

GOVERNMENT OF MEGHALAYA



**DEPARTMENT OF SOIL & WATER CONSERVATION
DETAIL PROJECT REPORT
OF
UPPER DABANG MICRO WATERSHED
UNDER
INTEGRATED WATERSHED MANAGEMENT PROGRAMME
WGH IWMP -IX
2010-2011**



**TURA SOIL & WATER CONSERVATION(T)DIVISION
WEST GARO HILLS, MEGHALAYA
TIKRIKILLA C&RD BLOCK**

SUMMARY

Name of the State	:	Meghalaya
Name of the District	:	West Garo Hills
Name of the C&RD Block	:	Tikrikilla
Name of the Villages	:	1) Dabang Gajingpara (11) Dabang Ampangdamgre
Name of the Project	:	IWMP-IX
Total Geographical Area	:	570.40 Ha
Total Treatment Area	:	500 Ha
Total Project Cost	:	75 lakhs
Project Duration	:	5 Years
Project Implementing Agency	:	Soil & Water Conservation Territorial Division, Tura.

TABLE OF CONTENTS

CHAPTER I	<u>INTRODUCTION AND BACKGROUND.....</u>
CHAPTER II	<u>BASIC INFORMATION OF THE PROJECT AREA</u>
CHAPTER III	<u>PROJECT PLANNING AND INSTITUTION BUILDING</u>
CHAPTER IV	<u>PROJECT ACTIVITY</u>
CHAPTER V	<u>PROJECT PHASING AND BUDGETING</u>
CHAPTER VI	<u>CAPACITY BUILDING</u>
CHAPTER VII	<u>EXPECTED OUTCOME</u>
ANNEXTURE I	MAPS .
ANNEXTURE II	COST ESTIMATES.
ANNEXTURE III	MoA, SUB COMMITTEE DETAILS ETC.

CHAPTER I

INTRODUCTION AND BACKGROUND

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INTRODUCTION AND BACKGROUND

1.1 Project Background:

The Upper Dabang (IWMP) Project is located in Tikrikilla C&RD Block, West Garo Hills District of Meghalaya. Consisting of a single micro-watershed, the project area is drained by the Dabang Stream and its tributaries flowing in a north to south direction. The total area is 570.40 Ha. with 500 Ha to be treated under the Integrated Watershed Management Programme (IWMP). The Project area is located at a distance of about 20 km from Tikrikilla the C & R D Block and about 145 km from Tura the District Headquarter . A total of two villages are covered under the project. These are –

- i) Dabang Gajinpara
- ii) Dabang Ampangdamgre

1.2 Micro-watershed Information:

The micro-watershed code is as codified by the North East Space Application Centre (NESAC). The total area of the micro-watershed is 570.40 Ha., with 500 hectares to be treated under the Integrated Watershed Management Programme (IWMP).

1.3 Need and Scope for Watershed Development:

The micro-watershed Upper Dabang falls under the High Priority category as per the prioritization of watersheds by the North East Space Application Centre (NESAC). . The farmers are all marginal and Jhum cultivation is practiced by most of the inhabitants of these villages on the slopes. Even though the area receives ample rainfall during the monsoons, there is acute shortage of water during the dry seasons and the villagers have to travel long distances for fetching water even for domestic use.

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

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

1. NREGS

CHAPTER II

BASIC INFORMATION OF THE PROJECT AREA

CHAPTER II

BASIC INFORMATION OF THE PROJECT AREA

2.1 Location:

The Project area is located at West Garo Hills. It is situated at a distance of about 20 km from Tikrikilla the C & R D Head Quarter and about 145 km from Tura the District Headquarter . The geographical location is between 90°19'26.40" to 90°21'46.80"E Longitude and 25°58'26.40"N to 25°54'55.80"N Latitude. There are two villages within the Watershed which are as follows –

- i) Dabang Gajinpara
- ii) Dabang Ampangdamgre

2.2 Physiography:

The physiography of the micro-watershed is highly undulating. The altitude ranges from a minimum of 40 m to a high of 144 m above mean sea level. In the lower reaches (valley lands) the slope ranges from 1% to 5% however, in the middle and upper reaches it is greater than 15% and can reach up to 50%.

