, snacks etc, cost of camera.	0	0	0	4.542								0.18				1.986				2.376				

II	**Monitoring & Evalution**	0	0	0	0																			
i.	Cost of Honorarium to evaluator.	0	0	0	7.45								2.125				3.675				1.65			
ii.	Cost of printing report etc.	0	0	0	6.05								1.25				3.075				1.725			
	Sub Total (I+II)	**0**	**0**	**0**	**81**								**16.875**	**0**	**0**	**0**	**40.5**	**0**	**0**	**0**	**23.625**	**0**	**0**	**0**	**0**
III	**Preparatory Phase**																							
	ENTRY POINT ACTIVITIES																							
i	Water Harvesting Farm Pond.	0	3	0	6		3		6															
ii	R.C.C. Water Storage Tank for Drinking Water purposes.	0	7	0	11.6		7		11.6															
iii	Ringwell / Drinking Water Structure.	0	9	0	8.4		9		8.4															
iv	Dugout Pond.	0	1	0	1		1		1															
	DPR																							
i.	Cost of Resources Inventories works	0	0	0	1.4				1.4															
ii.	Cost of PRA Exercises	0	0	0	1.6				1.6															
iii.	Cost of Land use Survey works	0	0	0	3.35				3.35															
iv.	Cost of formulating	0	0	0	0.4				0.4															

	Institutional &Capacity Building																							
i.	Awareness Campaign & Capacity building	0	16	0	10.1		4		2.1		4		4.2		4		1.9		4		1.9			
ii.	Exposure visits – off. Campus	0	12	0	10.55		3		2		3		4.35		3		2.1		3		2.1			
iii.	Capacity building of SHG's/ UG's.	0	16	0	5.15		4		1		4		1.95		4		1.1		4		1.1			
iv.	Capacity building of WC Members.	0	16	0	4.65		4		0.9		4		1.95		4		0.9		4		0.9			
v.	Capacity building of WDT/WV	0	12	0	3.3		3		0.75		3		1.05		3		0.75		3		0.75			
	Sub-Total of III	**0**	**92**	**0**	**67.5**	**0**	**38**	**0**	**40.5**	**0**	**18**	**0**	**13.5**	**0**	**18**	**0**	**6.75**	**0**	**18**	**0**	**6.75**	**0**	**0**	**0**	**0**
IV	**Work Phase**																							
A	**Arable Land Treament**																							
i.	Bench Terrace @Rs.20000/ ha.	130.5	0	0	26.1					19			3.8	64			12.8	47.5			9.5			
ii.	Improvement existing Paddy field @Rs.4300/ha.	445	0	0	19.135					140			6.02	170			7.31	135			5.805			
iii	Agro-Horticulture @Rs.10100/ ha.	27	0	0	2.727					9			0.909	9			0.909	9			0.909			
	Sub-Total Of A	**602.5**	**0**	**0**	**47.962**	**0**	**0**	**0**	**0**	**168**	**0**	**0**	**10.729**	**243**	**0**	**0**	**21.019**	**191.5**	**0**	**0**	**16.214**	**0**	**0**	**0**	**0**
B	**Non-Arable Land**																							
i.	Creation of Rubber Nursery(polybag) @Rs.25/each.	603	271350	0	67.8375					126	56700		14.175	257	115650		28.9125	220	99000		24.75			
ii.	Imp.of existing degraded Forest @Rs.3600/ ha.	280	0	0	10.08					65			2.34	155			5.58	60			2.16			
	Sub-Total of B	**883**	**271350**	**0**	**77.9175**	**0**	**0**	**0**	**0**	**191**	**56700**	**0**	**16.515**	**412**	**115650**	**0**	**34.4925**	**280**	**99000**	**0**	**26.91**	**0**	**0**	**0**	**0**

C	**Drainage Line Treament**																							
i	C.C.Irrigation Dam.	839	34	0	68.1275					135	9		14.775	694	24		52.0625	10	1		1.29			
ii	Water Harvesting Structure with C.C.Core wall.	1143	67	0	103.955					75	3		5.635	882	56		88.04	186	8		10.28			
iii.	Boulder Sausage Protection wall.	314.5	18	0	18.775									233	15		14.215	81.5	3		4.56			
iv.	Dug out Pond.	433	51	0	37.263					30	3		2.971	223	24		18.621	180	24		15.671			
v	C.C.Irrigation Channel.	105	5	0	9.6									105	5		9.6							
vi	C.C.Check Dam	180	10		14.4									128	8		11.7	52	2		2.7			
	Sub-Total of C	**3014.5**	**185**	**0**	**252.1205**	**0**	**0**	**0**	**0**	**240**	**15**	**0**	**23.381**	**2265**	**132**	**0**	**194.2385**	**509.5**	**38**	**0**	**34.501**	**0**	**0**	**0**	**0**
D	**Livelihood**																							
i	Tailoring @ Rs. 8000/- unit	0	229	0	18.32						36		2.88		79		6.32		114		9.12			
ii	Carpentry @ Rs. 5000/- unit.	0	88	0	4.4						20		1		25		1.25		43		2.15			
iii.	Kitchen Gardening @ Rs. 2500/- unit	0	470	0	11.75						86		2.15		120		3		264		6.6			
iv.	Pisciculture @ Rs. 10000/ unit	0	20	0	2										7		0.7		13		1.3			
v	Piggery/Poultry @Rs. 12000/- unit.	0	144	0	17.28						6		0.72		54		6.48		84		10.08			
vi	Weaving @Rs. 12500/- unit.	0	56	0	7										20		2.5		36		4.5			
	Sub-Total of D	**0**	**1007**	**0**	**60.75**	**0**	**0**	**0**	**0**	**0**	**148**	**0**	**6.75**	**0**	**305**	**0**	**20.25**	**0**	**554**	**0**	**33.75**	**0**	**0**	**0**	**0**

E	**Production System**																							
i	Piggery/Poultry @ Rs. 30000/- unit.	0	83	0	24.9						15		4.5		28		8.4		40		12			
ii	Pisciculture @ Rs. 30000/ unit	0	43	0	12.9										14		4.2		29		8.7			
iii.	Ricemill @Rs. 50000/- unit.	0	13	0	6.5						3		1.5		3		1.5		7		3.5			
iv.	Ginger Plantation @Rs.22500/ unit.	0	18	0	4.05										9		2.025		9		2.025			
v	Turmeric Plantation @Rs.12500/ unit.	0	24	0	3										3		0.375		21		2.625			
vi	Power Tiller @Rs.195000/unit.	0	2	0	3.9														2		3.9			
vii	Kitchen Gardening @ Rs. 25000/- unit	0	49	0	12.25						3		0.75		15		3.75		31		7.75			
	Sub-Total of E	**0**	**232**	**0**	**67.5**	**0**	**0**	**0**	**0**	**0**	**21**	**0**	**6.75**	**0**	**72**	**0**	**20.25**	**0**	**139**	**0**	**40.5**	**0**	**0**	**0**	**0**
	Sub-Total of IV (A+B+C+D+E)	**4500**	**272774**	**0**	**506.25**	**0**	**0**	**0**	**0**	**599**	**56884**	**0**	**64.125**	**2920**	**116159**	**0**	**290.25**	**981**	**99731**	**0**	**151.875**	**0**	**0**	**0**	**0**
IV	**Consolidation Phase**																							
i	Repairs, Maintenance of CPR's.	0	0	0	11.4																			11.4
ii	Improving the sustainability of various Interventions	0	0	0	4.3																			4.3
iii.	Documentation of successful experiences & Preparation of Completion Report	0	0	0	4.55																			4.55
	Sub-Total of V	**0**	**0**	**0**	**20.25**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**20.25**
	Grand Total (I+II+III+IV+V)	**4500**	**272866**	**0**	**675**	**0**	**38**	**0**	**40.5**	**599**	**56902**	**0**	**94.5**	**2920**	**116177**	**0**	**337.5**	**981**	**99749**	**0**	**182.25**	**0**	**0**	**0**	**20.25**

ACTION PLAN OF NGH - IWMP - IV UNDER SIMSANGGRE SOIL & WATER CONSERVATION DIVISION, WILLIAMNAGAR.

Name of C & R.D. Block : RESUBELPARA **Project Area - 2300 Ha.** **Name of Watershed : RONGMA & MERONGDIK WATERSHED**

	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.	
I	**Administrative Cost**																								
i.	Honourarium of WDT Members @ Rs. 12000/ month – 2 nos.	0	0	0	11.52								5.76				2.88				2.88				
ii.	Hon^{rm}of Watershed Volunteers @ Rs. 2500/- month – 6 nos.	0	0	0	5.4												5.4								
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 44 Nos. members/month for 38 months	0	0	0	3.344												3.344								
v	Hon^{rm}Office assistance @Rs.5000/month x 36 months.	0	0	0	3.6												1.02				2.58				
vi	Hon^{rm}Chartered Accountant	0	0	0	1.368												1.368								
vii	TA/DA of Field Asstt. @ 5000/month.	0	0	0	4.8								0.24				1.2				3.36				
viii	Hiring charges of office building @ 1500/month.	0	0	0	0.81								0.72								0.09				
ix.	Hiring charges of vehicle @ 5000/month.	0	0	0	0.5												0.3				0.2				
x	Office expenses, POL, Stationeries, printing of SHG's books, pamphlets, tea, snacks etc, cost of camera.	0	0	0	2.438								0.18				1.018				1.24				

II	**Monitoring & Evalution**	0	0	0	0																			
i.	Cost of Honorarium to evaluator.	0	0	0	3.6								1.035				1.725				0.84				
ii.	Cost of printing report etc.	0	0	0	3.3								0.69				1.725				0.885				
	Sub Total (I+II)	**0**	**0**	**0**	**41.4**								**8.625**	**0**	**0**	**0**	**20.7**	**0**	**0**	**0**	**12.075**	**0**	**0**	**0**	**0**
III	**Preparatory Phase**																							
	ENTRY POINT ACTIVITIES																							
i	Water Harvesting Farm Pond.	0	3	0	6		3		6															
ii	R.C.C. Water Storage Tank for Drinking Water purposes.	0	2	0	4.1		2		4.1															
iii	Ringwell for Community.	0	3	0	2.7		3		2.7															
iv	Dugout Pond.	0	1	0	1		1		1															
	DPR																							
i.	Cost of Resources Inventories works	0	0	0	0.7				0.7															
ii.	Cost of PRA Exercises	0	0	0	0.8				0.8															
iii.	Cost of Land use Survey works	0	0	0	1.75				1.75															
iv.	Cost of formulating	0	0	0	0.2				0.2															
	Institutional &Capacity Building																							
i.	Awareness Campaign & Capacity building	0	8	0	5.5		2		1.1		2		2.6		2		0.9		2		0.9			
ii.	Exposure visits – off. Campus	0	8	0	5.75		2		1.1		2		2.25		2		1.2		2		1.2			
iii.	Capacity building of SHG's/ UG's.	0	8	0	2.55		2		0.5		2		0.85		2		0.6		2		0.6			
iv.	Capacity building of WC Members.	0	8	0	2.35		2		0.5		2		0.85		2		0.5		2		0.5			
v.	Capacity building of WDT/WV	0	8	0	1.1		2		0.25		2		0.35		2		0.25		2		0.25			
	Sub-Total of III	**0**	**49**	**0**	**34.5**	**0**	**19**	**0**	**20.7**	**0**	**10**	**0**	**6.9**	**0**	**10**	**0**	**3.45**	**0**	**10**	**0**	**3.45**	**0**	**0**	**0**	**0**

IV	**Work Phase**																								
A	**Arable Land Treament**																								
i.	Bench terrace @Rs.20000/ ha.	56.5	0	0	11.3									30			6	26.5			5.3				
ii.	Improvement existing Paddy field @Rs.4300/ha.	280	0	0	12.04					80			3.44	110			4.73	90			3.87				
	Sub-Total Of A	**336.5**	**0**	**0**	**23.34**	**0**	**0**	**0**	**0**	**80**	**0**	**0**	**3.44**	**140**	**0**	**0**	**10.73**	**116.5**	**0**	**0**	**9.17**	**0**	**0**	**0**	**0**
B	**Non-Arable Land**																								
i.	Creation of Rubber Nursery(polybag) @Rs.25/each.	315	141750	0	35.4375					60	27000		6.75	125	56250		14.0625	130	58500		14.625				
ii.	Imp.of existing degraded Forest @Rs.3600/ ha.	55	0	0	1.98					20			0.72	35			1.26								
	Sub-Total of B	**370**	**141750**	**0**	**37.4175**	**0**	**0**	**0**	**0**	**80**	**27000**	**0**	**7.47**	**160**	**56250**	**0**	**15.3225**	**130**	**58500**	**0**	**14.625**	**0**	**0**	**0**	**0**
C	**Drainage Line Treament**																								
i	C.C.Irrigation dam.	670	25	0	52.9825					90	6		10.73	570	18		40.9625	10	1		1.29				
ii	Water Harvesting Structure with C.C.Core wall.	453	28	0	39.555					60	2		4.235	385	25		34.54	8	1		0.78				
iii.	Boulder Sausage Protection wall.	210.5	14	0	11.705									185	13		10.595	25.5	1		1.11				
iv.	Dug out Pond.	230	36	0	25.2									130	17		12.5	100	19		12.7				
v	C.C.Irrigation Channel.	30	1	0	3									30	1		3								
	Sub-Total of C	**1593.5**	**104**	**0**	**132.4425**	**0**	**0**	**0**	**0**	**150**	**8**	**0**	**14.965**	**1300**	**74**	**0**	**101.5975**	**143.5**	**22**	**0**	**15.88**	**0**	**0**	**0**	**0**
D	**Livelihood**																								
i	Tailoring @ Rs. 8000/- unit	0	111	0	8.88						20		1.6		37		2.96		54		4.32				
ii	Carpentry @ Rs. 5000/- unit.	0	39	0	1.95						7		0.35		4		0.2		28		1.4				
iii.	Kitchen Gardening @ Rs. 2500/- unit	0	312	0	7.8						60		1.5		78		1.95		174		4.35				
iv.	Pisciculture @ Rs. 10000/ unit	0	8	0	0.8										4		0.4		4		0.4				
v	Piggery/Poultry @Rs. 12000/- unit.	0	76	0	9.12										32		3.84		44		5.28				
vi	Weaving @Rs. 12500/- unit.	0	20	0	2.5										8		1		12		1.5				
	Sub-Total of D	**0**	**566**	**0**	**31.05**	**0**	**0**	**0**	**0**	**0**	**87**	**0**	**3.45**	**0**	**163**	**0**	**10.35**	**0**	**316**	**0**	**17.25**	**0**	**0**	**0**	**0**

E	**Production System**																								
i	Piggery/Poultry @ Rs. 30000/- unit.	0	50	0	15						9		2.7		19		5.7		22		6.6				
ii	Pisciculture @ Rs. 30000/ unit	0	22	0	6.6										8		2.4		14		4.2				
iii	Ricemill @Rs. 50000/- unit.	0	4	0	2														4		2				
iv	Power Tiller @Rs.195000/unit.	0	2	0	3.9														2		3.9				
v	Kitchen Gardening @ Rs. 25000/- unit	0	28	0	7						3		0.75		9		2.25		16		4				
	Sub-Total of E	**0**	**106**	**0**	**34.5**	**0**	**0**	**0**	**0**	**0**	**12**	**0**	**3.45**	**0**	**36**	**0**	**10.35**	**0**	**58**	**0**	**20.7**	**0**	**0**	**0**	**0**
	Sub-Total of IV (A+B+C+D+E)	**2300**	**142526**	**0**	**258.75**	**0**	**0**	**0**	**0**	**310**	**27107**	**0**	**32.775**	**1600**	**56523**	**0**	**148.35**	**390**	**58896**	**0**	**77.625**	**0**	**0**	**0**	**0**
IV	**Consolidation Phase**																								
i	Repairs, Maintenance of CPR's.	0	0	0	5.7																				5.7
ii	Improving the sustainability of various Interventions	0	0	0	2.375																				2.375
iii.	Documentation of successful experiences & Preparation of Completion Report	0	0	0	2.275																				2.275
	Sub-Total of V	**0**	**0**	**0**	**10.35**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**10.35**
	Grand Total (I+II+III+IV+V)	**2300**	**142575**	**0**	**345**	**0**	**19**	**0**	**20.7**	**310**	**27117**	**0**	**48.3**	**1600**	**56533**	**0**	**172.5**	**390**	**58906**	**0**	**93.15**	**0**	**0**	**0**	**10.35**

ACTION PLAN OF NGH - IWMP - IV UNDER SIMSANGGRE SOIL & WATER CONSERVATION DIVISION, WILLIAMNAGAR.

Name of C & R.D. Block : RESUBELPARA **Project Area - 1000 Ha.** **Name of Watershed : RONGMA WATERSHED**

	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.	
I	**Administrative Cost**																								
i.	Honourarium of WDT Members @ Rs. 12000/ month – 1 no.	0	0	0	5.76								2.88				1.44				1.44				
ii.	Hon^{rm}of Watershed Volunteers @ Rs. 2500/- month – 3 nos.	0	0	0	2.7												2.7								
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	1.672												1.672								
v	Hon^{rm}Office assistance @Rs.5000/month x 36 months.	0	0	0	1.8												0.51				1.29				
vi	Hon^{rm}Chartered Accountant	0	0	0	0.1												0.1								
vii	TA/DA of Field Asstt. @ 5000/month.	0	0	0	2.4								0.12				0.6				1.68				
viii	Hiring charges of office building @ 1500/month.	0	0	0	0.09																0.09				
ix.	Hiring charges of vehicle @ 5000/month.	0	0	0	0.1												0.1								
x	Office expenses, POL, Stationeries, printing of SHG's books, pamphlets, tea, snacks etc, cost of camera.	0	0	0	0.018												0.018								

II	**Monitoring & Evalution**	0	0	0	0																				
i.	Cost of Honorarium to evaluator.	0	0	0	1.65								0.45				0.75				0.45				
ii.	Cost of printing report etc.	0	0	0	1.35								0.3				0.75				0.3				
	Sub Total (I+II)	**0**	**0**	**0**	**18**								**3.75**	**0**	**0**	**0**	**9**	**0**	**0**	**0**	**5.25**	**0**	**0**	**0**	**0**
III	**Preparatory Phase**																								
	ENTRY POINT ACTIVITIES																								
i	Water Harvesting Farm Pond at Samkalak Rongsep	0	1	0	2		1		2																
ii	R.C.C. Water Storage Tank for Drinking Water purposes at Samkalak Songma.	0	1	0	2.1		1		2.1																
iii	Ringwell for Community at Samkalak Jongdik.	0	1	0	0.9		1		0.9																
iv	Dugout Pond at Lower Samkalak.	0	1	0	1		1		1																
	DPR																								
i.	Cost of Resources Inventories works	0	0	0	0.2				0.2																
ii.	Cost of PRA Exercises	0	0	0	0.4				0.4																
iii.	Cost of Land use Survey works	0	0	0	0.8				0.8																
iv.	Cost of formulating	0	0	0	0.1				0.1																

	Institutional &Capacity Building																							
i.	Awareness Campaign & Capacity building	0	4	0	2.8		1		0.6		1		1.4		1		0.4		1		0.4			
ii.	Exposure visits – off. Campus	0	4	0	2.15		1		0.4		1		0.75		1		0.5		1		0.5			
iii.	Capacity building of SHG's/ UG's.	0	4	0	1.15		1		0.2		1		0.35		1		0.3		1		0.3			
iv.	Capacity building of WC Members.	0	4	0	0.95		1		0.2		1		0.35		1		0.2		1		0.2			
v.	Capacity building of WDT/WV	0	4	0	0.45		1		0.1		1		0.15		1		0.1		1		0.1			
	Sub-Total of III	**0**	**24**	**0**	**15**	**0**	**9**	**0**	**9**	**0**	**5**	**0**	**3**	**0**	**5**	**0**	**1.5**	**0**	**5**	**0**	**1.5**	**0**	**0**	**0**	**0**
IV	**Work Phase**																							
A	**Arable Land Treament**																							
	SAMKALAK RONGSEP																							
ii.	Improvement existing Paddy field @Rs.4300/ha.	30	0	0	1.29					10			0.43	10			0.43	10			0.43			
	SAMKALAK SONGMA																							
i.	Bench terrace @Rs.20000/ ha.	5	0	0	1													5			1			
ii.	Improvement existing Paddy field @Rs.4300/ha.	20	0	0	0.86					10			0.43	10			0.43							
	SAMKALAK JONGDIK																							
i.	Bench terrace @Rs.20000/ ha.	5	0	0	1													5			1			
ii.	Improvement existing Paddy field @Rs.4300/ha.	20	0	0	0.86					10			0.43	10			0.43							
	LOWER SAMKALAK																							
i.	Bench terrace @Rs.20000/ ha.	5	0	0	1													5			1			
ii.	Improvement existing Paddy field @Rs.4300/ha.	20	0	0	0.86					10			0.43	10			0.43							
	Sub-Total Of A	**105**	**0**	**0**	**6.87**	**0**	**0**	**0**	**0**	**40**	**0**	**0**	**1.72**	**40**	**0**	**0**	**1.72**	**25**	**0**	**0**	**3.43**	**0**	**0**	**0**	**0**

B	**Non-Arable Land**																							
	SAMKALAK RONGSEP																							
i.	Creation of Rubber Nursery(polybag) @Rs.25 each.	45	20250	0	5.0625					10	4500		1.125	20	9000		2.25	15	6750		1.6875			
	SAMKALAK SONGMA	0	0	0	0																			
i.	Creation of Rubber Nursery(polybag) @Rs.25 each.	45	20250	0	5.0625					10	4500		1.125	20	9000		2.25	15	6750		1.6875			
	SAMKALAK JONGDIK	0	0	0	0																			
i.	Creation of Rubber Nursery(polybag) @Rs.25 each.	45	20250	0	5.0625					10	4500		1.125	20	9000		2.25	15	6750		1.6875			
	LOWER SAMKALAK	0	0	0	0																			
i.	Creation of Rubber Nursery(polybag) @Rs.25 each.	45	20250	0	5.0625					10	4500		1.125	20	9000		2.25	15	6750		1.6875			
	Sub-Total of B	**180**	**81000**	**0**	**20.25**	**0**	**0**	**0**	**0**	**40**	**18000**	**0**	**4.5**	**80**	**36000**	**0**	**9**	**60**	**27000**	**0**	**6.75**	**0**	**0**	**0**	**0**
C	**Drainage Line Treament**																							
	SAMKALAK RONGSEP																							
i	C.C.Irrigation dam across Chichengbok stream.	5	1	0	1.2575					5	1		1.2575											
ii	C.C.Irrigation dam across Bolga stream.	25	1	0	2									25	1		2							
iii.	C.C.Irrigation dam across Rongsep stream.	45	2	0	3									45	2		3							
iv.	Water Harvesting Structure with C.C.Core wall.	53	4	0	3.18									45	3		2.4	8	1		0.78			
v	Boulder Sausage Protection wall.	50	3	0	1.795									50	3		1.795							
vi	Dug out Pond.	46	6	0	3.5									40	4		2	6	2		1.5			

	SAMKALAK SONGMA																								
i	C.C.Irrigation dam across Bagapi stream.	30	2	0	3.0575					5	1		1.2575	25	1		1.8								
ii	C.C.Irrigation dam across Bolbok stream.	30	1	0	2									30	1		2								
iii.	C.C.Irrigation dam across Chima stream.	35	1	0	2.5									35	1		2.5								
iv.	C.C.Irrigation dam across Papang stream.	25	1	0	2.5									25	1		2.5								
v	Water Harvesting Structure with C.C.Core wall.	30	2	0	2.395									30	2		2.395								
vi	Dug out Pond.	8	2	0	1.5													8	2		1.5				
	SAMKALAK JONGDIK																								
i	C.C.Irrigation dam across Jongdik stream.	5	1	0	1.2					5	1		1.2												
ii	C.C.Irrigation dam across Nengban stream.	30	1	0	2.195									30	1		2.195								
iii.	Water Harvesting Structure with C.C.Core wall.	90	6	0	9									90	6		9								
iv.	Dug out Pond.	10	2	0	1													10	2		1				
	LOWER SAMKALAK																								
i	C.C.Irrigation dam across Rongsi stream.	5	1	0	1.315					5	1		1.315												
ii	C.C.Irrigation dam across Matchanang stream.	65	1	0	3.5									65	1		3.5								
iii.	C.C.Irrigation dam across Wanokdam stream.	30	1	0	2									30	1		2								
iv.	C.C.Irrigation dam across Bolsal stream.	35	2	0	3.29									25	1		2	10	1		1.29				
v	Water Harvesting Structure with C.C.Core wall.	10	1	0	1.695									10	1		1.695								
vi	Boulder Sausage Protection wall.	45	2	0	2									45	2		2								
vii	Dug out Pond.	8	2	0	1													8	2		1				
	Sub-Total of C	**715**	**46**	**0**	**56.88**	**0**	**0**	**0**	**0**	**20**	**4**	**0**	**5.03**	**645**	**32**	**0**	**44.78**	**50**	**10**	**0**	**7.07**	**0**	**0**	**0**	**0**

D	**Livelihood**																								
	SAMKALAK RONGSEP																								
i	Tailoring @ Rs. 8000/- unit	0	10	0	0.8						5		0.4						5		0.4				
ii	Carpentry @ Rs. 5000/-unit.	0	4	0	0.2						2		0.1						2		0.1				
iii.	Kitchen Gardening @ Rs. 2500/- unit	0	30	0	0.75						10		0.25						20		0.5				
iv.	Pisciculture @ Rs. 10000/ unit	0	2	0	0.2										1		0.1		1		0.1				
v	Piggery/Poultry @Rs. 12000/- unit.	0	6	0	0.72										3		0.36		3		0.36				
vi	Weaving @Rs. 12500/- unit.	0	6	0	0.75										2		0.25		4		0.5				
	SAMKALAK SONGMA																								
i	Tailoring @ Rs. 8000/- unit	0	10	0	0.8										5		0.4		5		0.4				
ii	Carpentry @ Rs. 5000/-unit.	0	4	0	0.2										2		0.1		2		0.1				
iii.	Kitchen Gardening @ Rs. 2500/- unit	0	30	0	0.75										10		0.25		20		0.5				
iv.	Pisciculture @ Rs. 10000/ unit	0	2	0	0.2										1		0.1		1		0.1				
v	Piggery/Poultry @Rs. 12000/- unit.	0	6	0	0.72										3		0.36		3		0.36				
vi	Weaving @Rs. 12500/- unit.	0	6	0	0.75										2		0.25		4		0.5				
	SAMKALAK JONGDIK																								
i	Tailoring @ Rs. 8000/- unit	0	10	0	0.8										5		0.4		5		0.4				
ii	Carpentry @ Rs. 5000/-unit.	0	4	0	0.2										2		0.1		2		0.1				
iii.	Kitchen Gardening @ Rs. 2500/- unit	0	30	0	0.75										10		0.25		20		0.5				
iv.	Pisciculture @ Rs. 10000/ unit	0	2	0	0.2										1		0.1		1		0.1				
v	Piggery/Poultry @Rs. 12000/- unit.	0	6	0	0.72										3		0.36		3		0.36				
vi	Weaving @Rs. 12500/- unit.	0	4	0	0.5										2		0.25		2		0.25				

	LOWER SAMKALAK																							
i	Tailoring @ Rs. 8000/- unit	0	14	0	1.12						5		0.4		2		0.16		7		0.56			
ii	Carpentry @ Rs. 5000/-unit.	0	4	0	0.2						2		0.1						2		0.1			
iii.	Kitchen Gardening @ Rs. 2500/- unit	0	30	0	0.75						10		0.25						20		0.5			
iv.	Pisciculture @ Rs. 10000/ unit	0	2	0	0.2										1		0.1		1		0.1			
v	Piggery/Poultry @Rs. 12000/- unit.	0	6	0	0.72										3		0.36		3		0.36			
vi	Weaving @Rs. 12500/- unit.	0	4	0	0.5										2		0.25		2		0.25			
	Sub-Total of D	**0**	**232**	**0**	**13.5**	**0**	**0**	**0**	**0**	**0**	**34**	**0**	**1.5**	**0**	**60**	**0**	**4.5**	**0**	**138**	**0**	**7.5**	**0**	**0**	**0**	**0**
E	**Production System**																							
	SAMKALAK RONGSEP																							
i	Piggery/Poultry @ Rs. 30000/- unit.	0	5	0	1.5						1		0.3		1		0.3		3		0.9			
ii	Pisciculture @ Rs. 30000/ unit	0	4	0	1.2										2		0.6		2		0.6			
iii	Ricemill @Rs. 50000/- unit.	0	1	0	0.5														1		0.5			
iv	Kitchen Gardening @ Rs. 25000/- unit	0	3	0	0.75										2		0.5		1		0.25			
	SAMKALAK SONGMA																							
i	Piggery/Poultry @ Rs. 30000/- unit.	0	5	0	1.5						1		0.3		1		0.3		3		0.9			
ii	Pisciculture @ Rs. 30000/ unit	0	4	0	1.2										2		0.6		2		0.6			
iii	Ricemill @Rs. 50000/- unit.	0	1	0	0.5														1		0.5			
iv	Kitchen Gardening @ Rs. 25000/- unit	0	3	0	0.75										2		0.5		1		0.25			

	SAMKALAK JONGDIK																							
i	Piggery/Poultry @ Rs. 30000/- unit.	0	5	0	1.5						1		0.3		1		0.3		3		0.9			
ii	Pisciculture @ Rs. 30000/ unit	0	4	0	1.2										2		0.6		2		0.6			
iii	Ricemill @Rs. 50000/- unit.	0	1	0	0.5														1		0.5			
iv	Kitchen Gardening @ Rs. 25000/- unit	0	3	0	0.75										2		0.5		1		0.25			
	LOWER SAMKALAK																							
i	Piggery/Poultry @ Rs. 30000/- unit.	0	6	0	1.8						2		0.6		1		0.3		3		0.9			
ii	Pisciculture @ Rs. 30000/ unit	0	2	0	0.6														2		0.6			
iii	Ricemill @Rs. 50000/- unit.	0	1	0	0.5														1		0.5			
iv	Kitchen Gardening @ Rs. 25000/- unit	0	1	0	0.25														1		0.25			
	Sub-Total of E	**0**	**49**	**0**	**15**	**0**	**0**	**0**	**0**	**0**	**5**	**0**	**1.5**	**0**	**16**	**0**	**4.5**	**0**	**28**	**0**	**9**	**0**	**0**	**0**	**0**
	Sub-Total of IV (A+B+C+D+E)	**1000**	**81327**	**0**	**112.5**	**0**	**0**	**0**	**0**	**100**	**18043**	**0**	**14.25**	**765**	**36108**	**0**	**64.5**	**135**	**27176**	**0**	**33.75**	**0**	**0**	**0**	**0**
IV	**Consolidation Phase**																							
i	Repairs, Maintenance of CPR's.	0	0	0	2.6																			2.6
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**	**4.5**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4.5**
	Grand Total (I+II+III+IV+V)	**1000**	**81351**	**0**	**150**	**0**	**9**	**0**	**9**	**100**	**18048**	**0**	**21**	**765**	**36113**	**0**	**75**	**135**	**27181**	**0**	**40.5**	**0**	**0**	**0**	**4.5**

ACTION PLAN OF NGH - IWMP - IV UNDER SIMSANGGRE SOIL & WATER CONSERVATION DIVISION, WILLIAMNAGAR.

