

# **DETAILED PROJECT REPORT**

## **RINGGI BISIK - INTEGRATED WATERSHED MANAGEMENT PROJECT**

**IWMP – V**

**2011 – 2012**

**RONGRAM C & RD BLOCK**

**WEST GARO HILLS DISTRICT**

**MEGHALAYA**

## SUMMARY

Name of the State	:	Meghalaya
Name of the District	:	West Garo Hills District
Name of the C&RD Block	:	Rongram
Name of the Villages	:	(i) Chidekgre
Name of the Project	:	West Garo Hills – IWMP – V
Total Geographical Area	:	393.80 Ha.
Total Treatment Area	:	250.00 Ha
Total Project Cost	:	37.50 lakhs
Project Duration	:	5 Years
Project Implementing Agency	:	Soil & Water Conservation Territorial Division, Tura.

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**CHAPTER I**  
**INTRODUCTION AND BACKGROUND**

# CHAPTER I

## INTRODUCTION AND BACKGROUND

### 1.1 Project Background:

The Ringgi Bisik (IWMP-V) project is located in Rongram C&RD Block, West Garo Hills District of Meghalaya. Consisting of a single micro-watershed, the project area is drained by the Ringgi River and its tributaries flowing in a north to south direction. The total area is 393.80 Ha. with 250.00 Ha. to be treated under the Integrated Watershed Management Programme (IWMP).

The Project area is located at a distance of about 17 km from Rongram C.& R.. D. and about 32 km from Tura the District Headquarter. One village is covered under the project. That is –

1 Chidekgre

### 1.2 Micro-watershed Information:

The total area of the micro-watershed is 393.80 Ha., with 250 hectares to be treated under the Integrated Watershed Management Programme (IWMP).

### **1.3 Need and Scope for Watershed Development:**

Located on the slopes of the deep gorges of the Arbella Plateau the village have one road connectivity. The farmers are all marginal and 18 households are below the poverty line, which is 46.15% of the total households. Jhum cultivation is practiced by most of the inhabitants of these villages on the slopes.

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

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

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

- i. MGNREGS

**CHAPTER II**  
**BASIC INFORMATION OF THE PROJECT AREA**

## CHAPTER II

### BASIC INFORMATION OF THE PROJECT AREA

#### 2.1 Location:

The Project area is located within the area of Nokma under Rongram C&RD Block of West Garo Hills District. It is situated at a distance of about 17 km from Rongram C.& R. D. Block and about 32 km from Tura, the District Headquarter. The geographical location is between  $90^{\circ} 19'$  to  $90^{\circ} 20'$   $10''$ E Longitude and  $25^{\circ} 33'$  to  $25^{\circ} 34' 58''$ N Latitude. There are 1 village within the Watershed area which is as follows –

1. Chidekgre

At present, this village is connected to seasonal motorable road.

#### 2.2 Physiography:

The physiography of the micro-watershed is highly undulating. The altitude ranges from a minimum of 350m to a high of 970 above mean sea level. In the lower reaches (valley lands) the slope ranges from 20% to 40%, however, in the middle and upper reaches it is greater than 45 %, and can reach up to 180%.

**Table 2.1: Physiographic details**

Elevation (metres)	Slope Range (%)	Order of watershed Sub/Micro-watershed	Major streams	Topography
350 m to 970m	<5% - >50%	First Order	Ringgi Bisik	Very Strongly Sloping

**2.3 Drainage:** The major stream draining the micro-watershed is the Ringgi Bisik which is a 1<sup>st</sup> order stream flowing in east to south direction. The slopes of the micro-watershed are dissected by numerous small tributaries flowing to the Ringgi.



**2.4 Soil:** Soil Texture is gravelly on the sloping lands and clayey to sandy clay on the low lying areas. Soil depth varies from very shallow to deep. Soils are permeable and generally acidic in nature. Owing to highly 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.

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

1	2	3	4	5	6	7	8	9	
Sl. No.	Names of State	Names of District	Names of Projects	Cause	Types of erosion	Area affected (ha)	Run-off (mm/ year)	Average soil loss (Tonnes/ ha/ year)	
1	Meghalaya	West GaroHills	West Garo Hills – IWMP V	Water erosion:					
				a	Sheet	210	2500-3500	40	
				b	Rill	110	2500-3500	20	
				c	Gully	30	2500-3500	3	
				Sub total					
				Wind erosion		Nil	Nil	Nil	

**2.5 Climate:** The area in the foothills or low lying areas and mid-slopes are hot in summer and cold throughout the winter. The area on the higher reaches is warm during summer and cold during winter. The average annual rainfall is 9000mm.

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

1	2	3	4	5	6	7		8	9	
Sl. No.	Name of State	Name of the Agro-climatic zone	Area (in ha)	Names of the districts	Names of the Projects	Major soil types		Average annual rainfall in mm (preceding 5 years' average)	Major crops	
						a) Type	b) Area (ha)		a) Name	b) Area (ha)
1	Meghalaya	Western Slopes and Valley	393.80 Ha	West Garo Hills	West Garo Hills – IWMP – V	Deep, excessively drained, coarse – loamy soil on moderately steep side slopes of hills having loamy surfaces with severe erosion hazard and stoniness associated with moderately deep, excessively drained, loamysoils on gently sloping hill tops with very severe erosion hazard and slight stoniness	393.80 Ha	9000 mm	Betel nut	15
									Betel leaf	5
									Oranges	15
									Ginger	25.50
									Chilli	17.19
								Squash	10	
								<b>Total</b>		<b>87.69 Ha</b>

**2.6 Agriculture:** Agriculture is the primary occupation of the people of the area. The people mostly practice jhum. The jhum plots vary from 0.5 to 1.0 Ha, and are cultivated for 1-2 years. The principal agricultural crops grown of the jhum fields are paddy, ginger, millet, maize, yam and vegetables. Fruit crops are well suited in the lower reaches which include orange, pineapple, jackfruit, litchi. The slopes of the Lower Ringgi Bisik are also very suitable for betel nut, betel leaf, black pepper, broomstick, which contribute to the income of the people.

**Table 2.4: Crop yield and production**

<b>Crops</b>	<b>Area (ha)</b>	<b>Average Yield (Qtl) per ha.</b>	<b>Total Production (Qtl.)</b>
Ginger	20	30	600
Millet	15	10	150
Squash	10	20	200
Yam	25	25	625
Chilli	25	20	500
Tapioca	20	20	400
Betel nut	30	25	750
Betel leaf	5	5	25
Oranges	10	10	100

**2.7 Natural Vegetation:** The tree species common to the watershed area includes - *Terminaliaspp.* *Schima walichii.* *Toona ciliata,* *Albizia spp.* *Aporosa spp.* *Bahunia variegata Duabanga spp.* and *Ficus spp.* However, due to jhum cultivation the forest cover of the area has reduced considerably.

**2.8 Socio-Economic Profile:** Economically, the area is perhaps the most backward in the district. The main reason is due to poor road communication, primitive way of agricultural practices like jhumming and the difficult terrain of the area.

Demographic Status: The total households in the watershed project is 39 with a total population of 200, of which 543 are male and 521 are female.

Infrastructure facilities :

- 2.1.1 *Roads:* The Project Area is connected by a seasonal road. The Project area depends entirely on the kutchra road connected either to Aguragre or Waribokgre.
- 2.1.2 *School:* there are only 1(one) L.P School within the Project Area run by the state Government.
- 2.1.3 *Electricity :* Ther is no connection and the village is yet to have electricity
- 2.1.4 *Health :* Ther is no Health Centre nearby and the entire local population have to either depends on facilities available at Asanang P.H.C. or Tura.
- 2.1.5 *Water Supply :* Ther is no Drinking water supply provided by the PHE Deptt.. However, during lean season the entire population have to depend on springs available in the area as the supply is not sufficient to meet the daily requirement.
- 2.1.6 *Market :* There is a weekly market held once in a week at Jengjal. However, the main market where the people sell their produce is at Jengjal and Rongram

**Table 2.5: Infrastructure Status.**

1	2	3		4			
Name of District	Name of Project	Parameters:		Status			
West Garo Hills	West Garo Hills – IWMP V	(i)	No. of villages connected to the main road by an all-weather road.	All villages are at 2 hr to 4 hrs walking from the motorable junction			
		(ii)	No. of village provided with electricity	nil			
		(iii)	No. of households without access to drinking water	10 nos.			
		(iv)	No. of educational institutions: Primary (P)/ Secondary (S)/ Higher Secondary (HS)/ Vocational institution (VI)	(P)	(S)	(HS)	(VI)
				1 No.	-	-	-
		(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 centres (e.g. Union (U)/ Society (S)/ Private agency (PA)/ Others (O))	(U)	(S)	(PA)	(O)
				Nil	Nil	Nil	Nil
(xiii)	No. of villages with access to Aganwadi Centres	1 No.					
(xiv)	Any other facilities with no. of villages (please specify)	Nil					

**2.9 Livestock:** there are only 4 kinds of livestock farming being farmed in the area viz. Piggery, Poultry, cattle and Goatery.

**Table 2.6: Existing livestock population**

Type of Animal	Population
Piggery	19
Poultry	209
Cattle	50
Goatery	36

**2.10 Land ownership:** There are primarily two types of land holding system, namely private lands (. individually owned land) and community lands (i.e. clan 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
West Garo Hills	West Garo Hills – IWMP V	(i) Large	-	-			
		(ii) Small	-	-			
		(iii) Marginal	34	10	-	10 Ha	10 Ha
		(iv) Landless	5	5	-	-	-
		Sub - Total	39	15		10 Ha	10 Ha

**Table 2.5: Common Property Resources in the Project Area**

1	2	3	4				5			
Name of District	Name of the Projects	CPR Particulars	Total Area (ha) Area owned/ In possession of				Area available for treatment (ha)			
			Pvt. Person	Govt. (specify deptt.)	PRI	Any other (Community)	Pvt. Person	Govt. (specify deptt.)	PRI	Any other (Community)
West Garo Hills	West Garo Hills – IWMP V									
		Horticulture Plantation	106.78	-	-		75.00			
		Agri. land	87.69	-	-		25.00			
		Tree clad area open	87.30	-	-	105.00				143.07
		Open Scrub Forest	-	-	-	6.93				6.93
		<b>Total</b>	281.77 Ha	-	-	<b>111.93 Ha</b>	<b>100.00 Ha</b>	-	-	<b>150.00 Ha</b>

**2.11 Land use and land cover :** As per the land use land cover map the Watershed area has been broadly classified into the following land uses.

a) Horticultural plantation	=	106.78 Ha
b) Agricultural land-crop land-kharif crop	=	87.69 Ha
c) Tree clad Area-open	=	192.30 Ha
d) Wastelands open scrub	=	<u>6.93 Ha</u>
Total	=	393.80 Ha

**2.12 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 Jhum areas are abandoned 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 is jhum cultivation areas. In other words, unscientific method of cultivation has not only reduced the Jhum cycle, low crop yield but had adversely affected the ecological balance within the area. Road communication is another infrastructural problems that the area is facing where large volume crops like pineapple, jackfruits etc do not find their way into the market which has resulted in poor socio-economic status of the people. However, to control or to overcome the said problems an innovative approach has been formulated and documented in the Action Plan or the Treatment Plan the Detailed Project Report. The method of identification of the problems is through the Participatory Rural Appraisal Exercises conducted in all the villages within the Watershed.



## **CHAPTER III**

# **PROJECT PLANNING & INSTITUTION BUILDING**

## **CHAPTER III**

### **PROJECT PLANNING & INSTITUTION BUILDING**

#### **3.1 Scientific Planning**

- i) Base Line Survey: To establish a benchmark for assessing the impact of any intervention (pre-project & post project) a baseline survey is essential. The baseline survey included household census & socio-economic survey by using structured and semi –structured questionnaires, bio-physical survey to identify and assess the status of natural resources in the project area.
- ii) Participatory Rural Appraisal: To further obtain information on the project area, the people, resources, various PRA techniques like resource mapping, social mapping, seasonal calendars, matrix ranking, Venn diagrams were used.
- iii) GIS & Remote Sensing: To facilitate the process of prioritization and planning Geographic Information System was use. The land use and land cover (LULC) maps were prepared. The activities were located on the field by using GPS and accordingly transferred to the maps on GIS platform.

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

1	2	2
Sl.No.	Scientific criteria/ inputs used	No. of projects in which scientific criteria were used
A.	<b>Planning</b>	
	Cluster approach	Yes
	Whether technical back-stopping for the project has been arranged? If yes, mention the name of the Institute.	Yes
	Baseline survey	Yes
	Hydro-geological survey	No
	Contour mapping	No
	Participatory Net Planning (PNP)	No
1	2	2
	Remote sensing data-especially soil/ crop/ run-off cover	Yes
	Ridge to Valley treatment	Yes

	Online IT connectivity between	
	(1) Project and DRDA cell/ZP	Yes
	(2) DRDA and SLNA	Yes
	(3) SLNA and DoLR	Yes
	Availability of GIS layers	
	1. Cadastral map	No
	2. Village boundaries	No
	3. Drainage	Yes
	4. Soil (Soil nutrient status)	Yes
	5. Land use	Yes
	6. Ground water status	No
	7. Watershed boundaries	Yes
	8. Activity	Yes
	Crop simulation models <sup>#</sup>	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>B.</b>	<b>Inputs</b>	
	1. Bio-pesticides	No
	2. Organic manures	Yes
	3. Vermi-compost	Yes
	4. Bio-fertilizer	No
	5. Water saving devices	Yes
	6. Mechanized tools/ implements	No
	7. Bio-fencing	Yes
	8. Nutrient budgeting	Yes
	9. Automatic water level recorders & sediment samplers	Yes
	Any other (please specify)	-

### 3.2 Project Implementing Agency:

The PIA is the Soil & Water Conservation Territorial Division, Tura, West 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	
West Garo Hills	West Garo Hills – IWMP V	(i) Type of organization#	Government
		(ii) Name of organization	Soil & Water Conservation (T) Division, Tura
		(iii) Designation & Address	Tura
		(iv) Telephone	03651 - 222352
		(v) Fax	
		(vi) E-mail	

### 3.3 Institution Building

#### i) Watershed Committee (WC)

The Watershed Committee of the Ringgi Bisik, IWMP V was constituted with the active involvement of the villagers with strong support of the Traditional Institutions (Village Council). The Ringgi Bisik Watershed Committee has been registered under the Society Registration Act 1860.

**Table 3.2: Details of Watershed Committees (WC):**

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18			
Names of the Districts	Names of projects	Names of WCs	Date of Registration as a Society (dd/mm/yyyy)	Designation	M/F	SC	ST	SF	MF	LF	Land-less	UG	SHG	GP	Any other	Educational qualification	Function/s assigned#			
West Garo Hills District	West Garo Hills District – IWMP – V	Ringgi Bisik		President	M	-	ST									VIII	A to I			
				Secretary	M	-	ST										B.E	A to I		
				Member	6 M	-	ST											Cl – VIII	Do	
				Member	2 F	-	ST													Do
				Member																

- |   |   |
|---|---|
| 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.



