

# **DETAILED PROJECT REPORT**

## **CHINAMGIJA - 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) Gondenggre
Name of the Project	:	West Garo Hills – IWMP – V
Total Geographical Area	:	344.80 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 Chinamgija (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 east to south-West direction. The total area is 344.80 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 16 km from Rongram C.& R.. D. and about 31 km from Tura the District Headquarter. One village is covered under the project. That is –

RE./

1. Gondenggre

### **1.2 Micro-watershed Information:**

The total area of the micro-watershed is 344.80 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 villages have only one road connectivity. The farmers are all marginal and 52 households are below the poverty line, which is 90% 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 is :-

- 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 16 km from Rongram C.& R. D. Block and about 31 km from Tura the District Headquarter. The geographical location is between 90° 20' to 90° 21' 10"E Longitude and 25° 34' to 25° 35' 21"N Latitude. There are 1 village within the Watershed area which is as follows –

1. Gondenggre

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 400m to a high of 850 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
400 m to 850m	5% - > 50%	Second order	Chinamgija	Sloping

**2.3 Drainage:** The major stream draining the micro-watershed is the Ringgi which is a 2<sup>nd</sup> order stream flowing in east-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	220	2500-4000	56.4
				b	Rill	130	2500-4000	33.3
				c	Gully	40	2500-4000	10.3
				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	Southern Slopes and Valley	344.80 Ha	West Garo Hills	West Garo Hills – IWMP – v	Deep , excessively drained, fine – loamy soil on moderately steep side slopes of hills having loamy surfaces with severe erosion hazard and stoniness associated with moderately deep, excessively drained, coarse loamy soils on gently sloping hill tops with severe erosion hazard and slight stoniness	344.80 Ha	9000 mm	Betel nut	10.00
									Betel leaf	5.00
									Bay leaf	2.50
									Ginger	15.37
									Chilli	6.00
									Squash	3.50
								<b>Total</b>		<b>42.37 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 Kera 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**

Crops	Area (ha)	Average Yield (Qtl) per ha.	Total Production (Qtl.)
Ginger	60	40	2400
Millet	20	10	200
Squash	25	20	500
Yam	30	25	750
Chilli	40	40	1600
Tapioca	30	30	900
Betel nut	60	30	1800
Betel leaf	10	10	100
Bay Leaf	15	15	225

**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 115 with a total population of 538, of which 274 are male and 264 are female.

Infrastructure facilities :

- 2.1.1 *Roads:* The Project Area is connected by a seasonal road. The Project area depends entirely on the kutchha road connected either to Aguragre or Waribokgre.
- 2.1.2 *School:* there are only 2(two) 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 :* There 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)
				2 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	74
Poultry	641
Cattle	169
Goatery	12

**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	103	107	-	26.50Ha	26.50 Ha
		(iv) Landless	12	8	-	-	-
		Sub - Total	115	115		26.50Ha	26.50 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	30.09	-	-	-	5.50	-	-	-
		Agri Kharif	42.37	-	-	-	7.50	-	-	-
		Current jhum	21.49	-	-	-	-	-	-	21.49
		Tree Clad open- area	125.85	-	-	125.00	-	-	-	215.51
		<b>Total</b>	219.80 Ha	-		<b>125.00 Ha</b>	<b>13.00 Ha</b>	-	-	<b>237.00 Ha</b>

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

a) Horticulture plantation	=	30.09 Ha
b) Agri – kharif	=	42.37 Ha
c) Current jhum	=	21.49 Ha
d) Tree clad Area-open	=	<u>250.85 Ha</u>
Total	=	344.80 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
<b>A.</b>	<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	No
	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	Divisional Soil & Water Conservation Officer, Tura
		(iv) Telephone	03651 - 222352
		(v) Fax	Do
		(vi) E-mail	

### 3.3 Institution Building

#### i) Watershed Committee (WC)

The Watershed Committee of the Chinamgija IWMP II was constituted with the active involvement of the villagers with strong support of the Traditional Institutions (Village Council). The Chinamgija 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	Chinamgi ja		President	M	-	ST									Cl – X	A to I
				Secretary	M	-	ST									B.E	A to I
				Member	10 M	-	ST									Cl – VI	Do
				Member	4 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.

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

1	2	3				4				5			6		
Names of the Districts	Names of projects	Total no. of registered SHGs				No. of members				No. of SC/ST in each category			No. of BPL in each category		
		With only Men	With only Women	With both	Total	Categories	M	F	Total	M	F	Total	M	F	Total
West Garo Hills	WGH IWMP V	-	-	-	-	(i) Landless									
						(ii) SF									
						(iii) MF									
						(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
						(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	-	-	-ppp

**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:

1	2	3	4	5	6			7												
S l. N o	Nam e of State s	Name of Distri cts	Name of Projects	Type of structures	Pre Project			Proposed Project												
					No	Area irriga ted (ha)	Stora ge capaci ty	Augmentation/ repair of existing structures				Construction of new structures				Total target				
								No	Area to be treate d (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 (m³)	Estima ted cost	
1	Meg hala ya	West Garo Hills	West Garo Hills – IWMP V	(i) Spring	-	-	-	-	-	-	-	3 nos.	-	25 m³	1.50	3 nos.	-	75	1.50	
(iii) Lake				-	-	-	-	-	-	-	-	-	-	-	-	-	--	-		
(v) Percolatio n Tank				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
(vi) Channel				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
(vii) Any others (please specify)																				
			Total									3 nos.	-	25 m³	1.50	3 nos.	-	75	1.50	

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		-

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

1	2	3	4	5	6		7								8								9							
S. No.	Names of States	Names of Districts	Names of projects	Type of structures	Pre-project		Proposed target								Achievement due to project								Change in irrigated area (Col. 8-6) (ha)							
					No.	Area irrigated (ha)	Augmentation/ repair of existing recharging structures			Construction of new recharging structures			Total target		Augmentation/ repair of existing recharging structures			Construction of new recharging structures			Total achievement									
							No.	Area to be irrigated (ha)	Estimated cost	No.	Area to be irrigated (ha)	Estimated cost	Area to be irrigated (ha)	Estimated cost	No.	Area irrigated (ha)	Expenditure incurred	No.	Area irrigated (ha)	Expenditure incurred	Area irrigated (ha)	Expenditure incurred								
				(i)Open wells		Nil		Nil		Nil		Nil		Nil		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.

	2	3						
Names of Districts	Names of Projects	Major activities of the UGs –Targets				No. of UGs involved	Estimate d Cost	Amount of WDF to be collected (Rs.)
		Structure/ activity proposed						
		Sl. No.	Type	No.#	Treatment (ha)			
West Garo Hills	West Garo Hills – IWMP V							

#### 4.2.4 Activities executed by User Groups in the Project Areas:

4									
Major activities of the UGs – Achievements									
Structure/ activity				No. of UGs involved	Expenditure incurred (Rs.)	No. of mandays			Amount of WDF collected (Rs.)
Sl. No.	Type	No.#	Treated Area (ha.)			SC	ST	F	

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

1	2	3		
Names of the Districts		Major activities of the SHGs		
		Name of activity	No. of SHGs involved	Average annual income from activity per SHG
West Garo Hills	IWMP \V			

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

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



#### 4.2.7 Other activities of watershed works phase:

1	2	3		4		5		6		7		8		9		10		11		12		13
District	Names of projects	Ridge area treatment		Drainage line treatment		Nursery raising		Land development		Crop demonstrations		Pasture development		Veterinary services		Fishery development		Non-conventional energy		Any other (please specify)		Total cost incurred (Rs. In lakhs)
		(a)	(b)	(a)	(b)	(a)	(b)	(a)	(b)	(a)	(b)	(a)	(b)	(a)	(b)	(a)	(b)	(a)	(b)	(a)	(b)	
WG H	IWMP V	11.25 Ha	1.125	135 Ha	27.50	-	-	-	-	-	-	-	-	-	-	12.00	2.00	-	-	-	-	27.50

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

1	2	3	4			5			6	7					8								
District	Project	Name of structures	Type of treatment			Type of land			Executing agency	Target					Achievement								
			(i) Ridge area (R)	(ii) Drainage line (D)	(iii) Land Dev. (L)	(i) Private	(ii) 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./ cu.m./ rmt)	Expenditure incurred (Rs. in lakh)				Status of completion	Actual month & year of completion (mm/yyyy)
												M	W	O	T			M	W	O	T		
		Dug out Pond		D		√			Indiv.	4		2.0	2	3 yrs									
		Bench terracing	-	D	-	√	-	-	Indiv.			0.2	0.2	3 yrs									
		Irri. Dam		D		√			UG	4	6	4.0	10	3 Yrs									
		W/H Farm Pond		D		√			Indiv.	4	6	4.0	10	3 yrs									
		Prot. Wall		D		√			UG	4	1.2	0.8	2	3 yrs									
		C.C. Channel		D		√			UG	2	0.6	0.4	1	3 yrs									

Contd.

#### 4.2.9 Details of engineering structures in watershed works.

9																	
Outcomes																	
Reduction in run off (cu.m)	Area treated# (ha)	Water level (m)		Production (quintal)		Income (Rs.)		Mandays generated					No. of beneficiaries				
		Pre-project	Post project	Pre-project	Post project	Pre-project	Post project	SC	ST	Others (Men)	Women	Total	SC	ST	Others	Women	Total
-	65.00	-	-	-	-	-	-	-	100%	6840	4560	11400	-	100 %	45	25	70

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

1	2	3	4			5			6	7				8			
District	Project	Name of structure/ work	Type of treatment			Type of land			Executing agency	Target				Achievement			
			(i) Ridge area (R)	(ii) Drainage line (D)	(iii) Land dev. (L)	(i) Private	(ii) Community	(iii) Others (pl. specify)	(i) UG (ii) SHG (iii) Others (pl. specify)	Area (ha)	No. of plants	Estimated cost (Rs. in lakh)	Expected month & year of completion (mm/yyyy)	Area (ha)	No. of plants	Expenditure incurred (Rs. in lakh)	Actual month & year of completion (mm/yyyy)
		Afforestation	√			√				10.00	3375	0.86	3 yrs				

# 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.

**4.2.11 Details of vegetative structures in watershed works: Phase – II (contd.):**

9														
Outcomes														
Reduction in run off (cu.m)	Production (quintal)		Income (Rs.)		Mandays generated					No. of beneficiaries				
	Pre- project	Post project	Pre- project	Post project	SC	ST	Othe rs	Women	Total	SC	ST	Others	Women	Total
-	-	-	-	-	-	100%	516	344	860					

#### 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	Chinamgija IWMP V									
		Carpentry			5 units	SHG's /Individual	17500	3 yrs.		
		Tailoring			4 units	Do	2.00	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.