Table 2.1: Physiographic details

Elevation (metres)	Slope Range (%)	Order of watershed Sub/Micro- watershed	Major streams	Topography
40 - 144	1 – 50%	2 Order of Didak River Micro W/S	(i)Dabang Stream (ii)Ronggaram Stream (iii)Bolbak Stream (iv)Silompa Stream (v)Ella Stream (vi)Chirongga stream (vii)Achikong bang Stream (viii)Dogilika Stream (ix)Rongbaram Stream (x)Bolchim Stream (xi)Gella Stream	Flat and gentle slopes

2.3 Drainage:

The major stream draining the micro-watershed is the Dabang which is a 2th to 3th order stream flowing in a north-south direction. The slopes of the micro-watershed are dissected by numerous small tributaries flowing to the Dabang.

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 Garo Hills	WGH IWMP-IX	Water erosion:				
				a	Sheet	500		
				b	Rill		NA	NA
				c	Gully			
				Sub total		500		
				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 remain warm throughout the winter. The area on the higher reaches is warm during summer and cold during winter. The average annual rainfall is 3600mm.

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	Hot, moisture	500	West Garo Hills	WGH IWMP-IX	Fine loamy soils. Coarse loam soils.	409.52 160.88	3600mm	Rice	22.06
									Maize	10.00
									Ginger	25.00
								Total		57.06

2.5 Agriculture:

Agriculture is the primary occupation of the people of the area. The people mostly practice jhum. The jhum plots vary from 1 to 1.5 Ha, and are cultivated for 3-4 years. The principal agricultural crops grown of the jhum fields are potato, sweet potato, maize, yam and vegetables. Fruit crops are well suited in the lower reaches which mango, jackfruit, orange, pineapple, litchi. The slopes of the Upper Dabang are also very suitable for betel nut, betel leaf, black pepper 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.)
Rice	22.06	20	4410.20
Maize	10.00	15	150.00
Ginger	25.00	40	1000.00

2.6 Natural Vegetation:

The tree species common to the watershed area includes *Mirbelia champaca*, *Artocarpus chapalasa*, *Gmelina arborea*, *Dendrocalamus bambusa*, *Shorea robusta*, *Vitree pedangcularisa* etc .However, due to jhum cultivation the forest cover of the area has reduced considerably.

2.7 Socio-Economic Profile:

Economically, the area is perhaps the most backward in the district. The main reason is due to the absence of road communication, primitive way of agricultural practices like jhumming and the difficult terrain of the area.

Demographic Status: The total households in the watershed project is 66(sixtysix) with a total population of 319 of which 147 are male and 172 are female. The detail of the household in each of the villages in the watershed project is as follows:

1. Dabang Gajinpara	-	43 Nos
2. Dabang Ampangdamgre	-	23 Nos
Total	-	66 nos

Infrastructure facilities :

- 2.1.1 *Roads:* There is no all weather road but the village within the Project Area is connected by the kutcha constructed under NREGS
- 2.1.2 *School:* there are only two L.P Schools within the Project Area run either by the Mission or by the Government.
- 2.1.3 *Electricity :* There is no electricity under this Project Area .
- 2.1.4 *Health :* There is no Community Health Centre or sub-centre and the local population have to either depends on facilities available at Naguapara at a distance of 5 km. .
- 2.1.5 *Water Supply :* There is no drinking water supply from P.H.E but the entire population depend on springs available in the area to meet the daily requirement.

2.1.6 *Market* : There is no any market under this project area but the people of this area sell their products at Naguapara weekly market which is 5 km away from the watershed area.

Table 2.5: Infrastructure Status.