### 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
						(i) Landless									
						(ii) SF									
						(iii) MF									
						(iv) LF									
Total		Nil	Nil	Nil	Nil				Nil			Nil			Nil



**CHAPTER IV**  
**PROJECT ACTIVITIES**

## CHAPTER IV PROJECT ACTIVITIES

### 4.1 Preparatory Phase:

#### i) Entry Point Activities (EPA)

(Financial – Rs. in lakh)

1	2	3	4	5	6	7	8	9	10	11
Sl. No.	State	District	Names of Project	Amount earmarked for EPA	Entry Point Activities planned	Estimated cost	Expenditure incurred	Balance	Expected outcome	Actual outcome
1	Meghalaya	West Garo Hills	West Garo Hills – IWMP V	1.5 Lakhs	Construction of Spring Chamber/Water Tanks  Construction of Ringwell	1.20  0.30	1.5	-	-	-

**ii) Other activities of Preparatory Phase:**

1	2	3	4	5	6	7	8	9	10	11	12	13
District	Name of Projects	Initiation of village level institution	Capacity building	IEC activities	Baseline survey	Hydro-geological survey	Identifying technical support agencies	Resource agreements	Preparation of DPR	Evaluation of DPR	Any other (please specify)	Cost incurred (Rs. In lakh)
West Garo Hills	West Garo Hills – IWMP V	1 no. W/C 6 nos. Sub Watershed Committee at each benefiting village	3 nos.	2 nos.	Participatory Rural Appraisals	N.A	Done	Done	Done	Done	-	-

**4.2 Watershed Works Phase:**

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

Sl. No	Name of State	Name of District	Name of Projects	Type of structures	6			7		
					Pre Project			Proposed Project		
					No	Area irrigated	Storage	Augmentation/ repair of existing structures		Construction of new structures

o	s	cts				ted (ha)	capac ity	No	Area to be treat ed (ha)	Storag e capaci ty	Estimat ed cost (in lakhs)	No	Area to be treated (ha)	Storage capacit y (per unit)	Estimate d cost (in lakhs)	No	Area to be treated (ha)	Storag e capaci ty (m <sup>3</sup> )	Estima ted cost			
1	Meg hala ya	West Garo Hills	West Garo Hills – IWMP V	(i) Spring Chamber	-	-	-	-	-	-	-	1	-	4 m <sup>3</sup>	0.60	3	-	12.00 m <sup>3</sup>	1.50			
				(ii) Pond	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
				(iii) Lake	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				(iv) Check Dam	-	-	-	-	-	-	-	-	-	1	25.00	40.00 m <sup>3</sup>	2.50	4	100.00	160.00 m <sup>3</sup>	10.00	
				(v) W/H Farm Pond	-	-	-	-	-	-	-	-	-	1	2.50	250.00 m <sup>3</sup>	2.50	2	5.00	500.00	5.00	
				(vi) Ddug out Pon	-	-	-	-	-	-	-	-	-	1	0.50	12.00 m <sup>3</sup>	0.50	4	2.00	48.00 m <sup>3</sup>	2.00	
				(vii) Any others (please specify)																		
			<b>Total</b>											<b>4</b>	<b>28.00</b>	<b>306.00</b>	<b>6.10</b>	<b>13</b>	<b>107.00</b>	<b>720.00</b>	<b>18.50</b>	

8											9	10
Achievement due to project												
Augmentation/ repair of existing structures				Construction of new structures				Total achievement			Change in storage capacity (col 8-6)	Change in irrigated area (ha) Col. (8-6)
No	Area irrigated (ha)	Storage capacity	Expenditure incurred (in lakhs)	No	Area irrigated (ha)	Storage capacity	Expenditure incurred (in lakhs)	Area irrigated (ha)	Storage capacity	Estimated incurred		
-	-	-	-	1	-	4 m <sup>3</sup>	0.60	-	12.00m <sup>3</sup>	1.50	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	1	25.00	40.00 m <sup>3</sup>	2.50	100.00	160.00 m <sup>3</sup>	10.00	-	-
-	-	-	-	1	2.50	250.00 <sup>3</sup> m	2.50	5.00	500.00	5.00	-	-
-	-	-	-	1	0.50	12.00 m <sup>3</sup>	0.50	2.00	48.00 m <sup>3</sup>	2.00	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	<b>4</b>	<b>28.00</b>	<b>306.00 m<sup>3</sup></b>	<b>6.10</b>	<b>107.00</b>	<b>720.00</b>	<b>18.50</b>	-	-











**4.2.8 Details of engineering structures in watershed works:**

1	2	3	4			5			6	7				8							
			Name of structures	Type of treatment			Type of land			Executing agency	Target				Achievement						
District	Project	(i) Ridge area (R)		(ii) Drainage line (D)	(iii) Land Dev. (L)	(i) Private	(ii) Community	(iii) Others (pl. specify)	(i) UG (ii) SHG (iii) Others (pl. specify)	No. of units (No./cum./rmt)	Estimated cost (Rs. in lakh)				Expected month & year of completion (mm/yyyy)	No. of units (No./cum./rmt)	Expenditure incurred (Rs. in lakh)				Status of completion
			M								W	O	T	M			W	O	T		
		Dug out Pond		D		√		Indiv.	4		2	2	3 yrs	4		2	2	3 yrs	3 yrs		
		Bench terracing	-	D	-	√	-	Indiv.			0.2	0.2	3 yrs			0.2	0.2	3 yrs	3 yrs		
		Irr. Dam		D		√		UG	4	6	4	10	3 Yrs	4	6	4	10	3 Yrs	3 yrs		
		W/H Farm Pond		D		√		Indiv.	4	6	4	10	3 yrs	4	6	4	10	3 yrs	3 yrs		
		Prot. Wall		D		√		UG	4	1.2	0.8	2	3 yrs	4	1.2	0.8	2	3 yrs	3 yrs		
		C.C. Channel		D		√		UG	2	0.6	0.4	1	3 yrs	2	0.6	0.4	1	3 yrs	3 yrs		

Contd.



#### 4.2.10 Details of activities connected with vegetative cover in watershed works:

1	2	3	4			5			6	7				8			
Dist rict	Pro ject	Name of structure/ work	Type of treatment			Type of land			Executing agency	Target				Achievement			
			(i) Ridge area (R)	(ii) Draina ge line (D)	(iii) Land dev. (L)	(i) Priv ate	(ii) Com muni ty	(iii) Other s (pl. speci fy)	(i) UG (ii)SHG (iii) Others (pl. specify)	Area (ha)	No. of plants	Estimat ed cost (Rs. in lakh)	Expecte d month & year of comple- tion (mm/ yyyy)	Area (ha)	No. of plant s	Expendi- ture incurred (Rs. in lakh)	Actual month & year of comple-tion (mm/ yyyy)
		Afforestation					✓			10		0.86	3 yrs	-	-	-	-
		Agro- Horticulture				✓				10		0.86	3 yrs	-	-	-	-
		Pasture dev.															
		Nursery raising															
		Others															

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



**4.2.12 Details of allied / other activities:**

1	2	3	4			5	6		7	
District	Project	Name of activity@	Type of land			Executing agency	Target		Achievement	
			(i) Private	(ii) Community	(iii) Others (landless)	(i) UG (ii) SHG (iii) Others (pl. specify)	Estimated cost (Rs. in lakh)	Expected month & year of completion (mm/yyyy)	Expenditure incurred (Rs. in lakh)	Actual month & year of completion (mm/yyyy)
West Garo Hills	Ringgi Bisik IWMP V									
		Carpentry			5 units	SHG's /Individual	0.175	3 yrs.		
		Tailoring			4 units	Do	0.40	3 yrs.		

(Contd.)

\* from column no. 2, no. of States; from column no. 3, no. of Districts; from column no. 4, total no. of Projects; from column no. 5, activity-wise totals, from column no. 6, type-wise totals, from column no. 7, agency-wise totals, from column no. 8, total estimated cost, from column no. 9, total expenditure incurred, structure-wise no. of completed works, from column no. 10, item-wise totals, for the entire country may be indicated at the end of the table

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



**CHAPTER V**  
**PROJECT PHASING & BUDGETING**



**CHAPTER V**  
**PROJECT PHASING & BUDGETING**  
**ACTION PLAN OF RINGGI BISIK MICRO WATRSHED ( IWMP ) UNDER TERRITORIAL DIVISION, TURA.**

Name of District : West Garo Hills

No. of villages Covered : 1 no.

Name of C. & R. D. Block : Rongram

Project Area : 250.00 Ha.

( Figures in lakh)

1	2	3	4	5	6	7	8	9	10	11	12	13	14
Sl. No.	Activities	I st Yr. (6%)		II nd Yr. (14%)		III rd Yr. (50%)		IV th Yr. (25%)		V th Yr. (5%)		Total 100%	
		Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.
<b>I</b>	<b><u>Management Cost :</u></b>												
<b>A</b>	<b>Administrative Cost : 10 %</b>	-	-	2%	0.75	5%	1.875	3%	1.125	-	-	10%	3.75
	i) Honorarium of 1 WDT Member @ Rs.4000/- per month	-	-	-	0.08	-	0.48	-	0.24	-	-	-	0.80
	ii) Honorarium of watershed Committee Chairman @ Rs. 250/- per month	-	-	-	0.03	-	0.03	-	0.03	-	-	-	0.09
	iii) Honorarium of WCM @ Rs.100/- per member per month	-	-	-	0.108	-	0.108	-	0.108	-	-	-	0.324
	iv) Honorarium of Chartered Accountant	-	-	-	0.08	-	0.10	-	0.10	-	-	-	0.28
	v) TA/DA of Field Asst. @ Rs.2500/- per month	-	-	-	0.15	-	0.30	-	0.15	-	-	-	0.60
	vi) Hiring Charges of Office Building @ Rs.500/- per month	-	-	-	0.06	-	0.06	-	0.06	-	-	-	0.18
	vii) Hiring Charges of Vehicles @ Rs.2500/- per month	-	-	-	0.15	-	0.30	-	0.30	-	-	-	0.75
	viii) Office expenses, POL, Stationeries, Printing of SHG books, pamphlets, tea & snacks, cost of camera etc.	-	-	-	0.092	-	0.497	-	0.137	-	-	-	0.726
	<b>Total Of 'A'</b>			<b>2%</b>	<b>0.75</b>	<b>5%</b>	<b>1.875</b>	<b>3%</b>	<b>1.125</b>			<b>10%</b>	<b>3.75</b>
	<b>Preparatory Phase :</b>												
<b>B</b>	<b>Entry Point Activities ; 4 %</b>	<b>4%</b>	<b>1.50</b>									<b>4%</b>	<b>1.50</b>
	i) Construction of Spring Chamber @ Rs. 60000/- per no.	2 nos.	1.20	-	-	-	-	-	-	-	-	2	1.20
	ii) Construction of Ringwell @ Rs.30000/- per no.	1 nos.	0.30	-	-	-	-	-	-	-	-	1	0.30
	<b>Total of 'B'</b>	<b>4%</b>	<b>1.50</b>									<b>4%</b>	<b>1.50</b>

...C.O...

1	2	3	4	5	6	7	8	9	10	11	12	13	14
<b>C.</b>	<b>Institution &amp; Capacity Building ; 5 %</b>	1%	0.375	2%	0.75	1%	0.375	1%	0.375			5%	1.875
	<i>i) Awareness Campaign</i>	-	0.10	-	0.10	-	0.075	-	0.10	-	-	-	0.30
	<i>ii) Exposure visits off-campus</i>	-	-	-	0.25	-	0.15	-	0.175	-	-	-	0.475
	<i>iii) Capacity Building of SHGs/UGs</i>	-	0.10	-	0.20	-	0.10	-	0.10	-	-	-	0.70
	<i>iv) Capacity Building of WC members</i>	-	0.075	-	0.20	-	0.05	-	-	-	-	-	0.30
	<i>v) Capacity Building of WDT/W Volunteer</i>	-	0.10	-	-	-	-	-	-	-	-	-	0.10
	<b>Total of 'C'</b>	<b>1%</b>	<b>0.375</b>	<b>2%</b>	<b>0.75</b>	<b>1%</b>	<b>0.375</b>	<b>1%</b>	<b>0.375</b>			<b>5%</b>	<b>1.875</b>
<b>D.</b>	<b>Detail Project Report (DPR) - 1%</b>	<b>1%</b>	<b>0.375</b>									<b>1%</b>	<b>0.375</b>
	<i>i) Cost of Resources Inventories works</i>	-	0.125	-	-	-	-	-	-	-	-	-	0.125
	<i>ii) Cost of PRA</i>	-	0.05	-	-	-	-	-	-	-	-	-	0.05
	<i>iii) Cost of Land use survey</i>	-	0.125	-	-	-	-	-	-	-	-	-	0.125
	<i>iv) Cost of formulating</i>	-	0.075	-	-	-	-	-	-	-	-	-	0.075
	<b>Total of 'D'</b>	<b>1%</b>	<b>0.375</b>									<b>1%</b>	<b>0.375</b>
<b>E.</b>	<b>i) Monitoring - 1%</b>	-	-	-	0.075	-	0.1875	-	0.1125	-	-	1%	0.375
				0.2%	0.075	0.5%	0.1875	0.3%	0.1125			1%	0.375
<b>F.</b>	<b>ii) Evaluation - 1%</b>	-	-	-	0.1125	-	0.1875	-	-	-	-	1%	0.375
	<b>Total of 'E'</b>			0.3%	0.1125	0.5%	0.1875	0.2%	0.075			1%	0.375
	<b>Total of I ( A to F )</b>	<b>6%</b>	<b>2.25</b>	<b>4.5%</b>	<b>1.6875</b>	<b>7%</b>	<b>2.625</b>	<b>4.5%</b>	<b>1.6875</b>			<b>22%</b>	<b>8.25</b>
<b>II</b>	<b>Watershed Works Phase : 50 %</b>			7.50%	2.8125	35%	13.125	7.50%	2.8125			50%	18.75
<b>A.</b>	<b>Arable Land Treatment :</b>												
	<i>iii) Terracing - @ Rs.20000/- ha.</i>	-	-	3	0.60	-	-	1	0.20	-	-	3	0.80
	<b>Total of 'A'</b>				<b>0.60</b>				<b>0.20</b>				<b>0.80</b>
<b>B.</b>	<b>Non-Arable Land Treatment :</b>												
	<i>i) Afforestation - Prelim. @ Rs.1300/- per ha.</i>	-	-	10	0.13	-	-	-	-	-	-	-	0.13
	<i>1st year Planting @ Rs.4600/- per Ha.</i>	-	-	-	0.46	-	-	-	-	-	-	-	0.46
	<i>2nd year Planting @ Rs. 2700/- per Ha.</i>	-	-	-	-	-	0.27	-	-	-	-	-	0.27
	<i>ii) Rubber pltn. - Pelim. @ Rs.1300/-per ha.</i>	-	-	10	0.13	-	-	-	-	-	-	-	0.13
	<i>1st year Planting @ Rs.4600/- per Ha.</i>	-	-	-	0.46	-	-	-	-	-	-	-	0.46
	<i>2 nd year Planting @ Rs. 2700/- per ha.</i>	-	-	-	-	-	0.27	-	-	-	-	-	0.27
					<b>1.18</b>		<b>0.54</b>						<b>1.72</b>