#### 4.2.13 Details of allied / other activities:

8											
Outcomes											
Income (Rs.)		Mandays generated					No. of beneficiaries				
Pre-project	Post project	SC	S T	Others	Women	Total	SC	ST	Others	Women	Total

### 4.3 Consolidation and withdrawal phase

#### Details of activities in the CPRs in the project areas:

1	2	3	4	5	6				7						
Names of the Districts	Names of projects	Name(s) of the villages	CPR particulars	Activity proposed	Target				Achievement						
					Target area under the activity (ha)	Estimated expenditure (Rs.)	Expected no. of beneficiaries	Estimated contribution to WDF (Rs.)	Area treated under the activity (ha)	Expenditure incurred (Rs.)	Actual no. of beneficiaries	No. of mandays			WDF collected (Rs.)
												SC	ST	F	
		Gondenggre		Maint. & Repair of CPR	-	0.875	-	0.875	-	-	-	-	-		0.875

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



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

**ACTION PLAN OF CHINAMGIJA 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>			2%	0.75	5%	1.875	3%	1.125			10%	3.75
	<b>Preparatory Phase :</b>												
<b>B</b>	<b>Entry Point Activities ; 4 %</b>	4%	1.50									4%	1.50
		2											
	i) Construction of Spring Chamber @ Rs. 60000/- per no.	nos.	1.20	-	-	-	-	-	-	-	-	2	1.20
		1											
	ii) Construction of Ringwell @ Rs.30000/- per no.	nos.	0.30	-	-	-	-	-	-	-	-	1	0.30
	<b>Total of 'B'</b>	4%	1.50									4%	1.50

...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) Awareness Campaign	-	0.10	-	0.10	-	0.075	-	0.10	-	-	-	0.30
	ii) Exposure visits off-campus	-	-	-	0.25	-	0.15	-	0.175	-	-	-	0.475
	iii) Capacity Building of SHGs/UGs	-	0.10	-	0.20	-	0.10	-	0.10	-	-	-	0.70
	iv) Capacity Building of WC members	-	0.075	-	0.20	-	0.05	-	-	-	-	-	0.30
	v) Capacity Building of WDT/W Volunteer	-	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) Cost of Resources Inventories works	-	0.125	-	-	-	-	-	-	-	-	-	0.125
	ii) Cost of PRA	-	0.05	-	-	-	-	-	-	-	-	-	0.05
	iii) Cost of Land use survey	-	0.125	-	-	-	-	-	-	-	-	-	0.125
	iv) Cost of formulating	-	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>	-	-	-	<b>0.075</b>	-	<b>0.1875</b>	-	<b>0.1125</b>	-	-	1%	0.375
				<b>0.2%</b>	<b>0.075</b>	<b>0.5%</b>	<b>0.1875</b>	<b>0.3%</b>	<b>0.1125</b>			<b>1%</b>	<b>0.375</b>
<b>F.</b>	<b>ii) Evaluation - 1%</b>	-	-	-	0.1125	-	0.1875	-	-	-	-	1%	0.375
	<b>Total of 'E'</b>			<b>0.3%</b>	<b>0.1125</b>	<b>0.5%</b>	<b>0.1875</b>	<b>0.2%</b>	<b>0.075</b>			<b>1%</b>	<b>0.375</b>
	<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><u>Watershed Works Phase : 50 %</u></b>			<b>7.50%</b>	<b>2.8125</b>	<b>35%</b>	<b>13.125</b>	<b>7.50%</b>	<b>2.8125</b>			<b>50%</b>	<b>18.75</b>
<b>A.</b>	<b>Arable Land Treatment :</b>												
	iii) Terracing - @ Rs.20000/- ha.	-	-	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) Afforestation - Prelim. @ Rs.1300/- per ha.	-	-	10	0.13	-	-	-	-				0.13
	1st year Planting @ Rs.4600/- per Ha.	-	-	-	0.46	-	-	-	-	-	-		0.46
	2nd year Planting @ Rs. 2700/- per Ha.	-	-	-	-	-	0.27	-	-	-	-		0.27
	ii) Rubber pltn. - Pelim. @ Rs.1300/-per ha.	-	-	10	0.13	-	-	-	-	-	-		0.13
	1st year Planting @ Rs.4600/- per Ha.	-	-		0.46	-	-	-	-	-	-		0.46
	2 nd year Planting @ Rs. 2700/- per ha.	-	-	-	-	-	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) Repairing & maintenance of CPR's	-	-	-	-	-	-	-	-	-	-	0.875	-	0.875
ii) Improving the sustainability of various intervention	-	-	-	-	-	-	-	-	-	-	0.50	-	0.50
iii) Documentation of successful experience and preparation of Completion Report.	-	-	-	-	-	-	-	-	-	-	0.50	-	0.50
<b>Total of V</b>										<b>5%</b>	<b>1.875</b>	<b>5%</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.

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**VILLAGEWISE ACTION PLAN OF CHINAMGIJA MICRO WATERSHED UNDER IWMP - V**  
**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	Gondenggre				Total	
		Phy.	Fin.	Phy.	Fin.	Phy.	Fin.
1	2	3	4	5	6	7	8
<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				
S L N o	Name of State	Name of Districts	Names of Projects	Year of sanction	Project duration (dd/mm/yyyy)		Area of the projects	Project cost (Rs. In lakh)	Names of Micro watersheds & Code nos. (as per DoLR's unique codification)	Area (ha) of the projects				Area details (ha) (falling within the projects)				
					From	To												
										Cultivated rainfed area	Cultivated irrigated area	Uncultivated wasteland		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	2011-12	2011-12	2015-16	250.0 Ha	37.50 Lakhs	Chinamgijas(Lower Reaches) –	42.37 Ha	-	30.37	-		150.85	20.00	6.41	250.0 Ha

**Fund provision for the IWMP projects from all sources:**

1	2	3		4										5
Distri ct	Name of Project s	IWMP Fund		Funds from other sources in addition to IWMP funds										Total
				Convergence funds		PPP		Community		Institutional finance		Others (Pl. specify)		
				Name of Scheme	Amount (Lakhs)	Name of private sector	Financial contri- bution	Name	Financial contri- bution	Name	Financi al contri- bution	Nam e	Financia l contri- bution	
West Garo Hills	West Garo Hills – IWMP V	33.75 lakh	3.75 lakh	NREGS	11.50	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	49.00

**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	Chinamgij a Watershed Committee	Axis Bank, Tura	911010006289137	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	11.50	C.C. Irrigation Dam Rubber Plantation	-	Block Level & District Level
2			* PHE Department TSC	n.a		-	

Note:

(i) Gondenggre                      Wages – 4.60;                      Material – 6.90;                      C.C. Irrigation Dam Rubber 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>	Area(s) of specialization <sup>\$</sup>	Accreditation details	Performance				
								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)

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

<sup>@</sup> 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 2009 – 10 as on 31/03/2010 (dd/mm/yyyy)\***

1	2	3	4	5	6		7	
Project Stakeholders	Total no. of persons	No. of persons trained so far	No. of persons to be trained during current financial year	No. of persons trained during current financial year	Sources of funding for training		Funds utilized (Lakhs)	
					a) DoLR	b) Any other (Pl. specify)	a) DoLR	b) Any other (Pl. specify)
SLNA	100 Nos.	-	100 Nos.	-	0.75	-	0.75	-
DRDA/ZP cell	5 Nos.	-	5 Nos.	-				
PIAs	2 Nos.	-	2 Nos.	-				
WDTs	10 Nos.	-	10 Nos.	-				
UGs	5 Nos.	-	5 Nos.	-				
SHGs	30 Nos.	-	30 Nos.	-				
WCs	16 Nos.	-	16 Nos.	-				
GPs	5 Nos.	-	5 Nos.	-				
Community	100 Nos.	-	100 Nos.	-				
Others Pl. specify)								

**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	1.10	1.10	

**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.	Gondenggre	-	100 %	3500	2500	6000	-	100 %	80	35	115	-	100 %	2	1	3

**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 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 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	2	3	4	5	6	7				8
Names of the Districts	Names of the projects	Names of the villages	Particular of CPR	Nature of right	Period of right	Beneficiary details (no. of families)				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 7.5.1 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	-	-	-	-	-
		Bore 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 monyhs 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	Squash	PVC pipes	Vermi-compost, 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					
Names of the Districts	Name of Projects	Name of crops	Pre-project						Mid-term						Post-project					
			Area (ha)		Average Yield (Qtl) per ha.		Total Production (Qtl)		Area (ha)		Average Yield per ha (Qtl)		Total Production (Qtl)		Area (ha)		Average Yield per ha (Qtl)		Total Production (Qtl)	
			Irri	Rf.	Irri	Rf.	Irri	Rf.	Irri	Rf.	Irri	Rf.	Irri	Rf.	Irri	Rf.	Irri	Rf.	Irri	Rf.
West Garo Hiils	IWMP - I	Millet	-	20	-	10	-	200	10	25	20	10	200	250	20	35	40	20	800	700
		Yam	-	25	-	22	-	550	15	30	30	22	450	660	30	45	60	30	1800	1350
		Ginger	-	40	-	28	-	1120	20	45	35	28	700	1260	30	50	60	35	1800	1750
		Tapioca	-	15	-	20	-	300	10	20	30	20	300	200	20	30	50	30	1000	900
		Betel nut	-	55	-	25	-	1375	10	60	35	25	350	1500	20	70	50	30	1000	2100
		Betel leaf	-	15	-	10	-	150	10	20	15	10	150	200	20	35	30	20	600	700

\* 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					
Sl No.	Names of States	Names of the Districts	Name of Projects	Name of crops	Pre-project						Mid-term						Post-project					
					Area (ha)		Average Yield (Qtl) per ha.		Total Production (Qtl)		Area (ha)		Average Yield per ha (Qtl)		Total Production (Qtl)		Area (ha)		Average Yield per ha (Qtl)		Total Production (Qtl)	
					Irri	Rf.	Irri	Rf.	Irri	Rf.	Irri	Rf.	Irri	Rf.	Irri	Rf.	Irri	Rf.	Irri	Rf.	Irri	Rf.
	Meghalaya	West Garo Hills District	WGH-IWMP V	Squash	-	-	-	-	-	-	20	-	15	-	300	-	45	-	30	-	1350	-

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

Irri. – Irrigated    Rf – Rainfed

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

1	2	3	4	5	6						7						8					
Sl No.	Names of States	Names of the Districts	Name of Projects	Name of crops	Pre-project						Mid-term						Post-project					
					Area (ha)		Average Yield (Qtl) per ha.		Total Production (Qtl)		Area (ha)		Average Yield per ha (Qtl)		Total Production (Qtl)		Area (ha)		Average Yield per ha (Qtl)		Total Production (Qtl)	
					Irri	Rf.	Irri	Rf.	Irri	Rf.	Irri	Rf.	Irri	Rf.	Irri	Rf.	Irri	Rf.	Irri	Rf.	Irri	Rf.
	Meghalaya	West Garo Hills District	WGH-IWMP V	squash	-	-	-	-	-	-	30 Ha	-	20	-	600	-	100	-	30	-	3000	-
			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	2010	250.85Ha	10 Ha	10.00 Ha	10 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		
District	Name of project	Duration of Project	Existing area under horticulture (ha)			Achievement (ha)		
			Source/Name of report	Year of reference	Area already under horticulture	Area under horticulture proposed to be covered through IWMP	Area under horticulture actually covered through IWMP	Change in area under horticulture
West Garo Hills District	WGH-IWMP V	5 yrs	PRA	2010	30.09	10.00 Ha	10.00 Ha	10.00 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 7.6.7 Increase/ Decrease in area under fuel-wood:**

1	2	3	4			5		
District	Name of project	Duration of Project	Existing area under fodder (ha)			Achievement (ha)		
			Source/Name of report	Year of reference	Area already under fuel-wood	Area under fuel-wood proposed to be covered under IWMP	Area under fuel-wood actually covered under IWMP	Change in area under fuel-wood
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	2	3	4			5			6			7
Names of the Districts	Name of Projects	Type of Animal	Pre-project			Mid-term			Post-project			Remarks
			No.	Yield	Income	No.	Yield	Income	No.	Yield	Income	
West Garo Hills District	WGH-IWMP V											
		Piggery	74	-	3.70	120	-	6.60	250	-	12.50	
		Poultry	641	-	2.25	900	-	3.60	1300	-	4.55	
		Cattle	169		13.50	250		21.25	300		25.50	
	Total for all projects		884	-	19.45	1270	-	31.45	1850	-	42.55	
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	WG H-IW MP 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)
			Migration (No. of beneficiaries)		Development of backward-forward linkages		
Total	Grand Total (8+9)		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 7.7.5 Details of other livelihoods created for farmers \* (contd.)