1	2	3		4			
Name of District	Name of Project	Parameters:		Status			
WGH	WGH-IWMP-IX	(i)	Whether connected to the main road by an all weather road	NIL			
		(ii)	No. of households without electricity	66			
		(iii)	No. of households without access to drinking water	66			
		(iv)	No. of educational institutions: Primary (P)/ Secondary (S)/ Higher Secondary (HS)/ Vocational institution (VI)	(P)	(S)	(HS)	(VI)
				2	NIL	NIL	NIL
		(v)	Distance of project village from nearest Primary Health Centre	5 km			
		(vi)	Distance of project village from nearest Veterinary Dispensary	5 km			
		(vii)	Distance of project village from nearest Post Office	5 km			
		(viii)	Distance of project village from nearest Banks	20 km			
		(ix)	Distance of project village from nearest Markets/ mandis	5 km			
		(x)	Distance of project village from nearest 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	2			
		(xiv)	No. of worship place	2			
		(xv)	No. of Community Hall	NIL			
		(xvi)	No. of water tanks/Ringwell/Spring chamber	NIL			

2.8 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	35
Poultry	1221
Goatery	107
Cattle	210
TOTAL	1573

2.9 Land ownership:

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

Table 2.7: Land Holding:

1	2	3	4	5	6		
Name of District	Name of the Project	Types of Farmer	No. of households	No. of BPL households	Land holding (ha)		
					Irrigated	Rainfed	Total
West Garo Hills	IWMP-IX	(i) Large(>5 Ha)	-	-	-	-	-
		(ii) Small(1-5 Ha)	-	-	-	-	-
		(iii) Marginal(<1 Ha)	66	-	-	22.06	-
		(iv) Landless	-	-	-	-	-
		Sub – Total	66	-	-	22.06	-

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	WGH IWMP-IX	(i) Wasteland/ degraded land	-	-	-	80.06	-	-	-	323
		(ii) Pastures	-	-	-	-	-	-	-	-
		(iii) Orchards	141.25	-	-	-	-	-	-	-
		(iv) Private agriculture land	-	-	-	-	97	-	-	-
		(v) Forest	-	-	-	25	-	-	-	10.00
		(vi) Village Ponds/ Tanks	-	-	-	-	-	-	-	-
		(vii) Community Buildings	-	-	-	-	-	-	-	-
		(viii) Weekly Markets	-	-	-	Nagaupara	-	-	-	-
		(ix) Permanent Markets	-	-	-	-	-	-	-	-
		(x) Temples/ Places of worship	-	-	-	2	-	-	-	-
		(xi) Jhum Cultivation	25	-	-	-	-	-	-	-
		(xii) Permanent Cultivation	22.06	-	-	-	-	-	-	-
		(xiii) Habitation including streams	15.00	-	-	Na	-	-	-	70
	Total		178.31	-	-	105.06	97	-	-	403

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

a) Agricultural land-crop land-kharif crop	=	38.70	Ha
b) Tree clad Area-open	=	385.62	Ha
c) Wastelands-barren Rocky/Stony waste	=	80.06	Ha
d) Horticulture plantation	=	<u>66.02</u>	<u>Ha</u>
Total	=	570.4	Ha

2.10 Problems of the Area :

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

CHAPTER III

PROJECT PLANNING & INSTITUTION BUILDING

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PROJECT PLANNING & INSTITUTION BUILDING

3.1 Scientific Planning

- i) Base Line Survey: To establish a benchmark for assessing the impact of any intervention (pre-project & post project) a baseline survey is essential. The baseline survey included household census & socio-economic survey by using structured and semi –structured questionnaires, bio-physical survey to identify and assess the status of natural resources in the project area.
- ii) Participatory Rural Appraisal: To further obtain information on the project area, the people, resources, various PRA techniques like resource mapping, social mapping, seasonal calendars, matrix ranking, Venn diagrams were used.
- iii) GIS & Remote Sensing: To facilitate the process of prioritization and planning Geographic Information System was use. The land use and land cover (LULC) maps were prepared by the North Eastern Space Application Centre (NESAC) using the LISS III images (2006). The activities were located on the field by using GPS and accordingly transferred to the maps on GIS platform.