Name of C & R.D. Block : RESUBELPARA **Project Area - 1300 Ha.** **Name of Watershed : MERONGDIK WATERSHED**

	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.	
I	**Administrative Cost**																								
i.	Honourarium of WDT Members @ Rs. 12000/ month – 1 no.	0	0	0	5.76								2.88				1.44				1.44				
ii.	Hon^{rm}of Watershed Volunteers @ Rs. 2500/- month – 3 nos.	0	0	0	2.7												2.7								
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	1.672												1.672								
v	Hon^{rm}Office assistance @Rs.5000/month x 36 months.	0	0	0	1.8												0.51				1.29				
vi	Hon^{rm}Chartered Accountant	0	0	0	1.268												1.268								
vii	TA/DA of Field Asstt. @ 5000/month.	0	0	0	2.4								0.12				0.6				1.68				
viii	Hiring charges of office building @ 1500/month.	0	0	0	0.72								0.72												
ix.	Hiring charges of vehicle @ 5000/month.	0	0	0	0.4												0.2				0.2				
x	Office expenses, POL, Stationeries, printing of SHG's books, pamphlets, tea, snacks etc, cost of camera.	0	0	0	2.42								0.18				1				1.24				

II	**Monitoring & Evalution**	0	0	0	0																			
i.	Cost of Honorarium to evaluator.	0	0	0	1.95							0.585				0.975				0.39				
ii.	Cost of printing report etc.	0	0	0	1.95							0.39				0.975				0.585				
	Sub Total (I+II)	**0**	**0**	**0**	**23.4**							**4.875**	**0**	**0**	**0**	**11.7**	**0**	**0**	**0**	**6.825**	**0**	**0**	**0**	**0**
III	**Preparatory Phase**																							
	ENTRY POINT ACTIVITIES																							
i	Water Harvesting Farm Pond at Merongdik.	0	1	0	2		1		2															
ii	R.C.C. Water Storage Tank for Drinking Water purposes at Merongdik.	0	1	0	2		1		2															
iii	Water Harvesting Farm Pond at Garo Thorikakona.	0	1	0	2		1		2															
iv	Ringwell for Community at Garo Thorikakona.	0	2	0	1.8		2		1.8															
	DPR																							
i.	Cost of Resources Inventories works	0	0	0	0.5				0.5															
ii.	Cost of PRA Exercises	0	0	0	0.4				0.4															
iii.	Cost of Land use Survey works	0	0	0	0.95				0.95															
iv.	Cost of formulating	0	0	0	0.1				0.1															
	Institutional &Capacity Building																							
i.	Awareness Campaign & Capacity building	0	4	0	2.7		1		0.5		1		1.2		1		0.5		1		0.5			
ii.	Exposure visits – off. Campus	0	4	0	3.6		1		0.7		1		1.5		1		0.7		1		0.7			
iii.	Capacity building of SHG's/ UG's.	0	4	0	1.4		1		0.3		1		0.5		1		0.3		1		0.3			
iv.	Capacity building of WC Members.	0	4	0	1.4		1		0.3		1		0.5		1		0.3		1		0.3			
v.	Capacity building of WDT/WV	0	4	0	0.65		1		0.15		1		0.2		1		0.15		1		0.15			
	Sub-Total of III	**0**	**25**	**0**	**19.5**	**0**	**10**	**0**	**11.7**	**0**	**5**	**0**	**3.9**	**0**	**5**	**0**	**1.95**	**0**	**5**	**0**	**1.95**	**0**	**0**	**0**	**0**

IV	**Work Phase**																							
A	**Arable Land Treament**																							
	MERONGDIK																							
i.	Bench terrace @Rs.20000/ ha.	21.5	0	0	4.3								15			3	6.5			1.3				
ii.	Improvement existing Paddy field @Rs.4300/ha.	80	0	0	3.44					20			0.86	20			0.86	40			1.72			
	GARO THORIKAKONA																							
i.	Bench terrace @Rs.20000/ ha.	20	0	0	4									15			3	5			1			
ii.	Improvement existing Paddy field @Rs.4300/ha.	110	0	0	4.73					20			0.86	50			2.15	40			1.72			
	Sub-Total Of A	**231.5**	**0**	**0**	**16.47**	**0**	**0**	**0**	**0**	**40**	**0**	**0**	**1.72**	**100**	**0**	**0**	**9.01**	**91.5**	**0**	**0**	**5.74**	**0**	**0**	**0**	**0**
B	**Non-Arable Land**																							
	MERONGDIK																							
i.	Rubber Nursery(polybag) @Rs.25 each.	65	29250	0	7.3125					10	4500		1.125	20	9000		2.25	35	15750		3.9375			
ii.	Imp.of existing degraded Forest @Rs.3600/ ha.	25	0	0	0.9					10			0.36	15			0.54							
	GARO THORIKAKONA																							
i.	Rubber Nursery(polybag) @Rs.25 each.	70	31500	0	7.875					10	4500		1.125	25	11250		2.8125	35	15750		3.9375			
ii.	Imp.of existing degraded Forest @Rs.3600/ ha.	30	0	0	1.08					10			0.36	20			0.72							
	Sub-Total of B	**190**	**60750**	**0**	**17.1675**	**0**	**0**	**0**	**0**	**40**	**9000**	**0**	**2.97**	**80**	**20250**	**0**	**6.3225**	**70**	**31500**	**0**	**7.875**	**0**	**0**	**0**	**0**

C	**Drainage Line Treament**																							
	MERONGDIK																							
i	C.C.Irrigation dam across Merongdik stream.	150	3	0	9					30	1		2.5	120	2		6.5							
ii	Water Harvesting Structure with C.C.Core wall.	165	9	0	14.75					30	1		3.2	135	8		11.55							
iii.	Boulder Sausage Protection wall.	50	4	0	3.4									50	4		3.4							
iv.	Dug out Pond.	50	8	0	7									30	3		3.5	20	5		3.5			
	GARO THORIKAKONA																							
i	C.C.Irrigation dam across Mansing stream.	40	1	0	3.2					40	1		3.2											
ii	C.C.Irrigation dam across Merongdik stream.	115	5	0	10.9675									115	5		10.9675							
iii.	Water Harvesting Structure with C.C.Core wall.	105	6	0	8.535					30	1		1.035	75	5		7.5							
iv.	Boulder Sausage Protection wall.	65.5	5	0	4.51									40	4		3.4	25.5	1		1.11			
v	Dug out Pond.	108	16	0	11.2									60	10		7	48	6		4.2			
vi	C.C.Irrigation Channel.	30	1	0	3									30	1		3							
	Sub-Total of C	**878.5**	**58**	**0**	**75.5625**	**0**	**0**	**0**	**0**	**130**	**4**	**0**	**9.935**	**655**	**42**	**0**	**56.8175**	**93.5**	**12**	**0**	**8.81**	**0**	**0**	**0**	**0**
D	**Livelihood**																							
	MERONGDIK																							
i	Tailoring @ Rs. 8000/- unit	0	31	0	2.48						5		0.4		10		0.8		16		1.28			
ii	Carpentry @ Rs. 5000/-unit.	0	10	0	0.5														10		0.5			
iii.	Kitchen Gardening @ Rs. 2500/- unit	0	82	0	2.05						20		0.5		24		0.6		38		0.95			
iv	Piggery/Poultry @Rs. 12000/- unit.	0	26	0	3.12										10		1.2		16		1.92			

	GARO THORIKAKONA																							
i	Tailoring @ Rs. 8000/- unit	0	36	0	2.88						5		0.4		15		1.2		16		1.28			
ii	Carpentry @ Rs. 5000/-unit.	0	13	0	0.65						3		0.15						10		0.5			
iii.	Kitchen Gardening @ Rs. 2500/- unit	0	110	0	2.75						20		0.5		34		0.85		56		1.4			
iv	Piggery/Poultry @Rs. 12000/- unit.	0	26	0	3.12										10		1.2		16		1.92			
	Sub-Total of D	**0**	**334**	**0**	**17.55**	**0**	**0**	**0**	**0**	**0**	**53**	**0**	**1.95**	**0**	**103**	**0**	**5.85**	**0**	**178**	**0**	**9.75**	**0**	**0**	**0**	**0**
E	**Production System**																							
	MERONGDIK																							
i	Piggery/Poultry @ Rs. 30000/- unit.	0	15	0	4.5						2		0.6		8		2.4		5		1.5			
ii	Pisciculture @ Rs. 30000/ unit	0	4	0	1.2										1		0.3		3		0.9			
iii	Power Tiller @Rs.195000/ unit.	0	1	0	1.95														1		1.95			
iv	Kitchen Gardening @ Rs. 25000/- unit	0	9	0	2.25						2		0.5		1		0.25		6		1.5			
	GARO THORIKAKONA																							
i	Piggery/Poultry @ Rs. 30000/- unit.	0	14	0	4.2						2		0.6		7		2.1		5		1.5			
ii	Pisciculture @ Rs. 30000/ unit	0	4	0	1.2										1		0.3		3		0.9			
iii	Power Tiller @Rs.195000/ unit.	0	1	0	1.95														1		1.95			
iv	Kitchen Gardening @ Rs. 25000/- unit	0	9	0	2.25						1		0.25		2		0.5		6		1.5			
	Sub-Total of E	**0**	**57**	**0**	**19.5**	**0**	**0**	**0**	**0**	**0**	**7**	**0**	**1.95**	**0**	**20**	**0**	**5.85**	**0**	**30**	**0**	**11.7**	**0**	**0**	**0**	**0**
	Sub-Total of IV (A+B+C+D+E)	**1300**	**61199**	**0**	**146.25**	**0**	**0**	**0**	**0**	**210**	**9064**	**0**	**18.525**	**835**	**20415**	**0**	**83.85**	**255**	**31720**	**0**	**43.875**	**0**	**0**	**0**	**0**

IV	**Consolidation Phase**																							
i	Repairs, Maintenance of CPR's.	0	0	0	3.1																			3.1
ii	Improving the sustainability of various Interventions	0	0	0	1.55																			1.55
iii.	Documentation of successful experiences & Preparation of Completion Report	0	0	0	1.2																			1.2
	Sub-Total of V	**0**	**0**	**0**	**5.85**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**5.85**
	Grand Total (I+II+III+IV+V)	**1300**	**61224**	**0**	**195**	**0**	**10**	**0**	**11.7**	**210**	**9069**	**0**	**27.3**	**835**	**20420**	**0**	**97.5**	**255**	**31725**	**0**	**52.65**	**0**	**0**	**0**	**5.85**

Convergence of Merongdik Watershed, NGH-IWMP Project -IV 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.
MERONGDIK																				
Creation of Rubber Nusery (Polybag) @Rs.25/- per plant.	4500	1.125			9000	2.25			15750	3.9375							**29250**	**7.313**		
Ha.	10				20				35								**65**			
Preliminary 1st year plantation @Rs.15760/- per ha. (Material Component)			10	1.576			20	3.152			35	5.516							**65**	**10.244**
Preliminary & 1st Year Wage Component @Rs.51100/-				5.11				10.22				17.885								**33.215**
2nd Year Maintenace @Rs.1000/- per ha.							(M)	0.10			(M)	0.20			(M)	0.35				**0.65**
2nd Year Wage Component. @Rs.35910/-								3.951				7.182				12.5685				**23.7015**
GARO THORIKAKONA																				
Creation of Rubber Nusery (Polybag) @Rs.25/- per plant.	4500	1.125			11250	2.8125			15750	3.9375							**31500**	**7.875**		
Ha.	10				25				35								**70**			
Preliminary 1st year plantation @Rs.15760/- per ha. (Material Component)			10	1.576			25	3.94			35	5.516							**70**	**11.032**
Preliminary & 1st Year Wage Component @Rs.51100/-				5.11				12.775				17.885								**35.77**
2nd Year Maintenace @Rs.1000/- per ha.							(M)	0.10			(M)	0.25			(M)	0.35				**0.7**
2nd Year Wage Component. @Rs.35910/-								3.951				8.9775				12.5685				**25.497**
TOTAL OF HA.	**20**		**20**		**45**		**45**		**70**		**70**						**135**		**135**	
TOTAL OF Phy. & Fin.	**9000**	**2.250**		**13.372**	**20250**	**5.0625**		**38.189**	**31500**	**7.875**		**63.4115**				**25.837**	**60750**	**15.188**		**140.8095**

Convergence of Rongma Watershed NGH-IWMP-IV 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.
SAMKALAK RONGSEP																				
Creation of Rubber Nusery (Polybag) @Rs.25/- per plant.	4500	1.125			9000	2.25			6750	1.6875							**20250**	**5.0625**		
Ha.	10				20				15								**45**			
Preliminary 1st year plantation @Rs.15760/- per ha. (Material Component)			10	1.576			20	3.152			15	2.364							**45**	**7.092**
Preliminary & 1st Year Wage Component @Rs.51100/-				5.11				10.22				7.665								**22.995**
2nd Year Maintenace @Rs.1000/- per ha.							(M)	0.10			(M)	0.20			(M)	0.15				**0.45**
2nd Year Wage Component. @Rs.35910/-								3.591				7.182				5.3865				**16.1595**
SAMKALAK SONGMA																				
Creation of Rubber Nusery (Polybag) @Rs.25/- per plant.	4500	1.125			9000	2.25			6750	1.6875							**20250**	**5.0625**		
Ha.	10				20				15								**45**			
Preliminary 1st year plantation @Rs.15760/- per ha. (Material Component)			10	1.576			20	3.152			15	2.364							**45**	**7.092**
Preliminary & 1st Year Wage Component @Rs.51100/-				5.11				10.22				7.665								**22.995**
2nd Year Maintenace @Rs.1000/- per ha.							(M)	0.10			(M)	0.20			(M)	0.15				**0.45**
2nd Year Wage Component. @Rs.35910/-								3.591				7.182				5.3865				**16.1595**

SAMKALAK JONGDIK																				
Creation of Rubber Nusery (Polybag) @Rs.25/- per plant.	4500	1.125			9000	2.25			6750	1.6875							**20250**	**5.0625**		
Ha.	10				20				15								**45**			
Preliminary 1st year plantation @Rs.15760/- per ha. (Material Component)			10	1.576			20	3.152			15	2.364							**45**	**7.092**
Preliminary & 1st Year Wage Component @Rs.51100/-				5.11				10.22				7.665								**22.995**
2nd Year Maintenace @Rs.1000/- per ha.							(M)	0.10			(M)	0.20			(M)	0.15				**0.45**
2nd Year Wage Component. @Rs.35910/-								3.591				7.182				5.3865				**16.1595**
LOWER SAMKALAK																				
Creation of Rubber Nusery (Polybag) @Rs.25/- per plant.	4500	1.125			9000	2.25			6750	1.6875							**20250**	**5.0625**		
Ha.	10				20				15								**45**			
Preliminary 1st year plantation @Rs.15760/- per ha. (Material Component)			10	1.576			20	3.152			15	2.364							**45**	**7.092**
Preliminary & 1st Year Wage Component @Rs.51100/-				5.11				10.22				7.665								**22.995**
2nd Year Maintenace @Rs.1000/- per ha.							(M)	0.10			(M)	0.20			(M)	0.15				**0.45**
2nd Year Wage Component. @Rs.35910/-								3.591				7.182				5.3865				**16.1595**
TOTAL OF HA.	**40**		**40**		**80**		**80**		**60**		**60**						**180**		**180**	
TOTAL OF Phy. & Fin.	**18000**	**4.5**		**26.744**	**36000**	**9**		**68.252**	**27000**	**6.75**		**69.644**				**22.146**	**81000**	**20.25**		**186.786**

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					
NGH - IWMP-IV	2014 - 2015	2014 - 2015	2017- 2018	2300 Ha.	345.00 Lakh	Merongdik 3B1B1a1f and Rongma 3B1B1a1f	1149 Ha.	-	1151Ha.	-	1149 Ha	210 Ha	-	1461Ha.	2820 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	
NGH-WMP-IV	310.5 lakhs	34.5 lakhs	NREGS	327.5955	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	327.5955

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.
NGH-IWMP-IV	Yet to be opened	Yet to be obtained	N.A.	Chairman W.C, Secretary W.C, Project Leader / WDT	Merongdik Watershed Committee Rongma 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 to be 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	North Garo Hills	NGH– IWMP-IV	* Community Rural Development Department NREGS		Plantation of Rubber – 315 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.	CapacityBuilding
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		FruitGarden	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 2014-2015 as on 31-03-2015 (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**
			2013-2014	**2014-2015**	**2015-2016**	**2016-2017**	**2017-2018**	
PIA	a) Project Management b) GIS application c) Projectization d) Entrepreneurship	a) NIRD b) SIRD c) ICAR	1	1	1	1	-	4
WDT	a) Project concept b) GIS application c) Projectization	a) NIRD b) SIRD c) PIA d) ICAR	1	1	1	1	-	4
UG	a) Asset Management	a) PIA	-	-	-	-	-	-

1	*2*	*3*	*4*					*5*
SHG	a) SHG concept & management b) Entrepreneurship	a) NGOs b) PIA	2	2	2	2	-	8
WC	a) Project Concept & Management b) Natural Resource management c) Livelihood related activities d) Microenterprise & Marketing	a) PIA b) Line Department c) NGOs	2	2	2	2	-	8
GP	-	-	-	-	-	-	-	-
Community	a) Project Concept & Management b) Natural Resource management c) Livelihood related activities d) Microenterprise & Marketing	a) PIA b) Line Department c)NGOs	-	-	-	-	-	-
Others (Pl. specify)	a) Exposure visits	a) ICAR b) RRTC	1	1	1	1	-	4
Total :			**7**	**7**	**7**	**7**	**-**	**24**

Table 6.3: Information, Education & Communication (IEC) activities for the year 2014-2015 as on 31/03/2015 (dd/mm/yyy)*

	1	*2*	*3*	*4*	*5*
	Activity	**Executing agency**	**Estimated expenditure (Rs.)**	**Expenditure incurred (Rs.)**	**Outcome (may quantity, wherever possible)**
1.	Awareness	S&WC (T) Division	5.50 lakh	5.50 lakh	-
2	Exposure Visits	S&WC (T) Division	5.75 lakh	5.75 lakh	-
3.	CapacityBuilding	S&WC (T) Division	6.00 lakh	6.00 lakh	-

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) Merongdik 2) Garo Thorkakona 3) Samkalak Songma 4) Samkalak Jongdik 5 Lower Samkalak 6) Samkalak Rongsep	-	115920	-	46368	115920	-	363	-	-	363	-	-	-	-	-
	TOTAL:	**-**	**115920**	**-**	**46368**	**115920**	**-**	**363**	**-**	**-**	**363**	**-**	**-**	**-**	**-**	**-**

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 months 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						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.
NGH–IWMP-IV	Paddy	-	954	-	19.36	-	18469.44	-	-	-	-	-	-	-	-	-	-	-	-
	Millet	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Soyabean	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Yam	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Ginger	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Tapioca	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Betel nut	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	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.
NGH–IWMP-IV	Paddy		N	I	L														
	Ginger		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 7.4.3 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.
NGH–IWMP-IV				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
NGH–IWMP-IV	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
NGH–IWMP-IV	5 yrs	Statistical Report, Meghalaya	-	-	55Ha.	-	55Ha.

* 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
NGH–IWMP-IV	5 yrs	-	-	-	-	-	-

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

Table 7.4.7 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
NGH–IWMP-IV	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 Details of livestock in the project areas (for fluids please mention in liters, for solids please mention in kgs. and income in Rs.):

2	3	4			5			6			7
Name of Projects	**Type of Animal**	**Pre-project**			**Mid-term**			**Post-project**			**Remarks**
		No.	**Yield**	**Income**	**No.**	**Yield**	**Income**	**No.**	**Yield**	**Income**	
NGH–IWMP-IV	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#**
North Garo Hills	NGH–IWMP-IV	NGH - IWMP-IVWatershed Committee	As per Treatment Plan	345Lakh		1: 1.5

B:C ratio more than 1 – cost effectiveless than 1 – Not cost effective

ANNEXURE - I

DETAILS OF SOCIO ECONOMIC

SOCIO ECONOMIC OF SAMKALAK SONGMA

Sl. No.	Name of Household	Member of female member below 18 years/ above				Total	Paddy Area	Agricultue	No. of Cow	Poultry	Piggery	Remarks
		Male		Female								
		Adult	Minor	Adult	Minor							
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*
1	Smt. Renme Sangma	-	-	1	-	1	-	-	1	4	-	
2	Shri Ringson Sangma	1	-	1	-	2	-	-	-	6	1	
3	Shri Arnishstone Marak	2	3	4	1	10	-	-	3	4	2	
4	Shri Chengjan Sangma	1	3	2	1	7	-	-	-	-	-	
5	Shri Gansing Marak	4	3	2	1	10	-	-	-	9	1	
6	Shri Jajajing Sangma	2	1	-	1	4	-	-	-	7	-	
7	Shri Kinte Marak	1	3	2	2	8	-	-	-	-	1	
8	Shri Bileng Marak	1	2	1	2	6	-	-	-	-	-	
9	Shri Ranggin Marak	3	2	1	3	9	-	-	-	-	1	
10	Shri Ringan Sangma	2	-	1	-	3	-	-	-	3	-	
11	Shri Prybindar Sangma	1	4	1	-	6	-	-	-	-	-	
12	Shri Chagin Sanngma	3	1	2	1	7	-	-	1	4	-	
13	Shri Singgan Sangma	1	-	1	2	4	-	-	-	7	-	
14	Shri Chongjing Sangma	1	1	3	3	8	-	-	-	-	1	
15	Shri Ratning Sangma	2	1	3	1	7	-	-	-	9	-	

16	Shri Goranda Marak	1	1	1	2	5	-	-	-	-	-	
17	Shri Allet Sangma	1	1	1	-	3	-	-	1	3	1	
18	Shri Purson Marak	1	1	4	4	10	-	-	2	16	-	
19	Shri Madu Marak	2	-	2	-	4	-	-	-	4	-	
20	Shri Wallet Marak	1	-	1	-	2	-	-	-	8	1	
21	Shri Diseng Mark	2	4	1	1	8	-	-	3	13	1	
22	Smt. Nengjan Mark	1	2	1	1	5	-	-	-	-	1	
23	Shri Momindro Marak	1	-	1	-	2	-	-	-	9	-	
24	Shri Mijen Marak	1	1	1	1	4	-	-	-	-	-	
25	Shri Sengnang Marak	1	-	1	1	3	-	-	-	-	-	
26	Shri Tangjen Marak	1	3	1	-	5	-	-	-	2	-	
27	Shri Jongnin Marak	2	-	2	3	7	-	-	1	8	-	
28	Shri Gajin Marak	3	2	2	1	8	-	-	-	6	-	
29	Shri Jarang Sangma	1	2	1	1	5	-	-	-	-	2	
30	Shri Polbin Sangma	1	1	1	-	3	-	-	-	7	-	
31	Shri Gajing Sangma	3	2	1	-	6	-	-	4	9	-	
32	Smt. Injak Sangma	1	2	1	2	6	-	-	-	-	1	
33	Shri Jimstone Marak	1	1	1	1	4	-	-	-	6	-	
34	Smt. Keweng Sangma	2	-	2	-	4	-	-	-	4	1	
35	Shri Alang Sangma	1	2	1	-	4	-	-	-	11	-	
36	Shri Nickston Sangma	1	1	1	1	4	-	-	-	10	-	
37	Shri Mingsing Sangma	1	-	1	-	2	-	-	-	3	-	
38	Shri Denison Sangma	1	1	1	1	4	-	-	-	4	-	

39	Shri Polsing Marak	3	1	1	1	6	-	-	1	9	1	
40	Shri Biwath Sangma	1	3	1	1	6	-	-	-	17	-	
41	Shri Lohin Sangma	3	-	1	1	5	-	-	1	10	-	
42	Smt. Rani Marak	-	-	1	2	3	-	-	-	7	-	
43	Shri Pollet Sangma	2	1	1	1	5	-	-	-	3	-	
44	Shri Janam Sangma	1	-	1	-	2	-	-	-	-	1	
45	Shri Nangneng Sangma	1	-	1	1	3	-	-	-	7	-	
46	Shri Jasang Marak	1	-	1	2	4	-	-	-	-	1	
47	Shri Jonggin Sangma	1	-	1	-	2	-	-	1	-	-	
48	Shri Ratnang Marak	2	3	2	2	9	-	-	1	-	-	
49	Shri Jangran Marak	2	1	1	1	5	-	-	2	-	1	
50	Smt. Saping Sangma	1	-	1	-	2	-	-	-	6	-	
51	Smt. Ranggu Marak	1	-	1	-	2	-	-	-	4	-	
52	Shri Stone Sangma	1	-	1	-	2	-	-	-	-	-	
53	Shri Otel Sangma	1	-	1	1	3	-	-	-	-	-	
54	Shri Jenggin Sangma	2	1	2	2	7	-	-	2	9	-	
55	Shri Maljong Marak	1	1	1	-	3	-	-	-	-	-	
56	Shri Milleng Marak	1	-	2	1	4	-	-	1	-	1	
57	Shri Roneth Marak	1	2	1	1	5	-	-	-	-	-	
58	Shri Chojan Marak	1	1	1	1	4	-	-	-	-	-	
59	Shri Dingga Marak	1	-	1	1	3	-	-	-	16	-	
	TOTAL : -	87	69	84	63	292			35	275	32	

SOCIO ECONOMIC OF SAMKALAK JONGDIKGRE

Sl. No.	Name of Household	Member of female member below 18 years/ above				Total	Paddy Area	Agricultue	No. of Cow	Poultry	Piggery	Remarks
		Male		Female								
		Adult	Minor	Adult	Minor							
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*
1	Shri Rabang Sangma	1	2	2	3	8	-	-	3	16	-	
2	Shri Siljeng Marak	2	1	1	-	4	-	-	-	7	-	
3	Shri Pinang Marak	3	2	2	2	9	-	-	-	13	1	
4	Shri Dokrek Marak	2	1	3	1	7	-	-	-	7	1	
5	Shri Nengbang Marak	1	2	1	2	6	-	-	-	5	-	
6	Shri Melison Marak	2	3	2	1	8	-	-	-	10	1	
7	Shri Chajing Marak	2	1	1	2	6	-	-	1	12	-	
8	Shri Biok Marak	1	3	2	2	8	-	-	-	-	-	
9	Shri Rejing Marak	1	2	1	1	5	-	-	-	4	-	
10	Shri Idot Sangma	3	1	2	2	8	-	-	-	9	-	
11	Shri Belong Sangma	2	-	1	3	6	-	-	-	13	-	
12	Shri Langgon Sangma	1	-	1	2	4	-	-	1	14	-	
13	Shri Ringjin Sangma	2	2	1	1	6	-	-	-	18	-	
14	Smt. Kinachi Sangma	1	1	1	1	4	-	-	1	10	-	
15	Shri Mengran Marak	3	2	2	1	8	-	-	-	3	-	
16	Shri Rabong Sangma	1	3	1	1	6	-	-	-	1	-	
17	Shri Banang Sangma	2	1	1	3	7	-	-	-	3	-	
18	Shri Bokbak Marak	1	1	1	2	5	-	-	-	19	-	

19	Shri Akan Marak	2	2	2	1	7	-	-	2	3	-	
20	Shri Rokman Sangma	1	1	1	3	6	-	-	-	17	-	
21	Shri Jasen Marak	3	-	2	3	8	-	-	-	7	-	
22	Shri Gotda Marak	4	-	2	2	8	-	-	-	2	-	
23	Shri Rajan Marak	1	2	1	1	5	-	-	-	4	1	
24	Shri Debit Marak	2	1	2	3	8	-	-	-	6	-	
25	Shri Rasin Sangma	1	1	1	-	3	-	-	-	12	-	
26	Smt. Besina Marak	-	1	1	2	4	-	-	-	16	1	
27	Shri Gonggit Marak	2	2	1	3	8	-	-	-	14	-	
28	Shri Chinen Sangma	1	1	2	1	5	-	-	1	18	-	
29	Shri Dingseng Marak	2	1	2	3	8	-	-	-	7	-	
30	Shri Rakjeng Marak	2	4	2	3	11	-	-	-	6	1	
31	Shri Deneng Marak	1	2	1	1	5	-	-	1	1	-	
32	Shri Manseng Marak	2	1	1	2	6	-	-	-	3	1	
33	Shri Gamel Marak	1	3	1	2	7	-	-	2	9	-	
34	Shri Hamet Marak	2	2	1	1	6	-	-	-	16	-	
	TOTAL	**58**	**52**	**49**	**61**	**220**			**12**	**305**	**7**	**0**

SOCIO ECONOMIC OF SAMKALAK RONGSEP

Sl. No.	Name of Household	Member of female member below 18 years/ above				Total	Paddy Area	Agricultue	No. of Cow	Poultry	Piggery	Remarks
		Male		Female								
		Adult	Minor	Adult	Minor							
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*
1	Shri Gising Marak	1	1	1	-	3	2 ha.	4 ha.	-	-	1	
2	Shri Gamen Marak	2	1	2	1	6	-	1 ha.	-	4	-	
3	Shri Dejan Marak	1	3	1	2	7	2 ha.	2 ha.	1	-	1	
4	Shri Kanring Sangma	1	1	1	2	5	3 ha.	-	2	-	2	
5	Shri Baran Marak	2	2	1	3	8	-	-	-	3	1	
6	Shri Sannen Marak	1	-	1	-	2	4 ha.	1 ha.	-	2	1	
7	Shri Jemison Sangma	1	2	1	-	4	-	3 ha.	2	-	-	
8	Shri Elson Marak	1	2	1	-	4	2 ha.	-	-	-	1	
9	Shri Changa Sangma	1	-	1	-	2	2 ha.	4 ha.	-	3	2	
10	Shri Nolik Sangma	1	1	1	2	5	-	-	1	-	-	
11	Shri Chengson Marak	1	1	1	-	3	3 ha.	5 ha.	-	-	-	
12	Shri Wiling Sangma	1	1	1	2	5	1 ha.	2 ha.	-	5	2	
13	Shri Gojen Marak	1	-	1	-	2	5 ha.	1 ha.	-	-	1	
14	Shri Sengban Sangma	1	-	1	1	3	-	3 ha.	1	-	-	
15	Shri Rengseng Marak	1	1	1	1	4	1 ha.	1 ha.	-	4	1	
16	Shri Jongren Marak	1	3	2	4	10	2 ha.	3 ha.	-	-	2	
17	Shri Mingjeng Sangma	1	1	1	-	3	2 ha.	2 ha.	2	-	1	
18	Shri Balsrang Sangma	1	1	1	1	4	-	2 ha.	1	-	1	
19	Shri Namjang Sangma	1	-	1	-	2	1 ha.	1 ha.	-	-	-	

20	Shri Wanseng Sangma	1	-	1	3	5	3 ha.	-	2	6	1	
21	Shri Diksen Marak	1	3	2	2	8	4 ha.	2 ha.	-	-	2	
22	Shri Toseng Sangma	1	-	1	1	3	2 ha.	2ha.	1	4	1	
23	Shri Jean Sangma	2	2	2	1	7	-	4 ha.	-	-	2	
24	Shri Kodik Sangma	1	-	1	-	2	-	-	1	-	1	
25	Shri Mingtong Sangma	1	-	1	2	4	2 ha.	1 ha.	1	5	1	
26	Shri Chajing Sangma	1	3	1	1	6	3 ha.	3 ha.	-	4	2	
27	Shri Mineng Marak	1	-	1	-	2	2 ha.	-	-	-	-	
28	Shri Goseng Marak	1	-	1	1	3	1 ha.	2 ha.	-	6	-	
29	Shri Wanjeng Marak	1	1	1	2	5	4 ha.	1 ha.	-	-	1	
30	Shri Minrang Marak	1	1	2	1	5	-	3 ha.	-	4	3	
31	Shri Doraseng Sangma	1	1	1	3	6	2 ha.	3 ha.	1	-	1	
32	Shri Ranjeng Sangma	1	1	2	2	6	2 ha.	1 ha.	2	-	2	
33	Shri Jonna Marak	2	2	2	-	6	5 ha.	-	-	5	1	
34	Shri Jinet Marak	1	2	1	2	6	-	-	-	-	1	
35	Shri Hollen Marak	3	-	1	2	6	2 ha.	2 ha.	1	-	2	
36	Shri Kottual Marak	1	-	1	3	5	3 ha.	-	-	7	1	
37	Shri Ponring Sangma	1	1	1	4	7	1 ha.	3 ha.	-	-	1	
38	Shri Songnan Marak	2	1	3	2	8	-	4 ha.	2	6	1	
39	Shri Juet Sangma	1	-	2	2	5	1 ha.	1 ha.	1	5	-	
40	Shri Galbe Marak	1	3	1	1	6	5 ha.	1 ha.	-	-	3	
41	Shri Dowel Marak	1	3	1	1	6	2 ha.	-	-	6	2	
42	Shri Letchubat Marak	1	1	1	-	3	-	-	1	-	1	
43	Shri Jingan Marak	1	-	1	-	2	3 ha.	-	-	3	-	
44	Shri Janung Sangma	2	1	-	-	3	-	1 ha.	-	5	1	
45	Shri Rongbang Marak	2	3	1	1	7	1 ha.	2 ha.	-	-	1	
46	Shri Pulno Marak	1	1	1	1	4	-	2 ha.	-	6	1	