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

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.)
Wes Hit Garolls District	WGH-IWMP V	(A) Backward linkages			
		(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)			
		(A) Forward linkages			
		(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		-	6 nos.	
		Change in cropping/ land use pattern		-	-	
		Area under agricultural crop				
		i Area under single crop		-	-	
		ii Area under double crop		100 ha	300 ha	
		iii Area under multiple crop		100 ha	250 ha	
		Net increase in crop production area				
		Increase in area under vegetation		-	150 ha	
		Increase in area under horticulture		-	200 ha	
		Increase in area under fuel & fodder		-	100 ha	
		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\***

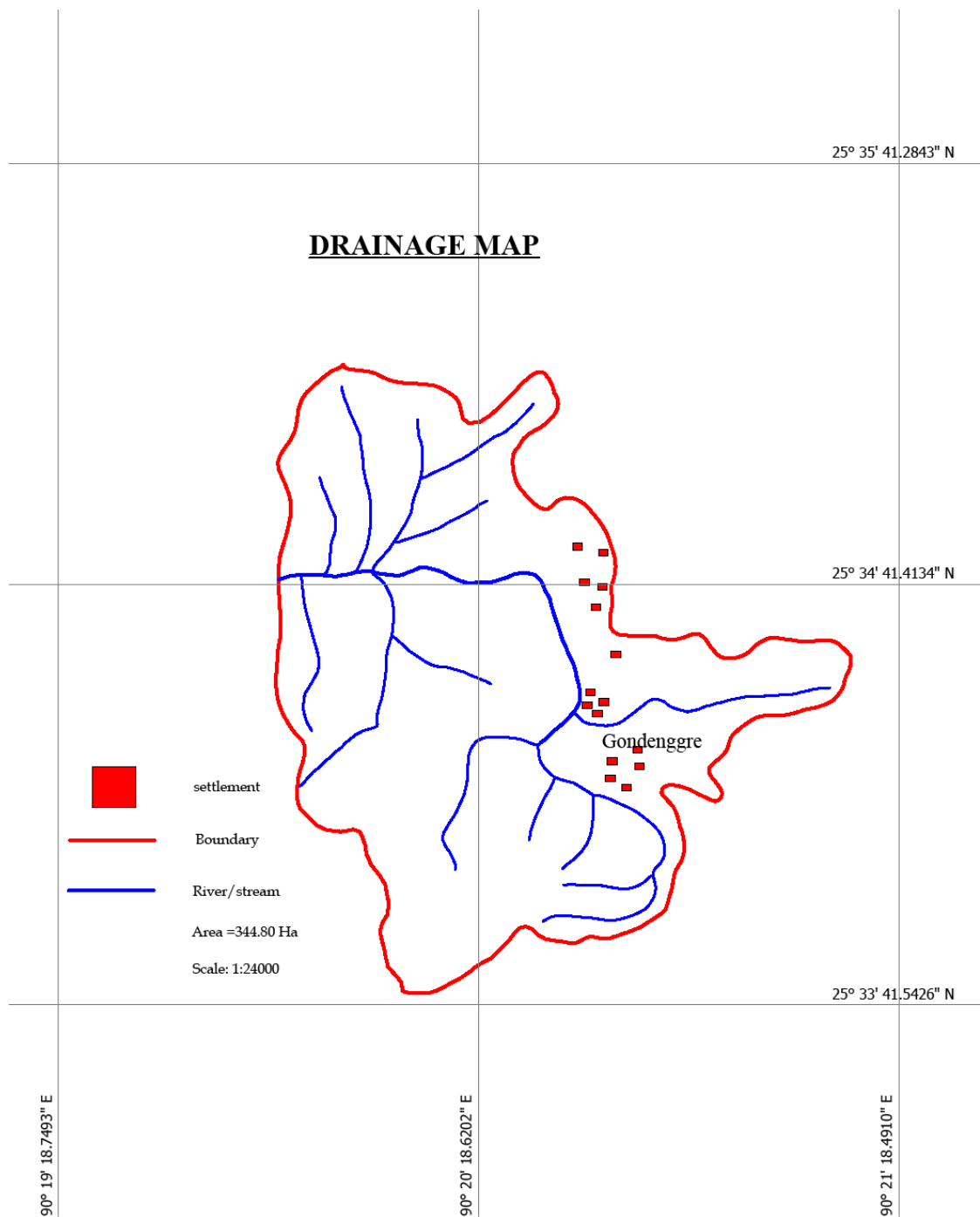
1	2	3	4	5	6	7	8	9	10
District	Name of project	Name of WC	Name of structure/ activity	Estimated cost (Rs.)	Expected quantifiable benefits (Rs.)	Expenditure incurred (Rs.)	Actual quantifiable benefit (Rs.)	Benefit: Cost ratio <sup>#</sup>	IRR
West Garo Hills District	WGH-IWMP V	Chinamgija	As per Treatment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

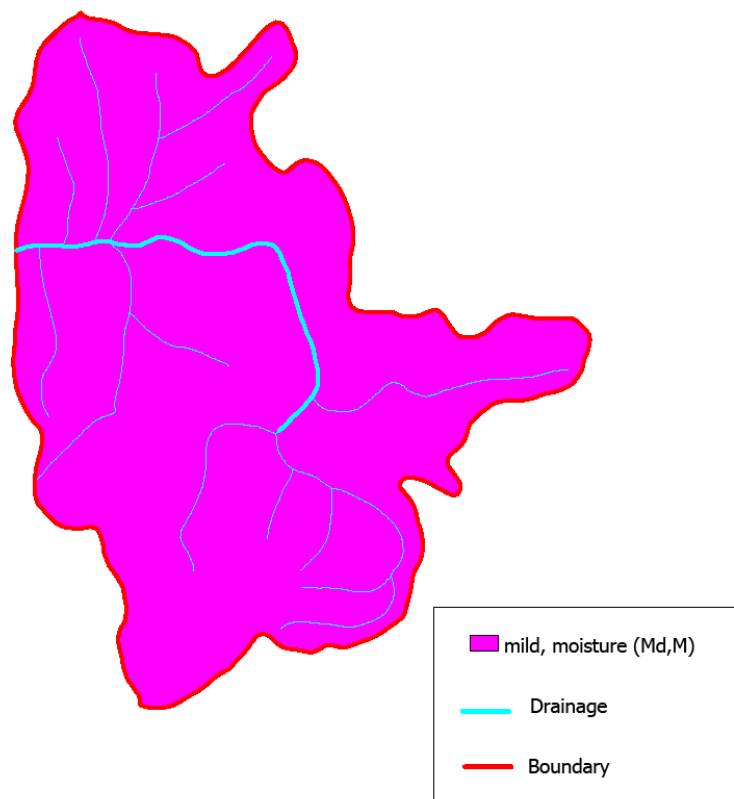
<sup>#</sup> B:C ratio more than 1 – cost effective  
less than 1 – Not cost effective