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

1	2	2
Sl.No.	Scientific criteria/ inputs used	No. of projects in which scientific criteria were used
A.	Planning	
	Cluster approach	3
	Whether technical back-stopping for the project has been arranged? If yes, mention the name of the Institute.	YES i)NESAC,Nongsder ii)SNLA,GIS lab,Shillong
	Baseline survey	YES
	Hydro-geological survey	GIS survey/engineering Survey
	Contour mapping	Toposheet(1:50000)
	Participatory Net Planning (PNP)	PRA exercise

1	2	2
	Remote sensing data-especially soil/ crop/ run-off cover	YES
	Ridge to Valley treatment	YES
	Online IT connectivity between	
	(1) Project and DRDA cell/ZP	YES
	(2) DRDA and SLNA	YES
	(3) SLNA and DoLR	YES
	Availability of GIS layers	
	1. Cadastral map	NO
	2. Village boundaries	NO
	3. Drainage	YES
	4. Soil (Soil nutrient status)	YES
	5. Land use	YES
	6. Ground water status	NO
	7. Watershed boundaries	YES
	8. Activity	YES
	Crop simulation models [#]	NO
	Integrated coupled analyzer/ near infrared visible spectroscopy/ medium spectroscopy for high speed soil nutrient analysis	NO
	Normalized difference vegetation index (NDVI) [#]	YES
	Weather Stations	NO
B.	Inputs	
	1. Bio-pesticides	NO
	2. Organic manures	YES
	3. Vermi-compost	NO
	4. Bio-fertilizer	YES
	5. Water saving devices	YES
	6. Mechanized tools/ implements	NO
	7. Bio-fencing	YES
	8. Nutrient budgeting	YES
	9. Automatic water level recorders & sediment samplers	NO
	Any other (please specify)	

3.2 Project Implementing Agency:

The PIA is the Soil & Water Conservation Territorial Division, 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	W.G.H. IWMP-IX	(i) Type of organization#	Government
		(ii) Name of organization	Soil & Water Conservation (T) Division,
		(iii) Designation & Address	Divisional Officer, Tura Soil & Water Cons.(T) Division, W.G.H, Tura Meghalaya.
		(iv) Telephone	03651-222354
		(v) Fax	03651-222354
		(vi) E-mail	turadivsoil@gmail.com

3.3 Institution Building

i) Watershed Committee (WC)

The Watershed Committee of the Upper Dabang Watershed IWMP-II was constituted with the active involvement of the villagers with strong support of the Traditional Institutions (Village Durbar/Council). The Upper Dabang Watershed Committee has been registered under the Society Registration Act 1983.

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#
W.G.H	W.G.H-IWMP-IX	Upper Dabang	Under progress	President	M		ST									Class X	A to I
				Secretary	M		ST									P.U (Arts)	A to I
				Member	8 M											Class IV-VIII	A to I
				Member	1 F												A to I
				Member													

- A. PNP and PRA
- C. Maintenance of Accounts
- E. Supervision of construction activities
- G. Verification & Measurement
- I. Social Audit

- B. Planning
- D. Signing of cheques and making payments
- F. Cost Estimation
- H. Record of labour employed
- J. Any other (please specify).

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
W.G.H	W.G.H. IWMP-IX					(i) Landless									
						(ii) SF									
						(iii) MF									
						(iv) LF									
Total					NIL				NIL			NIL			NIL

CHAPTER IV
PROJECT ACTIVITIES

CHAPTER IV PROJECT ACTIVITIES

4.1 Preparatory Phase:

i) Entry Point Activities (EPA)

(Financial – Rs. in lakh)

1	2	3	4	5	6	7	8	9	10	11
Sl. No.	State	District	Names of Project	Amount earmarked for EPA	Entry Point Activities planned	Estimated cost	Expenditure incurred	Balance	Expected outcome	Actual outcome
1	Meghalaya	W.G.H	W.G.H IWMP-IX	3.00 Lakh	Construction of Spring Chamber/Ringwell	3.00 Lakh	-	-	-	Increase in availability of drinking water