47	Shri Nonga Sangma	-	-	1	1	2	4 ha.	-	1	-	2	
48	Shri Tujong Marak	1	2	1	-	4	1 ha.	1 ha.	-	4	-	
49	Shri Deljen Sangma	2	-	2	4	8	3 ha.	3 ha.	-	6	2	
50	Shri Anil Sangma	1	2	1	-	4	2 ha.	-	1	-	1	
51	Shri Jonal Sangma	3	3	1	1	8	2 ha.	2 ha.	-	-	1	
52	Shri Lapseng Sangma	2	4	1	-	7	2 ha.	1 ha.	-	-	-	
53	Shri Minam Marak	1	3	2	2	8	2 ha.	2 ha.	2	6	1	
54	Shri Angan Marak	1	1	1	3	6	1 ha.	2 ha.	1	-	-	
55	Shri Saban Marak	2	1	3	-	6	3 ha.	1 ha.	-	4	1	
56	Shri Solmen Marak	1	3	1	-	5	1 ha.	1 ha.	1	7	1	
57	Shri Wanga Marak	1	-	1	4	6	4 ha.	2 ha.	-	-	2	
58	Shri Jongan Marak	1	1	1	1	4	2 h	-	2	3	1	
59	Shri Dibong Marak	1	-	1	1	3	-	1 ha.	1	3	1	
60	Shri Open Marak	1	3	1	3	8	3 ha.	2 ha.	-	-	-	
61	Shri Anseng Marak	1	1	1	1	4	1 ha.	2 ha.	-	6	1	
62	Shri Potring Marak	2	1	1	1	5	-	-	-	-	2	
63	Shri Kriwth Sangma	1	2	1	1	5	2 ha.	-	-	8	1	
64	Shri Bangbong Sangma	1	-	1	2	4	1 ha.	1 ha.	1	6	1	
65	Shri Namson Marak	1	-	1	1	3	4 ha.	-	-	-	2	
66	Shri Nongsin Sangma	1	2	1	-	4	-	3 ha.	-	-	1	
67	Shri Rangjing Marak	2	3	1	1	7	4 ha.	4 ha.	-	6	-	
68	Shri Moljin Marak	2	2	1	2	7	3 ha.	2 ha.	2	-	2	
69	Shri Ringkan Sangma	1	1	1	2	5	3 ha.	2 ha.	1	-	-	
70	Shri Sotjing Sangma	1	3	1	-	5	-	3 ha.	-	7	1	
71	Shri Beltong Sangma	1	-	1	1	3	-	-	2	-	-	
72	Shri Daring Sangma	1	-	1	2	4	2 ha.	1 ha.	-	5	-	

73	Shri Ginna Sangma	1	1	1	1	4	2 ha.	2 ha.	1	-	1	
74	Shri Minong Marak	3	4	1	-	8	3 ha.	-	-	-	-	
75	Shri Minchong Sangma	4	2	2	1	9	-	4 ha.	1	6	1	
76	Shri Koncheng Sangma	1	1	2	2	6	1 ha.	-	-	-	1	
77	Shri Mojan Sangma	2	2	4	3	11	5 ha.	-	-	4	-	
78	Shri Solcheng Sangma	1	1	1	-	3	2 ha.	2 ha.	-	-	1	
79	Shri Chiren Marak	1	-	1	-	2	2 ha.	-	1	-	-	
80	Shri Eseng Marak	1	1	1	-	3	1 ha.	-	-	-	1	
81	Shri Ponde Sangma	1	-	1	-	2	1 ha.	1 ha.	-	6	-	
82	Shri Sendeng Marak	1	-	1	-	2	-	2 ha.	1	5	-	
83	Shri Golla Marak	1	-	1	-	2	-	3 ha.	-	-	1	
84	Shri Banjang Sangma	1	-	1	-	2	4 ha.	-	-	-	-	
85	Shri Miksim Marak	1	-	1	-	2	4 ha.	1 ha.	1	5	1	
86	Shri Suseng Sangma	1	-	1	-	2	3 ha.	-	1	6	-	
87	Shri Singbat Sangma	1	-	1	-	2	1 ha.	2 ha.	-	-	-	
	Total :	115	109	115	110	427			64	218	105	

SOCIO ECONOMIC OF LOWER SAMKALAK

Sl. No.	Name of Household	Member of female member below 18 years/ above				Total	Paddy Area	Agricultue	No. of Cow	Poultry	Piggery	Remarks
		Male		Female								
		Adult	Minor	Adult	Minor							
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*
1	Shri Rapsen Sangma	2	2	2	4	10	-	-	3	6	1	
2	Shri Dingjin Marak	1	-	1	3	5	-	-	-	11	-	
3	Shri Rimjing Sangma	1	5	1	3	10	-	-	-	7	1	
4	Shri Sengbath Marak	1	-	1	-	2	-	-	-	-	1	
5	Shri Batneng Marak	1	-	1	-	2	-	-	-	3	-	
6	Smt. Kimjak Marak	-	-	1	-	1	-	-	-	8	1	
7	Shri Onang Marak	1	2	1	5	9	-	-	-	4	-	
8	Shri Nengjing Marak	1	2	1	1	5	-	-	-	6	1	
9	Shri Mingjin Marak	1	-	1	3	5	-	-	-	9	1	
10	Shri Eleton Marak	2	3	1	2	8	-	-	-	7	-	
11	Shri Nam Sangma	1	1	1	2	5	-	-	-	13	-	
12	Shri Najang Marak	1	2	1	3	7	-	-	1	10	-	
13	Shri Digin Sangma	1	2	1	-	4	-	-	-	8	-	

14	Smt. Rinna Marak	1	1	2	3	7	-	-	-	5	-	
15	Smt. Sanri Marak	-	2	1	3	6	-	-	-	-	1	
16	Shri Kilran marak	1	-	1	2	4	-	-	-	-	1	
17	Shri Sonin Marak	1	1	2	3	7	-	-	-	-	1	
18	Shri Chongkan Marak	1	-	1	2	4	-	-	-	6	1	
19	Shri Gaming Marak	1	-	1	-	2	-	-	-	-	-	
20	Shri Dojeng Marak	1	-	1	1	3	-	-	-	-	-	
21	Shri Nilbath Marak	1	1	1	3	6	-	-	-	4	-	
22	Shri Ringjen Marak	1	-	1	2	4	-	-	-	-	-	
23	Shri Ading Marak	1	-	1	1	3	-	-	-	6	1	
24	Shri Gan Marak	2	1	1	-	4	-	-	-	-	-	
25	Shri Rengsan Marak	3	-	2	1	6	-	-	1	9	-	
26	Shri Bellak Marak	1	4	1	3	9	-	-	-	16	-	
27	Shri Gemson Marak	3	-	1	1	5	-	-	-	10	1	
28	Shri Lobath Marak	1	1	1	5	8	-	-	1	19	-	
29	Shri Domba Marak	1	2	1	1	5	-	-	-	4	1	
30	Smt. Kodik Sangma	3	1	1	-	5	-	-	-	-	-	
31	Shri Jetring Marak	1	2	1	1	5	-	-	-	11	-	
32	Smt Nojak Marak	2	2	1	1	6	-	-	-	8	-	

33	Shri Wakkilson Sangma	1	2	1	-	4	-	-	2	6	1	
34	Shri Satnang Sangma	1	1	1	4	7	-	-	-	17	-	
35	Smt.Hini Sangma	-	1	1	-	2	-	-	-	5	-	
36	Shri Rimjing Marak	3	1	2	2	8	-	-	-	11	1	
37	Shri Gandi Marak	3	3	2	3	11	-	-	-	8	-	
38	Shri Ganggo Marak	2	2	2	-	6	-	-	-	-	1	
39	Shri Rongban Sangma	1	1	4	4	10	-	-	1	20	1	
40	Shri Salnang Marak	2	4	1	3	10	-	-	-	7	-	
41	Shri Gallen Marak	1	4	1	1	7	-	-	-	6	-	
42	Shri Jakwan Marak	1	1	1	-	3	-	-	1	8	-	
43	Shri Chochek Sangma	1	2	1	1	5	-	-	-	-	1	
44	Shri Jengka Marak	1	-	1	1	3	-	-	-	-	1	
	TOTAL	**57**	**59**	**54**	**78**	**248**			**10**	**278**	**19**	

SOCIO ECONOMIC OF MERONGDIK

Sl. No.	Name of Household	Member of female member below 18 years/ above				Total	Paddy Area	Agriculture	No. of Cow	Poultry	Piggery	Remarks
		Male		Female								
		Adult	Minor	Adult	Minor							
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*
1	Shri Harwin Marak	2	1	1	2	6	-	-	1	3	-	
2	Shri Nevalson Momin	1	1	1	3	6	-	-	-	6	1	
3	Shri Salmansing Sangma	2	2	1	2	7	-	-	-	4	-	
4	Shri Jengnon Marak	1	1	2	-	4	-	-	1	-	1	
5	Shri Helenjon Sangma	2	1	1	1	5	-	-	2	10	-	
6	Shri Walison Sangma	3	2	2	1	8	-	-	-	11	-	
7	Shri Silwithson Sangma	1	1	2	1	5	-	-	-	6	-	
8	Shri Nelboth Sangma	2	-	1	2	5	-	-	-	6	2	
9	Shri Jelwan Sangma	1	2	1	3	7	-	-	1	5	-	
10	Shri Imbothson Marak	1	1	1	1	4	-	-	-	7	-	
11	Shri Raken Momin	1	-	1	-	2	-	-	-	10	-	
12	Shri Hemjosh Marak	1	2	1	3	7	-	-	3	14	1	
13	Shri Jengson Marak	2	2	1	2	7	-	-	-	4	1	
14	Shri Jengaram Marak	1	3	1	1	6	-	-	-	-	2	
15	Shri Malban Marak	2	-	1	1	4	-	-	-	-	3	
16	Shri Ketarbath Marak	1	1	1	3	6	-	-	1	16	1	
17	Shri Banson Marak	1	-	1	-	2	-	-	-	-	-	
18	Shri Elwin Sangma	3	2	2	1	8	-	-	1	2	3	
19	Shri Changnan Sangma	1	1	1	1	4	-	-	-	6	-	

20	Shri Dinoram Marak	2	1	2	1	6	-	-	1	7	-	
21	Shri Chengnan Marak	2	-	1	2	5	-	-	-	10	1	
22	Shri Balenson Marak	2	2	1	1	6	-	-	-	3	-	
23	Shri Jadil Marak	1	1	1	2	5	-	-	-	8	1	
24	Shri Baseng Marak	3	-	1	2	6	-	-	2	11	-	
25	Shri Sepson Sangma	1	1	1	1	4	-	-	-	-	1	
26	Shri Ningseng Sangma	2	3	1	3	9			-	2	-	
27	Shri Novendro Marak	1	2	2	2	7			-	-	-	
28	Shri Ranreng Sangma	1	-	1	-	2			-	10	-	
29	Shri Raju Sangma	1	2	1	2	6			3	6	-	
30	Shri Waljinson Momin	4	2	2	3	11			1	4	1	
31	Shri Prodip Rabha	2	2	1	3	8			-	8	-	
32	Smt. Ajuli Marak	-	1	1	2	4			3	-	1	
33	Shri Ripsing Sangma	1	1	1	3	6			-	4	-	
34	Shri Jongran Marak	2	1	1	2	6			-	-	1	
35	Shri Kraigister Marak	1	2	1	2	6			-	10	-	
36	Shri Nekson Marak	1	-	1	1	3			-	-	1	
37	Shri Billu Sangma	2	1	2	2	7			2	6	1	
38	Shri Dunal Marak	1	1	1	1	4			1	3	-	
39	Shri Kelbath Marak	1	-	1	-	2			-	8	-	
40	Shri Rull Sangma	1	2	1	2	6			1	4	-	
41	Shri Peran Marak	2	2	1	2	7			1	5	-	
42	Shri Wiling Marak	3	1	2	3	9			3	7	1	
	TOTAL	**66**	**51**	**51**	**70**	**238**			**28**	**226**	**24**	

SOCIO ECONOMIC OF GARO THORKAKONA

Sl. No.	Name of Household	Member of female member below 18 years/ above				Total	Paddy Area	Agricultue	No. of Cow	Poultry	Piggery	Remarks
		Male		Female								
		Adult	Minor	Adult	Minor							
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*
1	Shri Polmithson Marak	2	2	1	2	7	-	-	3	6	1	
2	Shri Mukesh Momin	1	1	1	3	6	-	-	2	7	-	
3	Shri Panitha Sangma	1	1	1	2	5	-	-	-	4	-	
4	Shri Mollithchor Sangma	1	-	1	1	3	-	-	-	10	-	
5	Shri Greminath Marak	1	1	1	1	4	-	-	-	8	-	
6	Shri Jorendro Marak	1	2	1	2	6	-	-	2	-	1	
7	Shri Decembirth Marak	3	1	2	2	8	-	-	1	6	-	
8	Shri Windingson Marak	1	1	2	1	5	-	-	-	9	1	
9	Shri Joymothi Marak	2	1	1	2	6	-	-	-	4	-	
10	Shri Dinesh Marak	1	1	1	1	4	-	-	-	-	-	
11	Smt. Menu Marak	2	1	1	1	5	-	-	1	10	-	
12	Shri Ronjon Sangma	1	1	1	2	5	-	-	2	-	1	

13	Shri Junsud Sangma	2	1	1	3	7	-	-	-	14	-	
14	Shri Jimrip Marak	1	-	1	-	2	-	-	-	-	-	
15	Shri Swinson Marak	1	2	1	1	5	-	-	-	-	-	
16	Shri Willinath Marak	2	1	2	3	8	-	-	4	-	-	
17	Shri Wilchan Marak	3	3	2	3	11	-	-	-	4	1	
18	Shri Kromison Marak	2	2	1	2	7	-	-	-	11	1	
19	Shri Dirok Sangma	1	1	1	2	5	-	-	-	6	-	
20	Shri Jaseng Sangma	1	1	1	1	4	-	-	-	-	1	
21	Smt. Lalitha Marak	1	1	1	1	4	-	-	-	1	2	
22	Shri Effstar Marak	2	1	1	3	7	-	-	1	10	1	
23	Shri Robath Marak	1	3	1	1	6	-	-	2	7	-	
24	Shri Robitha Sangma	1	1	1	1	4	-	-	-	4	1	
25	Shri Kalmekson Sangma	2	3	2	1	8	-	-	-	3	-	
26	Shri Metarson Marak	1	1	1	1	4	-	-	-	-	-	
27	Shri Monggola Marak	2	3	1	2	8	-	-	-	2	-	
28	Shri Winsper Marak	1	2	1	1	5	-	-	1	4	1	
29	Shri Barmingstar Marak	1	1	2	2	6	-	-	1	10	1	
30	Shri Menson Marak	2	2	2	3	9	-	-	4	16	-	

31	Shri Pearsdin Marak	1	1	1	4	7	-	-	-	20	1	
32	Shri Roelis Marak	1	1	1	1	4	-	-	-	10	-	
33	Shri Sanjing Marak	3	1	2	2	8	-	-	1	11	1	
34	Shri Hanson Marak	1	3	1	1	6	-	-	-	8	1	
35	Shri Barnath Marak	2	1	2	3	8	-	-	-	3	1	
36	Shri Ajay Sangma	1	1	1	1	4	-	-	2	-	1	
37	Shri Mithel Marak	1	-	1	1	3	-	-	1	10	-	
38	Shri Marcas Sangma	1	1	1	2	5	-	-	-	-	-	
39	Shri Hewithbirth Marak	2	2	2	2	8	-	-	-	-	-	
40	Shri Embirth Marak	1	1	1	1	4	-	-	-	-	-	
41	Shri Binith Momin	1	2	1	1	5	-	-	1	-	-	
42	Shri Greenhas Marak	1	1	1	3	6	-	-	-	18	-	
43	Shri Walseng Sangma	2	2	1	3	8	-	-	2	2	-	
44	Shri Ruban Marak	2	2	2	2	8	-	-	1	7	-	
45	Shri Brejington Marak	3	1	1	1	6	-	-	-	10	1	
46	Shri Lemison Marak	2	2	2	3	9	-	-	-	13	-	
47	Shri Komeng Marak	2	3	2	2	9	-	-	4	-	-	
48	Shri Sengseng Momin	1	1	1	4	7	-	-	-	12	1	

49	Shri Biju Sangma	1	2	2	1	6	-	-	-	-	1	
50	Shri Allison Marak	1	1	1	1	4	-	-	1	-	-	
51	Shri Dimosh Marak	2	1	1	1	5	-	-	2	-	1	
52	Shri Rendil Momin	1	1	1	2	5	-	-	-	3	-	
53	Smt. Crebina Sangma	-	1	2	1	4	-	-	1	8	1	
54	Shri Sengjith Momin	1	2	1	2	6	-	-	2	17	-	
55	Shri Darkingston Momin	2	1	1	2	6	-	-	-	-	1	
56	Shri Jonnepen Marak	1	1	1	3	6	-	-	-	10	1	
57	Shri Salbillian Marak	1	2	1	1	5	-	-	4	15	-	
58	Shri Bojith Marak	1	1	1	1	4	-	-	-	6	-	
59	Smt. Seni Marak	-	2	1	1	4	-	-	1	-	1	
60	Shri Bindash Momin	1	1	1	1	4	-	-	-	-	1	
61	Shri Indalson Marak	1	1	1	3	6	-	-	-	-	-	
62	Shri Dearson Marak	3	1	2	2	8	-	-	-	10	-	
63	Shri Sugensing Marak	2	2	2	3	9	-	-	-	9	-	
64	Shri Rollingston Sangma	1	1	1	2	5	-	-	-	-	1	
65	Shri Sathel Sangma	1	1	1	3	6	-	-	1	3	-	
66	Shri Uranash Marak	2	1	1	4	8	-	-	2	-	3	

67	Shri Witherson Momin	1	1	1	1	4	-	-	-	10	1	
68	Shri Jonhellari Momin	1	2	1	3	7	-	-	1	11	-	
69	Shri Beconfield Marak	2	2	1	2	7	-	-	-	4	-	
70	Shri Kristar Momin	1	1	1	1	4	-	-	-	6	-	
71	Shri Happilson Marak	3	-	2	3	8	-	-	-	7	1	
72	Shri Ollopi Marak	1	1	1	1	4	-	-	-	10	-	
73	Shri Chokker Marak	1	2	1	1	5	-	-	6	13	-	
74	Shri July Sangma	1	1	1	1	4	-	-	-	-	-	
75	Shri Ronal Sangma	1	-	1	2	4	-	-	3	14	-	
76	Shri Nicka Marak	1	1	1	3	6	-	-	-	9	-	
77	Shri Johnclement Marak	2	2	2	1	7	-	-	-	3	-	
78	Shri Hamilson Marak	1	1	2	1	5	-	-	2	7	-	
79	Shri Brejenath Marak	2	2	2	3	9	-	-	-	11	-	
80	Shri Huljonsing Sangma	2	1	1	3	7	-	-	-	-	1	
81	Shri Belbong Sangma	2	3	1	3	9	-	-	-	6	-	
82	Shri Husendro Marak	1	1	2	1	5	-	-	-	4	1	
83	Shri Wabing Marak	4	-	2	3	9	-	-	-	-	2	
84	Shri Menen Marak	1	1	1	1	4	-	-	-	2	-	

85	Shri Temjing Sangma	2	1	1	2	6	-	-	-	8	-	
86	Shri Holpinash Marak	1	1	1	2	5	-	-	-	6	-	
87	Shri Cronal Prayer Sangma	2	1	1	2	6	-	-	-	-	2	
88	Smt. Trebilla Marak	-	-	1	2	3	-	-	-	3	-	
89	Shri Allendro Sangma	2	1	1	3	7	-	-	1	5	-	
90	Shri Grewin Marak	1	1	1	1	4	-	-	-	7	-	
91	Smt. Lenish Marak	-	2	1	2	5	-	-	2	9	-	
92	Shri Debojith Momin	3	1	1	1	6	-	-	1	10	-	
93	Shri Jime Sangma	1	1	1	1	4	-	-	3	15	-	
94	Shri Learnbath Marak	1	-	1	-	2	-	-	-	4	1	
95	Shri Solma Sangma	1	2	1	1	5	-	-	-	10	-	
96	Shri Sengban Sangma	1	1	1	2	5	-	-	-	-	-	
97	Shri Grewilson Momin	2	1	1	3	7	-	-	3	7	1	
	TOTAL : -	139	126	120	178	563			72	l	41	

ANNEXURE – II

N.O.C

Samkalakgri A'king
East Garo Hills

Dated Samkalakgri The 26th 4-2013.

N.O.C (No objection Certificate)

Anga shri Jonal Marak angni N.O.C. ko Soil conservation department ree onenga Chongmotan angni a'kingni ningo Songdong a'chaenggipa mandarangna department je hamranghoba man nadipet kare on pachina gita ree onenga. Jako anga beren aro gisek onrengen maming nengnikani gnian ree onenga.

Jako ree onenggipa,

Jonal Marak
NOKMA
Samkalakgri A'king
East Garo Hills

NO OBJECTION CERTIFICATE

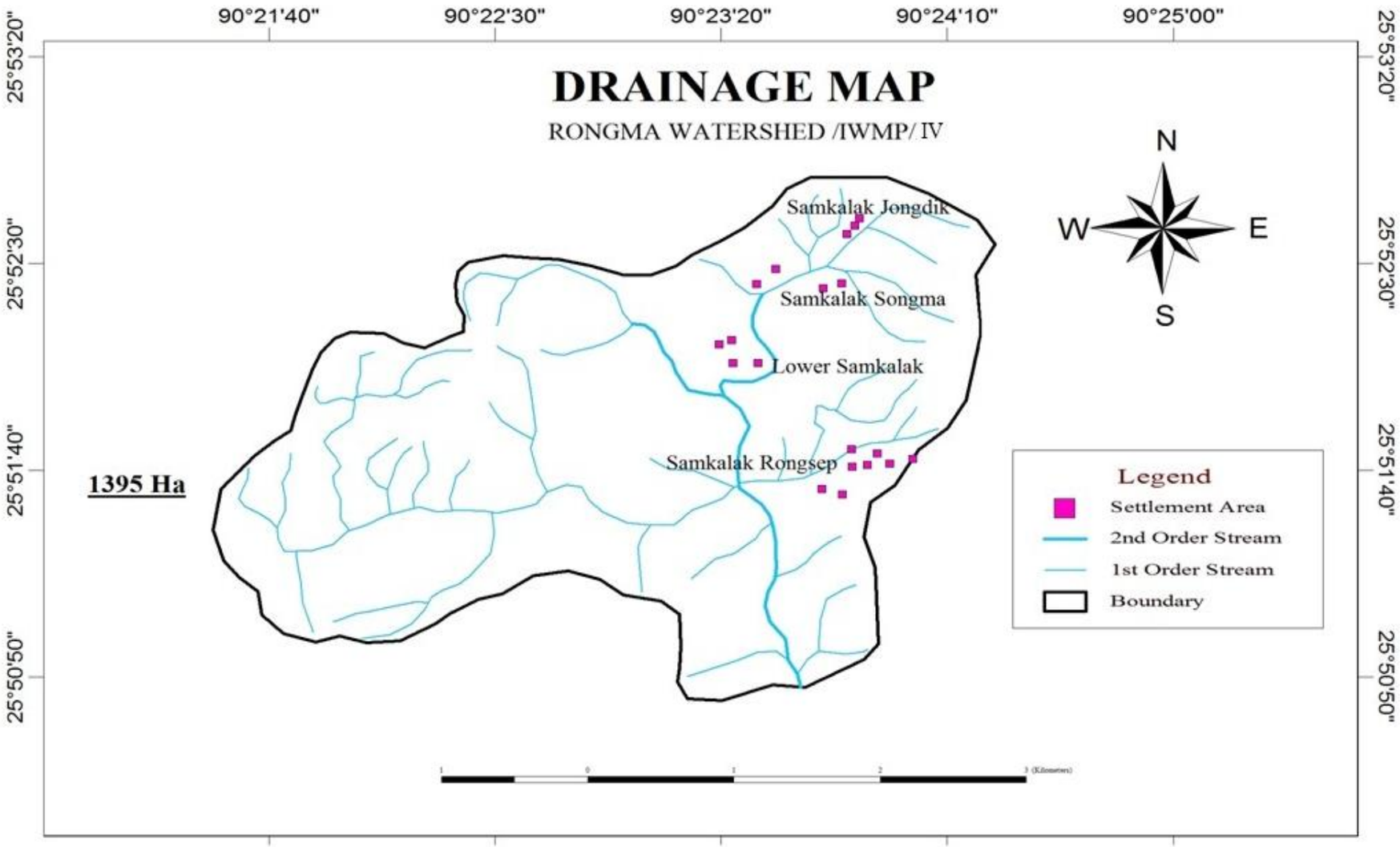
Anga Shri Nekson Sangma Gelāpara A·king Nokma angni A·kingni ningo songdonggipa manderangna Soil Deptt. je kamrangkoba dakee, ka·e onpachina anga mamung champengani dongjawa. Iako anga kusi onge be·en bemang an·sengean see onenga.

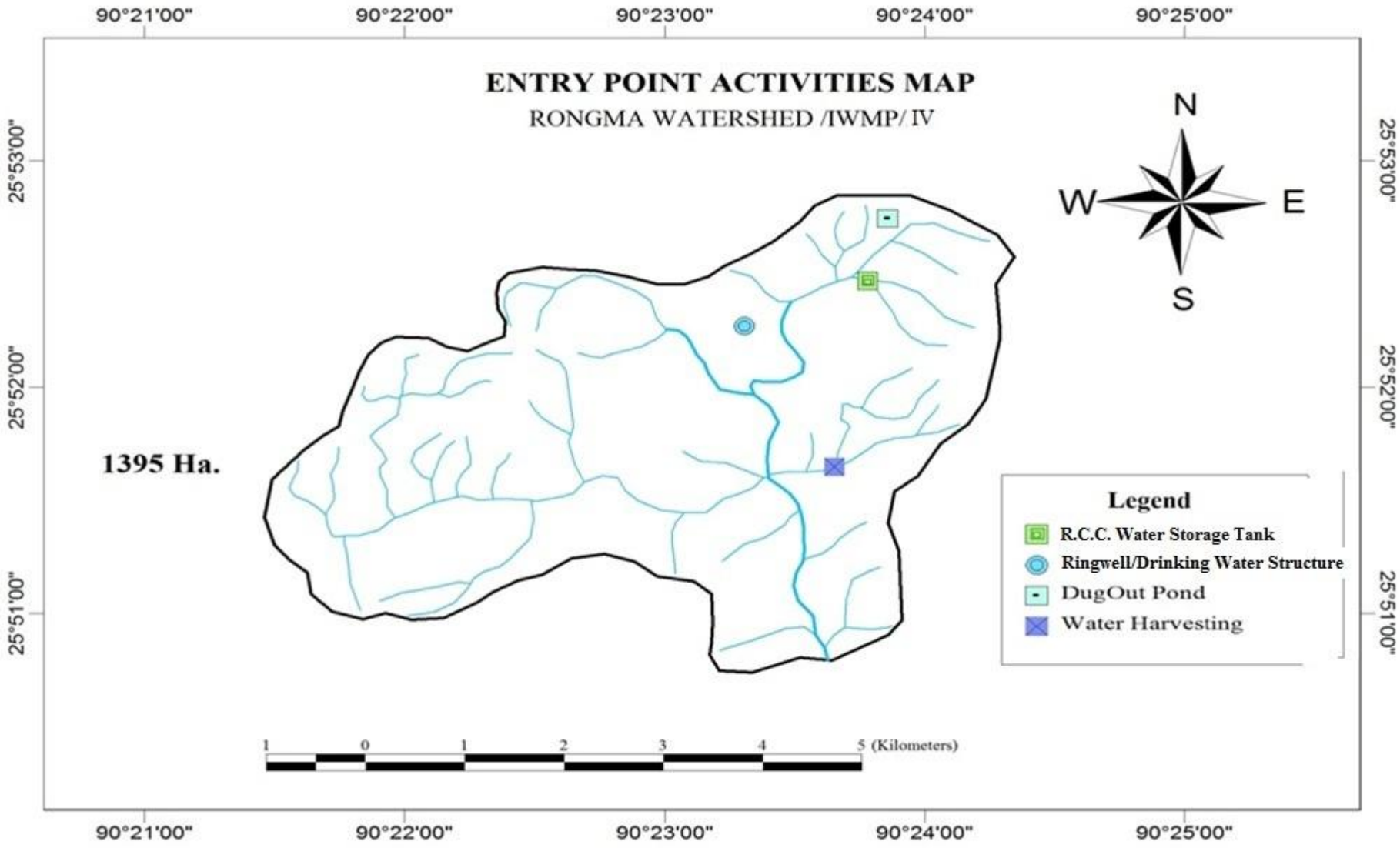
Iako see ongipa Getapara A·kingni Nokma.