**ANNEXURE I**  
**MAPS**

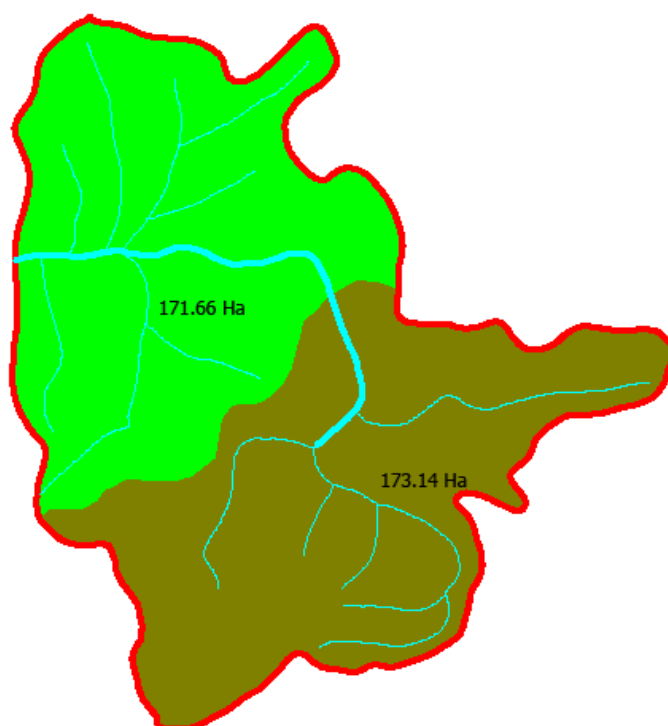






## AGROCLIMATIC ZONE MAP

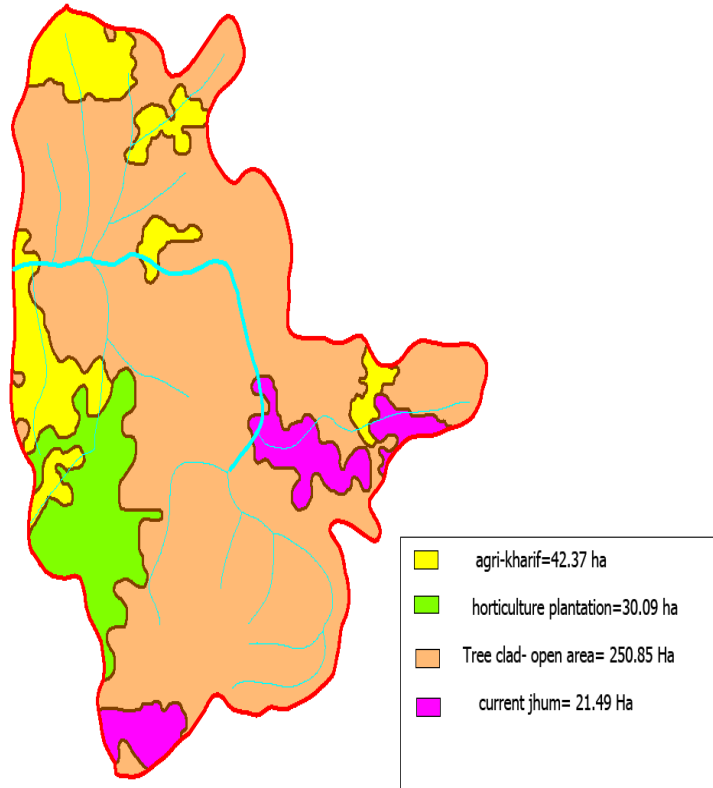


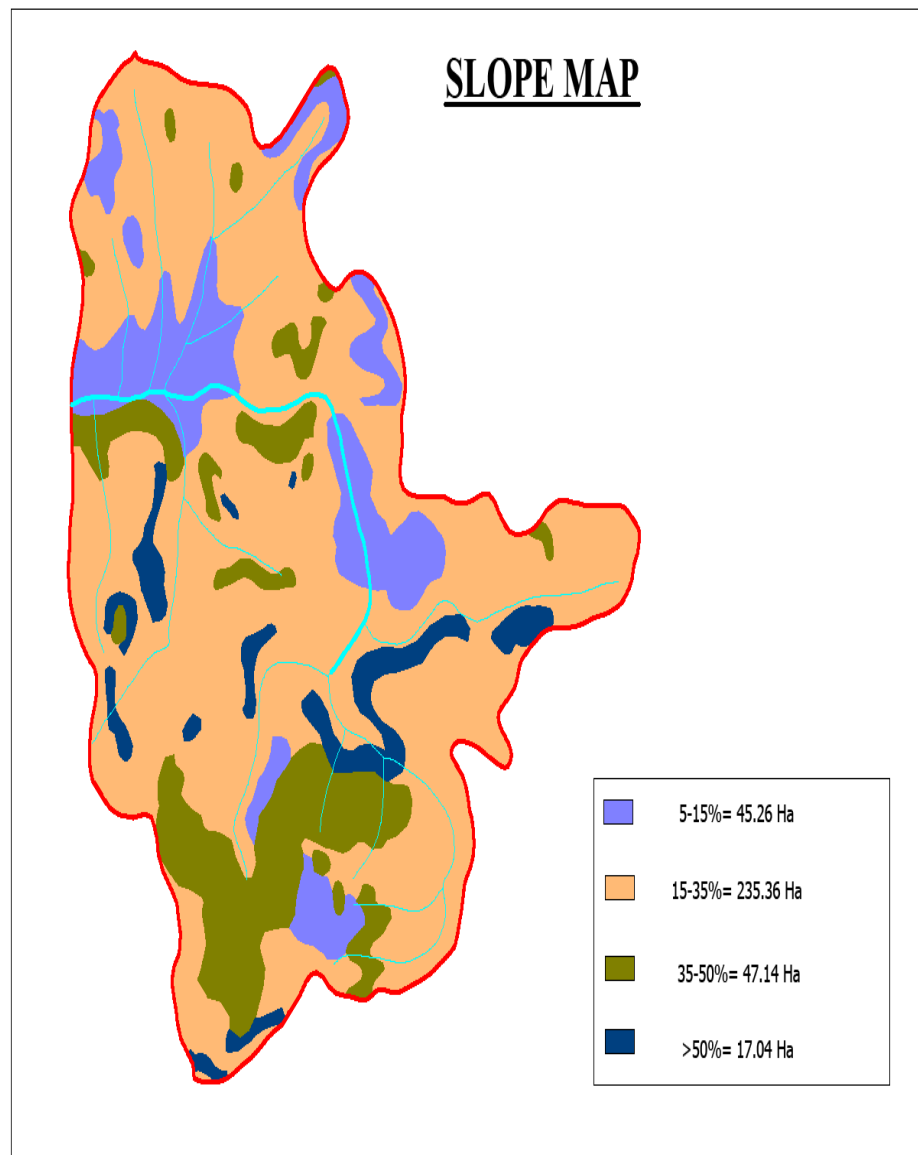
## SOIL MAP



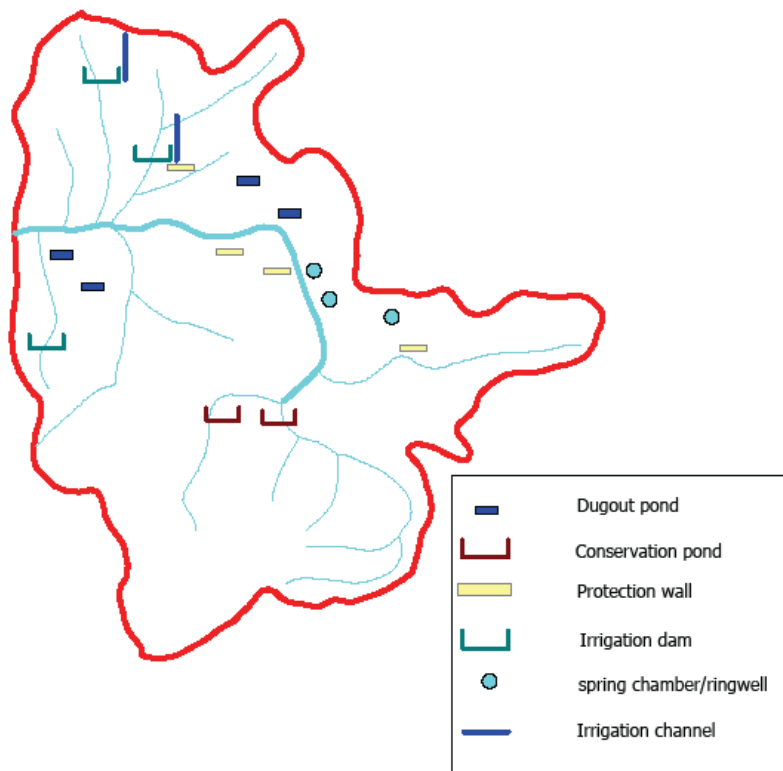
- |   |   |
|---|---|
|  | Deep, excessively drained fine loamy soils              |
|  | Moderately deep, excessively drained, coarse loamy soil |

## LAND USE LAND COVER MAP

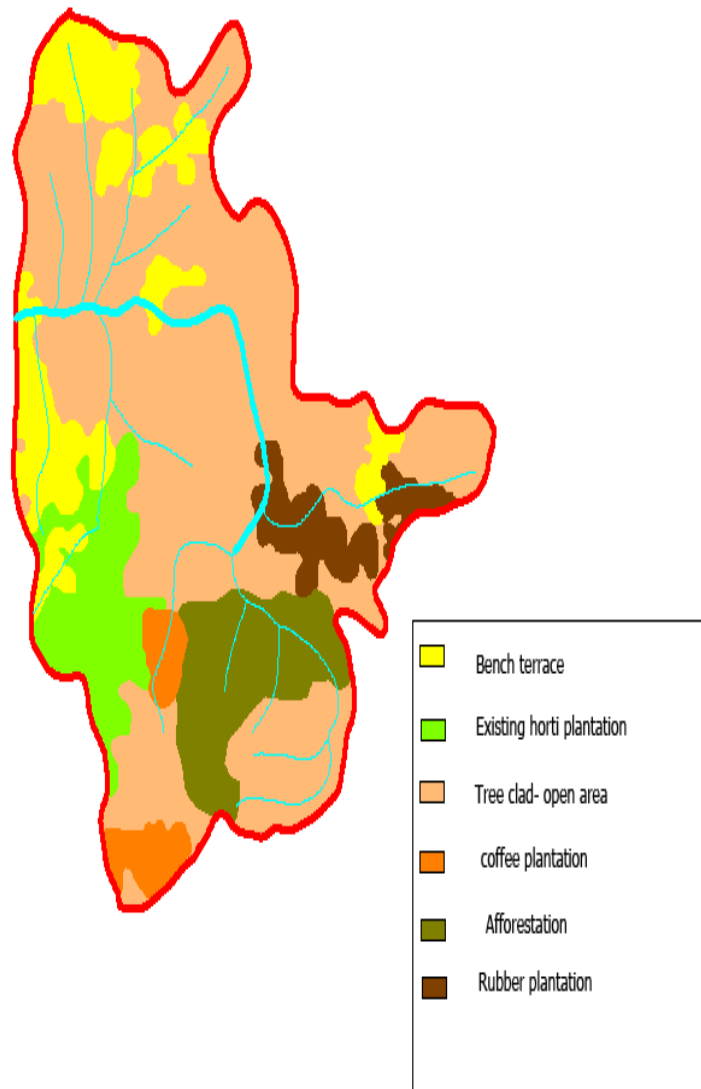




## **PROPOSED ENGINEERING MAP**



### PROPOSED LAND USE MAP



## **ANNEXURE II**

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



**SOCIO ECONOMIC SURVEY OF VILLAGE : GONDENGGRE**
**UNDER I.W.M.P.**

Sl.No.	Name of the head of the family	Male	Female	Total	Literacy rate	Illiteracy rate	Total	Agriculture(Ha.)		Horti.	Livestock				Infrastructure
								Settled Area	Unm Area		Cattle	Poultry	Piggery	Goatery	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	Shri, Genjak Marak (N)	3	1	4	4	-	4				2	10	-	-	
2	Shri, Manggan Marak	2	1	3	2	1	3				7	12	2	-	1 no. L.P. School
3	Shri, Ronjit Sangma	1	3	4	3	1	4				-	7	3	-	
4	Shri, Jagen Sangma	2	4	6	3	3	6				2	8	1	-	1 no. Anganwadi centre
5	Shri, Hetingson Marak	2	3	5	4	1	5				4	10	1	-	
6	Shri, Sexstone Marak	2	1	3	3	-	3				2	9	1	-	
7	Shri,Jacques Marak	4	1	5	4	1	5				-	10	1	-	No Electricity
8	Shri, Jinggat Marak	5	4	9	7	2	9				2	8	1	-	
9	Shri, Mansing Marak	1	2	3	2	1	3				-	5	-	-	No P.H.E. water supply
10	Shri, Menalson Marak	3	2	5	4	1	5				5	10	1	-	
11	Shri, Predinath Marak	3	1	4	3	1	4				2	8	-	-	
12	Shri, Michael Marak	4	2	6	5	1	6				5	10	-	-	No Health Sub - centre
13	Shri, Melison Marak	6	2	8	7	1	8				5	10	1	-	
14	Shri, Wenickson Sangma	4	2	6	4	2	6				2	12	-	-	
15	Shri, Clement Marak	1	2	3	2	1	3				-	8	1	-	No P.D.S.
16	Shri, Engson Marak	3	3	6	5	1	6				-	6	-	-	
17	Shri, Ronith Sangma	2	1	3	3	-	3				4	8	-	-	
18	Shri, Stenson Marak	3	3	6	2	4	6				2	6	1	-	
19	Shri, Jaleth Sangma	2	2	4	-	4	4				-	10	1	-	
20	Shri, Kebith Sangma	1	1	2	2	-	2				-	7	1	-	
21	Shri, Doren Sangma	1	1	2	2	-	2				-	6	-	-	
22	Shri, Jengren Marak	1	1	2	1	1	2				5	8	2	-	
1	2														16