<b>C. Drainage Line Treatment :</b>												
i) C.C. Irrigation Dam	-	-	-	-	2	5.00	1	2.50	-	-		7.50
ii) W/H Farm Pond	-	-	-	-	2	5.00	-	-	-	-		5.00
iii) Dug out-cum-Fishery Pond	-	-	1	0.992	1	0.992	-	-	-	-		1.98
iv) Protection Wall	-	-	-	-	3	1.50	-	-	-	-		1.50
v) Earthen Irrigation Channel @ Rs.50/-per R/m	-	-	-	-	265.00	0.1325	225.00	0.1125	-	-		0.25
<b>Total of 'C'</b>				<b>0.9525</b>		<b>12.625</b>		<b>2.6125</b>				<b>16.23</b>
<b>Total of II (A to C)</b>			<b>7.5%</b>	<b>2.8125</b>	<b>35%</b>	<b>13.125</b>	<b>7.5%</b>	<b>2.8125</b>			<b>50%</b>	<b>18.75</b>
<b>III Livelihood Activities for Assetless Person - 10%</b>			1%	0.375	3%	1.125	6%	2.25			10%	3.75
i) Kitchen Garden @ Rs.2500/- per unit	-	-	3	0.075	5	0.125	2	0.05	-	-		0.25
ii) Pisciculture @ Rs. 10000/- per unit	-	-	3	0.30	1	0.10	3	0.30	-	-		0.70
iii)Carpentry @ Rs. 5000/- per unit	-	-	-	-	2	0.10	6	0.30				0.40
iv) Tailoring @ Rs. 8000/- per unit	-	-	-	-	5	0.40	10	0.80				1.20
v) Poultry/Piggery @ 8000/- per unit	-	-	-	-	5	0.40	10	0.80				1.20
<b>Total of III</b>			1%	0.375	3%	1.125	6%	2.25			10%	3.75
<b>IV Production System &amp; Micro Enterprises - 13%</b>			1%	0.375	5%	1.875	7%	2.625			13%	4.875
i) Grocery @ Rs. 30000/- per unit	-	-		0.30		0.90		0.90				2.10
ii)Weaving @ Rs. 30000/- per unit	-	-		-		0.90		1.20				2.10
iii)Basket Making @ Rs.2500/- per unit	-	-		0.075		0.075		0.025				0.175
iv) Rice Mill @ Rs. 50000/- per unit	-	-		-		-		0.50				0.50
<b>Total of IV</b>			1%	0.375	5%	1.875	7%	2.625			13%	4.875

<b>V</b>	<b><u>Consolidation &amp; withdrawal Phase - 5 %</u></b>									<b>5%</b>	<b>1.875</b>	<b>5%</b>	<b>1.875</b>
	<i>i) Repairing &amp; maintenance of CPR's</i>	-	-	-	-	-	-	-	-	-	0.875	-	0.875
	<i>ii) Improving the sustainability of various intervention</i>	-	-	-	-	-	-	-	-	-	0.50	-	0.50
	<i>iii) Documentation of successful experience and preparation of Completion Report.</i>	-	-	-	-	-	-	-	-	-	0.50	-	0.50
	<b>Total of V</b>									<b>5%</b>	<b>1.875</b>	<b>15%</b>	<b>1.875</b>
	<b>Grand Total</b>												
	<b>( I + II + III + IV + V )</b>	<b>6%</b>	<b>2.25</b>	<b>14%</b>	<b>13.50</b>	<b>50%</b>	<b>12.375</b>	<b>25%</b>	<b>7.50</b>	<b>5%</b>	<b>1.875</b>	<b>100%</b>	<b>37.50</b>

Deputy Commissioner,  
West Garo Hills, Tura  
Meghalaya.

\_\_\_\_\_

Divisional Officer,  
Soil & Water Conservation (T) Division.  
West Garo Hills.

\_\_\_\_\_

**VILLAGEWISE ACTION PLAN OF RINGGI BISIK MICRO WATERSHED UNDER IWMP -  
TERRITORIAL DIVISION : TURA .**

Name of District : West Garo Hills  
Name of C.& R.D. Block : Rongram

No. of village : 1 no.  
Project Area : 250.00 Ha.

Sl. No.	Activities	Chidekgre				Total	
		Phy.	Fin.	Phy.	Fin.	Phy.	Fin.
<b>I</b>	<b><u>Watershed works Phase :</u></b>						
<b>A.</b>	<b><u>Arable Land Treatment :</u></b>						
	i) Rubber Plantation @ Rs. 8600/- per Ha.	10	0.86			10	0.86
	ii) Terracing @ Rs.20000/- per Ha.	3	0.80			3	0.80
<b>B.</b>	<b><u>Non-arable Land Treatment :</u></b>						
	i) Afforestation @ Rs. 10100/- per Ha.	10	1.001			10	1.001
<b>C.</b>	<b><u>Drainage Line Treatment :</u></b>						
	i) Irrigation Dam @ Rs. 250000/- per no.	3	7.50			3	7.50
	ii) W/H Farm Pond @ Rs. 250000/- per no.	2	5.00			2	5.00
	iii) Dug out Pond @ Rs. 50000/- per no.	2	1.90			2	1.90
	iv) Protection Wall @ Rs. 50000/- per no.	5	1.50			5	1.50
	v) Earthen Irrigation Channel @ 50/- per R/ m	2	0.25			2	0.25
<b>III</b>	<b><u>Livelihood Activities for Assetless Household :</u></b>						
	<b><u>i)Kitchen Garden @ 2500/-</u></b>	10	0.25			10	0.25
	<b><u>ii)Pisciculture @ 10000/-</u></b>	7	0.7			7	0.7
	iii)Carpentry @ 5000/-	8	0.40			8	0.40
	Tailoring @ 8000/-	15	1.2			15	1.2
	Piggery/Poultry @ 8000/-	15	1.2			15	1.2
<b>IV</b>	<b><u>Production System and Micro Enterprises :</u></b>						
	i) Grocery @ 30000/-	7	2.10			7	2.10
	ii) Weaving @ 30000/-	7	2.10			7	2.10
	iii)Basket Making @ 2500/-	7	0.175			7	0.175
	iv)Rice Mill @ 50000/-	1	0.5			1	0.5

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

1	2	3	4	5	6		7	8	9	10				11				
					Project duration (dd/mm/yyyy)					Area (ha) of the projects		Area details (ha) (falling within the projects)						
S L N o	Name of State	Name of Districts	Names of Projects	Year of sanction	From	To	Area of the projects	Project cost (Rs. In lakh)	Names of Micro watersheds & Code nos. (as per DoLR's unique codification)	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					
1	Meghalaya	West Garo Hills	West Garo Hills – IWMP V	2001 2-13	2012-13	2016-17	250.00	37.50 Lakhs	Ringgi Bisik (Reaches)	25Ha	Nil	5.93	1.00	43.89	92.3	6.93	106.78	250.0



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

1	2	3	4	5				6				
Sl. No.	Names of States	Name of Districts	Names of Projects	Distt. Agency's Project Account details				Watershed Committee (WC) account details:				
				Name of the Bank and Branch where project account has been opened	Account Number (to be obtained confidentially)	Account type (Savings/ Current/ Others)	Name & Designation of authorized persons who operate the account.	Name of Watershed Committee	Name of the Bank and Branch where project account has been opened	Account number (to be obtained confidentially)	Account type (Savings/ current others)	Name & Designation of authorized persons who operate the account.
1	Meghalaya	West Garo Hills	West Garo Hills – IWMP V	State Bank of India, Tura		Saving	Shri S.Ch. Sangma, DS&WCO	Ringgi Bisik Watershed Committee	Axis Bank Tura	911010006289810	Saving	Chairman W.C, Secretary W.C.



**Details of Convergence of IWMP with other Schemes:**

	1	2	3	4	5	6	7
Sl. No.	District	Names of projects	Names of Departments with Schemes converging with IWMP	Fund made available to IWMP due to convergence (Rs. in lakh)	Name of activity/task/structure undertaken with converged funds	Reference no. of activity/ task/ structure in DPR <sup>@</sup>	Level at which decision for convergence was taken <sup>\$</sup>
					(a) Structures (b) livelihoods (c) Any other (pl. specify) <sup>#</sup>		
1	West Garo Hills	West Garo Hills – IWMP V	* Community Rural Development Department NREGS	2.00	1. C.C. Channel 2. Coffee Plantation	-	Block Level & District Level
2			* PHE Department TSC	n.a		-	

**Note:**

(i) Chidekgre

Wages – 0.80;

Material – 1.20;

C.C. Channel  
Coffee Plantation

**Public-Private Partnership in the IWMP projects: NIL**

1	2	3	4			5		6	7	8	9
District	Name of project	Name of Private Sector Partner Agency	Type of agreement signed			Financial contribution		Partnership Interventions	Expected Outcomes	Actual Outcomes	Comments
			a)MoU	b)Contract	c) Any other (pl. specify)	IWMP	Private sector				

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

**CHAPTER VI**  
**CAPACITY BUILDING**

## CHAPTER VI CAPACITY BUILDING

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

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

1	2	3	4	5	6	7	8	9					
								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 <sup>#</sup>
Reference Year	No. of trainings assigned	No. of trainees to be trained	No. of trainings conducted	No. of trainees trained									
1	Meghalaya	NIRD (NER)	Guwahati	Director	Central Govt.	Remote Sensing, Rural Devt.	NA	-					
2		SIRD	Nongsder	Director	State Govt.	Capacity Building	NA	-					
3		RRTC	Umran	Director	Don-Bosco	Agri-Horti, Animal Husbandry, Entrepreneurship	NA						
4		ICAR	Umiam	Director	Central Govt.	Do	NA						
5		VTC	Kyrdem Kulai	Director	State Govt.	Animal Husbandry	NA						
6		Fruit Garden	Shillong	Director	State Govt.	Agri-Horti, Fruit Processing	NA						

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

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

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

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



**Table 6.3: Information, Education & Communication (IEC) activities for the year 2011 - 12 as on 31/03/11 (dd/mm/yyyy)\***

	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
	<b>Activity</b>	<b>Executing agency</b>	<b>Estimated expenditure (Rs.)</b>	<b>Expenditure incurred (Rs.)</b>	<b>Outcome (may quantity, wherever possible)</b>
1.	Awareness	S&WC (T) Division	0.30	0.30	
2.	PRA Exercises	S&WC (T) Division	0.05	0.05	
3.	Exposure Visits	S&WC (T) Division	0.475	0.475	
4.	Capacity Building	S&WC (T) Division	0.40	0.40	

**CHAPTER VII**  
**EXPECTED OUTCOME**





**Table 7.2 Migration Details:**

1	2	3	4	5	6	7	8	9	10	
Names of the Districts	Names of Projects	Name of village	No. of persons migrating	No. of days per year of migration	Major reason(s) for migrating	Distance of destination of migration from the village (km)	Occupation during migration	Income from such occupation (Rs. in lakh)	For reduced migration identify major activities of IWMP responsible	
									(a) Structures	(b) Livelihoods
				N	I	L				

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

**Table 7.3 Economic benefits accrued to women:**

1		2		3		4
Wages		Training		Livelihoods		Total (Rs. in lakh)
Woman days	Amount (Rs. in lakh)	No. of women participants	Amount (Rs. in lakh)	No. of women beneficiaries	Value of assistance provided (Rs. in lakh)	

\* from Column no. 2, total no. of States implementing the programme, from Column no. 3 to 6, category-wise totals, may be mentioned at the end of the table for the entire country.

**Table 7.4 Details of rights conferred in the CPRs of the project areas:**

1 Names of the Districts	2 Names of the projects	3 Names of the villages	4 Particular of CPR	5 Nature of right	6 Period of right	7 Beneficiary details (no. of families)				8 User Charges (Rs.)
						SC	St	Others	Total	
West Garo Hills District	WGH-IWMP-V									

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

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

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

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

**Table 7.5 Water related outcomes:**

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

1	2	3	4	5	6	7	8
Names of Districts	Names of Projects	Sources	Pre-Project level	Mid-term project level	Post-Project level	Increase/decrease (Col. 8 – Col. 6)	Remarks
West Garo Hills District	WGH-IWMP V	Open wells	-	-	-	-	-
		Others (specify) Springs	very poor poor	poor	Good	Increased	-

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

**Table 7.5.2 Status of Drinking water:**

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

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

**Table 7.5.3 Water Use efficiency:**

1	2	3	4			
District	Name of the project	Name of major crop	Water savings in cu.m.			
			through water saving devices <sup>\$</sup>	through water conserving agronomic practices <sup>#</sup>	Any other (pl specify)	Total
West Garo Hills District	WGH-IWMP V	Coffee	PVC pipes	FYM, mulching	-	-

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

<sup>\$</sup> Sprinkler, Drip, PVC pipe, etc.

<sup>#</sup> Vermi-compost, organic manuring, Mulching, Check basin, Alternate furrow, Ridges & furrow & other scientific practices.

**Table 7.6: Vegetation/ crop related outcomes:**

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

1	2	3	4						5						6					
			Pre-project						Mid-term						Post-project					
			Area (ha)		Average Yield (Qtl) per ha.		Total Production (Qtl)		Area (ha)		Average Yield per ha (Qtl)		Total Production (Qtl)		Area (ha)		Average Yield per ha (Qtl)		Total Production (Qtl)	
Irri	Rf.	Irri	Rf.	Irri	Rf.	Irri	Rf.	Irri	Rf.	Irri	Rf.	Irri	Rf.	Irri	Rf.	Irri	Rf.	Irri	Rf.	
Names of the Districts	Name of Projects	Millet	-	30	-	15	-	450	-	30	-	15	-	450	-	50	-	30	-	1500
		Yam	-	25	-	20	-	500	-	25	-	20	-	500	-	40	-	40	-	1600
		Ginger	-	30	-	35	-	1050	-	30	-	35	-	1050	-	55	-	70	-	3850
		Tapioca	-	20	-	20	-	400	-	20	-	20	-	400	-	35	-	40	-	1400
		Betel nut	-	45	-	25	-	1125	-	45	-	25	-	1125	-	75	-	50	-	3750
		Betel leaf	-	10	-	15	-	150	-	10	-	15	-	150	-	20	-	30	-	600

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

Irri – Irrigated Rf – Rainfed

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

1	2	3	4	5	6						7						8					
					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.	Irri	Rf.			
	Meghalaya	West Garo Hills District	WGH-IWMP V	Squash	-	-	-	-	-	-	120	-	28	-	3360	-	150	-	30	-	4500	-
			Total for the District																			

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

Irri. – Irrigated Rf – Rainfed

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

1 Sl No.	2 Names of States	3 Names of the Districts	4 Name of Projects	5 Name of crops	6						7						8					
					Pre-project						Mid-term						Post-project					
					Area (ha)		Average Yield (Qtl) per ha.		Total Producti on (Qtl)		Area (ha)		Average Yield per ha (Qtl)		Total Productio n (Qtl)		Area (ha)		Average Yield per ha (Qtl)		Total Production (Qtl)	
Irri	Rf.	Irri	Rf.	Irri	Rf.	Irri	Rf.	Irri	Rf.	Irri	Rf.	Irri	Rf.	Irri	Rf.	Irri	Rf.	Irri	Rf.			
	Meghalaya	West Garo Hills District	WGH- IWMP V	Black Pepper	-	-	-	-	-	-	60 Ha	-	27	-	1620	-	120	-	29	-	3480	-
			Total for the District																			

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

Irri. – Irrigated Rf – Rainfed

**Table 7.6.4 Increase/ Decrease in area under fodder:**

1	2	3	4			5		
District	Name of project	Duration of Project	Existing area under fodder (ha)			Achievement (ha)		
			Source/Name of report	Year of reference	Area already under fodder	Area under fodder proposed to be covered through IWMP	Area under fodder actually covered through IWMP	Change in area under fodder
West Garo Hills District	WGH-IWMP V							

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

**Table 7.6.5 Increase/ Decrease in Forest/vegetation cover:**

1	2	3	4			5		
District	Name of project	Duration of Project	Existing area tree cover (ha)			Achievement (ha)		
			Source/Name of report	Year of reference	Area already under forest/vegetative cover	Forest/vegetative cover area proposed to be covered under IWMP	Forest/vegetative cover area actually covered under IWMP	Change in forest/vegetative cover area
West Garo Hills District	WGH-IWMP V	5 yrs	PRA	2009 - 10	192.30 Ha	20.00 Ha	20.00	20.00 Ha

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



**Table 7.6.6 Increase/ Decrease in area under horticulture:**

1	2	3	4			5		
			Existing area under horticulture (ha)			Achievement (ha)		
District	Name of project	Duration of Project	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
West Garo Hills District	WGH-IWMP V	5 yrs	PRA	2010	106.78	10.00	10.00	10.00

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

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

1	2	3	4			5		
			Existing area under fodder (ha)			Achievement (ha)		
District	Name of project	Duration of Project	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
West Garo Hills District	WGH-IWMP V	5 yrs	-	-	-	-	-	-

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

**Table 7.7 Livelihood related outcomes:**

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

1 Names of the Districts	2 Name of Projects	3 Type of Animal	4			5			6			7 Remarks
			Pre-project			Mid-term			Post-project			
			No.	Yield	Income	No.	Yield	Income	No.	Yield	Income	
West Garo Hills District	WGH-IWMP V											
		Piggery	55	-	3.3	125	-	8.75	250	-	20.00	
		Poultry	1100	-	3.85	1500	-	5.25	2500	-	10.00	
	Total for all projects		1155	-	7.15	1525	-	14.00	2750	-	30.00	
Total for all Districts												

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

**Table 7.7.2 Details of other livelihoods created for landless people:**

1	2	3	4	5				6	7					8				
District	Project	Name of activity	Fund required for the activity (Rs.)	Sources of funding (Rs.)				Actual Expenditure incurred on activity (Rs.)	No. of beneficiaries trained					No. of beneficiaries taking up activity				
				Project Fund	Beneficiary	Others (pl. specify)	Total		SC	ST	Others	Women	Total	SC	ST	Others	Women	Total
West Garo Hills District	WGH - IWP V																	

(Contd.)