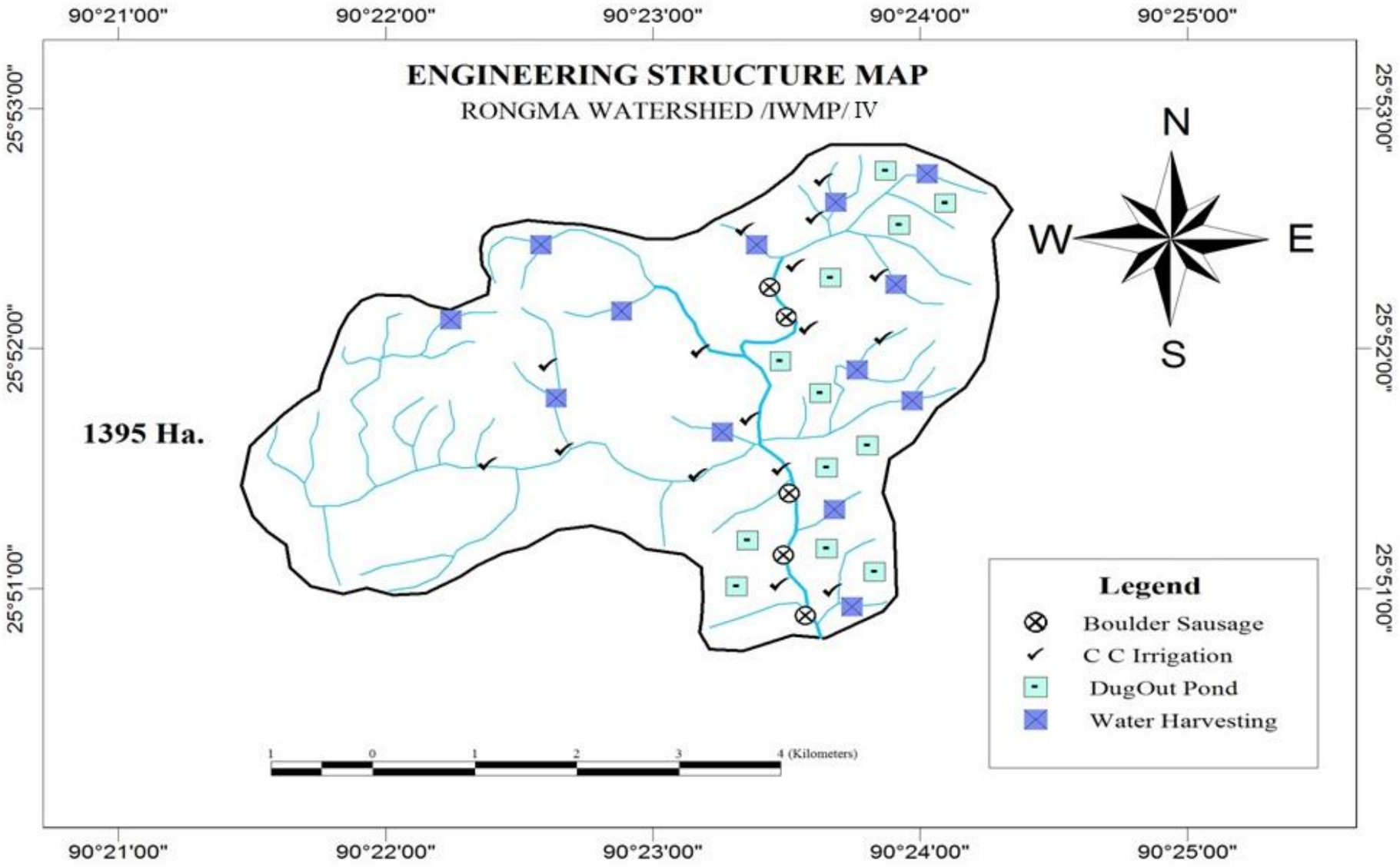
Nekson Sangma
NOKMA
Getapara A·king Land
North Garo Hills (Megh)

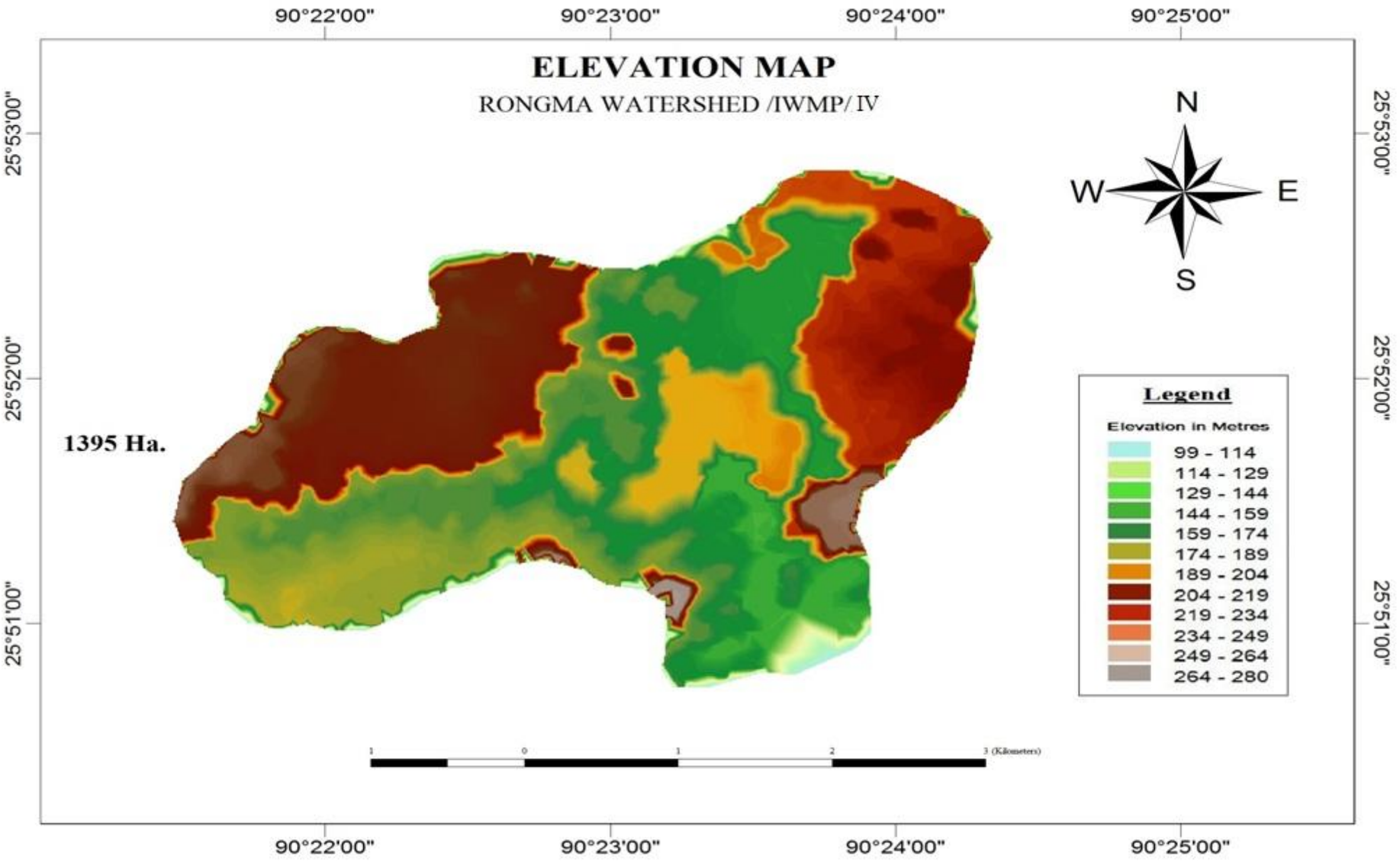
ANNEXURE - III

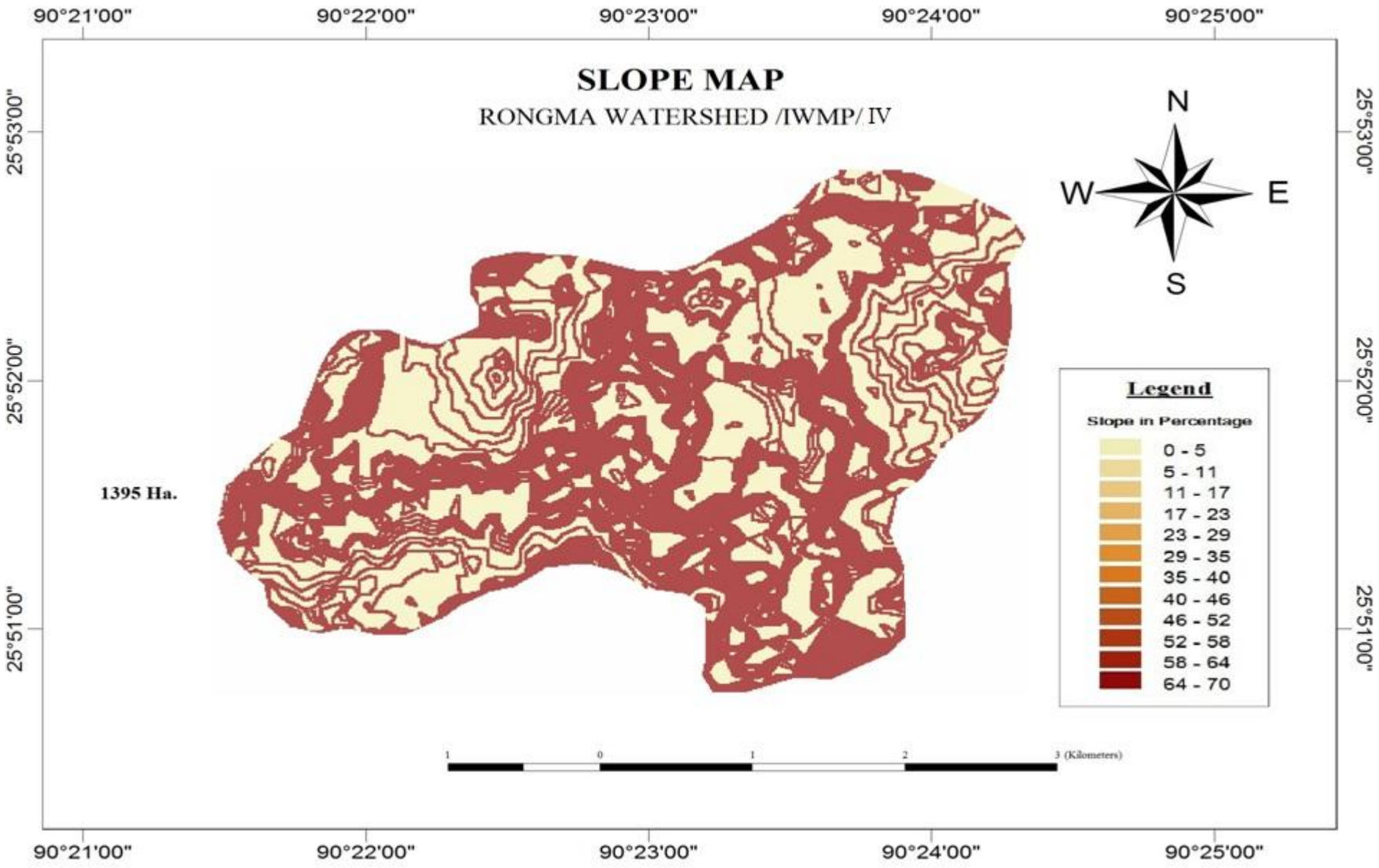
M A P S

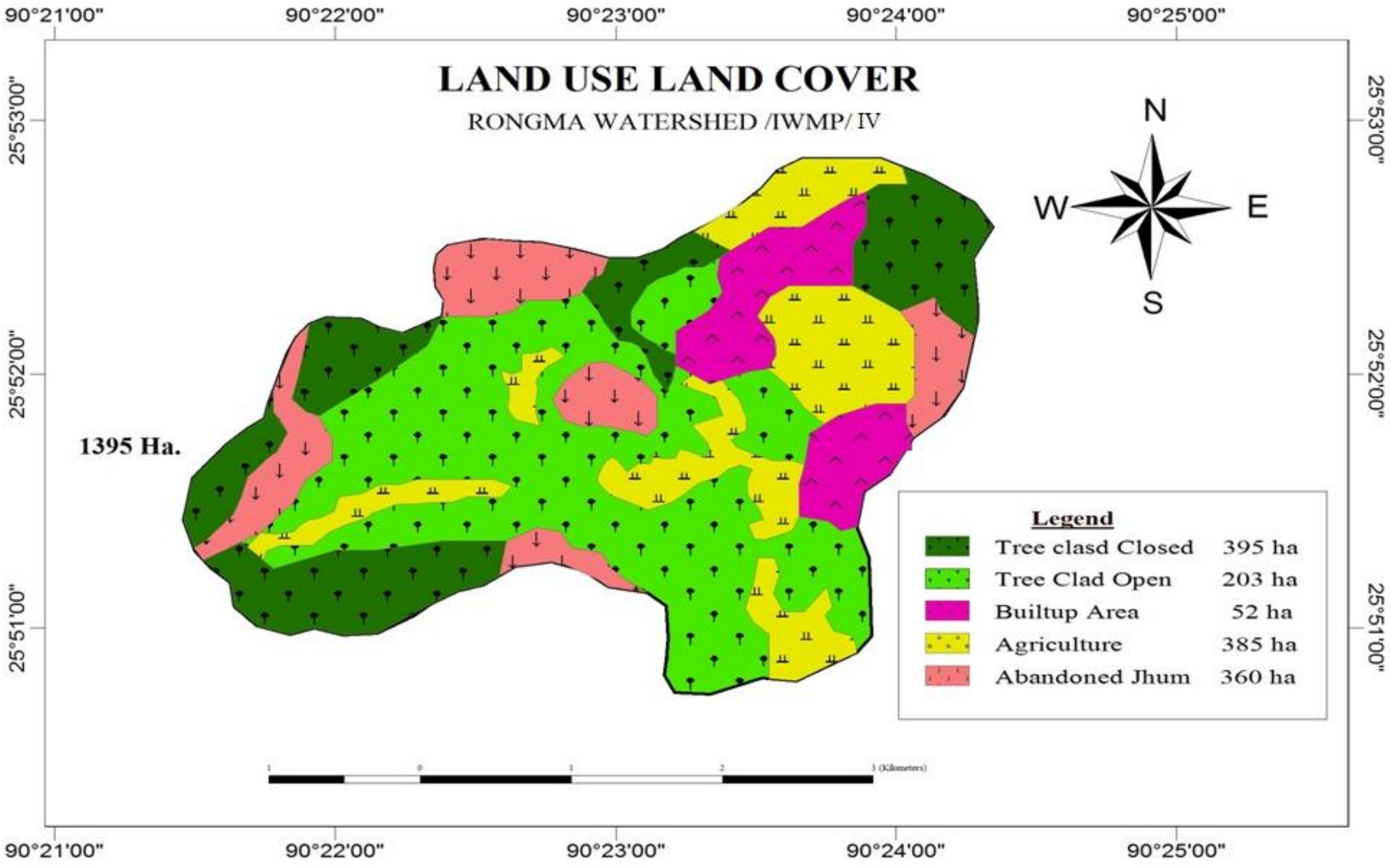

DRAINAGE MAP
RONGMA WATERSHED /IWMP/ IV
90°21'40"
90°22'30"
90°23'20"
90°24'10"
90°25'00"
25°53'20"
25°52'30"
25°51'40"
25°50'50"
N
W
E
S
Samkalak Jongdik
Samkalak Songma
Lower Samkalak
Samkalak Rongsep
1395 Ha
Legend
Settlement Area
2nd Order Stream
1st Order Stream
Boundary

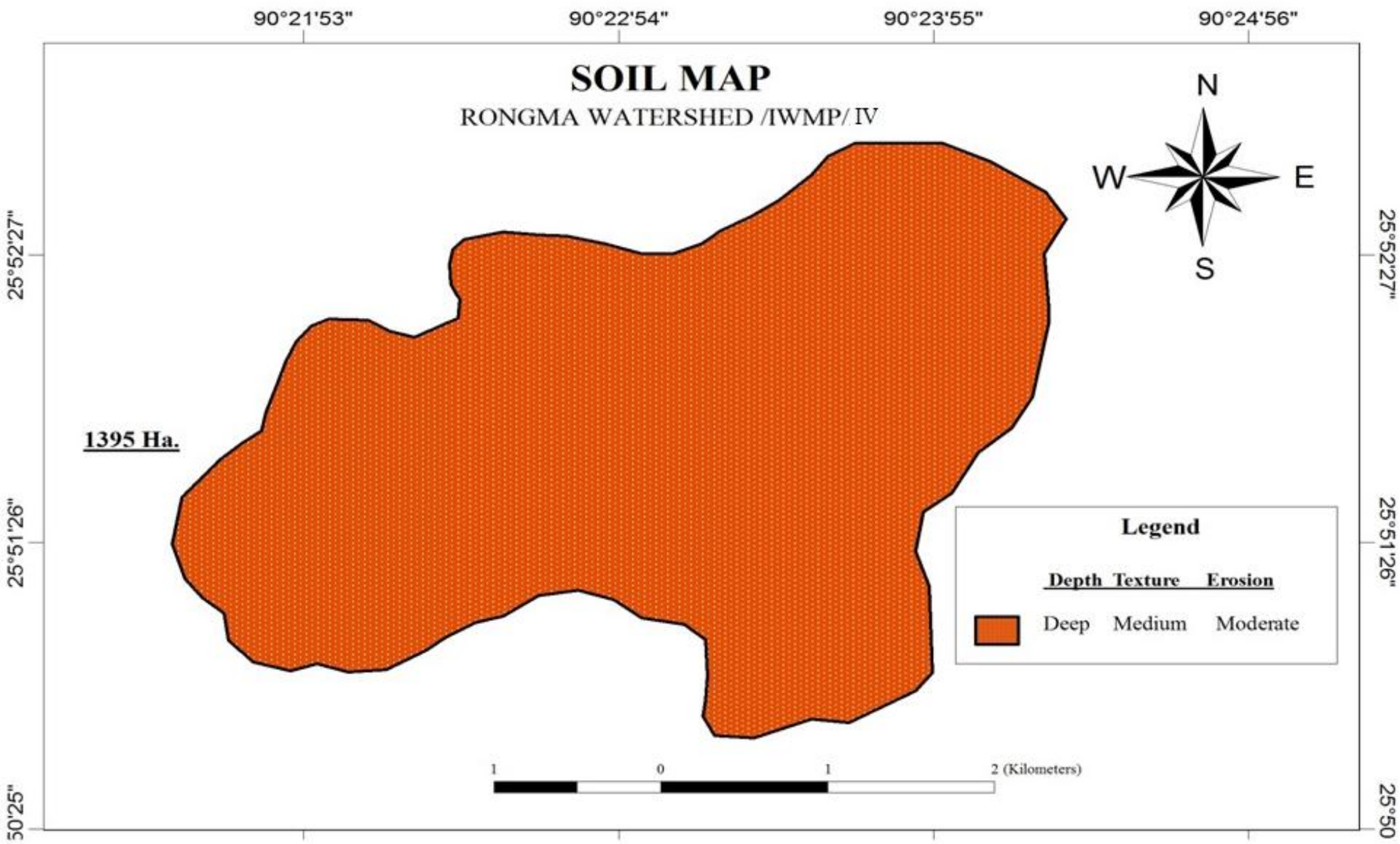

ENTRY POINT ACTIVITIES MAP
RONGMA WATERSHED /IWMP/ IV
1395 Ha.
N
W
E
S
Legend
R.C.C. Water Storage Tank
Ringwell/Drinking Water Structure
DugOut Pond
Water Harvesting
1 0 1 2 3 4 5 (Kilometers)
90°21'00"
90°22'00"
90°23'00"
90°24'00"
90°25'00"
25°53'00"
25°52'00"
25°51'00"

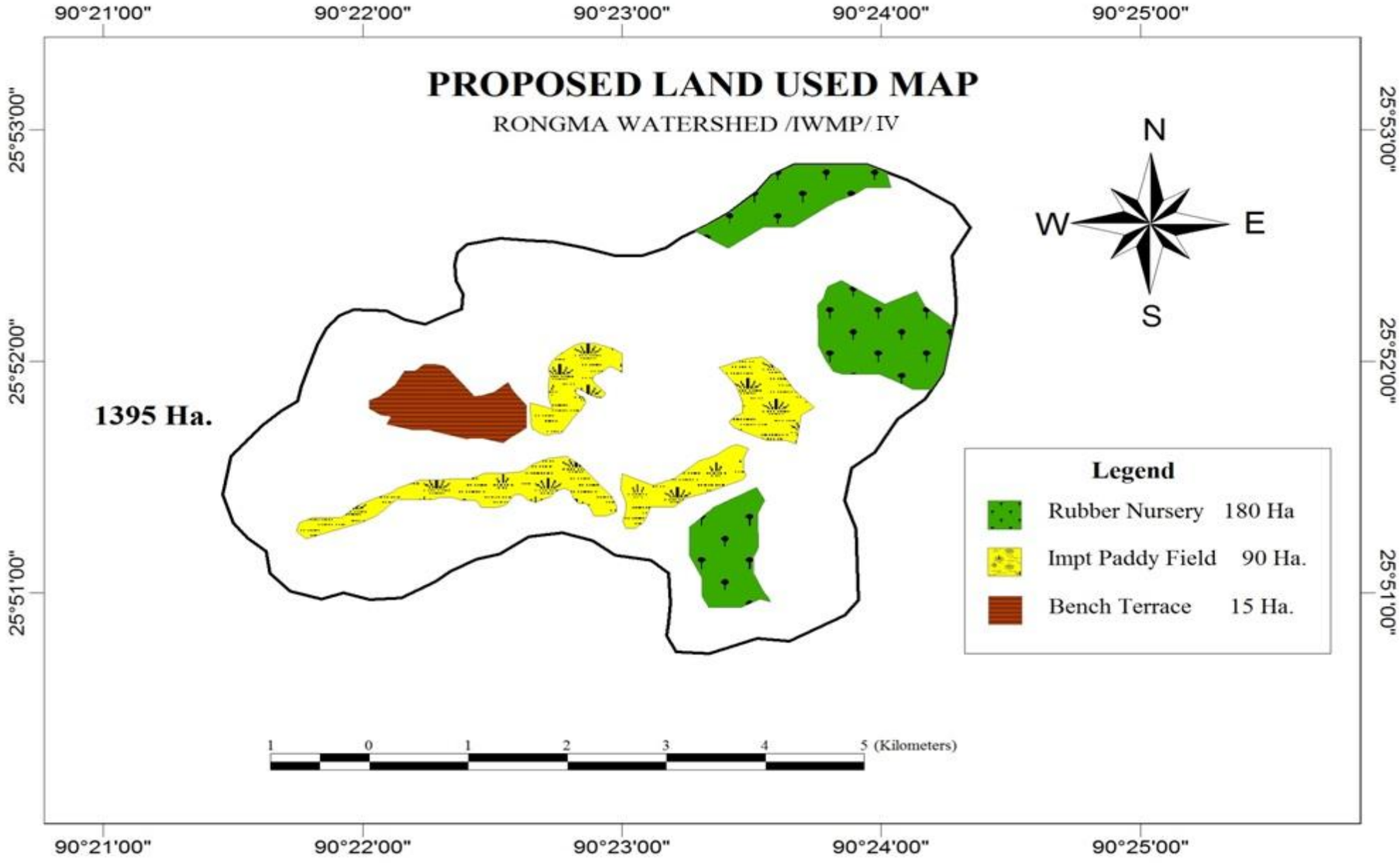

ENGINEERING STRUCTURE MAP
RONGMA WATERSHED /IWMP/ IV
1395 Ha.
90°21'00"
90°22'00"
90°23'00"
90°24'00"
90°25'00"
25°53'00"
25°52'00"
25°51'00"
N
W
E
S
Legend
Boulder Sausage
C C Irrigation
DugOut Pond
Water Harvesting
1 0 1 2 3 4 (Kilometers)

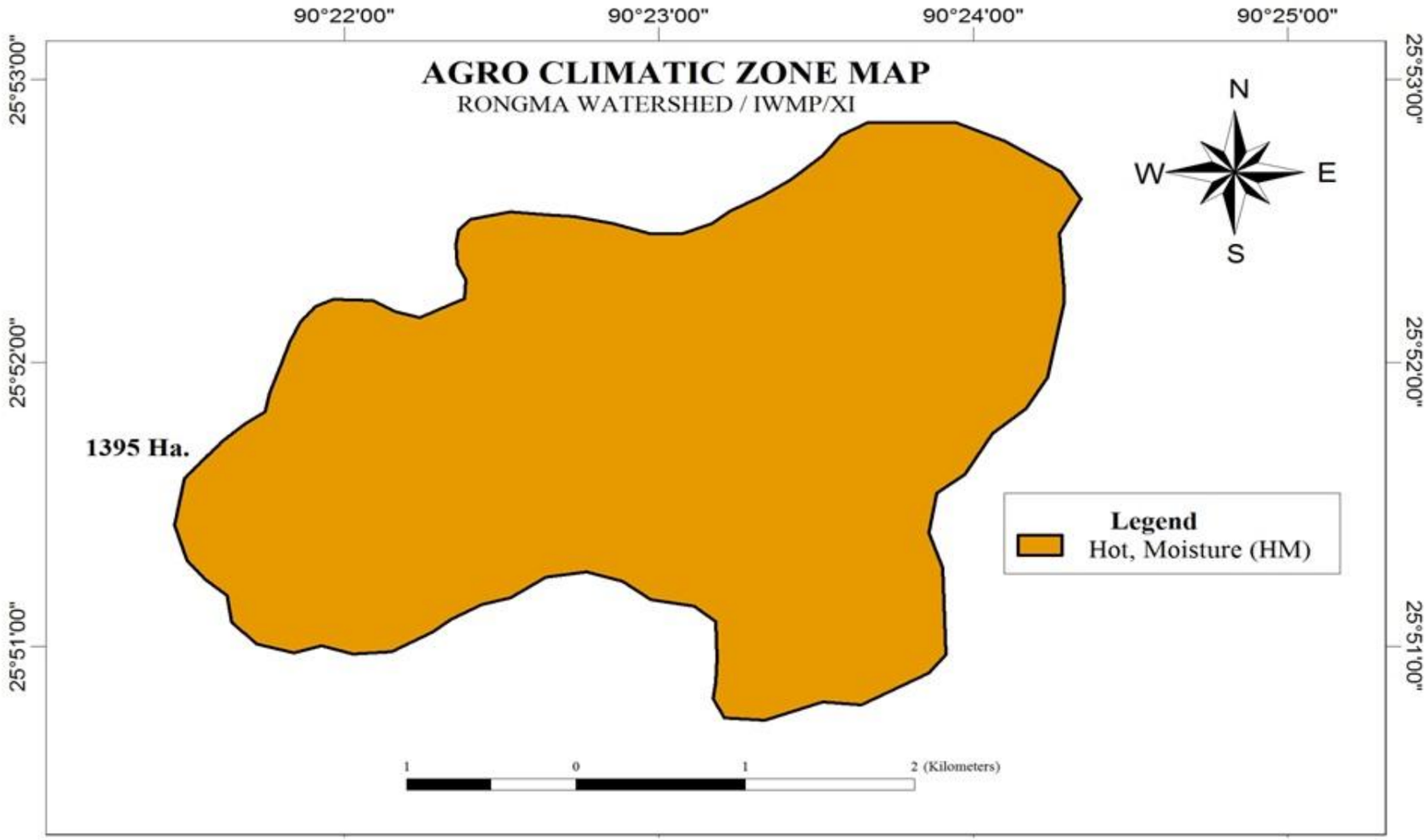

ELEVATION MAP
RONGMA WATERSHED /IWMP/ IV
90°22'00"
90°23'00"
90°24'00"
90°25'00"
25°53'00"
25°52'00"
25°51'00"
N
W
E
S
1395 Ha.
Legend
Elevation in Metres
99 - 114
114 - 129
129 - 144
144 - 159
159 - 174
174 - 189
189 - 204
204 - 219
219 - 234
234 - 249
249 - 264
264 - 280
1 0 1 2 3 (Kilometers)

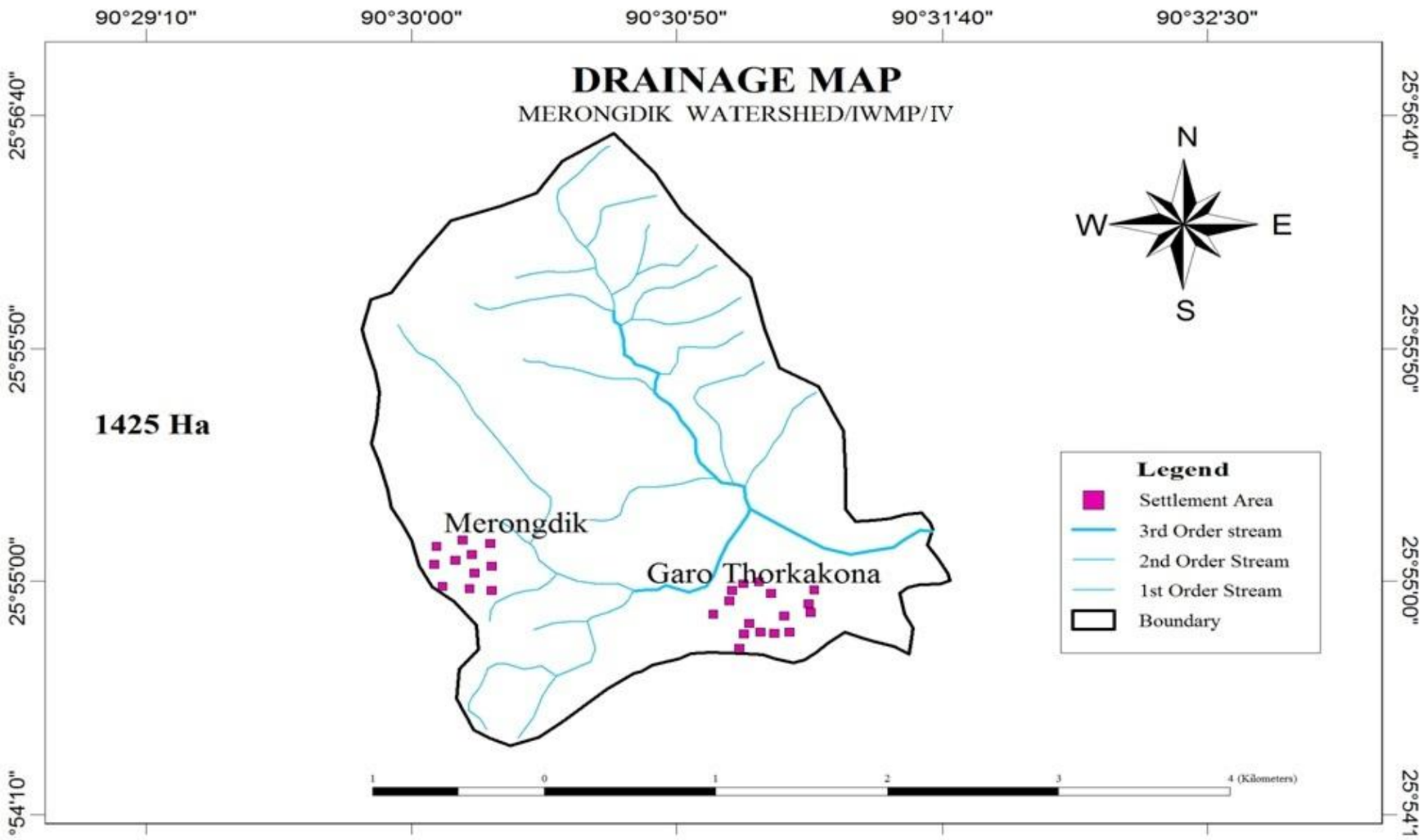

SLOPE MAP
RONGMA WATERSHED /IWMP/ IV
90°21'00"
90°22'00"
90°23'00"
90°24'00"
90°25'00"
25°53'00"
25°52'00"
25°51'00"
N
W
E
S
1395 Ha.
Legend
Slope in Percentage
0 - 5
5 - 11
11 - 17
17 - 23
23 - 29
29 - 35
35 - 40
40 - 46
46 - 52
52 - 58
58 - 64
64 - 70
1 0 1 2 3 (Kilometers)