23	Shri, Tangang Marak	3	1	4	2	2	4				-	12	-	-	
24	Shri, Teson Sangma	4	3	7	4	3	7				4	5	5	-	
25	Shri, Noben Sangma	4	4	8	2	6	8				5	10	2	-	
26	shri, Koka Sangma	6	3	9	5	4	9				3	8	-	-	
27	Shri, Lukash Marak	4	3	7	4	3	7				-	4	-	-	
28	Shri, Helnick	1	1	2	2	-	2				-	7	-	-	
29	Shri, Augustine Marak	2	1	3	2	1	3				5	6	2	-	
30	Shri, Andreash Sangma	2	3	5	2	3	5				-	7	-	-	
31	Shri Minngjin Sangma	3	3	6	4	2	6				5	6	2	-	
32	Smt Palme Marak	1	1	2	1	1	2				1	6	1	-	
33	Shri Palgen Sangma	1	2	3	3	-	3				2	8	2	-	
34	Shri Sinding Sangma	3	1	4	4	-	4				2	5	2	-	
35	Shri Amita Sangma	2	1	3	2	1	3				-	-	-	-	
36	Shri Linson Marak	4	3	7	4	3	7				-	3	2	-	
37	Shri Poban Sangma	2	2	4	3	1	4				2	8	2	-	
38	Shri Rangam	1	-	1	-	1	1				1	5	-	-	
39	Shri Najing Sangma	2	2	4	2	2	4				1	6	1	-	
40	Shri Mrending Sangma	5	3	8	3	5	8				-	3	2	-	
41	Shri Dinang Marak	1	-	1	1	-	1				-	-	-	-	
42	Shri Jamjing Sangma	1	1	2	-	2	2				3	7	2	-	
43	Shri Eblin Sangma	4	5	9	7	2	9				-	4	3	-	
44	Shri Darmen Sangma	1	1	2	1	1	2				-	6	-	-	
45	Shri Nangnang Marak	2	3	5	3	2	5				3	4	1	-	
46	Shri Hemal Sangma	1	2	3	2	1	3				-	4	-	-	
47	Shri Wetson Sangma	1	2	3	2	1	3				-	-	-	-	
48	Shri Clever Marak	6	1	7	4	3	7				1	4	-	-	
49	Shri Soro Marak	1	1	2	2	-	2				1	2	-	-	
50	Shri Bandi Sangma	1	1	2	2	-	2				-	-	-	-	

51	Shri Mitilson Sangma	1	1	2	2	-	2				-	-	-	-	
1	2														16
52	Shri Binon Sangma	2	2	4	3	1	4				2	6	-	-	
53	Shri Lakan Marak	3	3	6	4	2	6				-	-	-	-	
54	Smt Linda Marak	2	7	9	8	1	9				3	5	1	2	
55	Shri Clon Marak	3	3	6	5	1	6				1	5	1	5	
56	Shri Monensing Sangma	1	2	3	3	-	5				-	6	-	-	
57	Shri Raju Sangma	2	3	5	1	4	5				-	8	-	-	
58	Shri Kenedy Marak	3	3	6	4	2	6				5	2	-	-	
59	Shri Harden Sangma	1	1	2	-	2	2				-	4	-	-	
60	Shri Jenen Sangma	1	1	2	1	1	2				1	-	-	-	
61	Shri Banjing Sangma	2	3	5	3	2	5				-	7	-	-	
62	Shri Orjon Sangma	2	1	3	2	1	3				1	6	-	-	
63	Shri Winder Sangma	2	1	3	2	1	3				1	-	1	-	
64	Shri Basan Sangma	1	-	1	-	1	1				-	10	-	-	
65	Shri Okeldo Marak	3	2	5	4	1	5				1	8	1	-	
66	Shri Silseng Sangma	2	2	4	2	2	4				-	12	1	-	
67	Shri Withon Marak	2	4	6	4	2	6				5	8	1	-	
68	Shri Jangram Marak	3	3	6	4	2	6				2	7	2	-	
69	Shri Palebson Marak	4	2	6	4	2	6				1	6	1	-	
70	Shri Bimer Marak	2	1	3	2	1	3				-	15	-	-	
71	Shri Modi Marak	4	2	6	3	3	6				2	-	-	-	
72	Shri Pison Marak	3	1	4	3	1	4				1	10	-	-	
73	Shri Mathus Sangma	4	3	7	4	3	7				2	15	2	-	
74	Shri Solen Sangma	3	2	5	4	1	5				2	10	-	-	
75	Shri Koslok Sangma	4	4	8	6	2	8				2	5	-	-	
76	Shri Merak Marak	2	1	3	3	-	3				-	-	-	-	
77	Shri Doninath Marak	2	3	5	4	1	5				-	9	1	-	

78	Shri Habit Sangma	3	1	4	-	4	4				-	6	1	-	
79	Shri Bahinat Marak	2	4	6	6	-	6				3		-	-	
80	Shri Paul Sangma	3	3	6	6	-	6				-	7	-	-	
1	2														16
81	Shri Non Sangma	2	2	4	2	2	4				-	8	-	2	
82	Shri Wantu Marak	1	2	3	2	1	3				-	6	-	-	
83	Shri Donsing Marak	1	3	4	4	-	4				-	8	1	-	
84	Shri Jogen Sangma	3	3	6	6	-	6				4	6	-	-	
85	Shri Apple Marak	4	1	5	5	-	5				2	4	-	-	
86	Shri Nilnant Sangma	3	2	5	4	1	5				1	3	-	-	
87	Shri Arjun Kumar	1	2	3	3	-	3				1	-	-	-	
88	Shri Sanjai Marak	1	1	2	1	1	2				-	-	-	-	
89	Shri Hellon Marak	2	5	7	7	-	7				2	5	1	-	
90	Shri Grateson Marak	2	5	7	7	-	7				3	6	1	-	
91	Shri Lipson Marak	3	4	7	7	-	7				3	8	-	-	
92	Shri Tebiram Sangma	4	3	7	6	1	7				2	8	1	-	
93	Smt Gresilda Marak	-	2	2	2	-	2				-	-	-	-	
94	Shri Nadal Marak	5	3	8	6	2	8				3	9	1	-	
95	Smt Rosita Sangma	-	2	2	2	-	2				-	-	-	-	
96	Shri Jugish Sangma	2	4	6	6	-	6				2	4	-	-	
97	Shri Piberson Marak	3	3	6	6	-	6				1	5	-	-	
98	Shri Jahem Marak	2	2	4	4	-	4				-	2	-	-	
99	Shri Sobenath Marak	2	2	4	3	1	4				-	3	-	-	
100	Shri Jingga Marak	3	4	7	5	2	7				2	9	1	-	
101	Shri Abonate Marak	1	3	4	2	2	4				-	-	-	-	
102	Smt Walle Sangma	-	1	1	1	-	1				-	-	-	-	
103	Shri John Sangma	2	5	7	6	1	7				3	4	-	-	
104	Shri A lot Marak	3	6	9	7	2	9				4	10	2	1	

105	Shri Obenath Sangma	1	-	1	1	-	1				-	-	-	-	
106	Shri Najan Marak	2	1	3	3	-	5				-	-	-	-	
107	Shri Oni Marak	1	1	2	1	1	2				-	-	-	-	
108	Shri Leningbath Sangma	4	4	8	7	1	8				2	-	1	-	
109	Shri Nangjon Marak	1	3	4	2	2	4				-	-	-	-	
<b>1</b>	<b>2</b>														<b>16</b>
110	Shri Nesbil Sangma	4	5	9	8	1	10				5	15	3	2	
111	Shri Salon Sangma	4	4	8	6	2	8				3	8	1	-	
112	Shri Nikseng Marak	2	1	3	3	-	3				-	-	-	-	
113	Shri Waljing Sangma	3	2	5	5	-	5				-	-	-	-	
114	Shri Sangsal Sangma	2	3	5	5	-	5				-	-	-	-	
115	Shri Olaos Marak	3	4	7	5	2	7				3	5	1	-	
<b>Total.</b>		274	264	538	392	146	538				169	641	74	12	

ANNEXURE III

**COST ESTIMATES**







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

A.	Piggery ;		
	i) Construction of sty @ Rs. 20000/- each	Rs.	20000.00
	ii) Cost of Piglets - 10 nos. @ Rs. 20000/- each	Rs.	20000.00
	iii) Cost of feeds for 6 months (L/s)	Rs.	10000.00
B.	Construction of Dug out Pond ( 25.00 x 25.00 ) m ( as per estimate)	Rs.	60000.00
C.	Supply of fingerlings -1500 nos. @ Rs.3000/- per 1000 nos. (L/s)	Rs.	4500.00
D.	Kitchen Garden ;		
	i) Site preparation including Bunding, shaping etc.	Rs.	3500.00
	ii) cost of F.Y.M. including cost of applicaton	Rs.	4000.00
	iii) Cost of equipm qnts and tools etc.	Rs.	1500.00
	iv) Cost of seeds including sowing etc.	Rs.	1500.00
<b>G. Total</b>		<b>Rs.</b>	<b>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      48**

(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 ( $\text{m}^2$ )	0.08
vii) Earthwork for shoulder Bund ( $\text{m}^3$ )	62.32
viii) Area available for cultivation (Ha.)	0.87

### **B. Cost estimate .**

	<b>Amount.</b>
i) Jungle clearance including uprooting of stumps (L/s)	2000.00
ii) Cost of terracing @ Rs. 10/- $\text{m}^3$	15000.00
iii) Cost of shoulder Bund @ Rs. 7/- $\text{m}^3$	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	<u>Rs. 400.00</u>
<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	<u>Rs. 400.00</u>
<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	<u>Rs. 400.00</u>
<b>Sub-total</b>	<b>Rs. 1000.00</b>
<b>Grand Total</b>	<b>Rs. 3600.00</b>

**(Rupees three thousand six hundred) only.**

**Spacing - ( 4.75 x 4.75 ) m**

**Plant density - 450 nos.**

**A. Preliminary works**

:-

i) Cost of seedling .... L/s.....	Rs. 800.00	
ii) Box terracing including pit digging ( 0.45 x 0.45 x 0.45 ) m ..L/s...		
	.....Rs. 1350.00	500.00
<b>sub-total</b>	<b>Rs. 9000.00</b>	<b>1300.00</b>

**B. I st Year Planting .**

i) Cost of Fertilisers (NPK 45:30:45) including transportation	Rs. 2000.00
ii) Cost of 2 times application ( June-July and September - October)	
14 mandays @ Rs. 100/- each	Rs. 1400.00
iii) 1st year weeding	Rs. 1200.00
<b>Sub-total</b>	<b>Rs. 4600.00</b>

**C. II nd year maintenance .**

i) 2nd year weeding	Rs. 2700.00
<b>Sub-total</b>	<b>Rs. 2700.00</b>

**Grand Total Rs. 8600.00**

**( Rupeeseight thousand six hundred)  
only.**

**ESTIMATE FOR THE CONSTRUCTION OF IRRIGATION DAM UNDER  
INTEGRATED WATERSHED MANAGEMENT PROGRAMME AS PER  
PWD SCHEDULE OF RATES FOR (R&B) ROADS & BRIDGES 2009-10.**

1/67. Earth work in excavation for foundation of structure .....  
technical specification etc.