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

**Table 7.7.3 Details of other livelihoods created for landless people:**

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

**Table 7.7.4 Details of other livelihoods created for farmers:**

1	2	3	4	5				6	7				8					
District	Project	Name of activity	Fund required for the activity (Rs.) in lakhs	Sources of funding (Rs.) in Lakhs				Actual Expenditure incurred on activity (Rs.)	No. of farmers trained				No. of farmers taking up activity					
				Project Fund	Benefi-ciary	Others (pl. specify)	Total		SF	MF	LF	Total	SF	MF	LF	Total		
West Garo Hills District	WGH-IWMP V																	

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



**Table 7.8 Marketing related outcomes:**

**Backward-Forward linkages \***

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

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

**Table 7.9 Abstract of outcomes:**

1	2	3	4	5	6	7
Sl. No.	State	Item	Unit	Pre-project Status	Post-project Status	Remarks
		Status of water table		Very poor - poor	Good	
		Ground water structures repaired/ rejuvenated		-	6 nos.	
		Quality of drinking water		Moderate potable	Improved	
		Availability of drinking water		Insufficient	Sufficient	
		Increase in irrigation potential		-	18 nos.	
		Change in cropping/ land use pattern		-	-	
		Area under agricultural crop				
		i Area under single crop		-	-	
		ii Area under double crop		100 ha	200 ha	
		iii Area under multiple crop		150 ha	300 ha	
		Net increase in crop production area				
		Increase in area under vegetation		-	100 ha	
		Increase in area under horticulture		-	150 ha	
		Increase in area under fuel & fodder				
		Increase in milk production		-	-	
		No. of SHGs		2 nos.	10 nos.	
		Increase in no. of livelihoods		-	12 nos.	
		Increase in income		-	45,000	
		Migration		-	-	
		No. of school going children		120 nos.	350 nos.	
		SHG Federations formed		-	-	
		Credit linkage with banks		-	15 nos.	
		Resource use agreements		-	7 nos.	
		WDF collection & management		-	1 no.	
		Summary of lessons learnt	May be attached as a separate file			

**Table 7.10 Cost effectiveness of structures/ activities\***

<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>
<b>District</b>	<b>Name of project</b>	<b>Name of WC</b>	<b>Name of structure/ activity</b>	<b>Estimated cost (Rs.)</b>	<b>Expected quantifiable benefits (Rs.)</b>	<b>Expenditure incurred (Rs.)</b>	<b>Actual quantifiable benefit (Rs.)</b>	<b>Benefit: Cost ratio<sup>#</sup></b>	<b>IRR</b>
West Garo Hills District	WGH-IWMP V	Ringgi Bisik	As per Treatment Plan	27.375	36.586	-	-	1:1.33	

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

<sup>#</sup> B:C ratio more than 1 – cost effective  
less than 1 – Not cost effective



**ANNEXURE I**  
**MAPS**

# DRAINAGE MAP

25° 35' 41.2843" N




25° 34' 41.4134" N

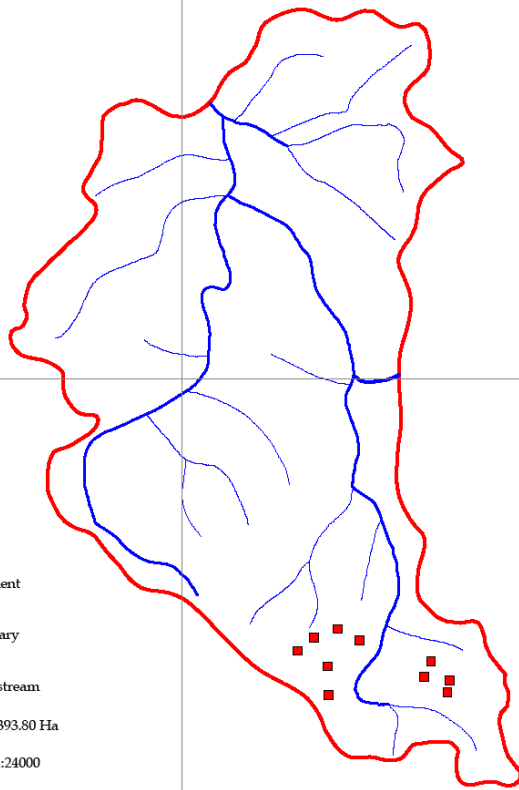
25° 33' 41.5426" N

90° 18' 18.8784" E

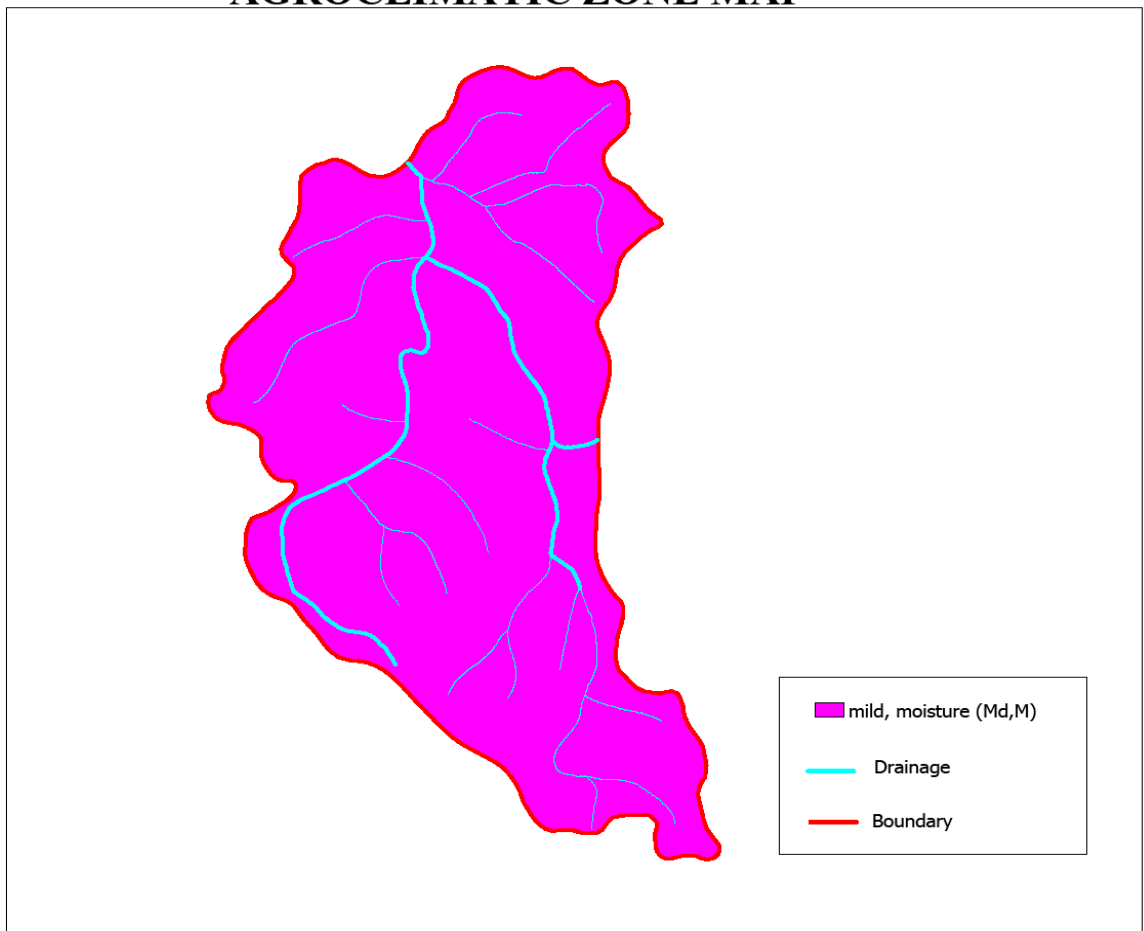
90° 19' 18.7493" E

90° 20' 18.6202" E

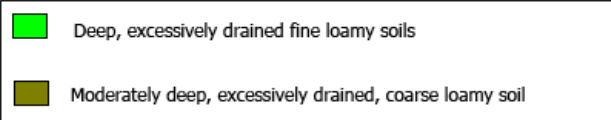
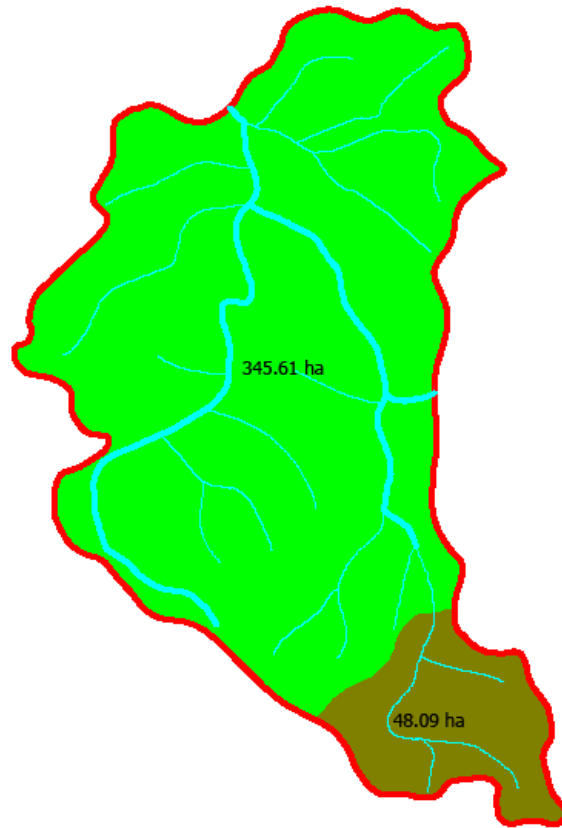
-  settlement
  -  Boundary
  -  River/stream
- Area =393.80 Ha  
Scale: 1:24000