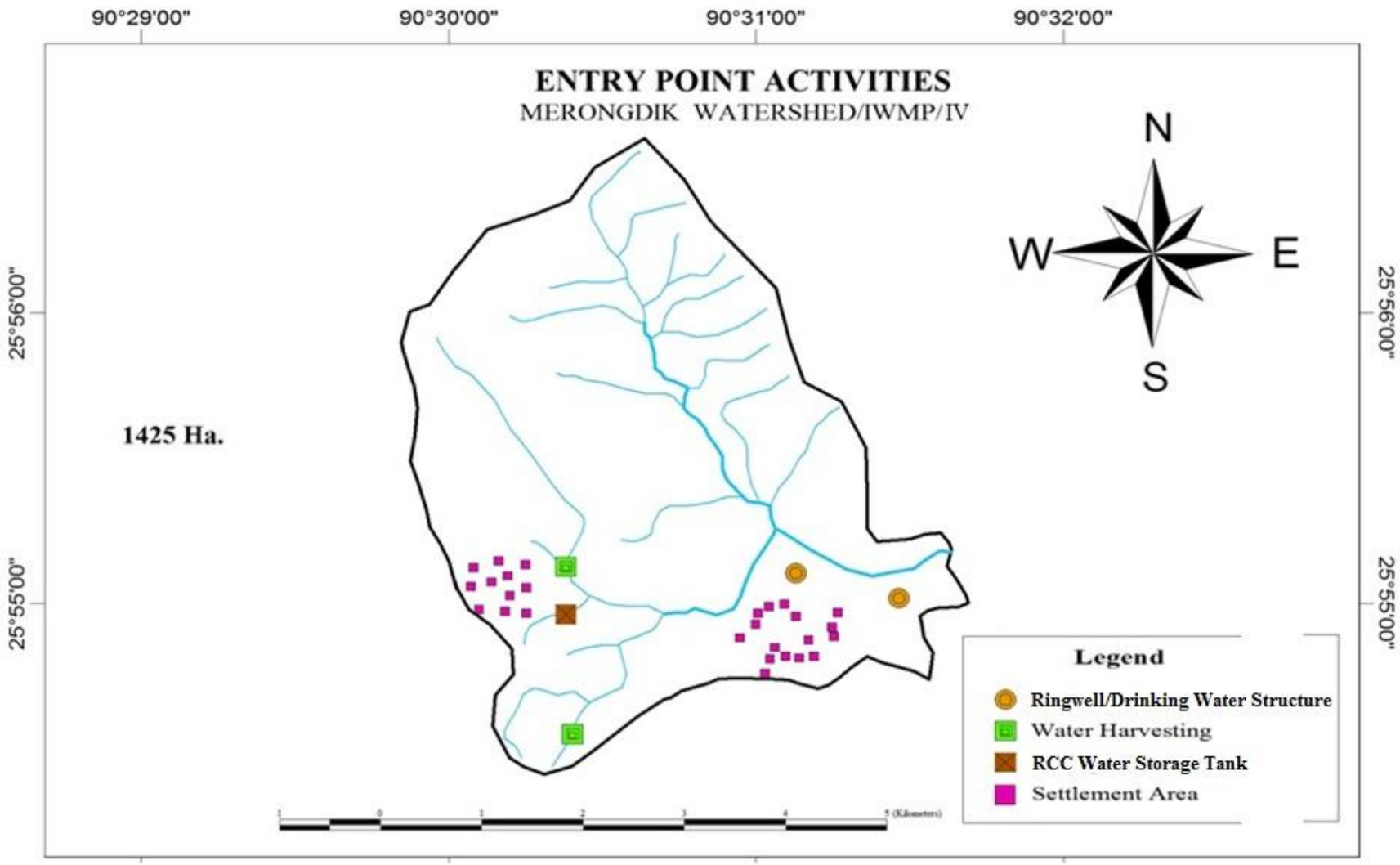

LAND USE LAND COVER
RONGMA WATERSHED /IWMP/ IV
1395 Ha.
N
W
E
S
Legend
Tree clasd Closed 395 ha
Tree Clad Open 203 ha
Builtup Area 52 ha
Agriculture 385 ha
Abandoned Jhum 360 ha
90°21'00"
90°22'00"
90°23'00"
90°24'00"
90°25'00"
25°53'00"
25°52'00"
25°51'00"

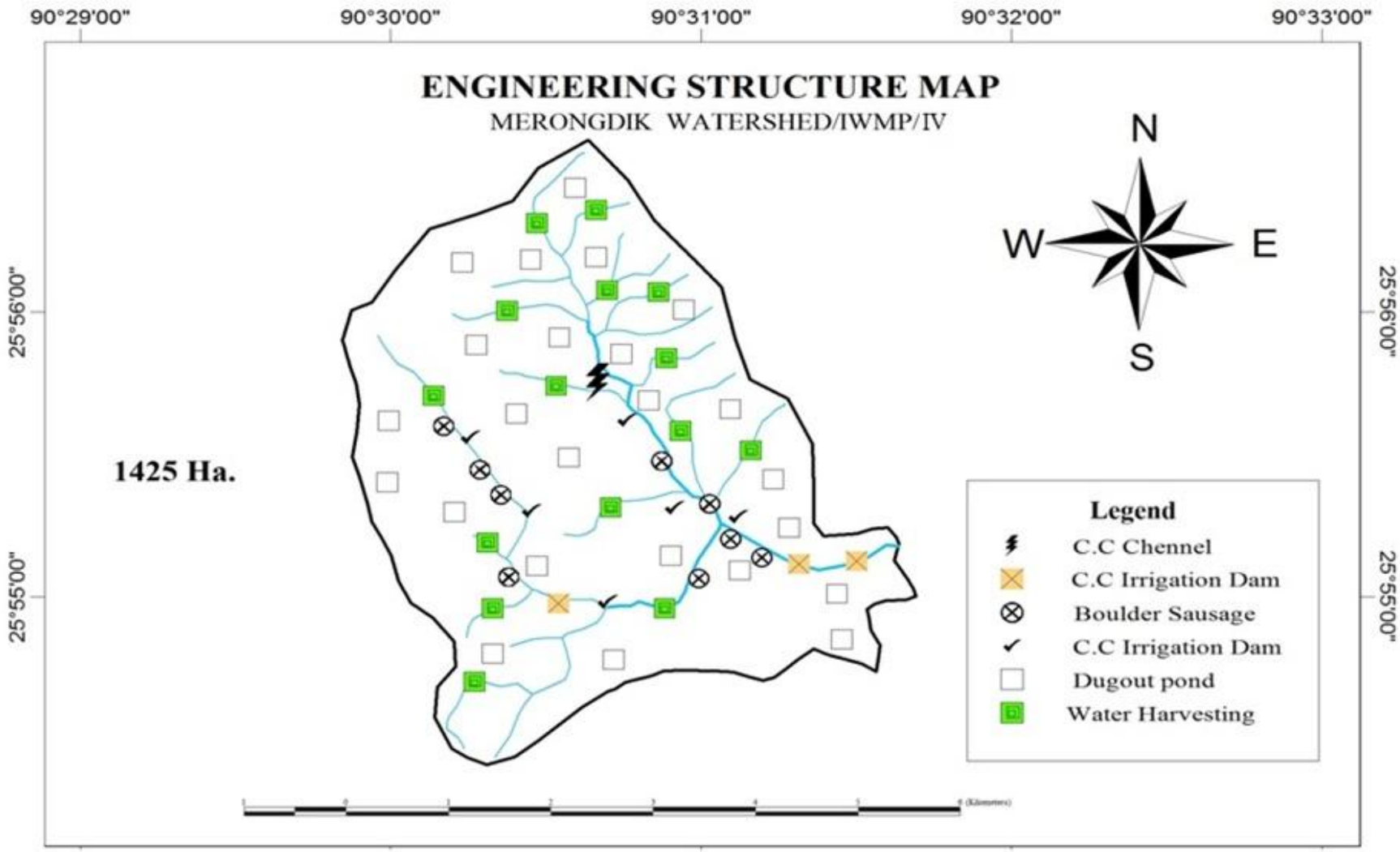

90°21'53"
90°22'54"
90°23'55"
90°24'56"
SOIL MAP
RONGMA WATERSHED /IWMP/ IV
N
W
E
S
25°52'27"
25°51'26"
50'25"
1395 Ha.
Legend
Depth Texture Erosion
Deep Medium Moderate
1 0 1 2 (Kilometers)

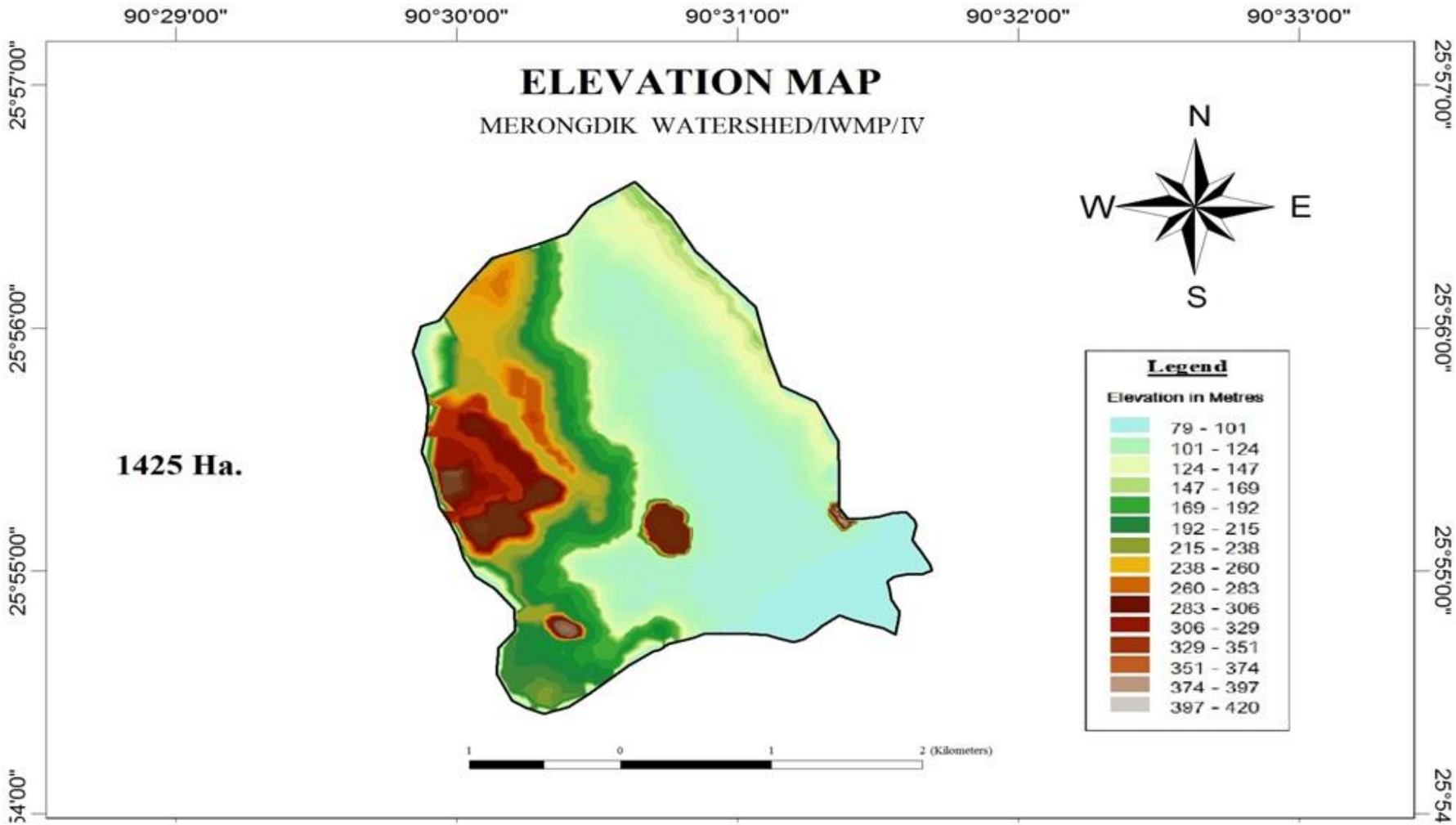

90°21'00"
90°22'00"
90°23'00"
90°24'00"
90°25'00"
25°53'00"
25°52'00"
25°51'00"
PROPOSED LAND USED MAP
RONGMA WATERSHED /IWMP/ IV
N
W
E
S
1395 Ha.
Legend
Rubber Nursery 180 Ha
Impt Paddy Field 90 Ha.
Bench Terrace 15 Ha.
1 0 1 2 3 4 5 (Kilometers)

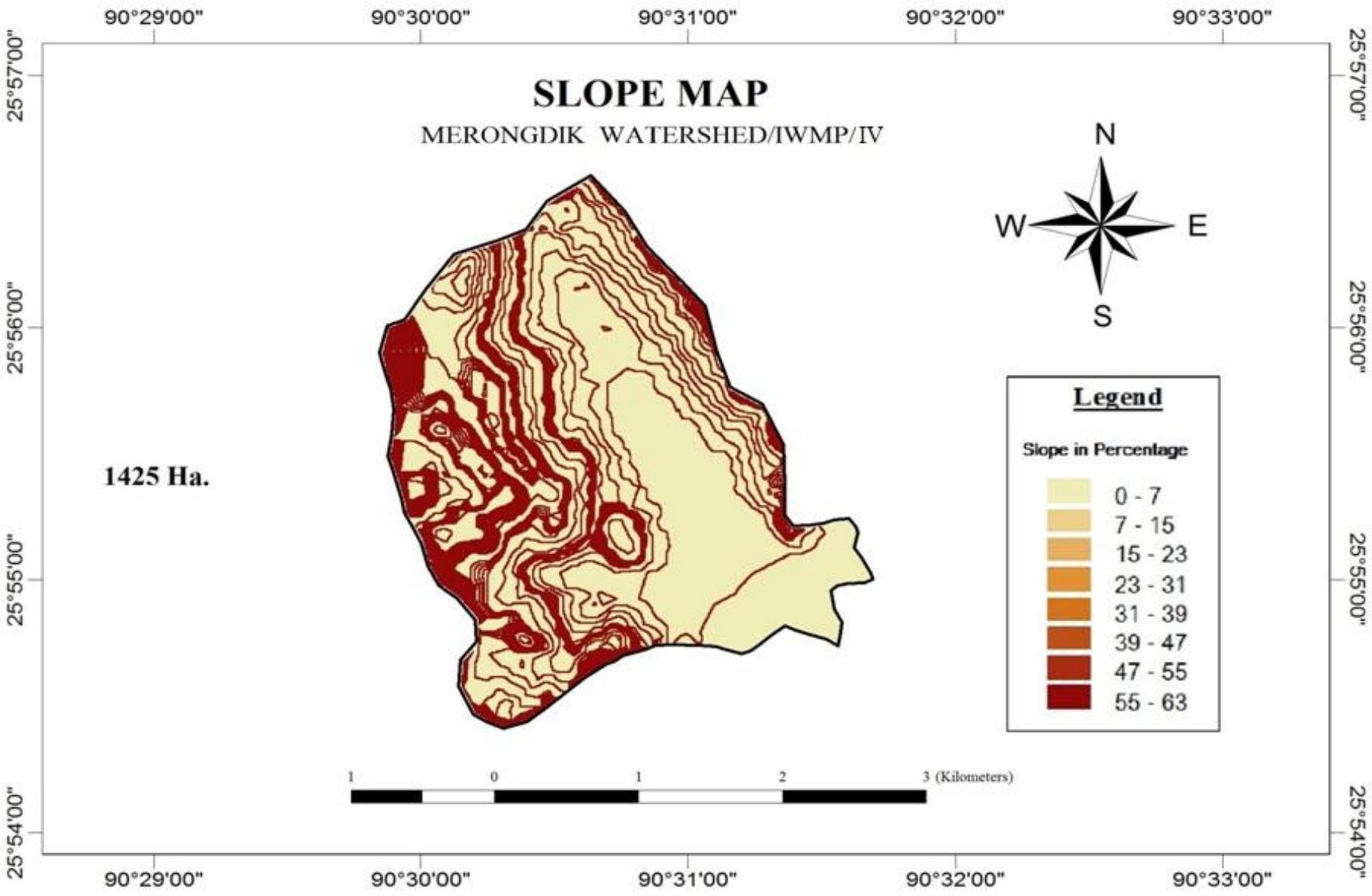

AGRO CLIMATIC ZONE MAP
RONGMA WATERSHED / IWMP/XI
90°22'00"
90°23'00"
90°24'00"
90°25'00"
25°53'00"
25°52'00"
25°51'00"
N
W
E
S
1395 Ha.
Legend
Hot, Moisture (HM)
1
0
1
2 (Kilometers)

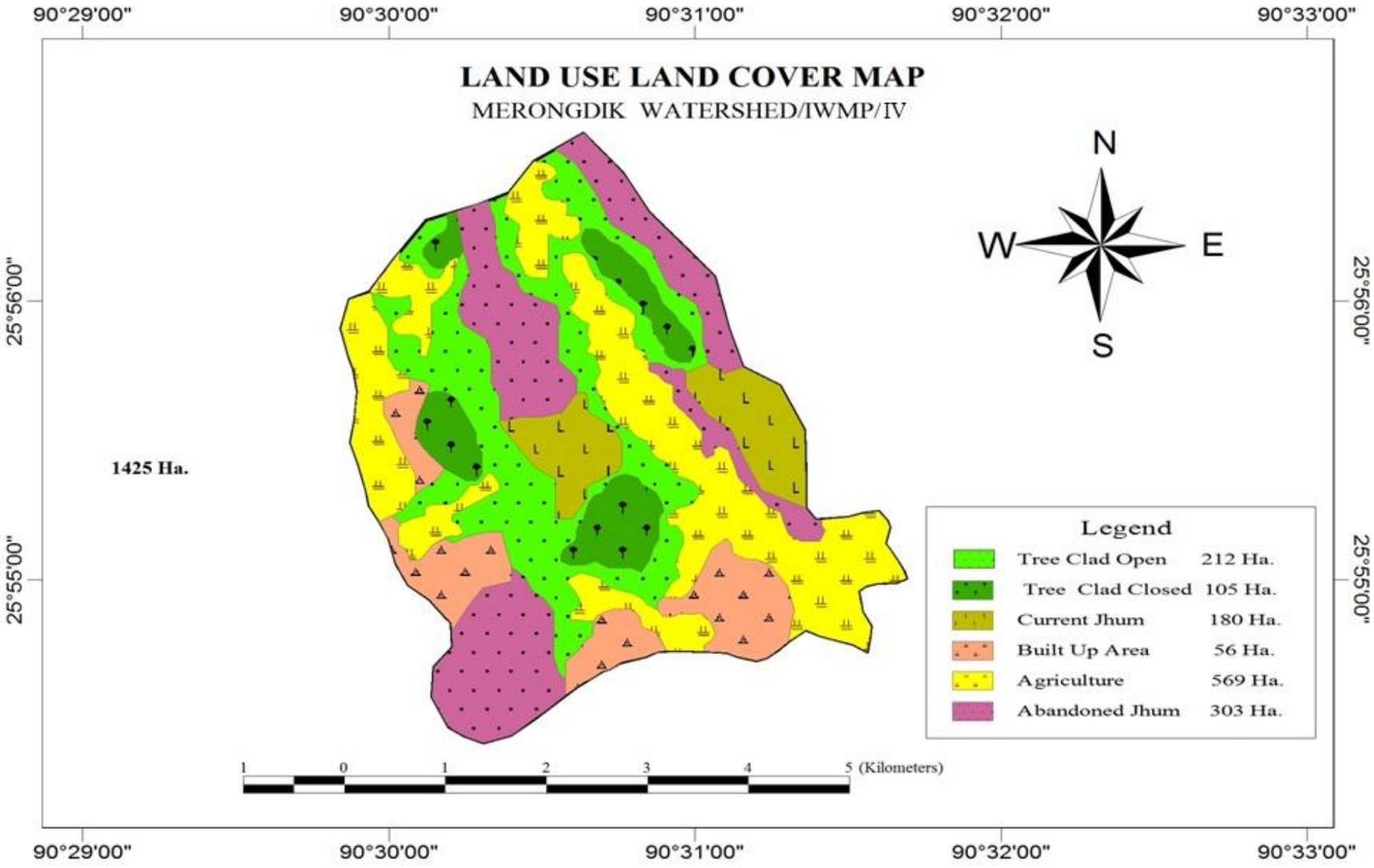

90°29'10"
90°30'00"
90°30'50"
90°31'40"
90°32'30"
25°56'40"
25°55'50"
25°55'00"
°54'10"
DRAINAGE MAP
MERONGDIK WATERSHED/IWMP/IV
1425 Ha
N
W
E
S
Merongdik
Garo Thorkakona
Legend
Settlement Area
3rd Order stream
2nd Order Stream
1st Order Stream
Boundary
1 0 1 2 3 4 (Kilometers)

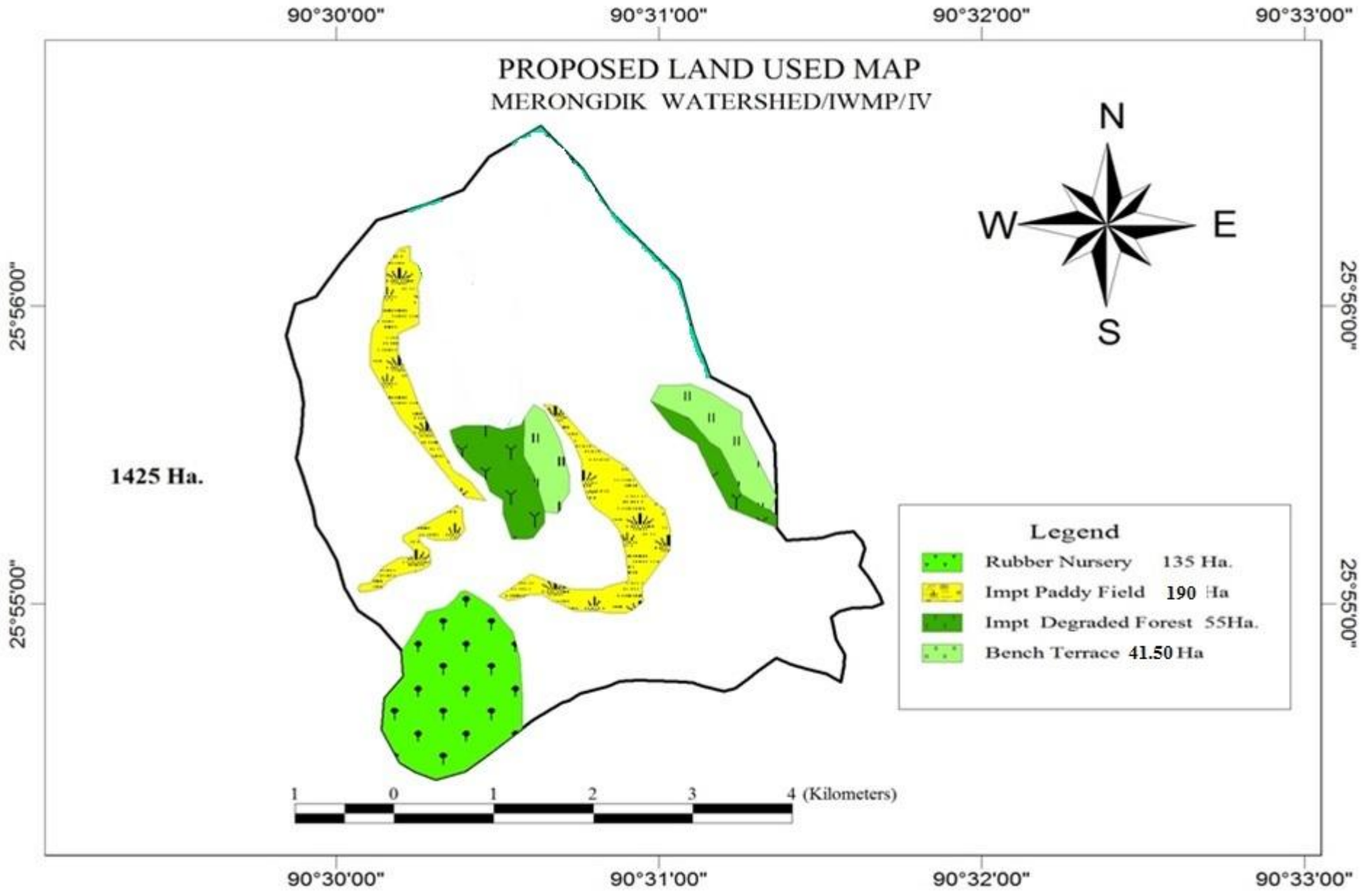

90°29'00"
90°30'00"
90°31'00"
90°32'00"
ENTRY POINT ACTIVITIES
MERONGDIK WATERSHED/IWMP/IV
N
W
E
S
25°56'00"
25°55'00"
1425 Ha.
Legend
Ringwell/Drinking Water Structure
Water Harvesting
RCC Water Storage Tank
Settlement Area
(Kilometers)

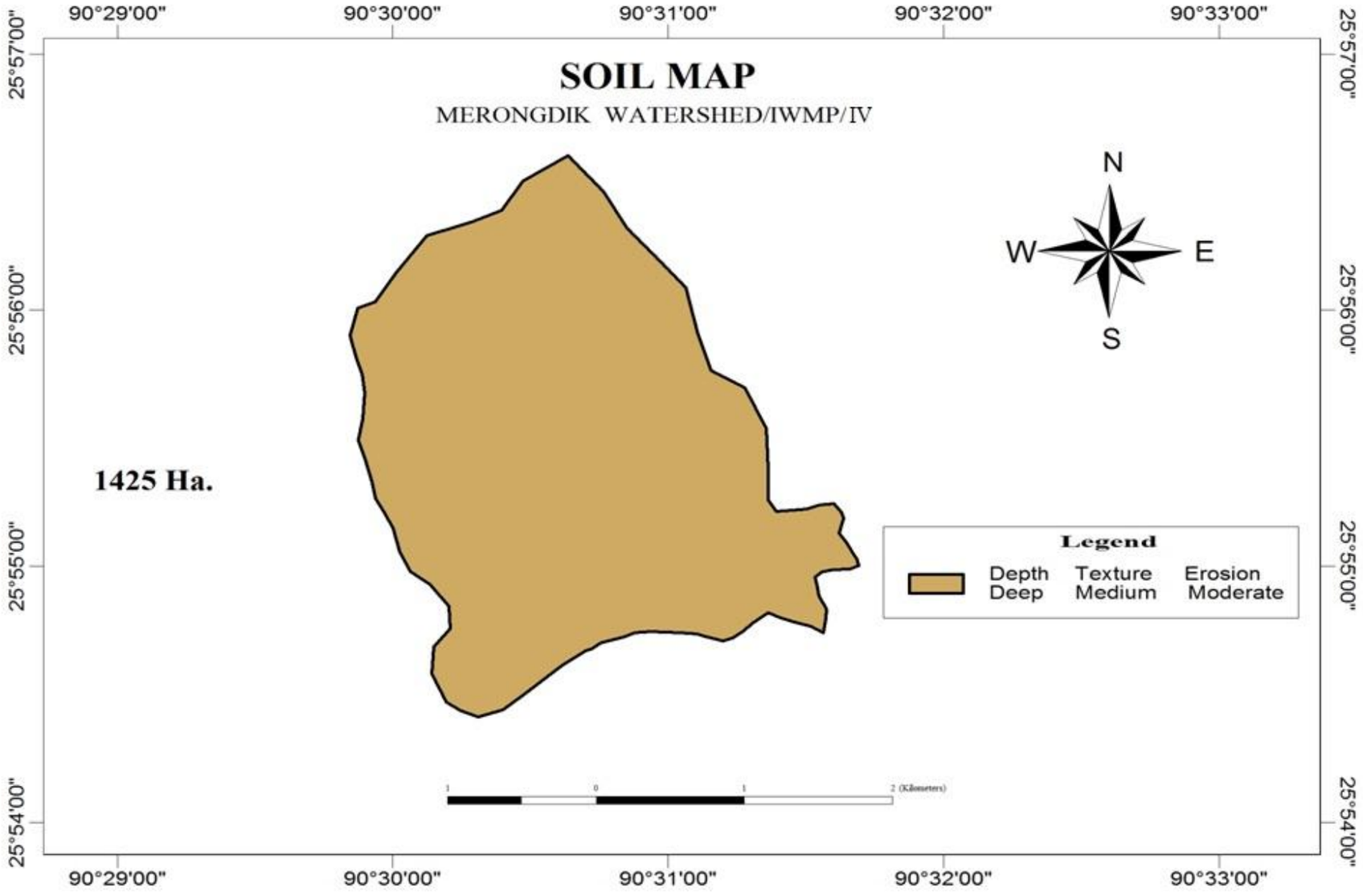

90°29'00"
90°30'00"
90°31'00"
90°32'00"
90°33'00"
25°56'00"
25°55'00"
ENGINEERING STRUCTURE MAP
MERONGDIK WATERSHED/IWMP/IV
N
W
E
S
1425 Ha.
Legend
C.C Chennel
C.C Irrigation Dam
Boulder Sausage
C.C Irrigation Dam
Dugout pond
Water Harvesting

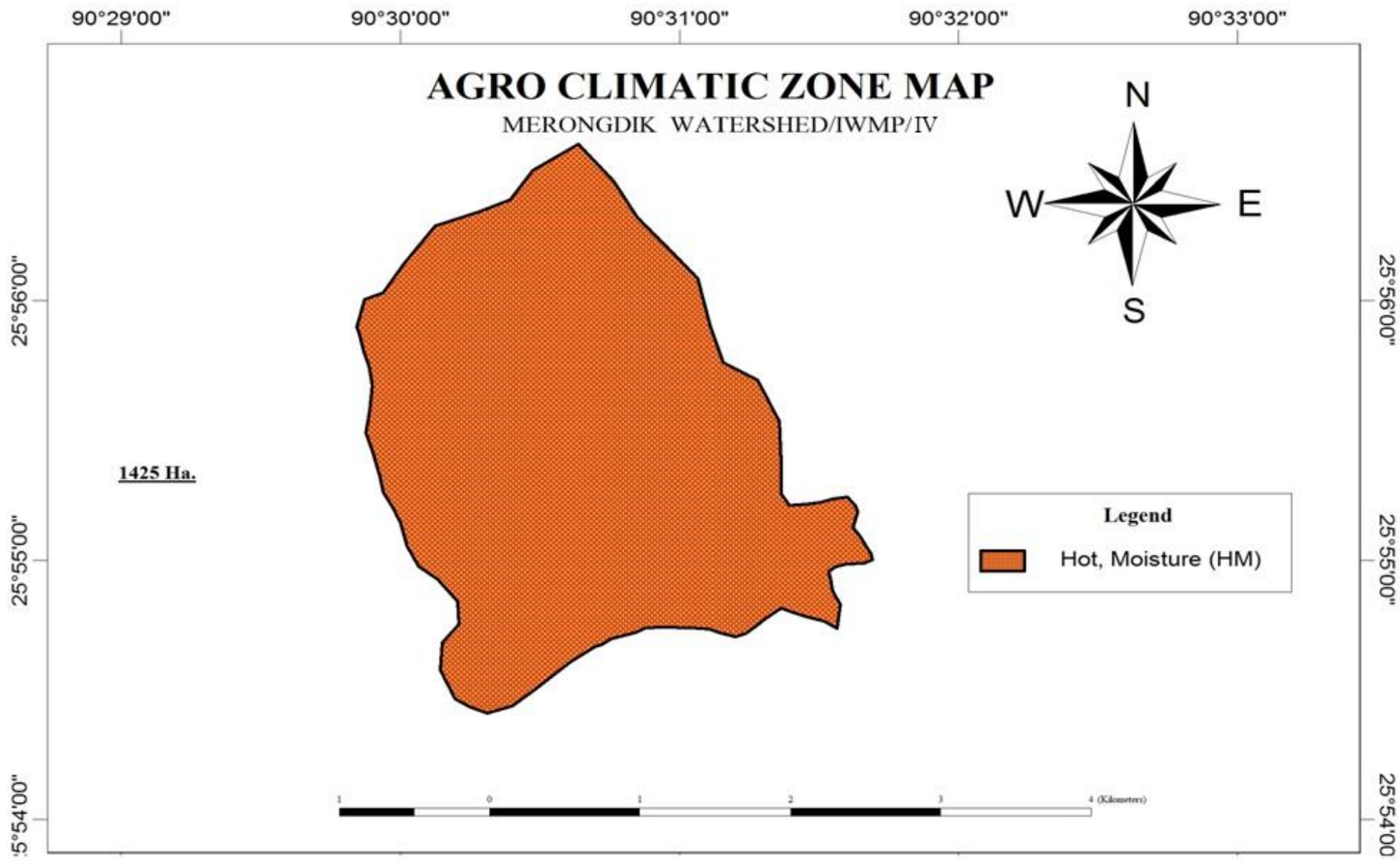

90°29'00"
90°30'00"
90°31'00"
90°32'00"
90°33'00"
25°57'00"
25°56'00"
25°55'00"
25°54'00"
ELEVATION MAP
MERONGDIK WATERSHED/IWMP/IV
1425 Ha.
N
W
E
S
Legend
Elevation in Metres
79 - 101
101 - 124
124 - 147
147 - 169
169 - 192
192 - 215
215 - 238
238 - 260
260 - 283
283 - 306
306 - 329
329 - 351
351 - 374
374 - 397
397 - 420
1 0 1 2 (Kilometers)


SLOPE MAP
MERONGDIK WATERSHED/IWMP/IV
1425 Ha.
90°29'00"
90°30'00"
90°31'00"
90°32'00"
90°33'00"
25°57'00"
25°56'00"
25°55'00"
25°54'00"
N
W
E
S
Legend
Slope in Percentage
0 - 7
7 - 15
15 - 23
23 - 31
31 - 39
39 - 47
47 - 55
55 - 63
1 0 1 2 3 (Kilometers)


LAND USE LAND COVER MAP
MERONGDIK WATERSHED/IWMP/IV
90°29'00"
90°30'00"
90°31'00"
90°32'00"
90°33'00"
25°56'00"
25°55'00"
N
W
E
S
1425 Ha.
Legend
Tree Clad Open 212 Ha.
Tree Clad Closed 105 Ha.
Current Jhum 180 Ha.
Built Up Area 56 Ha.
Agriculture 569 Ha.
Abandoned Jhum 303 Ha.
1 0 1 2 3 4 5 (Kilometers)


90°30'00"
90°31'00"
90°32'00"
90°33'00"
PROPOSED LAND USED MAP
MERONGDIK WATERSHED/IWMP/IV
N
W
E
S
25°56'00"
25°55'00"
1425 Ha.
Legend
Rubber Nursery 135 Ha.
Impt Paddy Field 190 Ha
Impt Degraded Forest 55Ha.
Bench Terrace 41.50 Ha
1 0 1 2 3 4 (Kilometers)


SOIL MAP
MERONGDIK WATERSHED/IWMP/IV
1425 Ha.
N
W
E
S
Legend
Depth
Deep
Texture
Medium
Erosion
Moderate
90°29'00"
90°30'00"
90°31'00"
90°32'00"
90°33'00"
25°57'00"
25°56'00"
25°55'00"
25°54'00"
2 (Kilometers)


90°29'00"
90°30'00"
90°31'00"
90°32'00"
90°33'00"
AGRO CLIMATIC ZONE MAP
MERONGDIK WATERSHED/IWMP/IV
N
W
E
S
25°56'00"
25°55'00"
25°54'00"
1425 Ha.
Legend
Hot, Moisture (HM)
1 0 1 2 3 4 (Kilometers)

ANNEXURE – IV

(PLAN &ESTIMATE)

MODEL ESTIMATE FOR CONSTRUCTION OF WATER HARVESTING FARM POND WITH C.C. CORE WALL AT GARO TORIKKAKONA UNDER MERONGDIK WATERSHED, NGH-IWMP-IV RESUBELPARA C&RD BLOCK.