Foundation :-

Dam	1	x	8.00	x	1.20	x	1.00	=	9.60	m <sup>3</sup>
W/Wall	2	x	2.50	x	1.20	x	1.00	=	9.60	m <sup>3</sup>
S/Wall	2	x	4.00	x	0.30	x	1.00	=	9.60	m <sup>3</sup>
T/Wall	1	X	8.00	X	0.30	X	1.00	=	9.60	m <sup>3</sup>
Apron	1	x	8.00	x	3.00	x	0.40	=	9.60	m <sup>3</sup>
L/Channel	1	x	20.00	x	1.80	x	1.00	=	9.60	m <sup>3</sup>
									9.60	m <sup>3</sup>

@ Rs 101/ m<sup>3</sup> Rs 969.60

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	0.10	=	0.24	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	0.30	=	0.72	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	$\frac{1.00 + 0.60}{2}$	x	1.00	=	6.40	m <sup>3</sup>
W/wall	2	x	2.50	x	$\frac{1.00 + 0.60}{2}$	x	1.60	=	6.40	m <sup>3</sup>
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>

$$1 \times 20.00 \times 1.50 \times 0.20 = \frac{6.00}{35.30} \text{ m}^3$$

@ 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> Rs 7539.65

Total. Rs. 249999.85

**Say, Rs. 250000.00**

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

***Submitted,***

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

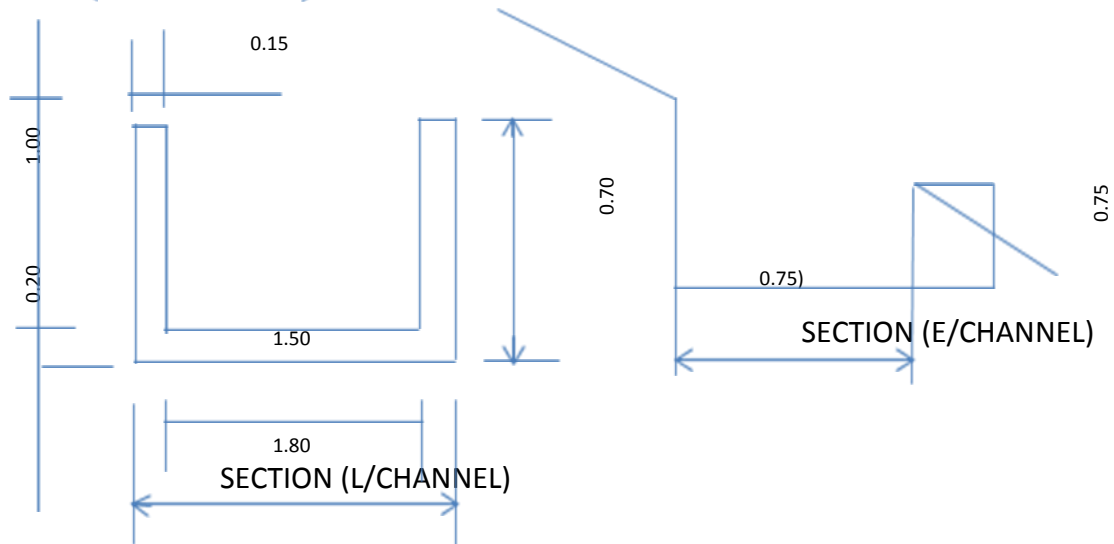
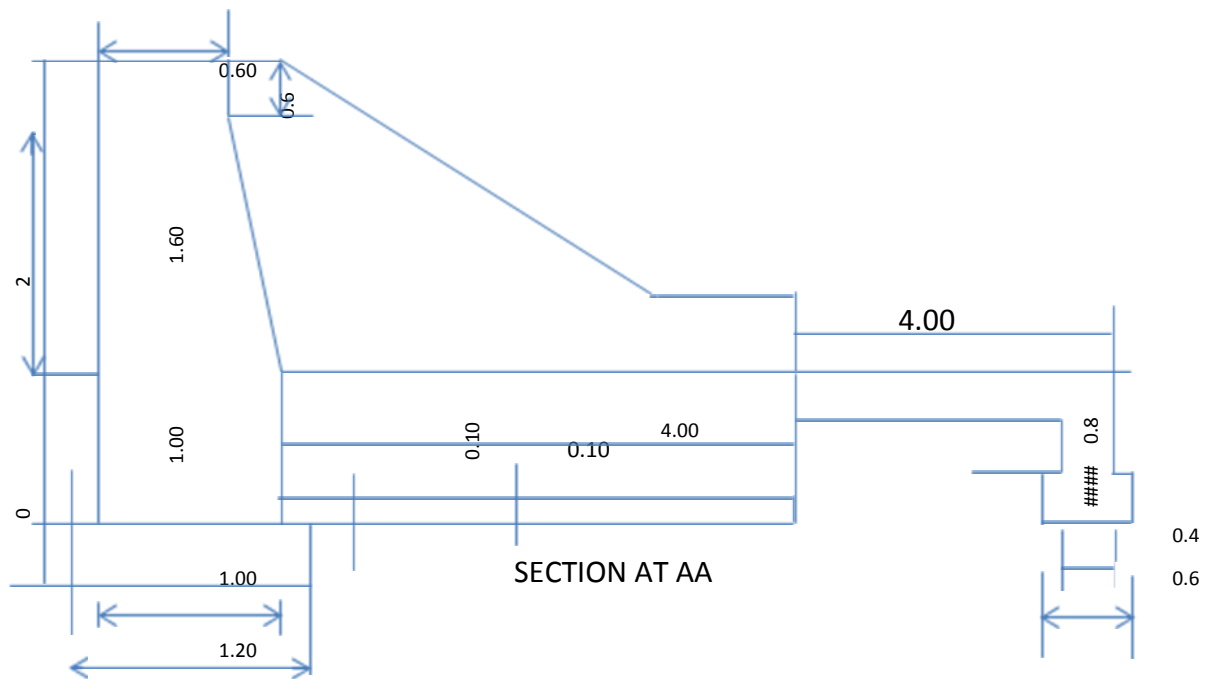
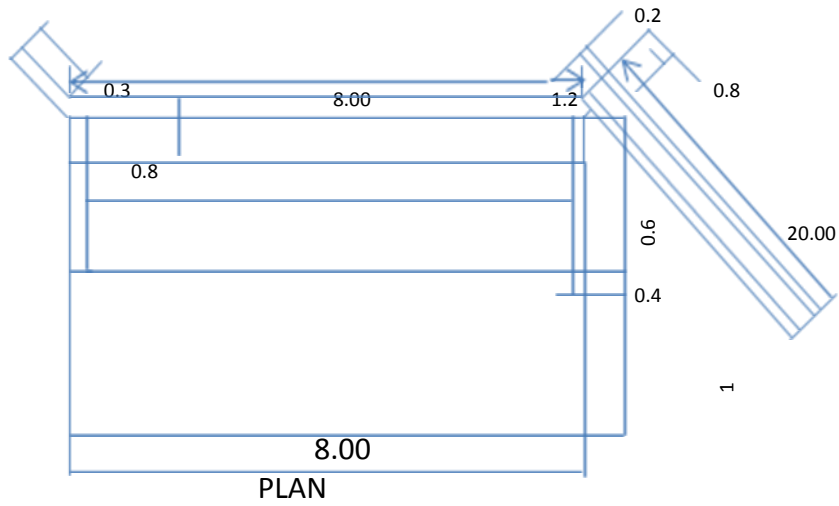
***Range Officer,***

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

***West Garo Hills.***

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# PLAN FOR C. C. IRRIGATION DAM





**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.

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

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

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

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

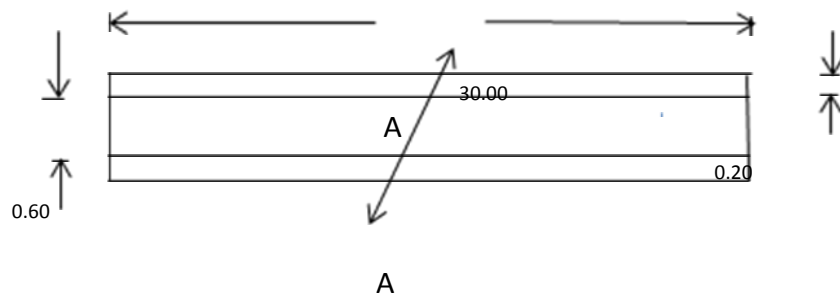
$$@ \text{ Rs } 130/- \text{ m}^3 = \text{ Rs } 429.00$$

Grand Total Rs 50068.50

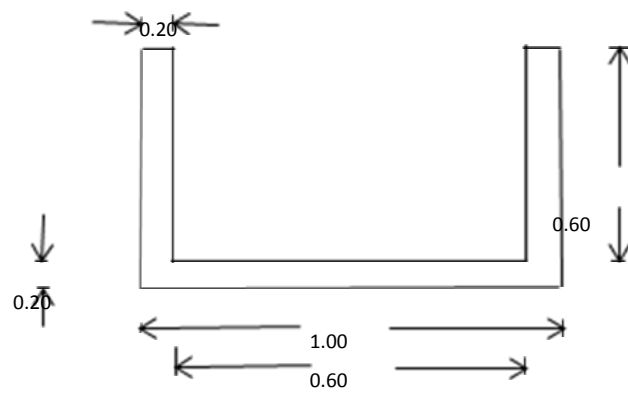
**Say Rs 50000.00 56**

**(Rupees fifty thousand) Only.**

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



**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 :

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

$$@ \text{ Rs. } 47 \text{ m}^3$$

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 :

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

---


$$1.20 \text{ m}^3$$

$$@ \text{ Rs. } 3571 \text{ m}^3$$

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 :

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

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

---


$$32.75 \text{ m}^3$$

$$@ \text{ Rs. } 4090/ \text{ m}^3$$

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

2

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 :