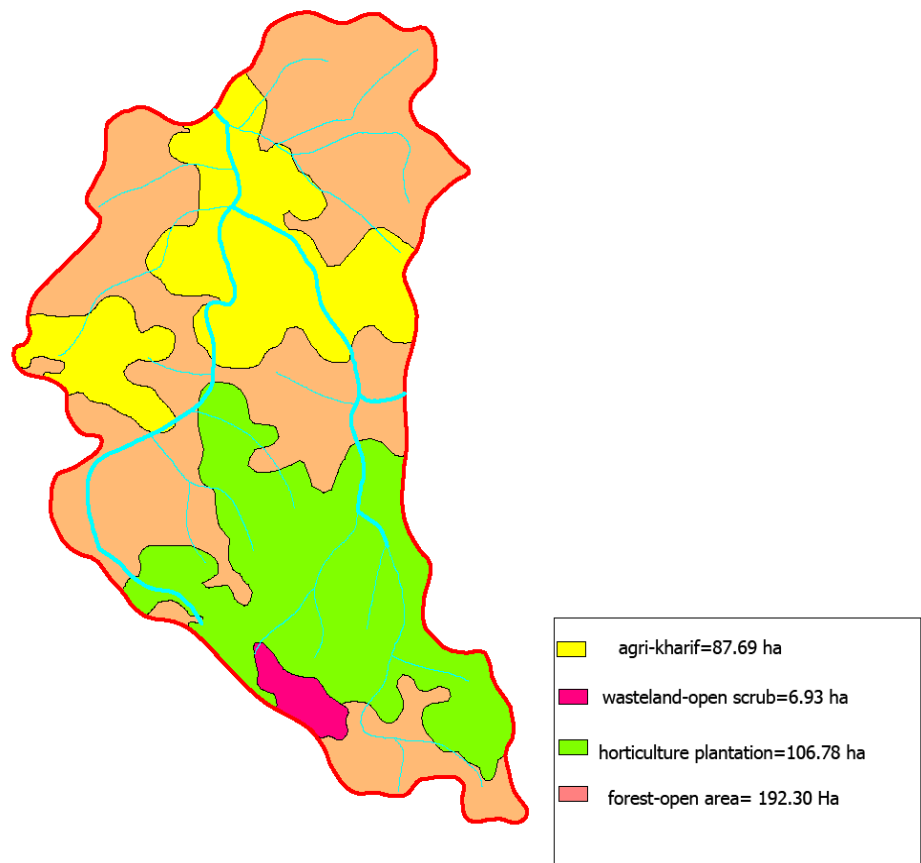
## AGROCLIMATIC ZONE MAP



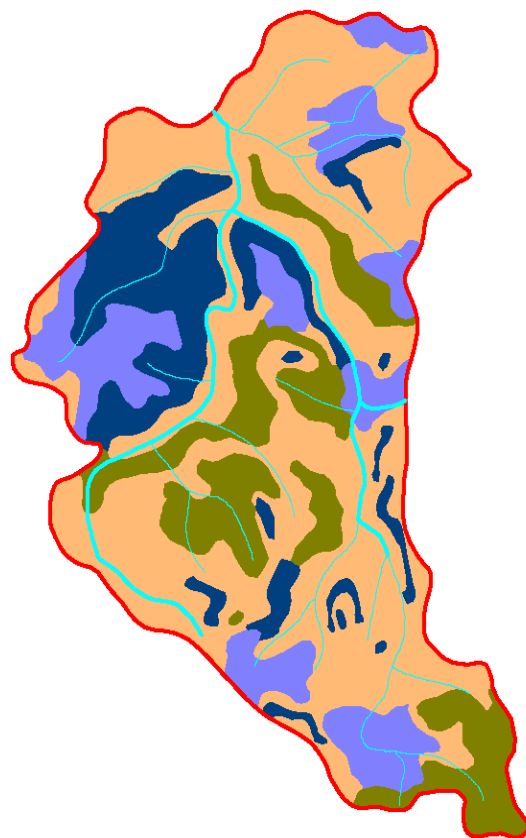
## SOIL MAP



## LAND USE LAND COVER MAP

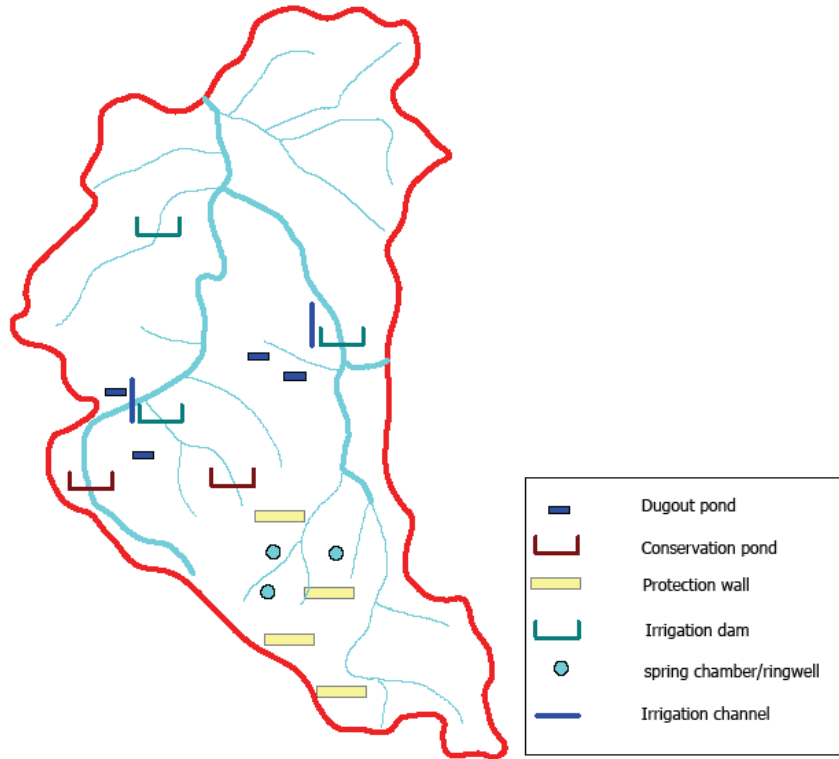


## SLOPE MAP

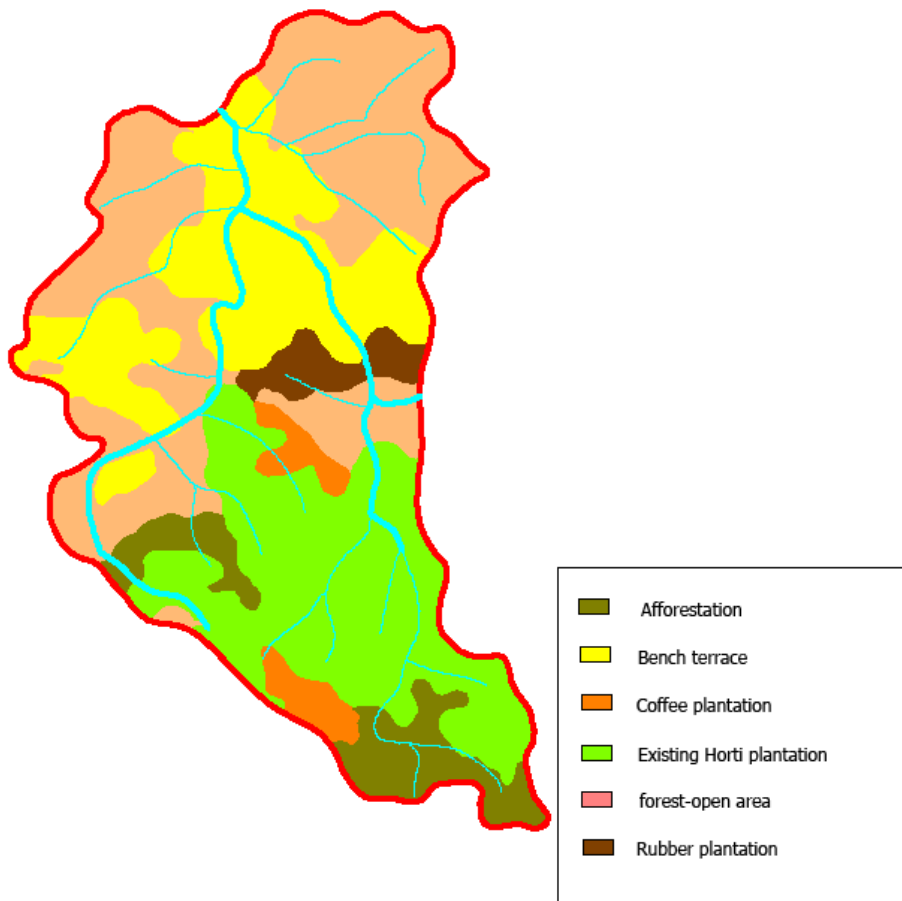


5-15%	= 55.05 Ha
15-35%	= 219.912 Ha
35-50%	= 62.69 Ha
>50%	= 56.04 Ha

## PROPOSED ENGINEERING MAP



### PROPOSED LAND USE MAP





## **ANNEXURE II**

### **SOCIO-ECONOMIC SURVEY DETAILS**

SOCIO ECONOMIC SURVEY OF VILLAGE :

CHIDEKGRE UNDER I.W.M.P.

Sl.No.	Name of the head of the family	Male	Female	Total	Literate	Illiterate	Total	Agriculture(Ha.)		Irrigation	Livestock				Infrastructure
								Settled Area	Jhum Area		Cattle	Poultry	Piggery	Goatery	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	Shri, Elwan .T.Sangma	3	2	5	4	1	5				5	9	2	-	
2	" Podu Sangma	2	5	7	4	3	7				3	5	1	-	1 no. L.P. School
3	" Musol Marak	1	1	2	2	-	2				-	2	-	-	
4	" Starson Marak	1	1	2	2	-	2				-	2	-	-	
5	" Jengna Sangma	4	5	9	6	3	9				4	6	2	-	1 no. Anganwadi centre
6	" Peterson Sangma	5	3	8	5	3	8				3	7	1	2	
7	" Mingsin Sangma	1	3	4	2	2	4				-	2	-	-	
8	" Sompu sangnma	3	2	5	3	2	5				-	3	-	-	No P.D.S.
9	" Lolith Marak	4	3	7	5	2	7				2	6	1	3	
10	" Tusan Sangma	2	5	7	5	2	7				2	5	1	-	No Electricity
11	" Mingnang Marak	2	3	5	2	3	5				-	8	-	-	
12	" Repjen Marak	3	2	5	3	2	5				-	3	-	-	No P.H.E. Water supply
13	" Palen sangma	2	2	4	2	2	4				-	2	-	-	
14	" Jingga Marak	7	3	10	7	3	10				5	9	2	3	
15	" Ponith sangma	1	2	3	2	1	3				-	4	1	-	No Health Sub-Centre
16	" Chingseng sangma	1	1	2	2	-	2				-	3	-	-	
17	" Bellim sangma	1	2	3	2	1	3				-	5	-	4	
18	" Darmen Marak	1	3	4	2	2	4				-	7	-	-	
19	" Tappanson Sangma	2	3	5	3	2	5				1	4	-	-	
20	" Monen sangma	2	2	4	2	2	4				-	8	-	-	
21	" Belloms sangma	4	1	5	3	2	5				-	7	-	1	
22	" Pidi Marak	3	4	7	4	3	7				2	8	1	-	

1	2														
23	Shri, Pinen Marak	2	4	6	4	2	6				2	9	1	-	
24	" Willindro Sangma	4	4	8	6	2	8				3	8	1	-	
25	" Surasing Marak	4	5	9	7	2	9				4	7	1	-	
26	" Malbith Marak	3	2	5	3	2	5				-	5	-	2	
27	Smt, Nenji Marak	2	1	3	2	1	3				-	4	-	2	
28	Shri, Dino Sangma	1	2	3	1	2	3				-	3	-	3	
29	" Pindar Sangma	1	1	2	2	-	2				-	6	-	4	
30	" Withnalsan Marak	4	3	7	5	2	7				3	4	1	-	
31	Smt, Kemchong Marak	-	3	3	2	1	3				-	7	-	3	
32	Shri, Jonith Sangma	3	5	8	5	3	8				4	5	1	-	
33	" Jangbin Sangma	2	2	4	3	1	4				-	3	-	2	
34	" Namseng Sangma	2	4	6	4	2	6				2	7	-	-	
35	" Gretson Sangma	2	4	6	4	2	6				2	8	1	-	
36	" Snat Sangma	3	4	7	2	5	7				3	5	1	-	
37	Smt, Nangjak Marak	1	2	3	2	1	3				-	5	-	2	
38	Shri, Roenath Sangma	3	1	4	4	-	4				-	4	-	3	
39	" Galsing Sangma	2	1	3	2	1	3				-	4	-	2	
<b>Total.</b>		94	106	200	130	70	200				50	209	19	36	

**ANNEXURE III**  
**COST ESTIMATES**

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

A.	<i>Piggery ;</i>		
	<i>i) Construction of sty @ Rs. 20000/- each</i>	<i>Rs.</i>	<i>20000.00</i>
	<i>ii) Cost of Piglets - 10 nos. @ Rs. 20000/- each</i>	<i>Rs.</i>	<i>20000.00</i>
	<i>iii) Cost of feeds for 6 months (L/s)</i>	<i>Rs.</i>	<i>10000.00</i>
B.	<i>Construction of Dug out Pond ( 25.00 x 25.00 ) m ( as per estimate)</i>	<i>Rs.</i>	<i>60000.00</i>
C.	<i>Supply of fingerlings -1500 nos. @ Rs.3000/- per 1000 nos. (L/s)</i>	<i>Rs.</i>	<i>4500.00</i>
D.	<i>Kitchen Garden ;</i>		
	<i>i) Site preparation including Bunding, shaping etc.</i>	<i>Rs.</i>	<i>3500.00</i>
	<i>ii) cost of F.Y.M. including cost of applicaton</i>	<i>Rs.</i>	<i>4000.00</i>
	<i>iii) Cost of equipmqnts and tools etc.</i>	<i>Rs.</i>	<i>1500.00</i>
	<i>iv) Cost of seeds including sowing etc.</i>	<i>Rs.</i>	<i>1500.00</i>
		<b>G. Total</b>	<b>Rs. 125000.00</b>

**(Rupees one lakh twenty five thousand ) only.**

## MODEL NORMS PER HACTARE FOR AFFORESTATION (NON-SAL) FOR IWMP

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

Spacing = (6.00 x 5.50) m

Plant Density = 300 nos.

### A. Preliminary Works .

i) Jungle clearance etc. -5mandays @ Rs. 100/- per manday	Rs.	500.00
ii) Pit digging (0.30 x 0.30 x 0.30) m - 300 nos. @ Rs. 4/- each	Rs.	1200.00
<b>Sub-total</b>	<b>Rs.</b>	<b>1700.00</b>

### B. I Year Planting .

i) Cost of Planting materials - 300 nos. @ Rs. 8/- each	Rs.	2400.00
ii) Cost of Planting - 300 nos. @ Rs. 2/- each	Rs.	600.00
iii) Weeding - 2 times - 20 mandays @ Rs. 100/- per manday	Rs.	2000.00
iv) Fire protection measures - 5 mandays @ Rs. 100/- per manday	Rs.	500.00
<b>Sub-total</b>	<b>Rs.</b>	<b>5500.00</b>

### C. II nd Year Planting .

i) Vacancy refilling (10%)	Rs.	400.00
ii) Weeding - 2 times - 20 mandays @ Rs. 100/- per manday	Rs.	2000.00
iii) Fire protection measures - 5 mandays @ Rs. 100/- per manday	Rs.	500.00
<b>Sub-total</b>	<b>Rs.</b>	<b>2900.00</b>

**Grand Total 10100.00**

**(Rupees ten thousand)  
only.**

## MODEL NORMS PER HACTARE FOR TERRACING ( IWMP )

### A. Technical Parameters .

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

### B. Cost estimate .

i) Jungle clearance including uprooting of stumps (L/s)	Amount.
	2000.00

ii) Cost of terracing @ Rs. 10/- m <sup>3</sup>	15000.00
iii) Cost of shoulder Bund @ Rs. 7/- m <sup>3</sup>	850.00
iv) Dressing, shaping and grading of terrace	950.00
v) Water Disposal structure (L/s)	1200.00
<b>G. Total</b>	<b>20000.00</b>

( Rupees twenty thousand ) only .

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

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

**A. Preliminary works.**

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

**B. I st year Planting .**

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

**C. II year Planting .**

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

(Rupees three thousand six hundred) only.





2/75 Plain cement concrete M-10(1:3:6 nominal mix) in levelling .....  
 .....per drawing and technical specification etc.

Foundation Base :

Dam	1	x	8.00	x	1.20	x	0.10	=	0.96	m <sup>3</sup>
W/Wall	2	x	2.50	x	1.20	x	0.10	=	0.60	m <sup>3</sup>
S/Wall	2	x	4.00	x	0.30	x	0.10	=	0.24	m <sup>3</sup>
T/wall	1	x	8.00	x	0.30	x	<u>0.10</u>	=	<u>0.24</u>	m <sup>3</sup>
									2.04	m <sup>3</sup>

@ Rs 3500/ m<sup>3</sup> Rs 7140.00

3/141(B) Plain cement concrete in open foundation complete.....  
 specification etc.

PCC Grade M20

Dam	1	x	8.00	x	1.00	x	1.00	=	8.00	m <sup>3</sup>
W/wall	2	x	2.50	x	1.00	x	1.00	=	5.00	m <sup>3</sup>
S/wall	2	x	4.00	x	0.30	x	1.00	=	2.40	m <sup>3</sup>
T/wall	1	x	8.00	x	0.30	x	<u>0.30</u>	=	<u>0.72</u>	m <sup>3</sup>
									16.12	

@ Rs 4535/ m<sup>3</sup> Rs 73104.20

4/141(F) Plain cement concrete in open foundation complete.....  
 specification etc.

PCC Grade M30

Dam	1	x	8.00	x	<u>1.00 + 0.60</u>	x	1.00	=	6.40	m <sup>3</sup>
					2					
W/wall	2	x	2.50	x	<u>1.00 + 0.60</u>	x	1.60	=	6.40	m <sup>3</sup>
					2					
S/wall	2	x	4.00	x	0.30	x	1.60	=	3.84	m <sup>3</sup>
Apron	1	x	8.00	x	3.00	x	0.40	=	9.60	m <sup>3</sup>
T/wall	1	x	8.00	x	0.30	x	0.40	=	0.96	m <sup>3</sup>
L/channel	2	x	20.00	x	0.15	x	0.70	=	2.10	m <sup>3</sup>
	1	x	20.00	x	1.50	x	0.20	=	<u>6.00</u>	m <sup>3</sup>
									35.30	m <sup>3</sup>

@ Rs 4535/ m<sup>3</sup> Rs 160085.50

5/78. Plastering with cement mortar (1:4), 15 mm thick on brickwork

..... technical specification.