As per PWD Schedule of Rates for Roads, Bridges, E&D, works for the year 2011-2012.

****

1	Site preparation -	L.S. - - - - -		Rs. 205.00
2/9.1/67	Earth work in excavation for foundation of structures upto 3m depth as per drawing and technical specification.			
	1 no. x 13.20 x 0.80 x 1.50	= 15.84m^3		
	1 no. x 8.30 x 1.00 x 1.00	= 8.00m^3		
	2 nos. x 8.00 x 0.20 x 0.35	= 1.12m^3		
	Total :	= 24.96m^3		
	@Rs. 105.00/m^3 - - - - - - -			Rs. 2620.80
3/14.1/97	Providing boulder apron for bed protection with stone boulders of minimum size etc.			
	1 no. x 8.00 x 0.60 x 0.20	= 0.96m^3		
	@Rs. 1316.00/m^3 - - - - - - -			Rs. 1263.36
4/12.4/137	Providing P.C.C. 1:3:6 nominal mix in foundation with crushed stone aggregate 40mm nominal mix etc.			
	1 no. x 13.20 x 0.80 x 0.20	= 2.112m^3		
	1 no. x 13.20 x 0.60 x 1.30	= 10.296m^3		
	1 no. x 13.20 x $\frac{0.30 + 0.60}{2}$ x 2.50	= 14.850m^3		
	2 nos. x 8.00 x 0.20 x 1.35	= 4.320m^3		
	1 no. x 8.00 x 0.60 x 0.20	= 0.960m^3		
	Total :	= 32.540m^3		
	@Rs. 4262.00/m^3 - - - - - - -			Rs. 138685.48

5/3.4/28 Earthwork in filling the embankment with approved materials obtained from borrow pits with a lift upto 1.50m etc.

1 no. x 13.20 x $\frac{12.50 + 2.00}{2}$ x 3.00 = 287.10m^3

Deduction for core wall.

1 no. x 13.20 x $\frac{0.30 + 0.60}{2}$ x 2.50 (-) = 14.85m^3

Total : = 272.25m^3

@Rs. 82.00/m^3 - - - - - - - Rs. 22324.50

6/14.5/100 Providing pitching on slope laid over prepared fills media, as per drawing and technical specification.

1 no. x 13.20 x 6.70 x 0.20 = 17.68m^3

@Rs. 82.00/m^3 - - - - - - - Rs. 23266.88

7/3.12/37 Furnishing and laying of live soads of perennial turf farming grass on embankment etc.

1 no. x 13.20 x 5.40 = 71.28m^2

1 no. x 13.20 x 2.00 = 26.40m^2

Total : = 97.68m^2

@Rs. 72.00/m^2 - - - - - - - Rs. 7032.96

8/9.13/78 Providing plastering with cement mortar (1:4)

Outlet : - 2 nos. x 8.00 x 0.60 = 9.60m^2

1 no. x 8.00 x 0.60 = 4.80m^2

2 nos. x 8.00 x 0.20 = 3.20m^2

Total : = 17.60m^2

@Rs. 179.00/m^2 - - - - - - - Rs. 3150.40

9/67 Earthwork in excavation for foundation of structures upto 3m depth, as per drawing etc.

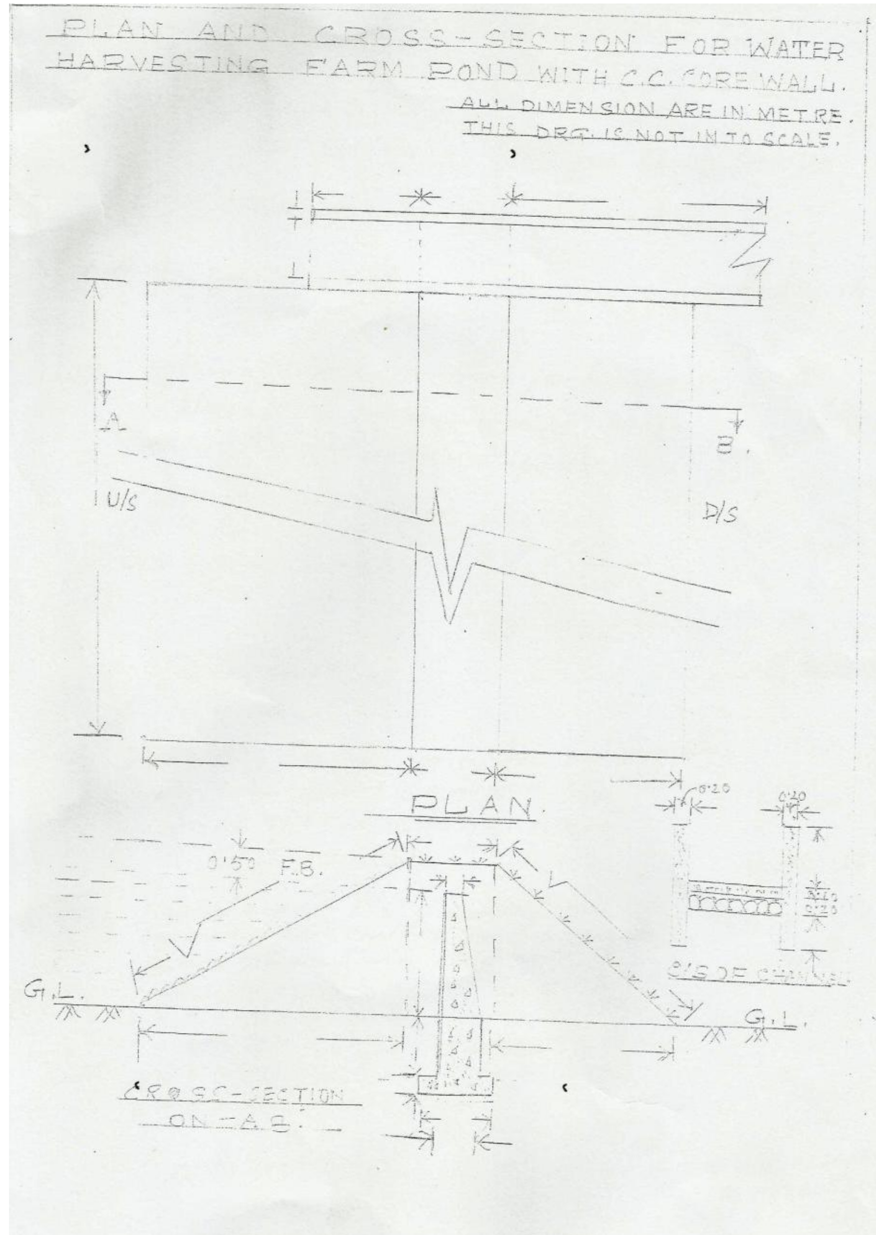
$28.80 \times \frac{1.00 + 0.60}{2} \times 0.60 = 13.82 m^3$

@Rs. 105.00/m^3 - - - - - - - Rs. 1451.10

Grand Total : - Rs. 200000.38

Say, - Rs. 200000.00

Rupees Two lakh only.


PLAN AND CROSS-SECTION FOR WATER
HARVESTING FARM POND WITH C.C. CORE WALL.
ALL DIMENSION ARE IN METRE.
THIS DRG. IS NOT IN TO SCALE.
A
B
U/S
D/S
PLAN
0'50
F.B.
0.20
G.L.
G.L.
CROSS-SECTION
ON-AB

MODEL ESTIMATE FOR CONSTRUCTION OF WATER HARVESTING FARM POND WITH C.C. CORE WALL AT MERONGDIK UNDER MERONGDIK WATERSHED, NGH-IWMP-IV RESUBELPARA C&RD BLOCK.

As per PWD Schedule of Rates for Roads, Bridges, E&D, works for the year 2011-2012.

****

1 Site preparation - L.S. - - - - - Rs. 205.00

2/9.1/67 Earth work in excavation for foundation of structures upto 3m depth as per drawing and technical specification.

1 no. x 13.20 x 0.80 x 1.50 = 15.84m^3
1 no. x 8.30 x 1.00 x 1.00 = 8.00m^3
2 nos. x 8.00 x 0.20 x 0.35 = 1.12m^3
Total : = 24.96m^3

@Rs. 105.00/m^3 - - - - - - - Rs. 2620.80

3/14.1/97 Providing boulder apron for bed protection with stone boulders of minimum size etc.

1 no. x 8.00 x 0.60 x 0.20 = 0.96m^3

@Rs. 1316.00/m^3 - - - - - - - Rs. 1263.36

4/12.4/137 Providing P.C.C. 1:3:6 nominal mix in foundation with crushed stone aggregate 40mm nominal mix etc.

1 no. x 13.20 x 0.80 x 0.20 = 2.112m^3
1 no. x 13.20 x 0.60 x 1.30 = 10.296m^3
1 no. x 13.20 x $\frac{0.30 + 0.60}{2}$ x 2.50 = 14.850m^3
2 nos. x 8.00 x 0.20 x 1.35 = 4.320m^3
1 no. x 8.00 x 0.60 x 0.20 = 0.960m^3
Total : = 32.540m^3

@Rs. 4262.00/m^3 - - - - - - - Rs. 138685.48

5/3.4/28 Earthwork in filling the embankment with approved materials obtained from borrow pits with a lift upto 1.50m etc.

1 no. x 13.20 x $\frac{12.50 + 2.00}{2}$ x 3.00 = 287.10m^3

Deduction for core wall.

1 no. x 13.20 x $\frac{0.30 + 0.60}{2}$ x 2.50 (-) = 14.85m^3

Total : = 272.25m^3

@Rs. 82.00/m^3 - - - - - - - Rs. 22324.50

6/14.5/100 Providing pitching on slope laid over prepared fills media, as per drawing and technical specification.

1 no. x 13.20 x 6.70 x 0.20 = 17.68m^3

@Rs. 82.00/m^3 - - - - - - - Rs. 23266.88

7/3.12/37 Furnishing and laying of live soads of perennial turf farming grass on embankment etc.

1 no. x 13.20 x 5.40 = 71.28m^2
1 no. x 13.20 x 2.00 = 26.40m^2
Total : = 97.68m^2

@Rs. 72.00/m^2 - - - - - - - Rs. 7032.96

8/9.13/78 Providing plastering with cement mortar (1:4)

Outlet : - 2 nos. x 8.00 x 0.60 = 9.60m^2
1 no. x 8.00 x 0.60 = 4.80m^2
2 nos. x 8.00 x 0.20 = 3.20m^2
Total : = 17.60m^2

@Rs. 179.00/m^2 - - - - - - - Rs. 3150.40

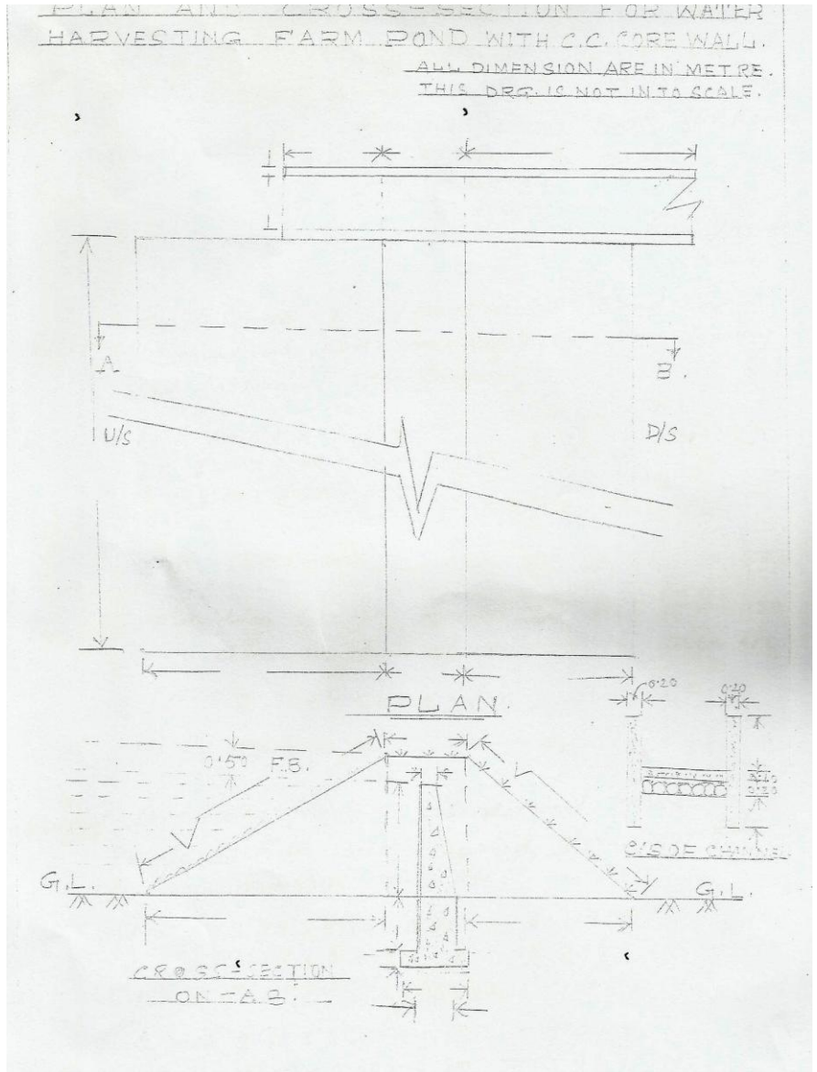
9/67 Earthwork in excavation for foundation of structures upto 3m depth, as per drawing etc.

28.80 x $\frac{1.00 + 0.60}{2}$ x 0.60 = 13.82m^3

@Rs. 105.00/m^3 - - - - - - - Rs. 1451.10

Grand Total : - Rs. 200000.38

Say, - Rs. 200000.00 Rupees Two lakh only.


PLAN AND CROSS-SECTION FOR WATER HARVESTING FARM POND WITH C.C. CORE WALL.
ALL DIMENSION ARE IN METRE.
THIS DRG. IS NOT IN TO SCALE.
A.
B.
U/S
D/S
PLAN.
F.B.
G.L.
G.L.
CROSS SECTION ON A.B.

MODEL ESTIMATE FOR CONSTRUCTION OF SPRING CHAMBER WITH DAM AND WATER RESERVOIR TANK AT MERONGDIK UNDER MERONGDIK WATERSHED, NGH-IWMP-IV, RESUBELPARA C&RD BLOCK.

As per PWD Schedule of Rates for Roads, Bridges, E&D, works for the year 2011-2012.

****

1 Site preparation - L.S. - - - - - Rs. 180.00

2/9.1/67 Earthwork in excavation for foundation of structures, including setting out construction of shoring & bracing removal of stumps and other deleterious matters etc.

Dam for Spring Chamber:
1 x 6.00 x 0.80 x 1.20 = 5.76m^3
1 x 2 nos. x 5.00 x 0.80 x 1.20 = 9.60m^3
For Reservoir Tank:
1 x 2 nos. x 2.50 x 0.30 x 0.50 = 0.75m^3
1 x 2 nos. x 1.50 x 0.30 x 0.50 = 0.45m^3
1 x 1 on x 1.50 x 2.00 x 0.30 = 0.90m^3
Platform:
1 x 1 no. x 1.50 x 2.30 x 0.20 = 0.69m^3
Total : = 18.15m^3

@Rs. 105.00/m^3 - - - - - - - Rs. 1905.75

3/14.1/97 Providing and laying boulder apron for bed protection with stone boulders of minimum size and weight not less 25kg. laid dry complete.

Dam for Spring chamber:
1 x 6.00 x 0.80 x 0.10 = 0.48m^3
1 x 2 nos. x 5.00 x 0.80 x 0.10 = 0.80m^3
For Reservoir Tank:
1 x 2 nos. x 2.50 x 0.30 x 0.10 = 0.15m^3
1 x 2 nos. x 1.50 x 0.30 x 0.10 = 0.09m^3
1 x 1 no. x 2.00 x 1.50 x 0.10 = 0.30m^3
For Platform:
1 x 1 no. x 2.30 x 1.50 x 0.10 = 0.34m^3
Total : = 2.16m^3 @Rs. 1316.00/m^3 - - - - - - - Rs. 2842.56

4/12.8/141(B) Providing plan cement concrete in open foundation complete as per drawing and technical specification.

Dam for Spring Chamber:
1 x 1 no. x 6.00 x 0.80 x 0.10 = 0.48m^3
1 x 2 nos. x 5.00 x 0.80 x 0.10 = 0.80m^3
For Reservoir Tank:
1 x 2 nos. x 2.50 x 0.30 x 0.10 = 0.15m^3
1 x 2 nos. x 1.50 x 0.30 x 0.10 = 0.09m^3
1 x 1 no. x 2.00 x 1.50 x 0.10 = 0.30m^3
Total : = 1.82m^3

@Rs. 5343.00/m^3 - - - - - - - Rs. 9724.26

5/12.4/172 Supplying fitting and placing un-coated HUSD bar reinforcement in foundation complete as per drawing etc.

For Reservoir Tank: - 12mm ⌀bar 15cm c/c.
2 x 18 pecs. x 1.65 x 0.89 kg/Rm. = 52.86kg.
2 x 15 pecs. x 1.65 x 0.89 kg/Rm. = 44.05kg.
10mm ⌀bar 20cm c/c.
2 x 8 pecs. x 2.20 x 0.62 kg/Rm. = 21.83kg.
2 x 8 pecs. x 1.50 x 0.62 kg/Rm. = 14.88kg.
2 x 9 pecs. x 2.20 x 0.62 kg/Rm. = 24.55kg.
2 x 12 pecs. x 1.80 x 0.62 kg/Rm. = 26.78kg.
Total : = 184.95kg.
Say, = 0.1850 Tones.

@Rs. 58451.00/Tone - - - - - - - Rs. 10813.40

6/12.11/144(ii) Providing plain/reinforcement cement concrete in well foundation complete as per drawing and technical specification.

R.C.C. Grand M_{20}.

Dam for Spring Chamber:

1 x 6.00 x 0.60 x 1.00 = 3.60m^3

2 x 5.00 x 0.60 x 1.00 = 6.00m^3

1 x 6.00 x $\frac{0.30 + 0.60}{2}$ x 1.50 = 4.05m^3

2 x 5.00 x $\frac{0.30 + 0.60}{2}$ x 1.50 = 6.75m^3

Reservoir Tank:

2 x 2.50 x 0.30 x 0.30 = 0.45m^3

2 x 1.50 x 0.30 x 0.30 = 0.27m^3

1 x 1.85 x 1.55 x 0.20 = 0.57m^3

2 x 2.30 x 0.15 x 1.40 = 0.97m^3

2 x 1.50 x 0.15 x 1.40 = 0.63m^3

1 x 2.30 x 1.80 x 0.10 = 0.41m^3

Platform:

1 x 2.30 x 1.50 x 0.10 = 0.34m^3

Total : = 24.04m^3

@Rs. 6631.00/m^3 - - - - - - - Rs. 159409.24

7 Providing and fixing GI Pipes including necessary sockets, bends, nuts, elbows, ties, etc. complete as per (PHE SOR) or market rates.

65mm dia GI Pipes 2.50m	@Rs. 799.93/Rm.	= 1999.825	
50mm dia GI Pipes 8.60m	@Rs. 625.94/Rm.	= 5383.084	
15mm dia GI Pipes 6.32m	@Rs. 170.09/Rm.	= 1074.968	
Bib cock 2 nos. steel	@Rs. 258.00 each.	= 516.000	
	Total :	= 8973.877	Rs. 8973.87

8/13.3/176 Plastering with cement mortar 1:3 in sub-structure as per drawing and technical specification.

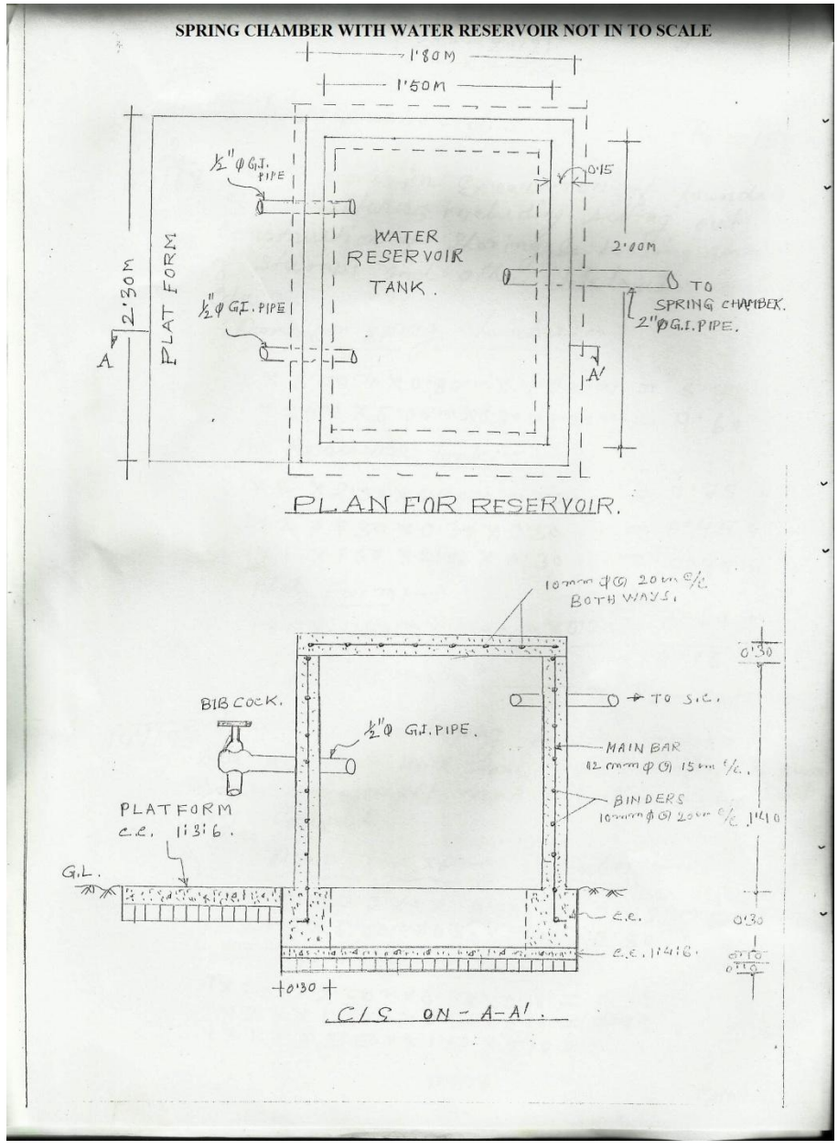
Dam for Spring Chamber:

1 x 2 nos. x 6.00 x 1.50	= 18.00m^2
1 x 2 nos. x $\frac{0.30 + 0.60}{2}$ x 1.50	= 1.35m^2
2 x 1 no. x 5.00 x 1.50	= 15.00m^2
1 x 1 no. x 6.00 x 0.30	= 1.80m^2
2 x 1 no. x 5.00 x 0.30	= 3.00m^2
Reservoir Tank:	
2 x 1 no. x 2.30 x 1.40	= 6.44m^2
2 x 1 no. x 1.80 x 1.40	= 5.04m^2
2 x 1 no. x 2.00 x 1.40	= 5.60m^2
2 x 1 no. x 1.50 x 1.40	= 4.20m^2
1 x 1 no. x 2.00 x 1.50	= 3.00m^2
Total :	= 63.43m^2

@Rs. 97.00/m^2 - - - - - - - - Rs. 6152.71

Grand Total : Rs. 200001.79
Say, - Rs. 200000.00
(Rupees Toe lakh) only.

SPRING CHAMBER WITH WATER RESERVOIR NOT IN TO SCALE



MODEL ESTIMATE FOR CONSTRUCTION OF R.C.C. RINGWELL AT MERONGDIK UNDER MERONGDIK WATERSHED, IWMP-IV RESUBELPARA C&RD BLOCK.
As per PWD Schedule of Rates for Roads, Bridges, E&D, works for the year 2011-2012.
****

1/8.3/61(A) Earthwork in excavation in soil in hilly area in manual means including cutting and trimming of the sides slopes and disposing of excavated earth with a lift upto 1.5m and lead upto 20m as per drawing and technical specification.

(i) $22/7 \times (0.85)^2 \times 1.50m$ (1^{st} 1.50m) = $3.40m^3$
@Rs. 145.00/m^3 - - - - - - Rs. 493.00

(ii) $22/7 \times (0.85)^2 \times 1.50m$ (2^{nd} 1.50m) = $3.40m^3$
@Rs. 145.00/m^3 - - - - - - Rs. 986.00

(iii) $22/7 \times (0.85)^2 \times 1.50m$ (3^{rd} 1.50m) = $3.40m^3$
@Rs. 145.00/m^3 x 3^{rd} = Rs. 435.00 - - - - Rs. 1479.00

(iv) $22/7 \times (0.85)^2 \times 1.50m$ (4^{th} 1.50m) = $3.40m^3$
@Rs. 145.00/m^3 x 4^{th} = Rs. 580.00 - - - - Rs. 1972.00

(v) $22/7 \times (0.85)^2 \times 1.50m$ (5^{th} 1.50m) = $3.40m^3$
@Rs. 145.00/m^3 x 5^{th} = Rs. 725.00/m^3 - - - Rs. 2465.00

(vi) $22/7 \times (0.85)^2 \times 1.50m$ (6^{th} 1.50m) = $3.40m^3$
@Rs. 145.00/m^3 x 6^{th} = Rs. 870.00/m^3 - - - Rs. 2958.00

(vii) $22/7 \times (0.85)^2 \times 1.50m$ (7^{th} 1.50m) = $3.40m^3$
@Rs. 145.00/m^3 x 7^{th} = Rs. 1015.00/m^3 - - - Rs. 3451.00

(viii) $22/7 \times (0.85)^2 \times 1.50m$ (8^{th} 1.50m) = $3.40m^3$
@Rs. 145.00/m^3 x 8^{th} = Rs. 1160.00/m^3 - - - Rs. 3944.00

(ix) $22/7 \times (0.85)^2 \times 1.50m$ (9^{th} 1.50m) = $3.40m^3$
@Rs. 145.00/m^3 x 9^{th} = Rs. 1305.00/m^3 - - - Rs. 4437.00

Total : Rs. 22185.00

2/104 P.C.C. work in prop 1:3:6 in C.C. Ringwell nominal mix, with crushed stone aggregate nominal size placed in Ringwell complete as directed, cement concrete grade M10.

33 nos. x 22/7 x $(0.60)^2$ x 0.45 = $16.80m^3$

Deduction for Hollow: -

33 nos. x 22/7 $(0.52)^2$ x 0.45 (-) = $12.61m^3$

Total : = $4.19m^3$

@ Rs. 4083.00/m^3 - - - - - - - Rs. 17107.77

3/138 Providing brick masonry work for wall around the platform of C.C. Ringwell 30cm thick in cement mortar 1:3 in foundation complete, including painting and plastering etc. etc.

1 no. x 22/7 x $(1.815)^2$ x 0.60m = $6.21m^3$

Deduction for inner side area:

1 no. x 22/7 x $(1.665)^2$ x 0.60m (-)= $5.22m^3$

Total : = $0.99m^3$

@Rs. 3940.00m^3 - - - - - - - Rs. 5880.60

4/2.9 Providing round shuttering with 22 G.I. plain sheet properly fitted in 1st class local wood frame area of shuttering = $2\pi rh$

(i) Outer Area = 2 x 22/7 x 0.60 x 0.45 x 6 nos. = $10.18m^2$

(ii) Inner Area = 2 x 22/7 x 0.52 x 0.45 x 6 nos. = $8.82m^2$

Total : = $19.00m^2$

@Rs. 427.00/m^2 - - - - - - - Rs. 8113.00

5/76(A) Providing stone masonry work in cement mortar 1:4 in foundation for platform complete as directed etc.

1 no. x 22/7 x $(1.665)^2$ x 0.25m = $2.18m^3$

Deduction for Ringwell:

1 no. x 22/7 x $(1.615)^2$ x 0.25m (-)= $0.30m^3$

Total : = $1.88m^3$

@Rs. 3120.00m^3 - - - - - - - Rs. 5865.60

6/173 Supplying and fitting and placing uncoated mild steel reinforcement complete in ringwell ring laid in 10cm c/c in horizontal section 3cm c/c in vertical section, etc.

8mm & mild steel bar:

Horizontal apart = 10 nos. x 3.14 x 33 nos. Ring = 1036.20Rm.
Vertical apart = 22 nos. x 0.45 x 33 nos. Ring = 326.70Rm.
Total : = 1362.90Rm.
Or 0.39kg./Rm. = 531.53kg. or 0.5315 tones.

@Rs. 49130.00/tones - - - - - - - Rs. 26112.59

7/176 Plastering with cement mortar 1:3 on stone masonry work for Ringwell platform as per drawing and technical specification.

1 no. x 22/7 x $(1.125)^2$ = 14.19m^2

Deduction for Ringwell:

1 no. x 22/7 x $(1.665)^2$ (-) = 1.39m^2

Total : = 12.80m^2

@Rs. 97.00m^2- - - - - - - - Rs. 1241.60

8 Labour for shinking down R.C.C. Ringwell in position including earth filling in out side of the Ringwell and ramming etc. complete.