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

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


---

5.00 m<sup>2</sup>

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

Rs.650.00

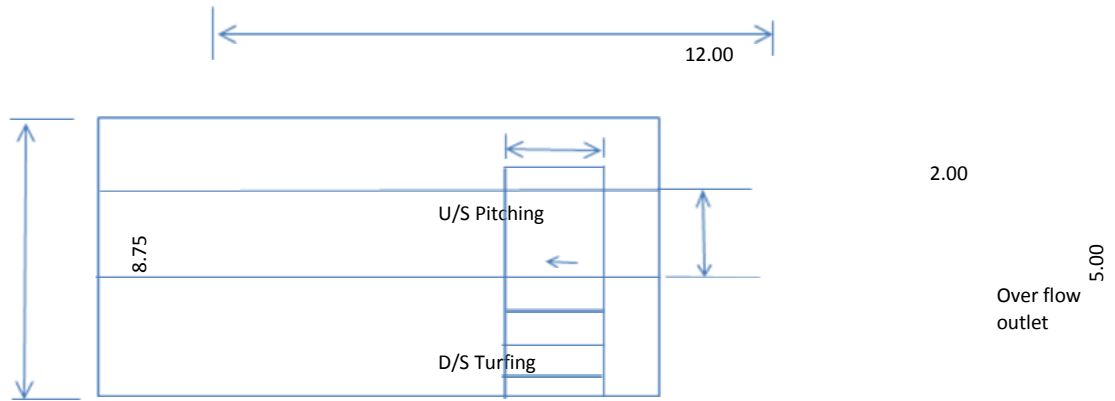
TOTAL Rs.2,50,014.80

:  
say, 250000.00

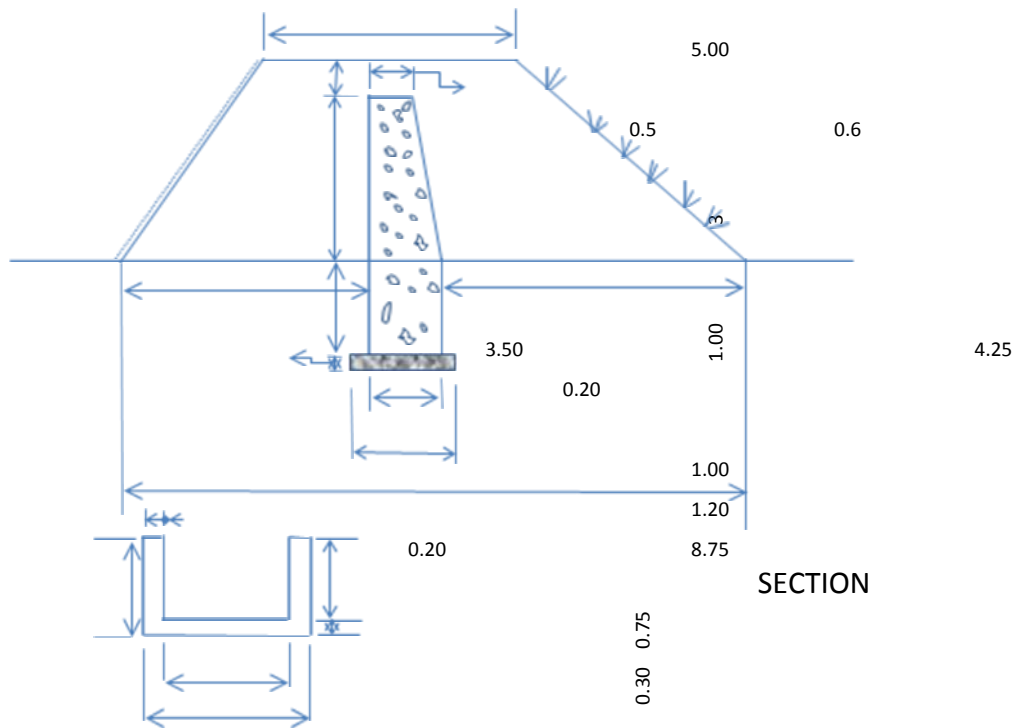
*(Rupees two lakh fifty thousand) only.*

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.

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

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

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

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

$$D = \frac{1.34}{m}$$

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

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

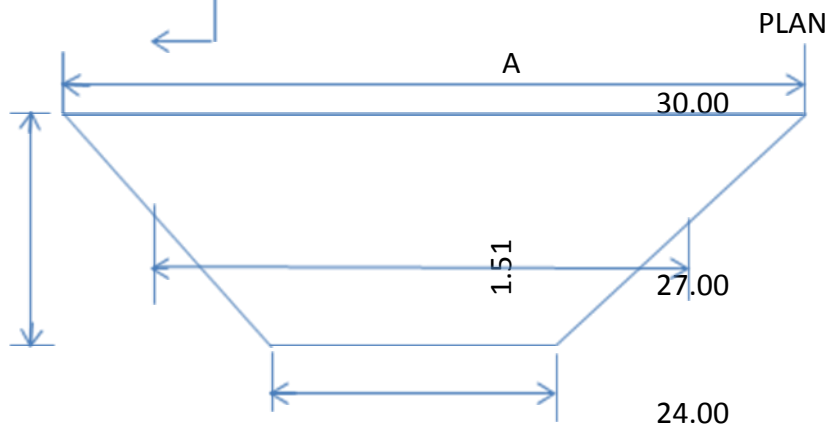
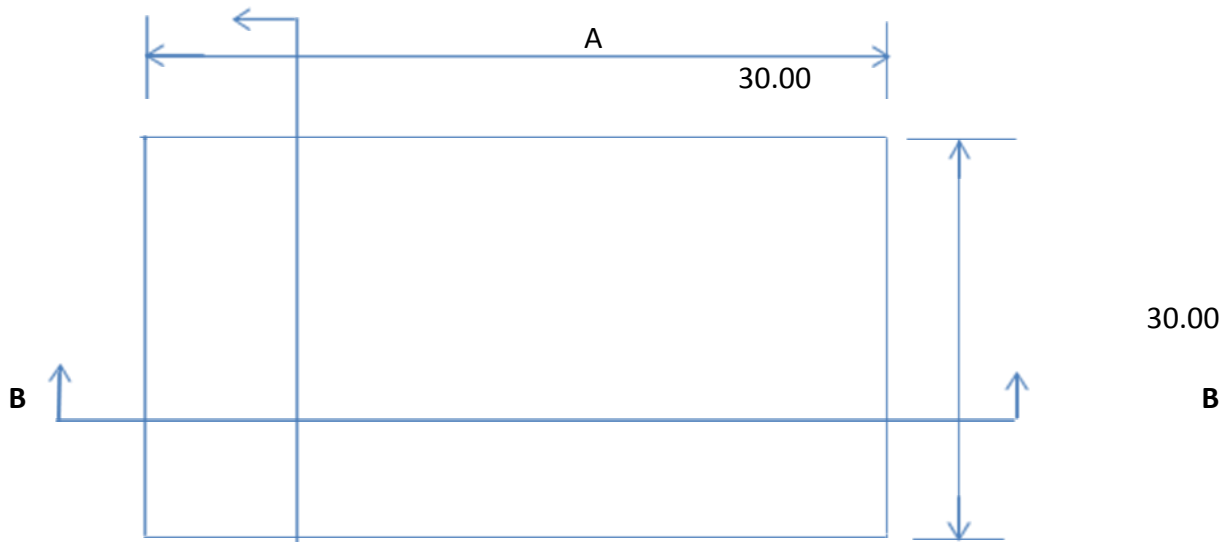
@ Rs 101/- m<sup>3</sup> ..... Rs. 99,067.87

Total : Rs. 99,217.87

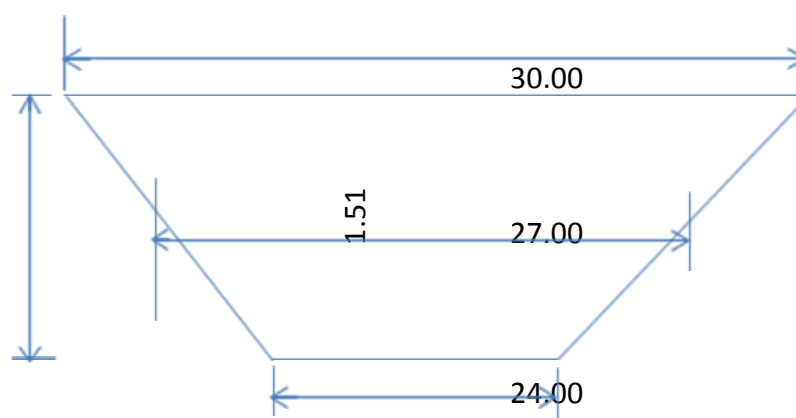
**Say, Rs. 99,200.00**

**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.	Excavaiton 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.</b>	<b>50000.00</b>

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

***Submitted,***

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

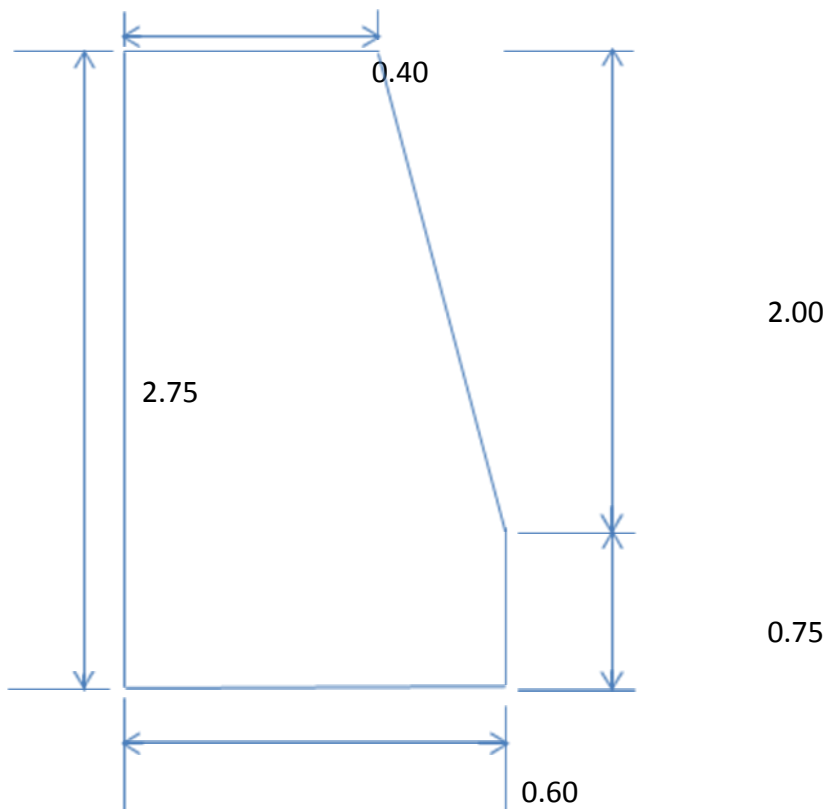
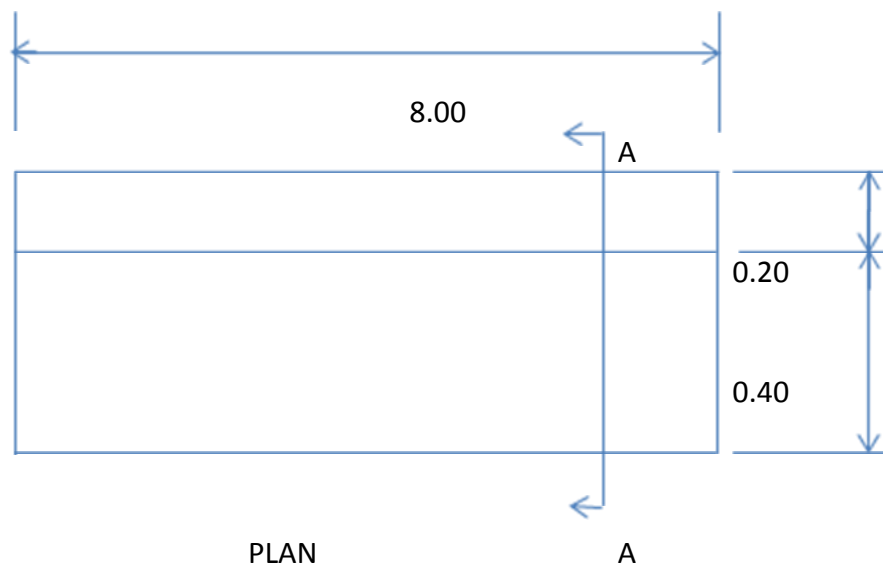
***Range Officer,***

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

***West Garo Hills.***

\_\_\_\_\_

# 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 foundation .....	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

**Sub-total = Rs. 54909.89**

.....C.O.....