Dam :	1	x	8.00	x	1.00	x	0.05	=	0.40	m <sup>2</sup>
	1	x	8.00	x	0.60	x	0.05	=	0.24	m <sup>2</sup>
W/wall :	2	x	2.50	x	1.00	x	0.05	=	0.25	m <sup>2</sup>
	2	x	2.50	x	1.00	x	0.05	=	0.25	m <sup>2</sup>
	2	x	2.50	x	0.60	x	0.05	=	0.15	m <sup>2</sup>
S/wall :	2	x	4.00	x	1.60	x	0.05	=	0.64	m <sup>2</sup>
	2	x	4.00	x	1.60	x	0.05	=	0.64	m <sup>2</sup>
	2	x	4.00	x	0.60	x	0.05	=	0.24	m <sup>2</sup>
Apron :	1	x	8.00	x	3.00	x	0.05	=	1.2	m <sup>2</sup>
	1	x	8.00	x	4.00	x	0.05	=	1.6	m <sup>2</sup>
T/wall :	1	x	8.00	x	0.30	x	0.05	=	0.12	m <sup>2</sup>
L/Chan :	1	x	20.00	x	1.50	x	0.05	=	1.5	m <sup>2</sup>
	2	x	20.00	x	0.70	x	0.05	=	1.4	m <sup>2</sup>
	2	x	20.00	x	0.15	x	0.05	=	<u>0.3</u>	m <sup>2</sup>
									8.93	m <sup>2</sup>
								@	Rs. 130/-	m <sup>2</sup>
									Rs. 1160.90	

5/67 Earth work in excavation for foundation of structure .....  
 technical specification etc.

E/channel	1	x	113.75	x	$\frac{(1.00 + 0.75)}{2}$	x	0.75	=	74.65	m <sup>3</sup>
								@	Rs 101/-	m <sup>3</sup>
									<u>Rs 7539.65</u>	
								Total.	Rs. 249999.85	
								<b>Say,</b>	<b>Rs. 250000.00</b>	

**(Rupees two lakhs fifty thousand) only.**

**Submitted,**

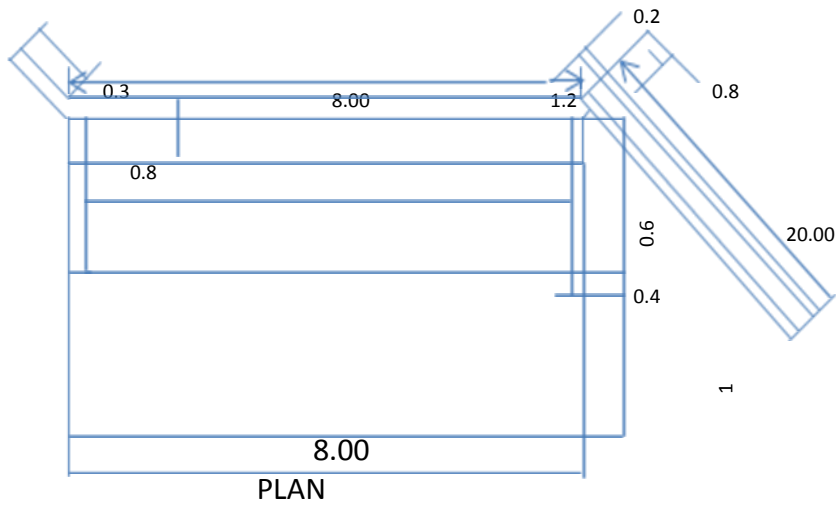
**( C. H. D. Sangma)**

**Range Officer,**

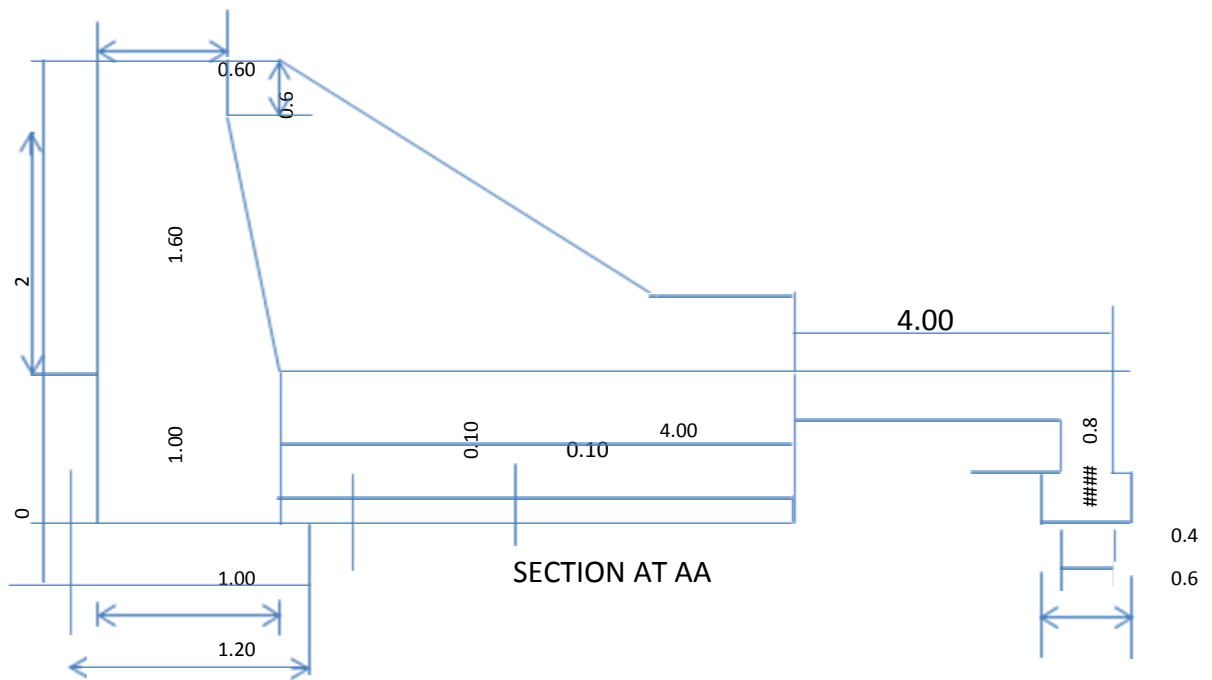
***Central Soil & water Conservation (T) Range, Tebronggre,  
West Garo Hills.***

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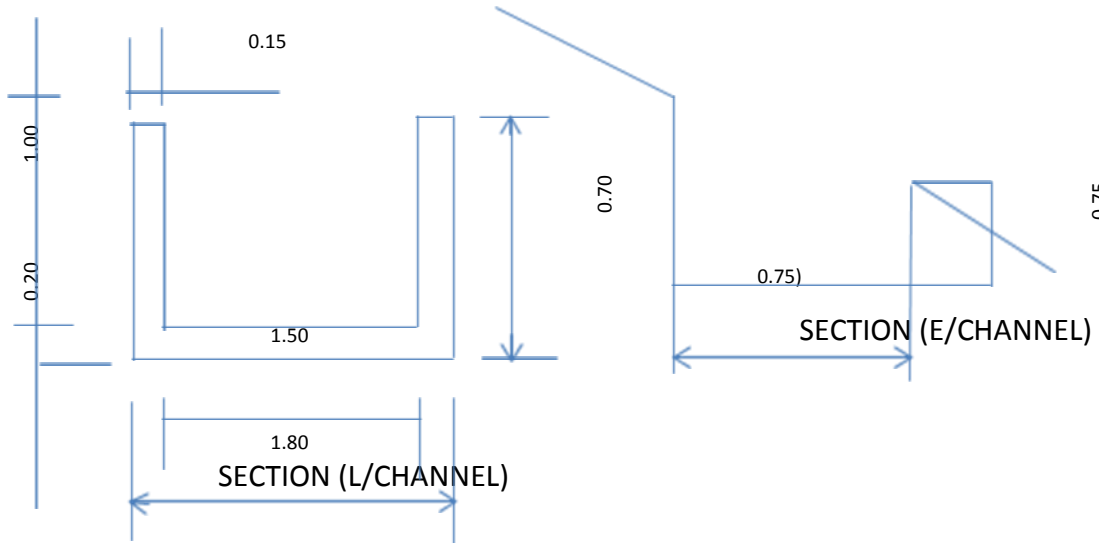
PLAN FOR C. C. IRRIGATION DAM



PLAN



SECTION AT AA



SECTION (L/CHANNEL)

SECTION (E/CHANNEL)

**ESTIMATE FOR CONSTRUCTION OF C.C. CHANNEL UNDER INTEGRATED  
WATERSHED MANAGEMENT PROGRAMME AS PER PWD SCHEDULE**

OF

**RATES FOR ROADS & BRIDGES FOR THE YEAR 2009-10**

1 Site preparation.....L/s..... Rs. 112.00

2/67. Earth work in excavation for  
foundaton.....approved material.

..... approved material.

$$1 \times 30.00 \times 1.00 \times 0.75 = 22.50 \text{ m}^3$$

$$@ \text{ Rs } 101/ \text{ m}^3 = \text{ Rs } 2272.50$$

3/103 Providing and laying of dry rubble flooring.....  
specification etc.

Boulder

soling :

$$1 \times 30.00 \times 1.00 \times 0.10 = 3.00 \text{ m}^3$$

$$@ \text{ Rs } 1065/ \text{ m}^3 = \text{ Rs } 3195.00$$

4/141(A) Plain cement concrete in open foundation .....  
specification etc.

PCC

Grade

M15 15

$$2 \times 30.00 \times 0.20 \times 0.60 = 7.20 \text{ m}^3$$

$$1 \times 30.00 \times 0.60 \times 0.20 = 3.60 \text{ m}^3$$

$$\underline{10.80 \text{ m}^3}$$

$$@ \text{ Rs } 4090/- \text{ m}^3 = \text{ Rs } 44172.00$$

5/78. Plastering with cement mortar(1:4) 15mm thick .....  
technical specification etc.

$$2 \times 30.00 \times 0.60 \times 0.05 = 1.80 \text{ m}^3$$

$$2 \times 30.00 \times 0.20 \times 0.05 = 0.60 \text{ m}^3$$

$$1 \times 30.00 \times 0.60 \times 0.05 = 0.90 \text{ m}^3$$

$$\underline{3.30 \text{ m}^3}$$

$$@ \text{ Rs } 130/- \text{ m}^3 = \text{ Rs } 429.00$$

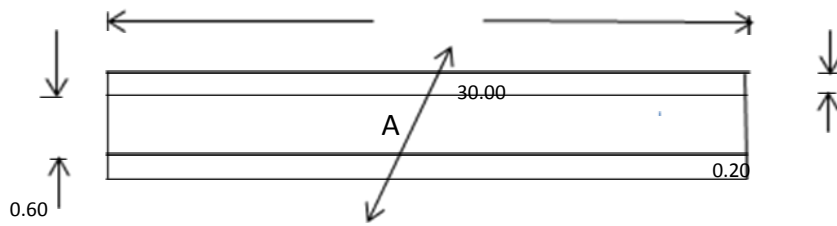
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Grand Total      Rs 50068.50

**Say                Rs 50000.00**

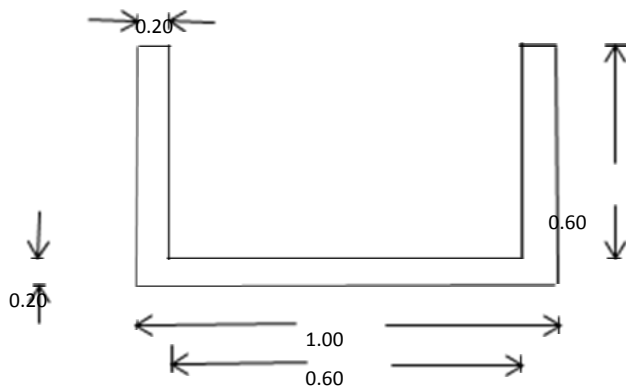
***(Rupees fifty thousand) Only.***

**PLAN FOR C.C. IRRIGATION CHANNEL.**



A

**PLAN**



**CROSS-SECTION AT 'AA'**

**ESTIMATE FOR CONSTRUCTION OF POND WITH C.C.CORE  
WALL UNDER INTEGRATED WATERSHED MANAGEMENT  
PROGRAMME (IWMP) AS PER SCHEDULED OF RATES FOR THE  
YEAR 2009-10 (ROADS & BRIDGES)**

- 1/134 Earth work in excavation of foundation of structure as per drawing and technical specification including setting ,construction shoring & bracing,removal of tumps and other deleterious matter, dressing of sides and bottom and backfilling with apron material.

I. Ordinary Soil

:

Corewall :

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

@ Rs. 47 m<sup>3</sup>

Rs.564.00

- 2/137 P.C.C. 1:3:6 in foundation (PCC 1:3:6 nominal mix in foundation with crushed stone aggregate 40mm nominal size mechanically mixed, placed in foundation and compacted by vibration including curing for 14 days.

Foundation

Base :

$$1 \times 12.00 \times 1.00 \times 0.10 = 1.20 \text{ m}^3$$

1.20 m<sup>3</sup>

@ Rs. 3571 m<sup>3</sup>

Rs.4,285.20

- 3/141 PCC in open foundation complete as per drawing and technical specifications.

A. PCC Grade M15.

Corewall :

$$1 \times 12.00 \times \left( \frac{1.00 + 0.60}{2} \right) \times 2.5 = 24.00 \text{ m}^3$$

Overflow

outlet :

$$1 \times 5.00 \times 2.00 \times 0.50 = 5.00 \text{ m}^3$$

$$2 \times 5.00 \times 0.75 \times 0.50 = 3.75 \text{ m}^3$$

32.75 m<sup>3</sup>

@ Rs. 4090/ m<sup>3</sup>

Rs.133947.50

- 4/29 Construction of embankment with approved materials obtained from burrow pits with a lifting to 1.5m, transporting to site, spreading, grading to required slope and compacting to meet requirement of tables 300.1 and 300.2 with a lead upto 1000m as per technical specification clause 301.5.

Earthfilling:

$$1 \times 12.00 \times \left( \frac{8.75 + 4.00}{2} \right) \times 3.00 = 229.50 \text{ m}^3$$

@ Rs. 269/ m<sup>3</sup>

Rs.61735.50

- 5/37 Furnishing and laying of live sods of perennial turf forming grass on embankment slope, verges or other locations shown on the drawing or as directed by the Engineer including preparation of ground, fetching of sods and watering as per technical specification clause 309  
D/S:

$$1 \times 12.00 \times 0.50 \times 5.25 \times 6.00 = 189.00 \text{ m}^2$$

@ Rs. 46 m<sup>2</sup>

Rs.8,694.00

- 6/100 Providing and laying pitching on slopes laid over prepared filter media as per drawing and technical specifications clause 1302.

I. Boulder :

U/S:

$$1 \times 12.00 \times 0.20 \times 3.50 \times 4.40 = 36.96 \text{ m}^3$$

@ Rs. 1086 m<sup>3</sup>

Rs.40,138.56

- 7/78 Plastering with cement mortar (1:4) 15mm thick on brickwork as per technical specifications.