L.S. - - - - - - - - - Rs. 3500.00

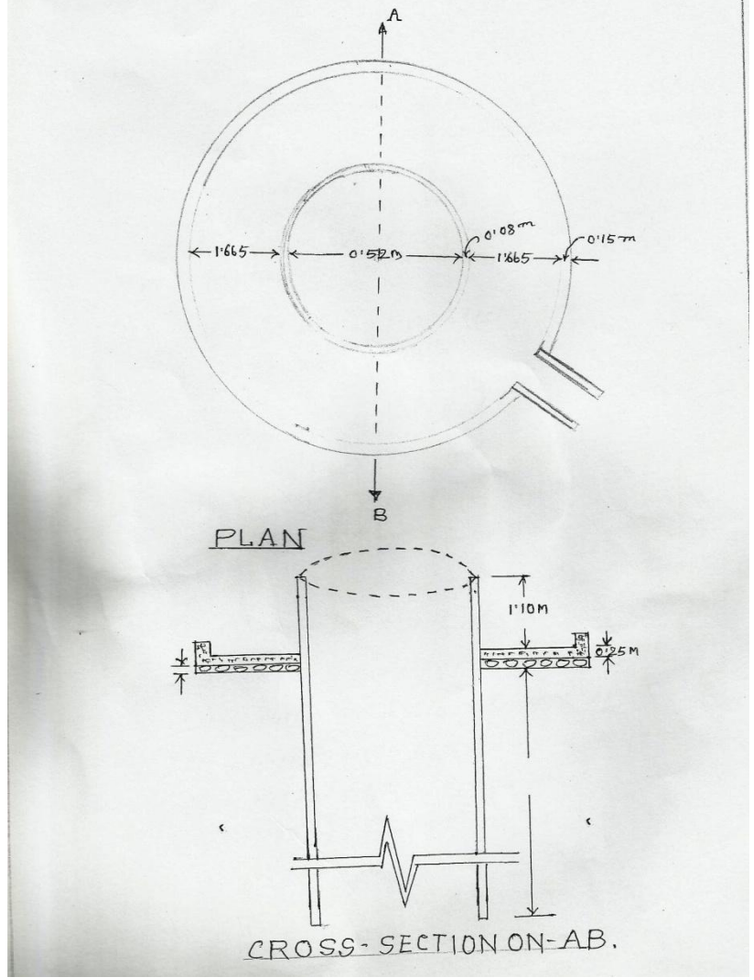
Grand Total : Rs. 90006.16

Say, - Rs. 90000.00

(Rupees Ninety thousand) only.

PLAN AND CONSTRUCTION FOR CONSTRUCTION OF R.C.C. RING WELL.

NOT TO SCALE.



ESTIMATE FOR CONSTRUCTION OF C.C. IRRIGATION DAM WITH C.C. LEAD CHANNAL ACROSS MERONGDIK STREAM.
AS PER P.W.D., S.O.R. FOR ROADS, BRIDGES, E & D WORK FOR THE YEARS 2011-2012.

1. Site preparation - - - L.S. - - - - Rs. 895.00

2/9.1/67 Earth work in Excavation for foundation of structure upto 3m depth, as per drawing and technical specification.

Dam	20.00m x 1.30 x 1.20	= 31.20 m^3
W/Wall	2 x 5.00 x 1.20 x 1.10	= 13.20 m^3
Apron	1 x 8.00 x 3.20 x 0.40	= 10.24 m^3
T/Wall	1 x 8.00 x 0.30 x 0.60	= 1.44 m^3
L/Channel	1 x 15.00 x 1.00 x 1.00	= 15.00 m^3
	Total = 71.08	m^3

@ Rs.105.00/m^3 - - - - - - - -Rs. 7463.40

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

Dam	1 x 20.00 x 1.30 x 0.20	= 5.20 m^3
U/S	1 x 20.00 x 1.20 x 0.20	= 4.80 m^3
D/S	1 x 20.00 x 1.20 x 0.20	= 4.80 m^3
W/wall	2 x 5.00 x 1.20 x 0.20	= 2.40 m^3
Apron	1 x 8.00 x 3.20 x 0.40	= 10.24 m^3
T/wall	1 x 8.00 x 0.40 x 0.20	= 0.64 m^3
L/Channel	1 x 15.00 x 1.00 x 0.20	= 3.00 m^3
	Total = 31.08 m^3	

@Rs.1316.00/m^3 - - - - - - - Rs. 40901.28

3/12.4/137 Plain cement concrete M10 (1:3:6) nominal mix in leveling course below open foundation of head works as per drawing and technical specification.

Dam	1 x 20.00 x 1.30 x 0.10	= 2.60 m^3
	1 x 20.00 x 1.00 x 0.90	= 18.00 m^3
	1 x 20.00 x $\frac{0.60 + 1.00}{2}$ x 1.90	= 30.40 m^3
	2 x 6.00 x 0.60 x 0.50	= 7.80 m^3
Apron	1 x 8.00 x 1.50 x 0.10	= 1.20 m^3
	1 x 8.00 x 2.83 x 0.10	= 2.26 m^3
T/Wall	1 x 8.00 x 0.20 x 0.40	= 0.64 m^3
S/wall	2 x 1.50 x 0.20 x 0.50	= 0.30 m^3
	2 x 1.50 x 0.20 x $\frac{0.50 + 2.83}{2}$	= 0.99 m^3
L/Channel	1 x 15.00 x 1.00 x 0.20	= 3.00 m^3
	2 x 15.00 x 0.60 x 0.20	= 3.60 m^3
	Total	= 70.79 m^3

@Rs.4262.00/m^3 - - - - - - - Rs. 301736.98

4/8.4/62 Providing for construction of stone masonry works for wing walls/ breast walls in cement mortor 1:5.

W/wall	2 nos. x 5.00 x 1.00 x 0.90	= 9.00 m^3
	2 nos. x 5.00 x $\frac{1.00 + 0.60}{2}$ x 2.00	= 16.00 m^3
		= 25.00 m^3

@Rs.3271.00/m^3 - - - - - - - Rs. 81775.00

5/13.3/176 12 mm thick cement plastering including cleaning the surface in prop 1:3 including carriage of sand within 200 m.

Dam	2 x 20.00 x 1.90	= 76.00 m^2
	2 x $\frac{1.00 + 0.60}{2}$ x 1.90	= 3.04 m^2
	1 x 20.00 x 0.60	= 12.00 m^2
	4 x 6.00 x 0.50	= 12.00 m^2
	4 x 0.60 x 0.50	= 1.20 m^2
Apron	1 x 8.00 x 4.33	= 34.64 m^2
T/wall	1 x 8.00 x 0.20	= 1.60 m^2
S/wall	4 x 4.33 x 0.20	= 3.46 m^2
L/Channel	2 x 15.00 x 0.60	= 18.00 m^2
	2 x 15.00 x 0.60	= 9.00 m^2
	4 x 15.00 x 0.20	= 6.00 m^2
	Total	=177.99 m^2

@Rs.97.00/m^2 - - - - - - - - Rs. 17260.18

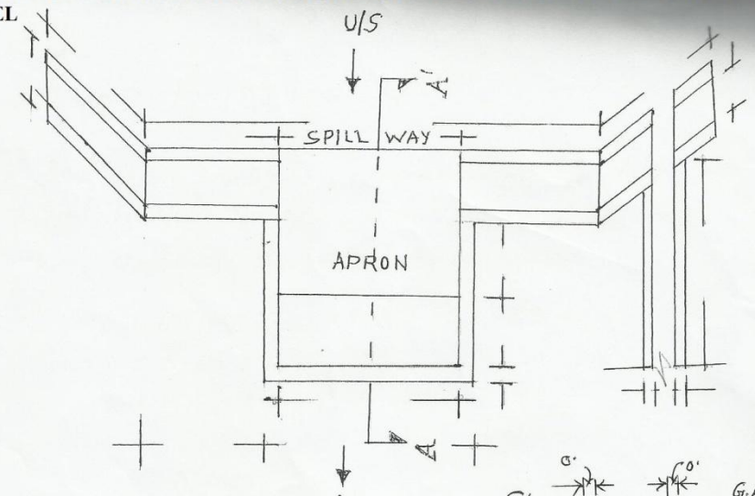
Grand Total Rs. 450001.84

Say Rs. 450000.00

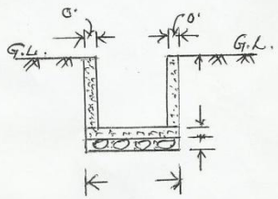
(Rupees Four lakh and fifty thousand) only.

Submitted,

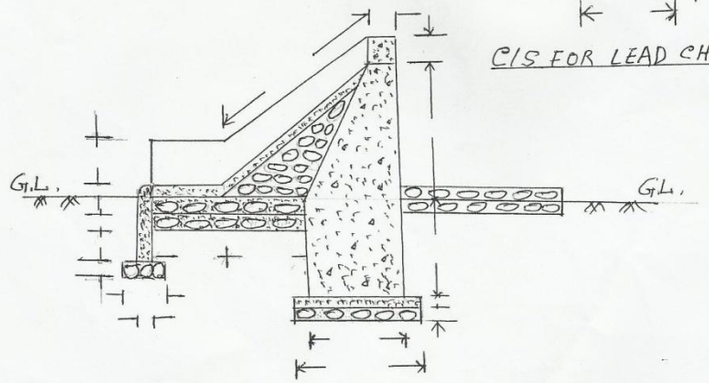
PLAN AND CROSS-SECTION FOR CONSTRUCT OF C.C. IRRIGATION DAM WITH C.C. LED CHANNEL



PLAN.



C/S FOR LEAD CHANNEL.



CROSS-SECTION ON-AA'

ESTIMATE FOR CONSTRUCTION OF BOULDER SAUSAGE PROTECTION WALL
AT ……
AS PER P.W.D., S.O.R. FOR ROADS, BRIDGES, E & D WORK FOR THE YEARS 2011-2012.

1. Site preparation - - - L.S. - - - Rs. 159.00

2/134 Earth work in Excavation for foundation of structures including setting out of construction of sharing and bracing removal of stumps and other deleterious matters.

A (2) Ordinary Soil :

1 x 30.40 x 1.00 x 0.50 = 15.20 m^3

@ Rs.50.00/m^3 - - - - - - - Rs. 760.00

2/98 Providing and laying boulder apron laid in wire crates with 4 mm dia G.I. wire conforming to 18.280 and 5:4826 in 100 x 100 mm mesh (woven diagonally) including 10 % extra for laps and joints stone boulders weighing not less than 25 kg each as per drawing etc. etc.

1 liers x 30.40 x 0.90 x 0.90 = 24.62 m^3

@Rs.2393.00/m^3 - - - - - - - Rs. 58915.66

Grand Total Rs. 59834.66

Say Rs. 59834

∴ 3 nos. x Rs. 59834.00 = Rs. 17502.00

Say Rs. 179500/-

(Rupees One lakh seventy nine thousand five hundred) only.

ESTIMATE FOR CONSTRUCTION OF C.C. IRRIGATION DAM WITH C.C. LEAD CHANNEL AND EARTHEN CHANNEL AT ……
AS PER P.W.D. S.O.R. FOR ROADS, BRIDGES, E & D WORK FOR THE YEARS 2011-2012.

1/67 Earth work in Excavation for foundation of structures up to 3 m depth as per drawing and technical specification.

Dam	1 x 12.00 x 0.85 x 1.20	= 12.24m^3
W/Wall	2 x 5.00 x 0.80 x 0.90	= 7.20m^3
L/Channel	1 x 10.00 x $\frac{1.20 + 1.0}{2}$ x 0.80	= 8.80 m^3
Apron	1 x 2.40 x 2.00 x 0.50	= 2.40 m^3
	Total	= 30.64 m^3

@ Rs.105.00/m^3 - - - - - - - -Rs. 3217.20

2/97 Providing and laying boulder apron for bed protection with stone boulders of minimum size and weight not less than 25 kg laid dry complete etc, etc. .

1 x 12.00 x 0.85 x 0.20	= 2.04 m^3
2 x 5.00 x 0.80 x 0.20	= 1.60 m^3
1 x 10.00 x 1.00 x 0.20	= 2.00 m^3
1 x 2.40 x 2.00 x 0.40	= 1.92 m^3
Total	= 7.56 m^3

@Rs.1316.00/m^3 - - - - - - - Rs. 9948.96

3/75 Providing Plain cement concrete M 10 (1:3:6 nominal mix) leveling course below open foundation of head walls as per drawing and technical specification.

	1 x 12.00 x 0.85 x 0.10	= 1.02 m^3
	1 x 12.00 x 0.65 x 0.90	= 7.02 m^3
	1 x 12.00 x $\frac{0.65 + 0.45}{2}$ x 1.20	= 7.92 m^3
	2 x 4.80 x 0.45 x 0.45	= 1.94 m^3
W/Wall	2 x 5.00 x 0.65 x 0.70	= 4.55 m^3
	2 x 5.00 x 0.65 + 0.45 x 1.20	= 6.60 m^3
Apron	1 x 2.40 x 1 x $\frac{0.00 + 1.10}{2}$ = 1.32 m^3	
	1 x 2.40 x 1.70 x 0.10	= 0.40 m^3
	1 x 2.40 x 1.00 x 0.10	= 0.24 m^3
	2 x 1.70 x 0.45 x 0.20	= 0.30 m^3
	2 x 1.00 x 0.45 x 0.20	= 0.18 m^3
	2 x 2.40 x 1.15 x 0.20	= 1.10 m^3
Channel	1 x 10.00 x 1.00 x 0.10	= 1.00 m^3
	2 x 10.00 x 0.60 x 0.70	= 8.40 m^3
	Total	= 41.99 m^3

@Rs.4083.00/m^3 - - - - - - - Rs. 171445.17

4/176 Plastering with cement mortor 1:3 in sub structure.

2 x 12.00 x 1.65		= 39.60 m^3
1 x 12.00 x 0.45		= 5.40 m^3
2 x $\frac{0.65 + 0.45}{2}$ x 1.65		= 1.81 m^3
2 x 5.00 x 1.20		= 12.00 m^3
2 x 5.00 x 0.45		= 4.50 m^3
2 x 2.45 x 0.45		= 2.20 m^3
1 x 2.00 x 0.45		= 0.90 m^3
1 x 2.00 x 1.00		= 2.00 m^3
1 x 2.00 x 1.70		= 3.40 m^3
2 x 10.00 x 0.70		= 14.00 m^3
1 x 10.00 x 0.80		= 8.00 m^3
	Total	= 93.81 m^3

@Rs.97.00/m^3 - - - - - - - - Rs. 9099.57

5/134 Earthen work in excavation for earthen irrigation channel including removal of stumps and other deleterious matter and dressing of sides and bottom etc., etc.

1 x 101.00 x $\frac{1.50 + 1.00}{2}$ x 1.00 = 126.25 m^3

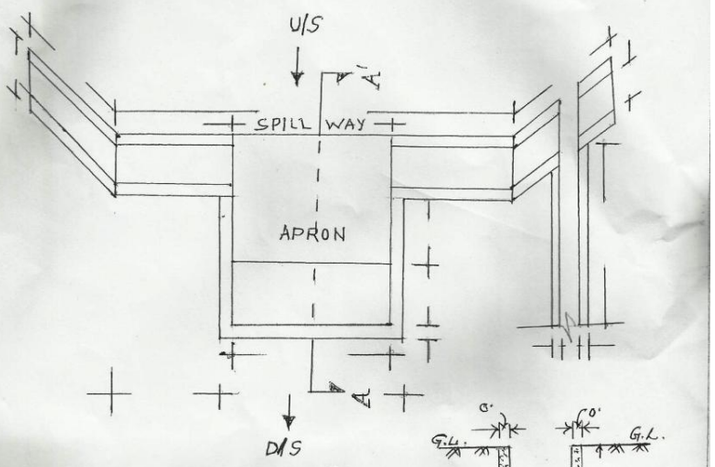
@Rs.50.00/m^3 - - - - - - - - Rs. 6312.50

Grand Total	Rs.	200023.40
Say	Rs.	200000

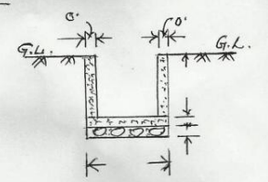
∴ 3 nos. x Rs. 200000/- each = Rs. 600000/-
(Rupees Six lakh) only.

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

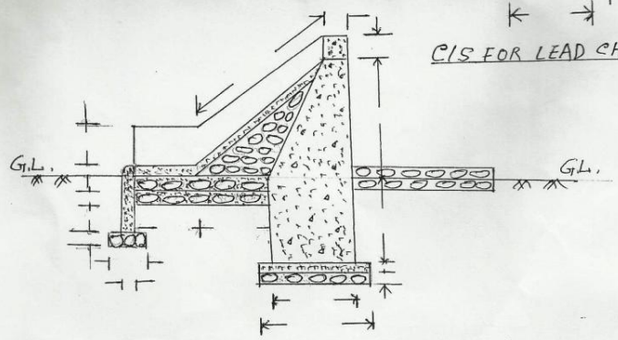
THIS DRG. IS NOT IN TO SCALE.
ALL DIMENSION ARE IN METRE.



PLAN.



C/S FOR LEAD CHANNEL.



CROSS-SECTION ON-AA'

ESTIMATE FOR CONSTRUCTION OF C.C. IRRIGATION DAM WITH C.C. LEAD CHANNEL AND EARTHEN CHANNEL ACROSS NANGBAN STREAM AT SAMKALAK AS PER P.W.D., S.O.R., E&D WORK FOR THE YEARS 2011-2012.

1/67 Earthen work in Excavation for foundation of structure upto 3 m depth including setting out, construction of shoving and bracing removal of stumps and other deleterious matters etc..

1 x 12.00 x 0.85 x 1.00	= 10.20 m^3
1 x 6.00 x 3.20 x 0.40	= 7.69 m^3
1 x 6.00 x 0.30 x 0.20	= 0.36 m^3
2 x 5.00 x 0.85 x 1.00	= 8.50 m^3
1 x 10.00 x $\frac{1.50 + 1.30}{2}$ x 1.00	= 14.00 m^3
	= 40.74 m^3

@Rs.105.00/m^3 - - - - - - - Rs. 2158.15

2/97 Providing and laying boulder apron for bed protection with stone boulder of minimum size and weight etc., etc.

1 x 6.00 x 3.20 x 0.25	= 4.80 m^3
1 x10.00 x 1.00 x 0.25	= 2.50 m^3
Total	= 7.30 m^3

@Rs.1316.00/m^3 - - - - - - - Rs. 9606.80

3/629(iii) Construction of wing wall/breast wall in cement mortor 1:5 as per drawing.

2 x 5.00 x 0.60 x 0.90	= 5.40 m^3
2 x 5.00 x $\frac{0.45 + 0.65}{2}$ x 1.95	= 10.72 m^3
Total	= 16.12 m^3

@Rs.3271.00/m^3 - - - - - - - Rs. 52728.52

4/137 Providing P.C.C. 1:3:6 in foundation with crushed stone aggregate 40 mm downgraded nominal size including curing complete.

1 x 12.00 x 0.85 x 0.10		= 1.02 m^3
1 x 12.00 x 0.65 x 1.90		= 7.02 m^3
1 x 12.00 x $\frac{0.45 + 0.65}{2}$ x 0.10		= 9.90 m^3
2 x 3.00 x 0.45 x 0.45	= 1.22 m^3	
2 x 5.00 x 0.85 x 0.10	= 0.85 m^3	
1 x 6.00 x 3.20 x 0.15	= 2.88 m^3	
1 x 6.00 x 0.30 x 0.60	= 1.08 m^3	
1 x 6.00 x $\frac{0.20 + 0.30}{2}$ x 0.15	= 0.38 m^3	
2 x 1.35 x 0.35 x 0.35	= 0.33 m^3	
2 x 3.20 x 0.35 x 0.60	= 1.34 m^3	
2 x 0.35 x 0.30 x 0.35	= 0.07 m^3	
1 x 10.00 x 1.00 x 0.10		= 1.00 m^3
2 x 10.00 x 0.15 x 0.80		= 2.40 m^3
	Total = 29.49 m^3	

@Rs.4262.00/m^3 - - - - - - - Rs. 125686.38

5/176 Plastering with cement mortor 1:3..

2 nos. x 12.00 x 1.50	= 36.00 m^3
4 nos. x 3.00 x 0.45	= 5.40 m^3
2 nos. x 0.60 x 0.45	= 0.54 m^3
1 no. x 13.00 x 0.45	= 5.85 m^3
2 nos. x 6.00 x 0.25	= 3.00 m^3
4 nos. x 3.50 x 0.40	= 5.60 m^3
1 no. x 6.00 x 0.20	= 1.20 m^3
2 nos. x 3.50 x 0.35	= 2.45 m^3
4 nos. x 1.35 x 0.35	= 1.89 m^3
2 nos. x 1.35 x 0.40	= 1.08 m^3
4 nos. x 0.35 x 0.40	= 0.56 m^3
4 nos. x 0.35 x 0.30	= 0.42 m^3
1 no. x 10.00 x 1.00	= 10.00 m^3
1 no. x 10.00 x 1.00	= 10.00 m^3

@Rs171.00/m^2 - - - - - - - Rs. 15316.47

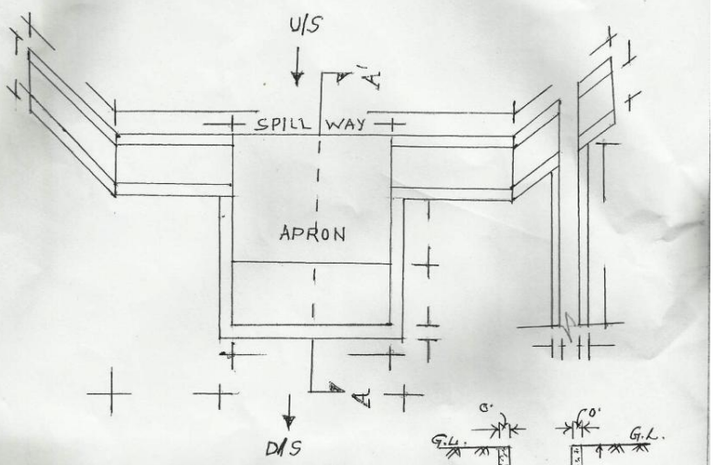
Grand Total	Rs.	110000.84
Say	Rs.	110000.00

(Rupees one lakh ten thousand) only.

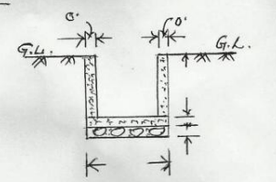
Submitted,

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

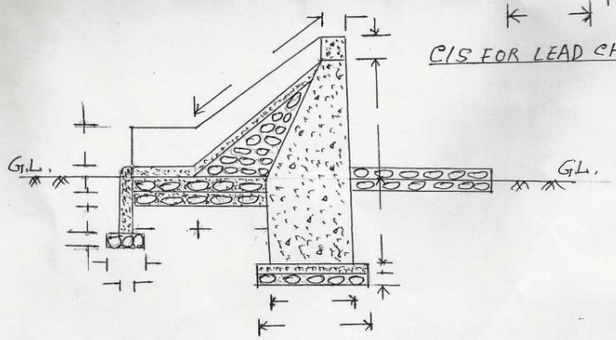
THIS DRG. IS NOT INTO SCALE.
ALL DIMENSION ARE IN METRE.



PLAN.



C/S FOR LEAD CHANNEL.



CROSS-SECTION ON-AA'

ESTIMATE FOR CONSTRUCTION OF WATER HARVESTING STRUCTURE UNDER RONGMA WATERSHEDIWMP-IV AT LOWER SAMKALAK. AS PER THE S.O.R. FOR ROADS BRIDGES WORKS FOR N.H. CIRCLE MEGHALAYA, SHILLONG FOR THYEAR 2011-2012.

1. Site preparation - - - L.S. - - - - Rs.

2/67 Earth work in Excavation for foundation trenches including light dressing and removal of spoils etc..

	1 x 17.30 x 0.60 x 1.00	= 10.38 m^3
Channel	1 x 10.00 x 1.60 x 1.00	= 16.00 m^3
	2 x 10.00 x 0.20 x 0.35	= 1.40 m^3
	Total	= 27.78 m^3

@Rs.105.00/m^3 - - - - - - - Rs. 2916.90

3/103 Providing and laying dry rubber flooring complete as per drawing.

1 x 10.00 x 1.20 x 0.25 = 3.00 m^3

@Rs.1246.00/m^3 - - - - - - - Rs. 3738.00

4/75 Providing plain cement concrete M 10 1:3:6 nominal mix in leveling course below open foundation etc., etc.

1 x 17.30 x 0.60 x 0.10	= 1.038 m^3
1 x 17.30 x 0.40 x 0.90	= 6.228 m^3
1 x 17.30 x $\frac{0.20 + 0.40}{2}$ x 1.90	= 9.861 m^3
1 x 10.00 x 1.20 x 0.10	= 1.20 m^3
2 x 10.00 x 0.20 x 1.35	= 5.40 m^3
Total	= 23.727 m^3

@Rs.4083.00/m^3 - - - - - - - Rs. 96877.34

4/75 Providing plain cement concrete M 10 1:3:6 nominal mix in leveling course below open foundation etc., etc.

1 x 17.30 x 0.60 x 0.10 = 1.038 m^3
1 x 17.30 x 0.40 x 0.90 = 6.228 m^3
1 x 17.30 x $\frac{0.20 + 0.40}{2}$ x 1.90 = 9.861 m^3
1 x 10.00 x 1.20 x 0.10 = 1.20 m^3
2 x 10.00 x 0.20 x 1.35 = 5.40 m^3
Total = 23.727 m^3

@Rs.4083.00/m^3 - - - - - - - Rs. 96877.34

5/28 Construction of embankment with approved material deposited at site from roadway cutting and excavated from drain etc..

1 x 17.30 x $\frac{10.55 + 1.80}{2}$ x 2.50 = 267.068 m^3

Deduction for core wall :

1 x 17.30 x $\frac{0.20+ 0.40}{2}$ x 1.30 = (-) 9.861 m^3
= 257.207 m^3

@Rs.308.00/m^2 - - - - - - - Rs. 18914.28

6/71 12mm thick cement plastering including cleaning surfaces, curing, carriage of sand within 200m. Complete.

Dam	4.30m x 0.30m x 1 No.	= 1.29 m^2
Dam	4.30m x 1.30m x 2 Nos.	= 11.18 m^2
Apron	3.70m x 2.00m x 1No.	= 7.40 m^2
T/Wall	4.30m x 1.20m x 1 No.	= 5.16 m^2
G/Wall	3.00m x 0.30m x 2 Nos.	= 1.80 m^2
G/Wall	3.00m x 0.95m x 4 Nos.	= 11.40 m^2
W/Wall	2.00m x 0.30m x 2 Nos.	= 1.20 m^2
W/Wall	2.00m x 1.70m x 4 Nos.	= 13.60 m^2
W/Wall	1.70m x 0.30m x 2 Nos.	= 1.02 m^2
	Total	= 54.05m^2

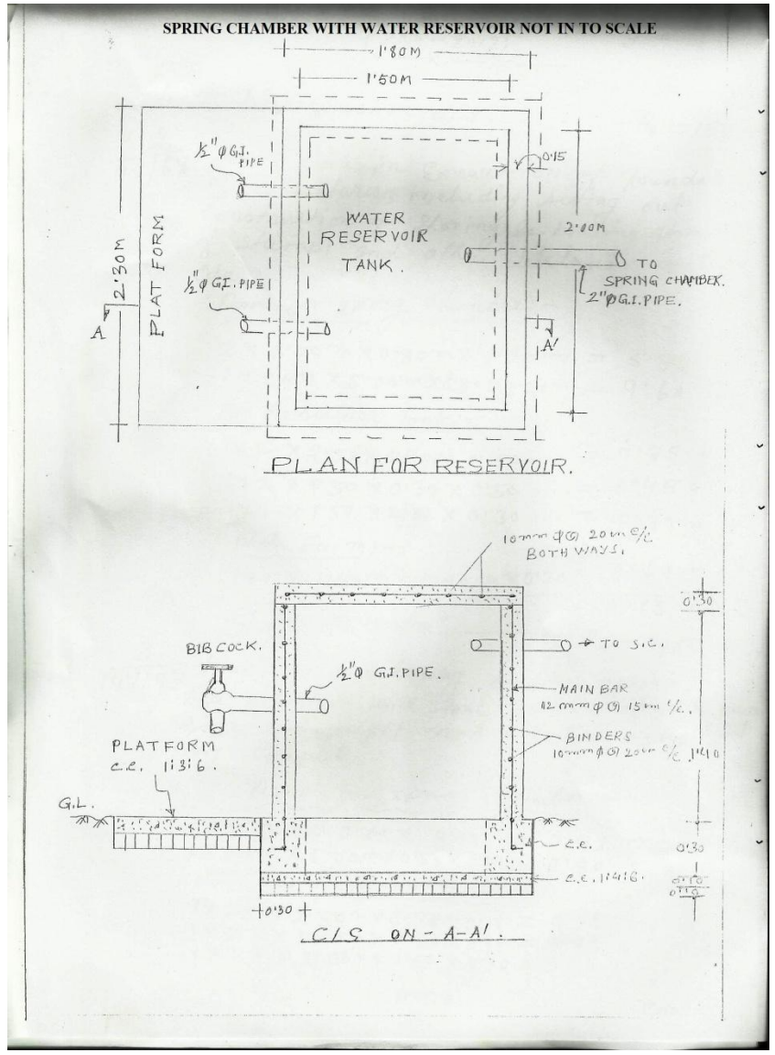
@Rs171.00/m^2 - - - - - - - Rs. 9242.55

Grand Total Rs. 75000.46

Say Rs. 75000.00

(Rupees Seventy five thousand) only.

SPRING CHAMBER WITH WATER RESERVOIR NOT IN TO SCALE



ESTIMATE FOR CONSTRUCTION OF WATER HARVESTING STRUCTURE UNDER RONGMA WATERSHED SAMKALAK RONGSEP.
AS PER THE S.O.R. FOR ROADS BRIDGES WORKS FOR N.H. CIRCLE MEGHALAYA, SHILLONG FOR THYEAR 2011-2012.

1. Site preparation - - - L.S. - - - - Rs. 470.00

2/61. Earth work in Excavation for foundation trenches including light dressing and removal of spoils etc..

	1 x 21.40 x 0.60 x 1.00	= 12.84 m^3
Channel	1 x 10.00 x 1.60 x 1.00	= 16.00 m^3
	2 x 10.00 x 0.20 x 0.35	= 1.40 m^3
	Total	= 30.78 m^3

@Rs.66.00/m^3 - - - - - - - Rs. 1995.84

2/75 Providing plain cement concrete M 10 1:3:6 nominal mix in leveling course below open foundation etc., etc.

1 x 21.40 x 0.60 x 0.10	= 1.038 m^3
1 x 21.40 x 0.40 x 0.90	= 7.70 m^3
1 x 21.40 x $\frac{0.20 + 0.40}{2}$ x 1.90	= 12.19 m^3
1 x 10.00 x 1.20 x 0.10	= 1.20 m^3
2 x 10.00 x 0.20 x 1.35	= 5.40 m^3
Total	= 27.77 m^3

@Rs.4083.00/m^3 - - - - - - - Rs. 113384.91

4/75 Providing plain cement concrete M 10 1:3:6 nominal mix in leveling course below open foundation etc., etc.

1 x 10.00 x 1.20 x 0.25 = 3.00 m^3

@Rs.1246.00/m^3 - - - - - - - Rs. 3738.00

5/28 Construction of embankment with approved material deposited at site from roadway cutting and excavated from drain etc..

$$1 \times 21.40 \times \frac{10.55 + 1.80}{2} \times 2.50 = 330.36\ m^3$$

Deduction for core wall :

$$1 \times 21.40 \times \frac{0.20 + 0.40}{2} \times 1.90 = (-)\ 12.19\ m^3$$

$$= 318.17\ m^3$$

@Rs.82.00/m^2 - - - - - - - Rs. 26089.94

6/100 Providing and laying boulder pitching on slopes laid over prepared filler media
As per drawing etc.

$1x21.40x\sqrt{5^2}x(2.50)^2x0.25 = 29.36m^3$
@ Rs. 1316.00/- m^3 - - - - - Rs. 39427.36

7/37 Furnishing and laying line sods of perennial lurf forming grass on embankment slopes etc.

$1x21.40x\sqrt{(3.75)^2}x(2.50)^2x$ = Rs.96.30m^3
1x21.40x 1.80 = Rs.38.52m^3

134.82m^3

8/78 Plastering with cement mortor 1:4

1x10.00x1.20= 12.00m^2 = 12.00m^2
2x10.00x1.20= 0.20 m^2 = 4.00 m^2
2x10.00x1.20= 0.65 m^2 = 13.00m^2

@Rs. 179.00m^2 Rs. 5191.00

Grand Total. = Rs. 200004.09
Say Rs. = 200000/- (Rupees Two laks) only.