2

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

*Total* Rs. 60042.29

**Say, Rs. 60000.00**

**( Rupees sixty thousand only)**

**Submitted,**

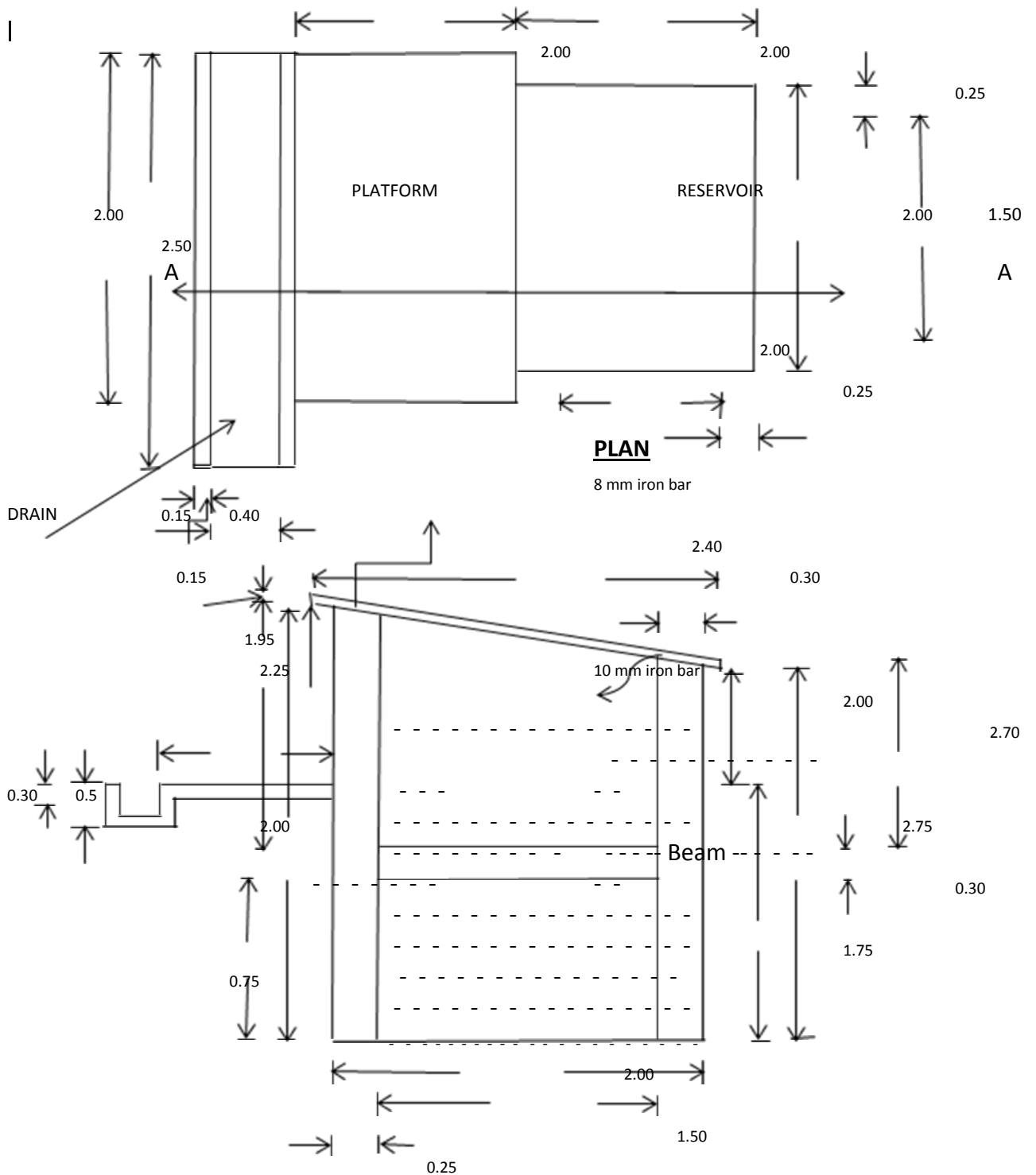
**( C. H. D. Sangma)**

**Range Officer,**

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

\_\_\_\_\_

## PLAN FOR SPRING CHAMBER



## CROSS - SECTION AT "AA"

All dimensions are in metre

Submitted,

## **ANNEXURE IV**

### **MoA, OTHER DETAILS ETC.**

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



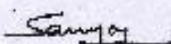
Phone: 03651-223835(O), 223826(R)  
Fax: 03651-221179, 222226  
e-mail: sanjaygoyal\_ias@yahoo.com

**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 convered with Watershed Projects/Programmee within West Gato 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 MNREGS WITH IWMP AT GONDENGRE VILLAGE  
UNDER CHINANGUA MICRO WATERSHED, WGN - IWMP - V**

Name of village : Gondengre  
Total No. of sub-Grd holder : 115 nos.

Total Wage Component @ Rs. 100/- per day per annum ..... Rs. 115000.00  
Amount earmarked for convergence per year ..... Rs. 115000.00

(Figures in lakhs)

Sl. No.	Activities	Seq.	Project Period												Man-days to be generated		
			2012-2013			2013-2014			2014-2015			2015-2016				Total	
			Phy.	Fin.		Phy.	Fin.		Phy.	Fin.		Phy.	Fin.				
				Wages	Material		Wages	Material		Wages	Material		Wages	Material			
1	C.C. rd. Item @ Rs. 250000/- per no.	no	-	-	4	4.00	5.00	-	-	-	-	-	4	4.00	5.00	4000	
2	Double Plaster @ Rs. 12000/- per sq. m	Sq. m	-	-	-	-	-	10	0.03	0.30	-	-	-	10	0.03	0.30	500
GRAND TOTAL			-	-	-	4.00	5.00	10	0.03	0.30	-	-	-	10	0.03	0.30	4500

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

1. Wage Component ..... Rs. 4.50  
2. Material Component ..... Rs. 5.00  
Grand Total ..... Rs. 9.50

(Subjects eleven lakh fifty thousand) only.

*ATVT  
K. Venkata Rao*

*dy.*

### AGREEMENT FOR CONVERGENCE OF SCHEME

The Village Employment Council (VEC) and the communities of Gondenggre 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 Gondenggre village under Chinamgija Micro Watershed - WGH - IWMP 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. Rubber Plantation 10.00 Hactare.
2. C. C. Irrigation Dam 4 nos.

*R. T. I. P.*  
*S. P. Gayak Mahal.*

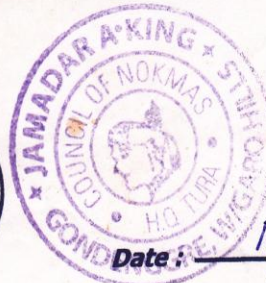
  
Chairman,  
Gondenggre V.E.C.,  
Rangram C. & R. D. Block,  
West Garo Hills.

*[Signature]*  
Secretary,  
Gondenggre V.E.C.,  
Rangram C. & R. D. Block,  
West Garo Hills.



Shri Jogen T. Sangma  
Nokma

Gondenggre Jamadar-A'king III-33 (9)  
Dist. West Garo Hills,  
Meghalaya



## No Objection Certificate

Anga Smt/Shri Jogen T. Sangma Gondenggre  
Songgit Cham Songni nokma aro angni  
Chra depante demechik Chawarising  
ians indake see parake on nenga.  
Chongmotam Soil, Water Conservation depart-  
ment ni re-baenggipa Integrated Water Shed  
management project (I.W.N.P.) Schemeko  
Chingni Songi Chusokatani bidingo  
Chinga mamungba Champengani dongjawa.

Ja Schemeni ningo dingtangdingang  
Kamrangko Kaanis lamangni dongjimin  
niam gita chinga jarikgen aro depart-  
mentko mamung lakeba matrangjawa aro  
origimin Kamrangko aritangtang bil jakrangko  
jakkale kanko Kianggen ind ians see on nenga.

1. Shri Jogen T Sangma  
2. " Wantu Ch Marak  
3. " Kenedy Ch Marak  
4. " Jimbarth T Sangma  
5. " Simon T Sangma  
6. " Winder M. Sangma

Jogen T. Sangma  
Nokma  
Jamadar A'king  
Gondenggre  
West Garo Hills  
W. T. Sangma  
Ch Marak  
Sgt.  
J. Sangma  
Inf.

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

1	2	3	4	5	6
Sl. No.	Beneficiary's Name	Location	Nature of work	Nos./unit	GPS Location
1	Shri. Andres Sangma	Ringgi stream, Gondenggre	Irrigation dam	1	25° 34" 41.2' - 90° 21" 31.8'
	" Jingga Marak	"	"		
	" Mellison Sangma	"	"		
	" Binon Sangma	"	"		
	" Jonat Sangma	"	"		
2	" Lipson Marak	Gondenggre	Irrigation Dam	1	25° 34" 17.5' - 90° 20" 26.4'
3	" Koslok Sangma	Gondenggre	Dug Out Pond	1	25° 34" 50.5' - 90° 20" 21.6'
4	" Jastin Marak	Ringgi stream , Gondenggre	Protection wall	1	25° 34" 17.6' - 90° 20" 23.4'
5	" Jahem Marak	Ringgi stream , Gondenggre	Irrigation Dam	1	25° 34" 45.8' - 90° 20" 19.5'
6	" Rajip Sangma	Gondenggre	Protection Wall	1	25° 34" 17.5' - 90° 20" 23.5'
7	" Sekston Marak	Gondenggre	C. C. Channel	1	25° 34" 33.7' - 90° 20" 05.1'
8	" Clement Marak	Gondenggre	Dug Out Pond	1	25° 34" 26.3' - 90° 19" 59.0'
9	" Maikel Marak	Gondenggre	W/H Farm Pond	1	25° 34" 16.3' - 90° 20" 02.9'
10	" Sindeng Sangma	Gondenggre	Dug out Pond	1	25° 34" 27.8' - 90° 20" 30.4'

	2	3	4	1	
	Beneficiary's Name	Location	Nature of work	Nos./unit	
11	" Kokka Sangma	Gondenggre	Dug out Pond	1	25° 34" 24.7' - 90° 20" 23.6'
12	" Wetton Marak	Gondenggre	W/Harvesting Farm Pond	1	25° 34" 41.0' - 90° 21" 00.2'
13	" Wetton Marak	Gondenggre	Protection Wall	1	25° 34" 47.2' - 90° 20" 56.3'
14	" Paljen Sangma	Gondenggre	Dug out Pond	1	25° 34" 33.0' - 90° 20" 29.3'
15	" Limson Marak	Gondenggre	C.C. Channel	1	25° 34" 28.3' - 90° 20" 31.0'
16	Community	Gondenggre	Rubber Plantation		25° 34" 06.1' - 90° 20" 07.0'
17	" Silseng Sangma	Gondenggre	W/Harvesting Farm Pond	1	25° 34" 36.6' - 90° 21" 07.3'
18	" Kenedy Marak	Gondenggre	W/Harvesting Farm Pond	1	25° 34" 28.2' - 90° 20" 49.1'
19	" Setting Marak	Ringgi Bisik , Gondenggre	Protection Wall	1	25° 34" 01.3' - 90° 20" 03.1'
20	Community	Gondenggre	Coffee Pltn.		25° 34" 12.1' - 90° 20" 06.2'