Overflow  
outlet :

$$1 \times 5.00 \times 2.00 \times 0.20 = 2.00 \text{ m}^2$$

$$2 \times 5.00 \times 1.50 \times 0.20 = 3.00 \text{ m}^2$$


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5.00 m<sup>2</sup>

@ Rs. 130 m<sup>2</sup>

Rs.650.00

TOTAL

: Rs.2,50,014.80

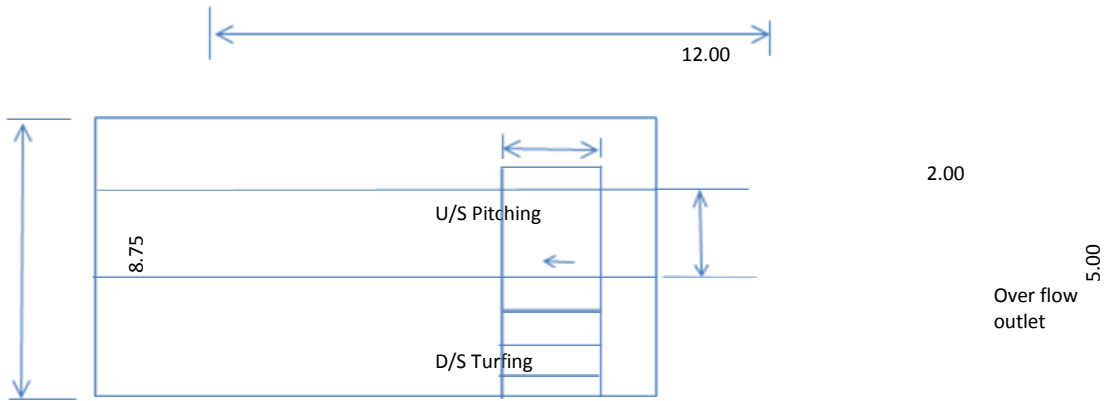
say, **250000.00**

***(Rupees two lakh fifty thousand) only.***

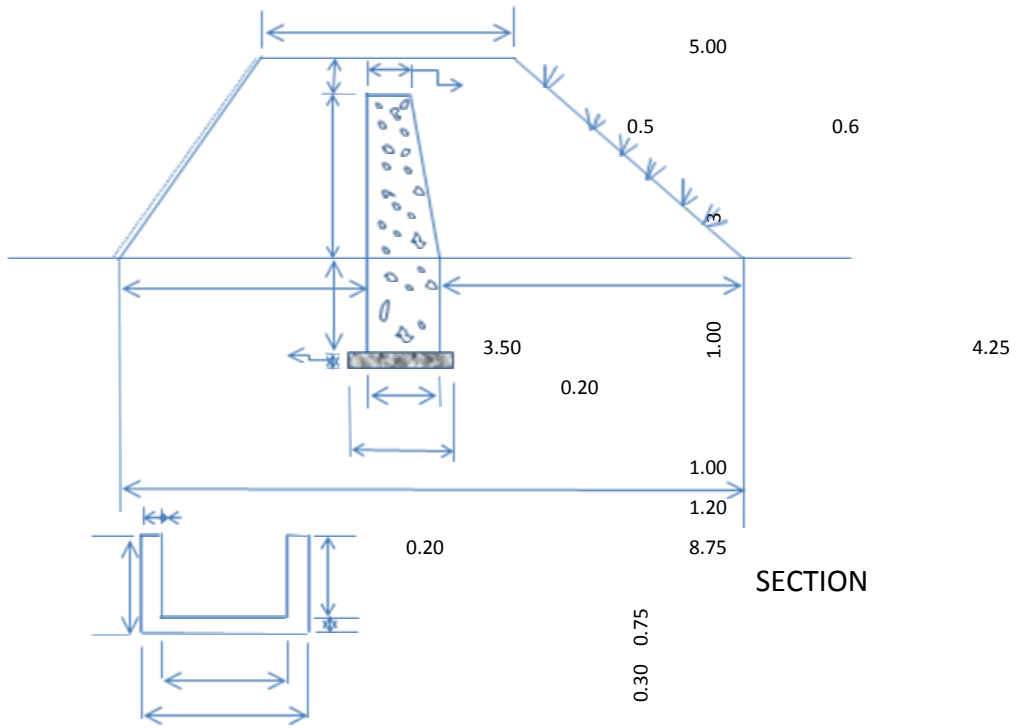
**Submitted,**



**C.C. CORE WALL DAM**



**PLAN**



**SECTION**

**SECTION (OVER FLOW OUTLET)**

**ESTIMATE FOR THE CONSTRUCTION OF DUGOUT CUM FISHERY POND UNDER INTEGRATED  
WATERSHED MANAGEMENT PROGRAMME AS PER P.W.D. SCHEDULE OF RATES  
FOR ROADS & BRIDGES AND E & D WORKS FOR THE YEAR 2009-10.**

1. Site preparation ..... L/s ..... Rs. 150.00  
 2/67. Earthwork in excavation for foundation of structures upto 3 m depth as per.....  
 ..... With approved  
 material.

$$\frac{D}{6} \left\{ \frac{A+4}{B+C} \right\} m^3$$

$$A = \{ 30.00 \times 30.00 \} m = 900.00 m^3$$

$$B = \{ 27.00 \times 27.00 \} m = 729.00 m^3$$

$$C = \{ 24.00 \times 24.00 \} m = 576.00 m^3$$

$$D = 1.34 m$$

$$\frac{D}{6} \left\{ \frac{A+4}{B+C} \right\} m^3$$

$$\frac{1.51}{6} \left\{ 900.00 + (4 \times 729.00) + 576.00 \right\} m^3 = 980.87 m^3$$

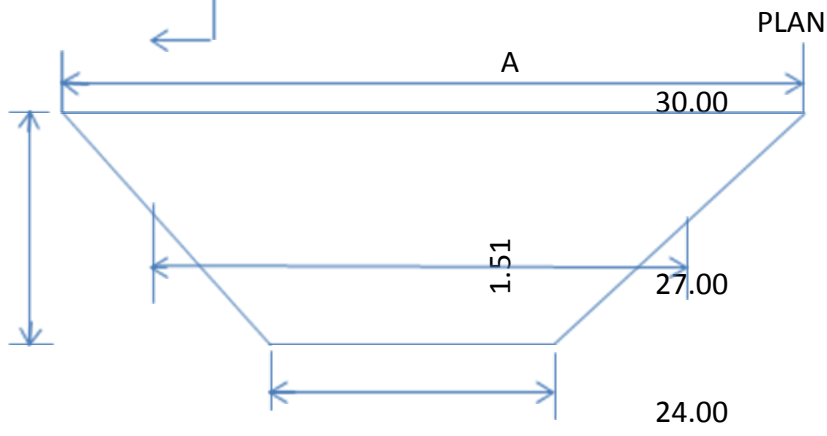
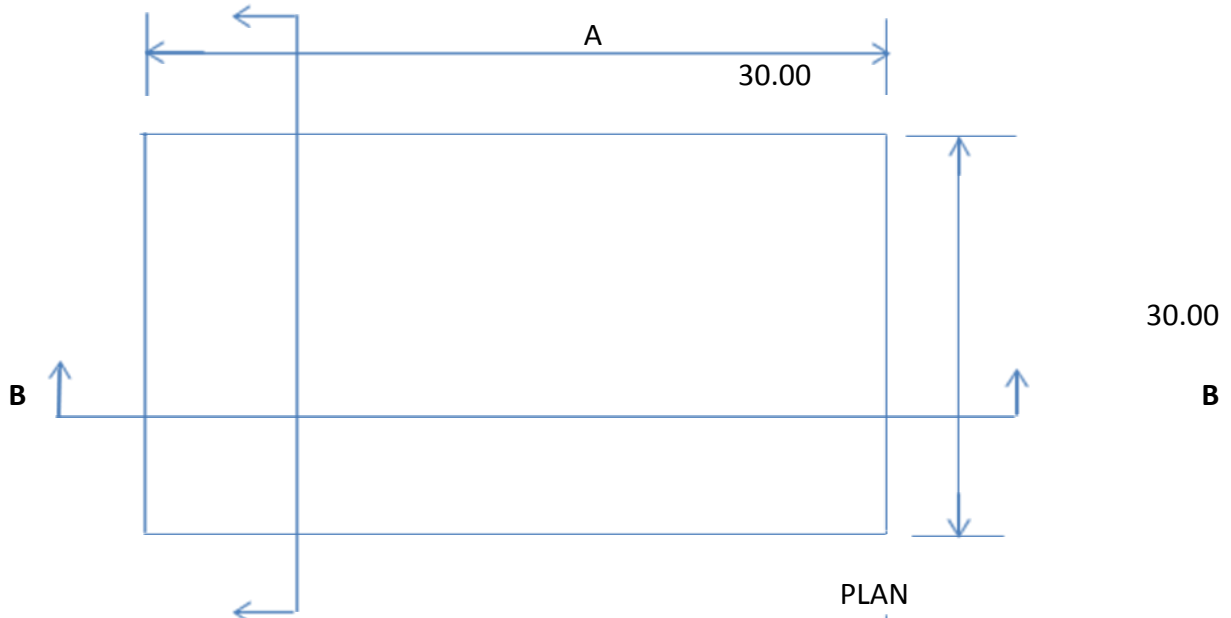
@ Rs 101/- m<sup>3</sup> ..... Rs. 99,067.87

Total : Rs. 99,217.87

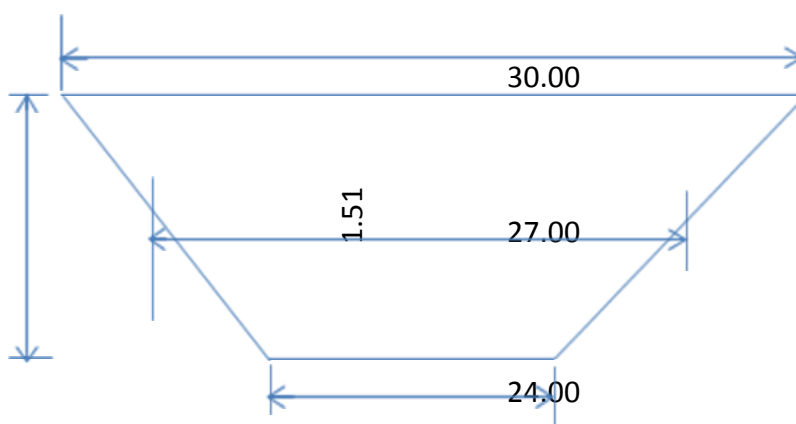
**Say, Rs. 99,200.00**

**Rupees (ninety nine thousand two hundred ) only**

PLAN FOR DUG-OUT POND



SECTION-AA



SECTION-BB

**ESTIMATE FOR THE CONSTRUCTION OF C. C. PROTECTION WALL UNDER INTEGRATED WATERSHED MANAGEMENT PROGRAMME AS PER P.W.D. SCHEDULE OF RATES FOR ROADS BRIDGES AND E & D WORKS FOR THE YEAR 2009-10.**

1	Site preparation .....	L/s.....							Rs.	620.00
2/134.	Excavation for structure.....	approved material.								
	<u>I. Ordinary rock.</u>									
	1	x	8.00	x	0.60	x	0.75	=	3.60	m <sup>3</sup>
									@ Rs. 68/-	m <sup>3</sup> Rs. 244.80
3/137.	P C C 1:3:6 in	foudation.....								
	<u>Foudation Base</u>									
	1	x	8.00	x	0.60	x	0.10	=	0.48	m <sup>3</sup>
									@ Rs. 3571/-	m <sup>3</sup> Rs. 1714.08
4/141	Plain cement concrete.....	Technical specifications.								
	A. PCC Grade M									
	15									
	1	x	8.00	x	0.60	x	0.65	=	3.12	m <sup>3</sup>
									@ Rs. 3571/-	m <sup>3</sup> Rs. 11141.52
5/141.	Plain Cement concrete.....	technical specifications.								
	B. PCC Grade M									
	20									
	1	x	8.00	x	$\frac{(0.60 + 0.40)}{2}$	x	2.00	=	8.00	m <sup>3</sup>
									@ Rs. 4535/-	m <sup>3</sup> Rs. 36280.00
									Total. =	Rs. 50000.40
									<b>Say,</b>	<b>Rs. 50000.00</b>

**(Rupees fifty thousand) only.**

**Submitted,**

**( C. H. D. Sangma )**

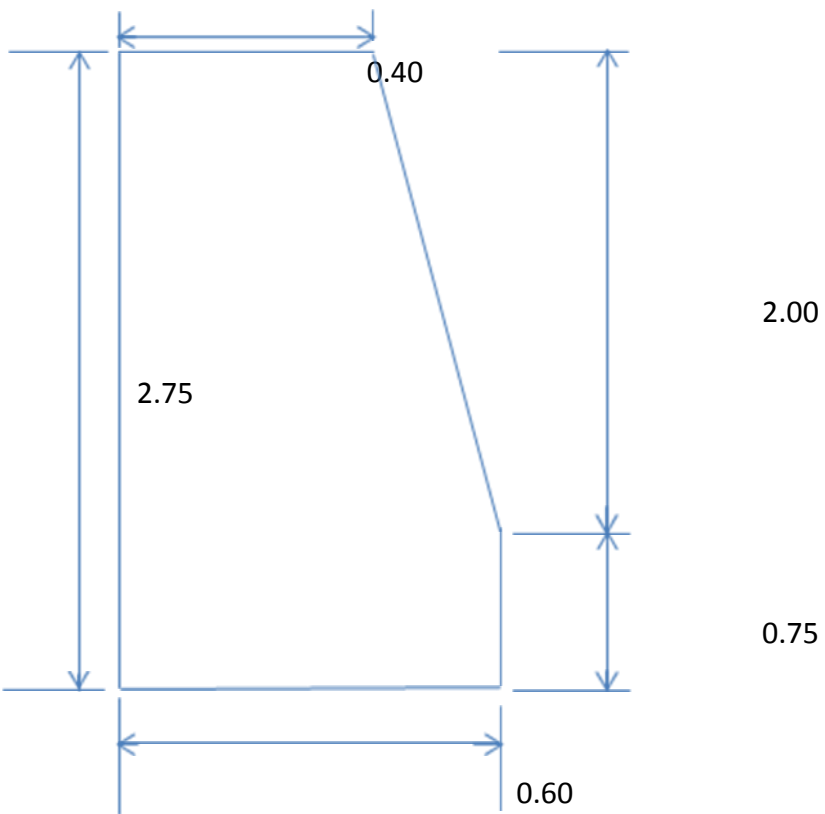
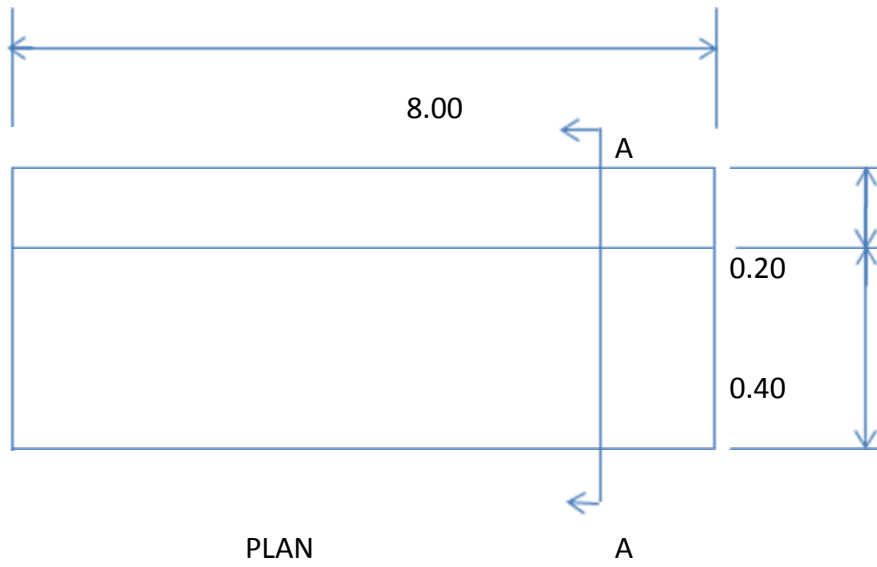
**Range Officer,**