ESTIMATE FOR COSTRUCTION OF SPRING CHAMBER ACROSS THE TE.KRA STREAM AT _____
AS PER THE P.W.D. SCHEDULE OF RATES FOR ROADS,BRIDGES AND E & D WORKS
FOR THE YEAR 2011-2012 TURA CIRCLE AND WILLIAMANGAR CIRCLE.

1. Site preparation - - - - L.S. - Rs. 235.00

2/67 A. Earth work in excavation for foundation of the structure including cutting, dressing and removal of spoils etc. complete.

Dam - 1x 8.00 m x 0.80 m x 1.20. = 7.68 m^3
1x 2X5.00 x 0.80 m x 1.20 . = 4.60 m^3

Tank- 1x2 m x 2.50 m x 0.30 m x 0.50 = 0.75 m^3
1x2 m x 1.50 m x 0.30 m x 0.50 = 0.75 m^3
1x2 m x 2.50 m x 1.50 m x 0.30 = 0.90 m^3
P/Form – 1x1 m x 2.30 x 1.50 m x 0.20. = 0.69 m^3
= 20.07 m^3

@ 105.00/-m^3 - - - - - - - Rs. 2107.35

3/97. Providing and laying boulder apron for bed protection with stone boulder of minumun size and wight etc .

Dam - 1x 8.00 m x 0.80 m x 0.10 . = 0.64 m^3
1x 2.00X5.00 x 0.80 m x 0.10. = 0.80 m^3

Tank- 1x2 m x 2.50 m x 0.30 m x 0.10 = 0.15 m^3
1x2 m x 1.50 m x 0.30 m x 0.10 = 0.09 m^3
1x2 m x 2.00 m x 1.50 m x 0.10 = 0.30 m^3
P/Form – 1x1 m x 2.30 x 1.50 m x 0.10. = 0.34 m^3
= 2.32 m^3

@ 1316.00/-m^3 - - - - - - - Rs. 3053.12

4/139 B. Providing plain cementconcrete on open foundation complete as per drawing and technical specification

BP.C.C Grande M20

1x1x 8.00X 0.80 m x 0.10. = 0.64 m^3
1x2x 5.00X 0.80 m x 0.10. = 0.80 m^3

Tank
1x2x 2.50X 0.30 m x 0.10. = 0.15 m^3
1x2x 1.50X 0.30 m x 0.10. = 0.09 m^3
1x1x 2.00X 1.50 m x 0.10. = 0.30 m^3
1.98m^3

@ 5343.00/-m^3 - - - - - - - Rs. 10579.14

5/172 Supplying fitting and plancing coated HVSD ban reinprument in foundation complete as per drawing and technical specification

12 mm ∅ ban 10cm c/c
2x18pcsx1.65x0.89kg/Rs. = 52.86 kg
2x15"x1.65x0.89kg/Rs. = 44.05kg

10 mm ∅ ban 20cm c/c

2x8pcsx2.20mx0.62kg/Rs. = 21.83 kg
2x8 "x1.50mx0.62kg/Rs. = 14.88kg
2x9 "x2.20mx0.62kg/Rs. = 24.55kg
2x12 "x1.80mx0.62kg/Rs. = 26.78kg
184.95 Kg

Say Rs. 1845 tone
@ 58461.00/-tone - - - - - - - Rs. 10812.36

6/144 (iii) (Rain enforce) Providing Rain force cement concrete in open foundation complete as per drawing and technical specification

1x1x 8.00X 0.60 m x 0.10.	=	4.80 m^3
2x 5.00X 0.60 m x 0.10.	=	6.00 m^3
1x1x $\frac{8.00+ 0.60}{2}$ m x 1.40.	=	5.04 m^3
2x 5.00X $\frac{0.30 m + 0.60}{2}$ x1.40.	=	6.30 m^3
2x2.50x0.30x0.30		=0.45 m^3
2x1.50x0.30x0.30		=0.27 m^3
1x1.85x1.55x0.20		=0.57m^3
2x2.30x0.15x1.40		=0.97m^3
2x1.50x0.15x1.40		=0.63m^3
1x2.30x01.80x0.10		=0.41m^3
1x2.30x0.15x0.10		=0.34^3
		25.78m^3
@ Rs. 6631.00/-m^2 - - - - -		Rs. 170947.18

7/ Providing and fining GI pipe including necessary socket band jam nuts elbows ties etc. complete as Market rates

65mm dia Gi Pipe2.50m @Rs. 800/- per m	= Rs. 2000.00	
50mm dia∅ Gi Pipe10.00m @Rs. 626/- per m	= Rs. 6260.00	
15mm ∅ Gi Pipe6.00m @Rs. 190/- per m	= Rs. 1140.00	
Bib cock = 2 nos. steel @ Rs. /- cach	= Rs. 516.00	
	Rs. 9916.00	Rs. 9916.00

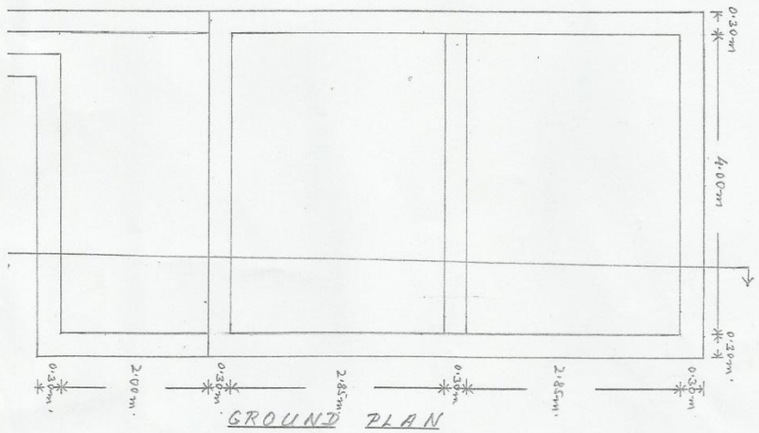
8/16 Plastering with cement muster 1:3

2x1x2.30x1.40	= 6.44
2x1x1.80x1.40	=5.04
2x1x2.00x1.40	=5.60
2x1x1.50x1.40	=4.20
1x1x2.00x1.50	=3.00
	24.28 m^2

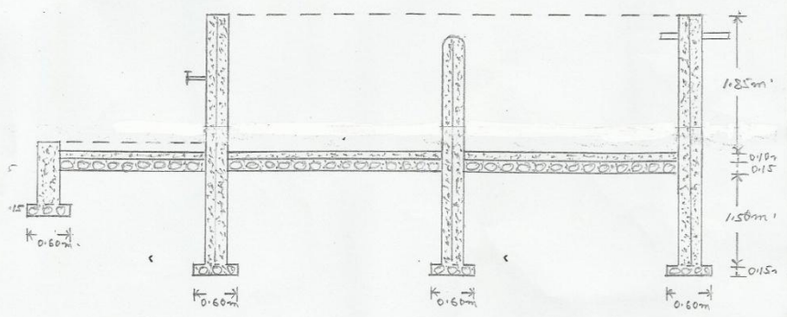
@ Rs. 37.00/-m^2 - - - - -	Rs.	2355.16
Grand Total	Rs.	210005.31

Say Rs. 210000/-
(Rupees : Two lakh ten thousand) only .

PLAN FOR CONSTRUCTION OF R.C.C. SPRING CHAMBER
AT CHIGIND UNDER MREKCHI WATERSHED (WMP-XII)
NOT TO THE SCALE



GROUND PLAN



CROSS SECTION ON AB.

ESTIMATE FOR CONSTRUCTION OF C.C. CHANNAL AT GARO THORIKAKONA, UNDER RESUBELPARA C & R.D. BLOCK, IWMP – PROJECT. AS PER THE P.W.D., S.O.R. OF ROAD BRIDGES E & D WORKS FOR THE YEAR 2011-2012.

1/9.1/67 Earth work in excavation for foundation upto 3m, depth, as per drawing and technical specification.

104.30 Rm x 1.50 m x 1.25 = 12.00 m^3

@Rs.105.00/m^3 - - - - - - - Rs. 20533.80

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

104.30 x 1.30 m x 0.15 = 20.33 m^3

@Rs.1316.00/m^3 - - - - - - - Rs. 26754.28

3/12.4/137 Providing Plain cement concrete 1:3:6 nominal mix in foundation with crushed stone aggregate 40 mm nominal size etc.

2 x 104.30 x 0.15 x 1.00 = 31.29 m^3
1 x 104.30 x 1.30 x 0.10 = 13.55 m^3
Total = 44.84 m^3

@Rs.4262.00/m^3 - - - - - - - Rs. 191108.08

4/9.13/78 Providing plastering with cement mortor (1:4).

3 x 104.30 x 1.00 = 312.90 m^2
2 x 104.30 x 0.15 = 31.29 m^2
Total = 344.19 m^2

@Rs.179.00/m^2 - - - - - - - Rs. 61610.00

Grand Total Rs. 300006.00
Say Rs. 300000.00

(Rupees Three lakh) only.

Submitted,

ESTIMATE FOR CONSTRUCTION OF C.C. CHECK DAM ACROSS THE MERONGDIK STREAM AS PER THE P.W.D., S.O.R. OF ROAD BRIDGES E & D WORKS FOR THE YEAR 2011-2012.

1. Site preparation - - - L.S. - - - - Rs. 460.00

2/61 Earth work in soil in hill areas by manual means including cutting and trimming the side slopes etc.

Dam	1 x 12.00 x 1.20 x 1.00	= 14.40 m^3
W/Wall	2 x 3.00 x 1.20 x 1.00	= 7.20 m^3
Apron	1 x 8.00 x 3.20 x 0.25	= 6.40 m^3
T/Wall	1 x 8.00 x 0.20 x 0.60	= 0.96 m^3
Channel	1 x 12.80 x 1.00 x 1.00	= 12.80 m^3
	Total	= 41.76 m^3

@Rs.66.00/m^3 - - - - - - - - Rs. 2756.16

3/97 Providing and laying boulder apron for bed protection stone minimum size and weight not less than 25 kg laid dry complete etc. .

Dam	1 x 12.00 x 1.20 x 0.20	= 2.88 m^3
	1 x 12.00 x 1.20 x 0.20	= 2.88 m^3
W/Wall	2 x 3.00 x 1.20 x 0.20	= 1.44 m^3
Apron	1 x 8.00 x 3.20 x 0.25	= 6.40 m^3
T/Wall	1 x 8.00 x 0.40 x 0.20	= 0.64 m^3
L/Channel	1 x 12.80 x 1.00 x 0.20	= 2.56 m^3
	Total	= 16.80 m^3

@Rs.1316.00/m^3 - - - - - - - Rs. 22108.80

4/75 P.C.C. M10 1:3:6 nominal mix in leveling course below open foundation of head walls, as per drawing and technical specification.

Dam	1 x 12.00 x 1.00 x 0.10	= 1.20 m^3
	1 x 12.00 x 1.00 x 0.70	= 8.40 m^3
	1 x 12.00 x $\frac{1.00 + 0.50}{2}$ x 1.20	=10.80 m^3
	2 x 2.00 x 0.50 x 0.50	= 1.00 m^3
Apron	1 x 8.00 x 1.50 x 0.10	= 1.20 m^3
	1 x 8.00 x 2.83 x 0.10	= 2.26 m^3
T/Wall	1 x 8.00 x 0.20 x 0.55	= 0.88 m^3
G/Wall	2 x 1.50 x 0.20 x 0.55	= 0.30 m^3
	1 x 1.50 x 0.20 x $\frac{0.5 + 2.83}{2}$	= 0.99 m^3
	1 x 12.80 x 1.00 x 0.20	= 2.56 m^3
	2 x 12.80 x 0.60 x 0.20	= 3.07 m^3
	Total	= 32.66 m^3

@Rs.4083.00/m^3 - - - - - - - Rs. 133350.78

5/62 Construction of stone masonry works for wing wall / breast wall in cement mortor 1:5.

2 x 3.00 x 1.20 x 0.20	= 1.44 m^3
2 x 3.00 x 1.00 x 0.60	= 3.60 m^3
2 x 3.00 x $\frac{1.00 + 0.50}{2}$ x 1.00	= 4.50 m^3
	= 9.54 m^3

@Rs.3271.00/m^3 - - - - - - - Rs. 31205.34

6/16 Plastering with cement mortor 1:3 including cleaning the surface etc., etc.

2 x 12.10 x 1.20	= 28.80 m^2
2 x $\frac{1.00 \times 0.5}{2}$ x 1.20	= 1.80 m^2
1 x 12.00 x 0.50	= 6.00 m^2
4 x 2.00 x 0.50	= 4.00 m^2
4 x 0.50 x 0.50	= 1.00 m^2
1 x 8.00 x 4 .33	= 34.64 m^2
1 x 8.00 x 0.20	= 1.60 m^2
4 x 4.33 x 0.20	= 3.46 m^2
2 x 12.80 x 0.60	= 15.36 m^2
1 x 12.80 x 0.60	= 7.68 m^2
Total	=104.34 m^2

@Rs.97.00/m^2 - - - - - - - - Rs. 10120.98

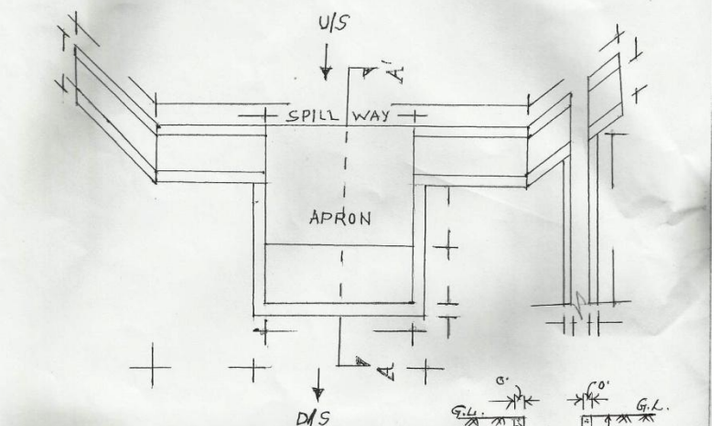
Grand Total Rs. 200002.06

Say Rs. 200000/-

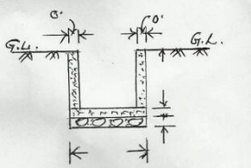
(Rupees Two lakh) only.

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

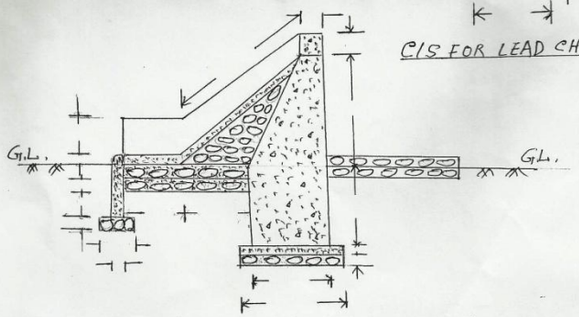
THIS DRG. IS NOT IN TO SCALE.
ALL DIMENSION ARE IN METRE.



PLAN.



C/S FOR LEAD CHANNEL.



CROSS-SECTION ON-AA'

ESTIMATE FOR CONSTRUCTION OF C.C. IRRIGATION DAM WITH C.C. LEAD CHANNAL ACROSS MERONGDIK STREAM.
AS PER P.W.D., S.O.R. FOR ROADS, BRIDGES, E & D WORK FOR THE YEARS 2011-2012.

1. Site preparation - - - L.S. - - - - Rs. 895.00

2/9.1/67 Earth work in Excavation for foundation of structure upto 3m depth, as per drawing and technical specification.

Dam	20.00m x 1.30 x 1.20	= 31.20 m^3
W/Wall	2 x 5.00 x 1.20 x 1.10	= 13.20 m^3
Apron	1 x 8.00 x 3.20 x 0.40	= 10.24 m^3
T/Wall	1 x 8.00 x 0.30 x 0.60	= 1.44 m^3
L/Channel	1 x 15.00 x 1.00 x 1.00	= 15.00 m^3
	Total = 71.08	m^3

@ Rs.105.00/m^3 - - - - - - - -Rs. 7463.40

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

Dam	1 x 20.00 x 1.30 x 0.20	= 5.20 m^3
U/S	1 x 20.00 x 1.20 x 0.20	= 4.80 m^3
D/S	1 x 20.00 x 1.20 x 0.20	= 4.80 m^3
W/wall	2 x 5.00 x 1.20 x 0.20	= 2.40 m^3
Apron	1 x 8.00 x 3.20 x 0.40	= 10.24 m^3
T/wall	1 x 8.00 x 0.40 x 0.20	= 0.64 m^3
L/Channel	1 x 15.00 x 1.00 x 0.20	= 3.00 m^3
	Total = 31.08 m^3	

@Rs.1316.00/m^3 - - - - - - - Rs. 40901.28

3/12.4/137 Plain cement concrete M10 (1:3:6) nominal mix in leveling course below open foundation of head works as per drawing and technical specification.

Dam	1 x 20.00 x 1.30 x 0.10	= 2.60 m^3
	1 x 20.00 x 1.00 x 0.90	= 18.00 m^3
	1 x 20.00 x $\frac{0.60 + 1.00}{2}$ x 1.90	= 30.40 m^3
	2 x 6.00 x 0.60 x 0.50	= 7.80 m^3
Apron	1 x 8.00 x 1.50 x 0.10	= 1.20 m^3
	1 x 8.00 x 2.83 x 0.10	= 2.26 m^3
T/Wall	1 x 8.00 x 0.20 x 0.40	= 0.64 m^3
S/wall	2 x 1.50 x 0.20 x 0.50	= 0.30 m^3
	2 x 1.50 x 0.20 x $\frac{0.50 + 2.83}{2}$	= 0.99 m^3
L/Channel	1 x 15.00 x 1.00 x 0.20	= 3.00 m^3
	2 x 15.00 x 0.60 x 0.20	= 3.60 m^3
	Total	= 70.79 m^3

@Rs.4262.00/m^3 - - - - - - - Rs. 301736.98

4/8.4/62 Providing for construction of stone masonry works for wing walls/ breast walls in cement mortor 1:5.

W/wall	2 nos. x 5.00 x 1.00 x 0.90	= 9.00 m^3
	2 nos. x $\frac{1.00 + 0.60}{2}$ x 2.00	= 16.00 m^3
		= 25.00 m^3

@Rs.3271.00/m^3 - - - - - - - Rs. 81775.00

5/13.3/176 12 mm thick cement plastering including cleaning the surface in prop 1:3 including carriage of sand within 200 m.

Dam	2 x 20.00 x 1.90	= 76.00 m^2
	2 x $\frac{1.00 + 0.60}{2}$ x 1.90	= 3.04 m^2
	1 x 20.00 x 0.60	= 12.00 m^2
	4 x 6.00 x 0.50	= 12.00 m^2
	4 x 0.60 x 0.50	= 1.20 m^2
Apron	1 x 8.00 x 4.33	= 34.64 m^2
T/wall	1 x 8.00 x 0.20	= 1.60 m^2
S/wall	4 x 4.33 x 0.20	= 3.46 m^2
L/Channel	2 x 15.00 x 0.60	= 18.00 m^2
	2 x 15.00 x 0.60	= 9.00 m^2
	4 x 15.00 x 0.20	= 6.00 m^2
	Total	=177.99 m^2

@Rs.97.00/m^2 - - - - - - - - Rs. 17260.18

Grand Total Rs. 450001.84

Say Rs. 450000.00

(Rupees Four lakh and fifty thousand) only.

ESTIMATE FOR CONSTRUCTION OF C.C. IRRIGATION DAM AT ……
AS PER P.W.D. S.O.R. FOR ROADS, BRIDGES, E & D WORK FOR THE YEARS 2011-2012.

1. Site preparation - - - L.S. - - - - Rs. 485.00

1/67 Earth work in Excavation for foundation of structures up to 3 m depth.

1 x 10.00 x 0.60 x 0.60 = 3.60 m^3
1 x 6.00 x 3.20 x 0.40 = 7.68 m^3
1 x 6.00 x 0.30 x 0.20 = 0.36 m^3
2 x 1.50 x 0.60 x 0.60 = 1.08 m^3
Total = 12.72 m^3
@ Rs.105.00/m^3 - - - - - - - -Rs. 1335.60

2/97 Providing and laying boulder apron for bed protection with stone boulders of minimum size and weight.

1 x 6.00 x 3.20 x 0.25 = 4.80 m^3
@Rs.1316.00/m^3 - - - - - - - Rs. 6316.80

3/62 Plain cement concrete M10 1:3:6 with crushed stone aggregate
40 mm nominal size etc., etc.

1 x 10.00 x 0.60 x 0.10 = 0.60 m^3
1 x 10.00 x 0.60 x 0.50 = 3.00 m^3
1 x 10.00 x $\frac{0.40+ 0.60}{2}$ x 1.20 = 6.00 m^3
2 x 2.00 x 0.40 x 0.30 = 0.48 m^3
2 x 1.50 x 0.60 x 0.10 = 0.18 m^3
1 x 6.00 x 3.20 x 0.15 = 2.88 m^3
1 x 6.00 x 0.30 x 0.60 = 1.08 m^3
1 x 6.00 x $\frac{0.20 + 0.30}{2}$ = 0.37 m^3
2 x 1.35 x 0.35 x 0.35 = 0.33 m^3

2 x 3.20 x 0.35 x 0.60 = 1.34 m^3
2 x 0.35 x 0.30 x 0.35 = 0.07 m^3
Total = 16.33 m^3
@Rs.4083.00/m^3 - - - - - - - Rs. 66675.39

5/62(iii) Construction of wing wall/breast wall in cement mortor 1:5 as per drawing.

2 x 1.50 x 0.60 x 0.50 = 0.90 m^3
1 x 1.50 x $\frac{0.40 + 0.60}{2}$ x 1.50 = 2.25 m^3
= 3.15 m^3
@Rs.3271.00/m^3 - - - - - - - Rs. 10303.65

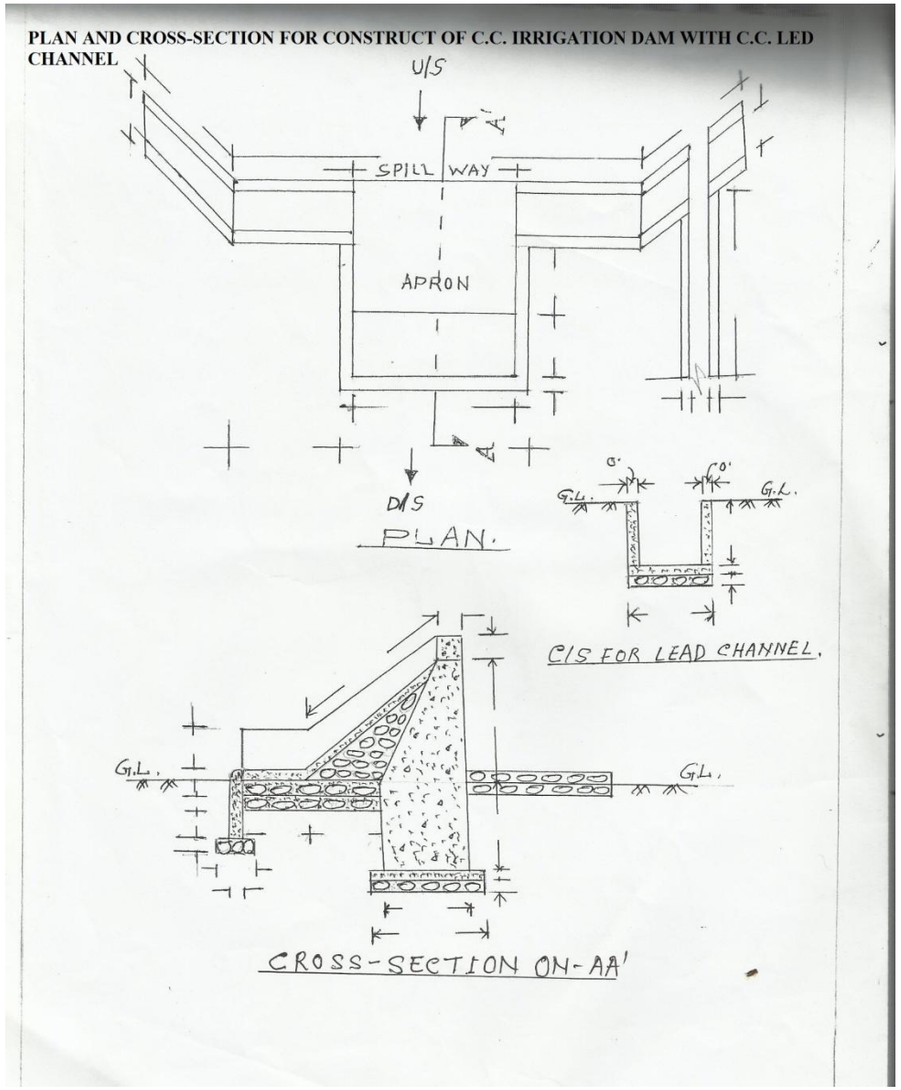
5/62(iii) Plastering with cement mortor 1:3 in sub structure.

2 x 10.00 x 1.20 = 24.00 m^2
4 x 2.00 x 0.30 = 2.40 m^2
2 x 0.40 x 0.30 = 0.24 m^2
1 x 11.00 x 0.40 = 4.40 m^2
2 x 6.00 x 0.25 = 3.00 m^2
4 x 3.50 x 0.60 = 8.40 m^2
1 x 6.00 x 0.20 = 1.20 m^2
2 x 3.50 x 0.40 = 2.80 m^2
4 x 1.35 x 0.35 = 1.89 m^2
2 x 1.35 x 0.40 = 1.08 m^2
4 x 0.35 x 0.40 = 0.56 m^2
4 x 0.35 x 0.30 = 0.42 m^2
Total = 50.39 m^2
@Rs.97.00/m^2 - - - - - - - - Rs. 4887.83

Grand Total Rs. 90004.27
Say Rs. 90000/

(Rupees Ninety thousand) only.

PLAN AND CROSS-SECTION FOR CONSTRUCT OF C.C. IRRIGATION DAM WITH C.C. LED CHANNEL



MODEL ESTIMATE FOR CONSTRUCTION OF C.C. CHECK DAM ACROSS THE MERONGDIK STREAM UNDER RESUBELPARA C & R.D. BLOCK, IWMP SCHEME. AS PER THE P.W.D., S.O.R. OF ROAD BRIDGES E & D WORKS FOR THE YEAR 2011-2012.

1/9.1/67 Earth work in excavation for foundation upto 3 m , depth, as per drawing and technical specification.

1 x 10.00 x 1.00 x 1.20 = 12.00 m^3
1 x 6.00 x 3.20 x 0.40 = 7.68 m^3
1 x 6.00 x 0.30 x 0.20 = 6.40 m^3
1 x 5.00 x 1.00 x 1.20 = 12.00 m^3
Total = 32.04 m^3

@Rs.105.00/m^3 - - - - - - - Rs. 3364.20

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

1 x 6.00 x 3.20 x 0.25 = 4.80 m^3

@Rs.1316.00/m^3 - - - - - - - Rs. 6316.80

3/8.7/62 Providing for construction of stone masonry works for wing wall/ breast walls in cement mortor 1:5.

2 x 5.00 x 1.00 x 1.00 = 1.20 m^3
2 x 5.00 x $\frac{0.40 + 0.60}{2}$ x 2.50 = 12.50 m^3
Total = 22.50 m^3

@Rs.3271.00/m^3 - - - - - - - Rs. 73597.50

4/12.4/137 Plain cement concrete M10 (1:3:6) nominal mix in leveling course below open foundation of head walls, as per drawing and technical specification.

2 x 10.00 x 2.50	= 50.00 m^3			
4 x 2.00 x 0.30	= 2.40 m^3			
2 x 0.60 x 0.30	= 0.36 m^3	1 x 10.00 x 0.40	= 4.00 m^3	
2 x 6.00 x 0.25	= 3.00 m^3			
4 x 3.50 x 0.60	= 8.40 m^3			
1 x 6.00 x 0.20	= 1.20 m^3			
2 x 3.50 x 0.40	= 2.80 m^3			
4 x 1.35 x 0.35	= 1.89 m^3			
4 x 0.35 x 0.40	= 0.56 m^3			
4 x 0.35 x 0.30	= 0.42 m^3			
	Total = 31.55 m^3			
@Rs.4262.00/m^3 - - - - - - -		Rs. 134466.10		

5/13.3/176 12 mm thick cement plastering including clearing the surface in prop 1:3 including carriage of sand with in 200 m.

2 x 10.00 x 2.50		= 50.00 m^2
4 x 2.00 x 0.30		= 2.40 m^2
2 x 0.60 x 0.30		= 0.36 m^2
1 x 10.00 x 0.40		= 4.00 m^2
2 x 6.00 x 0 .25		= 3.00 m^2
4 x 3.50 x 0.60		= 8.40 m^2
1 x 6.00 x 0.20		= 1.20 m^2
2 x 3.50 x 0.40		= 2.80 m^2
4 x 1.35 x 0.35		= 1.89 m^2
4 x 0.35 x 0.30		= 0.56 m^2
4 x 0.35 x 0.30		= 0.42 m^2
	Total	= 75.03 m^2

@Rs.97.00/m^2 - - - - - - - - Rs. 7277.91

Grand Total Rs. 225022.51

Say Rs. 225000.00

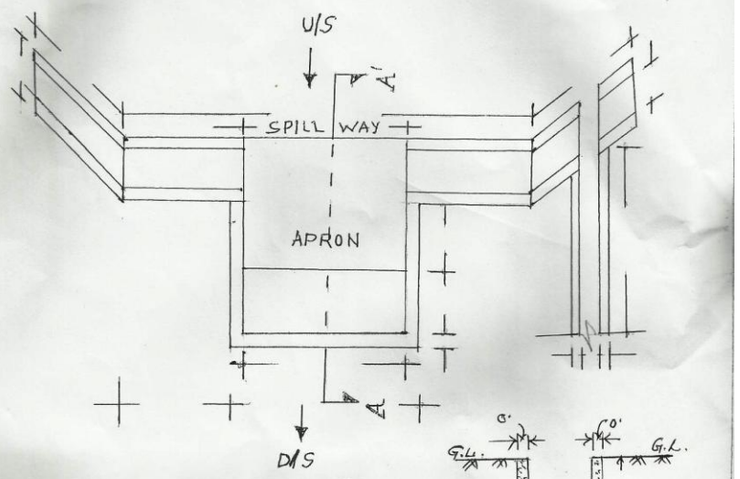
1 No. cost = 225000.00

∴ 2 nos. cost = 25000.00 x 2 = 450000.00

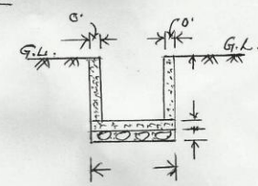
(Rupees Four lakh and fifty thousand) only.

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

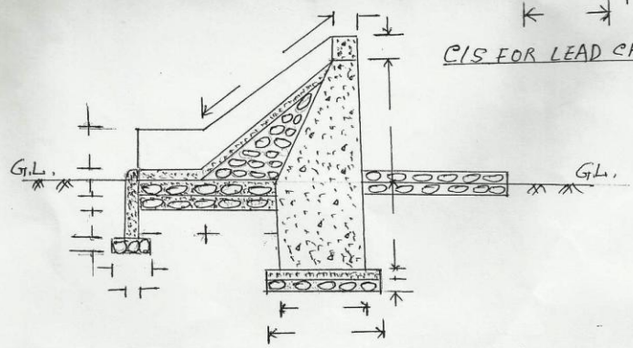
THIS DRG. IS NOT INTO SCALE.
ALL DIMENSION ARE IN METRE.



PLAN.



C/S FOR LEAD CHANNEL.



CROSS-SECTION ON-AA'

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