**Cental Soil & water Conservation (T) Range, Tebronggre,**

**West Garo Hills.**

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PLAN FOR STONE MASONRY PROTECTION WALL



**COST ESTIMATE FOR THE CONSTRUCTION OF SPRING CHAMBER UNDER INTEGRATED WATERSHED MANAGEMENT PROGRAMME AS PER P.W.D. SCHEDULE OF RATES FOR ROADS & BRIDGES AND E & D WORKS FOR THE YEAR 2009-10.**

1	Site preparation .....	L/S .....								Rs.	1200.00
1/67.	Earth work in excavation for foundation of structure .....										
	technical specification etc.										
	Foundation :-										
	Storage	1	x	2.00	x	2.00	x	1.00	=	4.00	m <sup>3</sup>
	Platform	1	x	2.00	x	2.00	x	0.50	=	2.00	m <sup>3</sup>
	Drain	1	x	2.50	x	0.70	x	0.50	=	0.88	m <sup>3</sup>
										6.88	m <sup>3</sup>
										@ Rs 101/	m <sup>3</sup>
										Rs	694.88
2/103	Providing and laying of dry rubble.....										
	..... Specifications clause 1303.3.										
	Platform	1	x	2.00	x	2.00	x	0.10	=	0.40	m <sup>3</sup>
	Storage	3	x	2.00	x	0.25	x	0.75	=	1.13	m <sup>3</sup>
										1.53	m <sup>3</sup>
										@ Rs 1065/	m <sup>3</sup>
										Rs	1629.45
3/141.E.	R.C.C. in open foudation .....										
	specifications etc.										
	RCC Grade M25										
	Column	2	x	0.25	x	0.25	x	4.00	=	0.50	m <sup>3</sup>
		2	x	0.25	x	0.25	x	3.75	=	0.47	m <sup>3</sup>
	Slab	1	x	2.40	x	2.40	x	0.15	=	0.86	m <sup>3</sup>
	Beam	3	x	2.00	x	0.25	x	0.30	=	0.45	m <sup>3</sup>
										2.28	m <sup>3</sup>
										@ Rs 5727/	m <sup>3</sup>
										Rs	13057.56
4/141.D.	P.C.C. in open foundation .....										
	specifications.										
	P.C.C. Grade M25										
	Wall	3	x	2.00	x	0.25	x	0.70	=	1.05	m <sup>2</sup>
		1	x	2.00	x	0.25	x	2.00	=	1.00	m <sup>2</sup>
		1	x	2.00	x	0.25	x	2.95	=	1.48	m <sup>2</sup>
		1	x	2.00	x	0.25	x	2.70	=	1.35	m <sup>2</sup>
		1	x	2.00	x	0.25	x	2.70	=	1.35	m <sup>2</sup>
	Platform	1	x	2.00	x	2.00	x	0.30	=	1.20	m <sup>2</sup>
	Drain	2	x	2.50	x	0.15	x	0.50	=	0.38	m <sup>2</sup>
		1	x	2.50	x	0.40	x	0.20	=	0.20	m <sup>2</sup>
										8.00	m <sup>2</sup>
										@ Rs.4941/-	m <sup>3</sup>
										Rs.	39528.00
										<b>Sub-total =</b>	<b>Rs. 54909.89</b>
										.....C.O....	
										<u>2</u>	
										B.F. =	Rs. 54909.89
5/78.	Plastering with cement mortar (1:4), 15 mm thick on brickwork										
	..... technical specification.										
	Wall	2	x	2.00	x	2.25	=	9.00	m <sup>2</sup>		

	2	x	2.00	x	1.95	=	7.80	m <sup>2</sup>	
	2	x	2.00	x	2.70	=	10.80	m <sup>2</sup>	
Slab	1	x	2.40	x	2.40	=	5.76	m <sup>2</sup>	
	2	x	2.40	x	0.15	=	0.72	m <sup>2</sup>	
Platform	1	x	2.00	x	1.00	=	2.00	m <sup>2</sup>	
Drain	2	x	2.00	x	0.15	=	0.60	m <sup>2</sup>	
	2	x	2.00	x	0.50	=	2.00	m <sup>2</sup>	
	1	x	2.00	x	0.40	=	0.80	m <sup>2</sup>	
							39.48	m <sup>2</sup>	
						@	Rs. 130/-	m <sup>2</sup>	Rs. 5132.40
									<i>Total</i> Rs. 60042.29
									<b>Say, Rs. 60000.00</b>

**( Rupees sixty thousand only)**

**Submitted,**

**( C. H. D. Sangma)**

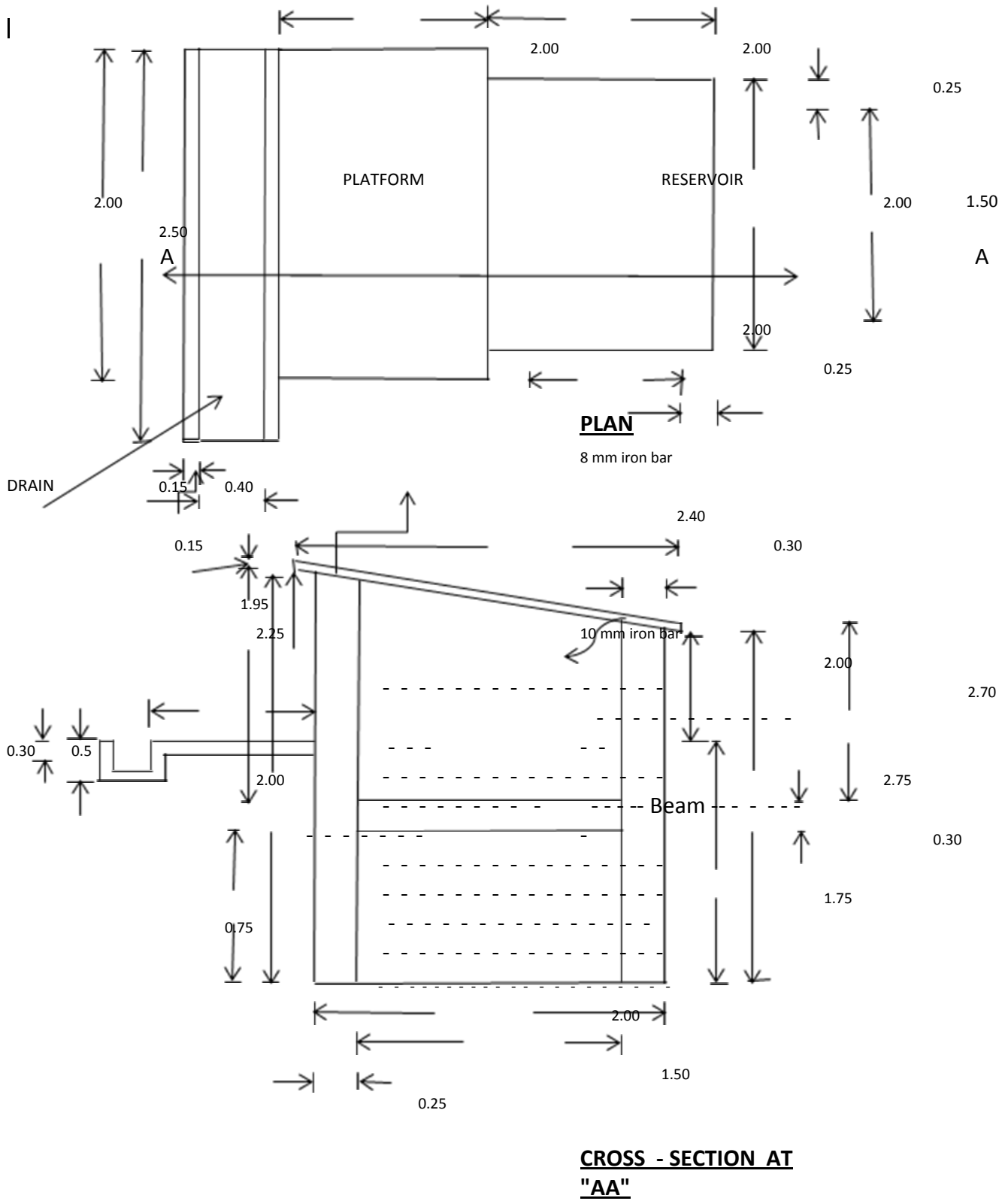
**Range Officer,**

**Cental Soil & water Conservation (T) Range, Tebronggre,**

**West Garo Hills.**

\_\_\_\_\_

**PLAN FOR SPRING CHAMBER**



*All dimensions are in metre*

*Submitted,*



**ANNEXURE IV**

**MoA, SUB COMMITTEE DETAILS ETC.**

**SANJAY GOYAL, IAS**  
DISTRICT MAGISTRATE  
WEST GARO HILLS DISTRICT,  
TURA, MEGHALAYA- 794001



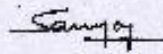
Phone: 03651-223835(O), 223826(R)  
Fax: 03651-221179, 222226  
e-mail: sanjaygoyal\_ias@yahoo.com

**TO WHOM IT MAY CONCERN**

This is to certify that centrally sponsored schemes like NREGS, BRGF, RKVY, NRHS and Total Sanitation Campaign etc can be covered with Watershed Projects/Programme within West Garo Hills District.

Dated: Tura  
The 14<sup>th</sup> April, 2011.



  
(Sanjay Goyal)  
Deputy Commissioner,  
West Garo Hills Dist, Tura.

**ABSTRACT OF PERSPECTIVE PLAN FOR CONVERGENCE OF MINRESS WITH IWMP AT CHIDKRE VILLAGE  
UNDER RINGGI BISKI MICRO WATERSHED, WGH - IWMP - V**

Name of village : Chidkro  
Total No. of full-time labor : 33 nos.

Total Wage Component @ Rs. 100/- per day per annum ..... Rs. 330000.00  
Amount earmarked for convergence per annum ..... Rs. 300000.00

(Figures in Lakhs)

S. No.	Activity	Project Period												Man-days to be generated	
		2012-2013			2014-2015			2015-2016			Total				
		Phy.	Fin.	Mat.	Phy.	Fin.	Mat.	Phy.	Fin.	Mat.	Phy.	Fin.	Mat.		
1	C.C. Channel @ Rs. 10000/- per 100 m	1.00	0.4	0.6	-	-	-	-	-	-	-	1.00	0.4	0.6	400
2	Coffe Plantation @ Rs. 10000/- per Ha.	1.0	1.4	0.6	-	-	-	-	-	-	-	1.0	1.4	0.6	400
<b>GRAND TOTAL</b>															

Amount allocated for convergence for the period 2012-13 to 2015-16.

1. Wage Component ..... Rs. 0.8  
2. Material Component ..... Rs. 1.2  
Grand Total ..... Rs. 2.0

(Rupees two lakh) only.

*E.S. Sangma*  
Chairman  
Arhela Chidkro V.E.C.  
West Garo Hills.

*Vijay Sangma*  
Chairman  
Arhela Chidkro V.E.C.  
West Garo Hills.

**AGREEMENT FOR CONVERGENCE OF SCHEME**

The Village Employment Council (VEC) and the communities of Chidekgre village under Rangram C. & R. D. Block, West Garo Hills, Meghalaya have no objection to the convergence of MNREGS with Integrated Watershed Management Project (IWMP) at Chidek gre village under Ringgi-Bisik Micro Watershed - WGH - IWMP -M being implemented by Tura soil & Water Conservation (T) Division, west Garo Hills.

We also agreed to allocate and commit funds for wages as well as material component under MNREGS in our Annual Work Plan for various Soil & water conservation works which shall be taken up during the Project period (2012-2013 to 2015-2016). The wages and material component under MNREGS shall be utilised for the following works;

1. Coffee Plantation 10.00 Hectare.
2. C.C. Channel 1 no.

  
Chairman,  
Chidekgre V.E.C.  
Rangram C. & R. D. Block,  
west Garo Hills.  
  
Arbala Chidekgre V.E.C.  
West Garo Hills

Secretary,  
Chidekgre V.E.C.  
Rangram C. & R. D. Block,  
West Garo Hills.

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

**Pa Ewan Sangma**

**Nokma**

Chidekgre A-king III-32 (8)  
P.O. Rongram  
Dist. West Garo Hills,  
Meghalaya.



Date: 17.1.2011

NO OBJECTION CERTIFICATE

Anga Shri Ewan T. Sangma Arbela Chidekgre songoi nokma and ebra dipante dimilik chawarawang iano indake su parake onoga. chongmetan Soil and Water conservation (T) Departmentni rakbanggipa Integrated Watershed Management Project skhemko uingoi songo churshetani bidings uinga mamangka champungani dongja.

Ja skhemni ningoi dingtang dingtang kamrangko karonio nanangni dengimin nian gitani uinga janihjen and Departmentko mamang dakiba matrangjawa and engine kamrangko antangtangni keil zakhevi kargen son kuralake iano su onoga

Jako su mol mologgipa

- 1 Shri Lalith Marak
- 2 " Shri Yingsan Marak.
- 3 " Taran Sangma
- 4 " Pile Mork
- 5 " Jemasing Marak
- 6 " Terinma Marak

*E. Sangma*

**Pa. E. Sangma  
Nokma III-32 (8)  
Chidekgre A-king  
West Garo Hills.**

**BENEFICIARY LIST UNDER RINGGI BISIK MICRO WATERSHED (IWMP) -2011.**

<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	
Sl. No.	Beneficiary's Name	Location	Nature of work	Nos./unit	GPS Location	
1	Shri. Elwan Sangma	Chidekgre	Dug out Pond	1	25° 34" 02.1'	- 90° 19" 50.9'
2	" Peterson Sangma	Sisingkol stream , Chidekgre	Irrigation Dam	1	25° 34"09.1'	- 90° 19" 40.4'
3	" Surasing Marak	Chinamgija stream , Chidekgre	Irrigation Dam	1	25° 34" 07.3'	- 90° 19" 37.7'
4	" Sompo Sangma	Songgitcham stream , Chidekgre	Irrigation Dam	1	25° 34" 01.5'	- 90° 19" 30.5'
5	" Manji Marak	Chinamgija stream , Chidekgre	Irrigation Dam	1	25° 33" 57.5'	- 90° 19" 42.5'
6	" Jonit Sangma	Chidekgre	Dug out Pond	1	25° 33" 52.8'	- 90° 19" 33.2'
7	" Ripjen Marak	Chidekgre	Dug Out Pond	1	25° 33" 54.3'	- 90° 19" 48.5'
8	" Namsing Sangma	Songgitcham stream , Chidekgre	W/H Farm Pond	1	25° 34" 13.3'	- 90°19" 27.8'
9	" Jengna Sangma	Chidekgre	Protection Wall	1	25° 33" 58.5'	- 90° 19" 34.5'
10	" Jengna Sangma	Chidekgre	Protection Wall	1	25° 34" 00.1'	- 90° 19" 33.6'
11	" Nipinson Marak	Chidekgre	Dug out Pond	1	25° 33" 58.7'	- 90° 19" 45.9'
12	" Pidi Marak	Chidekgre	Protection Wall	1	25° 34" 07.9'	- 90° 19"43.3'
13	" Crunalet Sangma	Chidekgre	W/Harvesting Farm Pond	1	25° 35" 78.9'	- 90° 19" 09.9'
14	Community	Chidekgre	Rubber Pltn.		25° 34"48.0'	- 90° 21" 37.7'