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 agree-ments	Preparation of DPR	Evaluation of DPR	Any other (please specify)	Cost incurred (Rs. In lakh)
W.G.H	W.G.H IWMP-IX	a) Rapport Building b) Community meeting c)Formation of	a) Project concept/roles and responsibility of W.C b) Concept/roles and responsibility of SHG and UG c) Concept/roles and responsibility of WDT members d) Off-campus exposure trip to research Institutes/Established farms etc.	a)Pamphlets b)Banners c)Posters	a)Participatory Rural Appraisals b)Socio Economic Survey	a)GPS survey b)Engineering Survey	a) NIRD b)SIRD c)ICAR d)NEHU	a) NOC with village headman for under-taking developmental works b) Agreement for convergence of NREGS scheme with IWMP with VEC.	a)Resource inventory works	Done		1.5

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											
Sl · No	Name of States	Name of Distri cts	Name of Project s	Type of structures	Pre Project			Proposed Project											
					No	Are a irrig ated (ha)	Stor age capa city	Augmentation/ repair of existing structures				Construction of new structures				Total target			
								No	Area to be treat ed (ha)	Stora ge capaci ty	Estima ted cost (in lakhs)	No/R M	Area to be treat ed (ha)	Storage capacit y (per unit)	Estimat ed cost (in lakhs)	No	Area to be treat ed (ha)	Storag e capaci ty (m ³)	Estima ted cost
1	Megh alaya	W.G. H	W.G.H IWMP- IX	Dug out Pond	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				C.C Check cum Irrigation Dam	-	-	-	-	-	-	-	4	90	765	10.00	4	90	765	10.00
				Conservatio n Pond	-	-	-	-	-	-	-	4	135	1950	10.00	4	135	1950	10.00
				Earthen Irrigation Channel	-	-	-	-	-	-	-	400. rmt	60	-	0.20	400 rmt	60	-	0.20
				Water harvesting farm pond	-	-	-	-	-	-	-	4	130	1320	10.00	4	130	1320	10.00
			Total										415	2085	30.20		415	2085	30.20

[illegible]

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

[illegible]

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						
		Structure/ activity proposed				No. of UGs involved	Estimated Cost	Amount of WDF to be collected (Rs.)
		Sl. No.	Type	No.#	Treatment (ha)			
W.G.H	W.G.H IWMP-IX	1.	C.C Check-cum irrigation dam	4 Nos	90 Ha	2	10.00	0.50
		2	Stone masonry Protection Wall	8Nos	90 Ha	2	4.00	0.20
		3	Earthen Irrigation Channel	400 rmt	60 Ha	1	0.20	0.01
			Total		240 Ha	5	14.20	0.71

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	Names of projects	Major activities of the SHGs		
		Name of activity	No. of SHGs involved	Average annual income from activity per SHG
West Garo Hills	W.G.H IWMP-IX	Piggery	5	0.65
		Poultry	5	0.40
	Total		4	1.05

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	Income generating activities	Amount			I	II	III		
	NIL	1.60	NIL	Piggery	1.50	1.30	0.60					
				Poultry	1.50	0.80	0.40					

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		Horticulture & Cash Crop Development		Veterinary services		Fishery development		Non-conventional energy		Any other (please specify)		Total cost incurred (Rs. In lakhs)												
		(a)	(b) (Rs)	(a)	(b) (Rs)	(a)	(b) (Rs)	(a)	(b) (Rs)	(a)	(b)	(a)	(b)	(a)	(b) (Rs)	(a)	(b) (Rs)	(a)	(b)	(a)	(b)													
W G H	W.G.H IWMP-IX	i)Improvement of degraded forest(10 Ha)	0.36	i)check dam.	10.00	ii)protection wall.	4.00	iii)farm pond.	10.00	iv)dug out pond.	7.50	v)Channel.	0.20	i) Poly bag Rubber (21,000 plant)	5.25	i)Wet Terrace(12Ha)	2.40	-	-	i)Rubber plantation(40 Ha)	4.40	ii)Are canut plantation (30 Ha)	2.64	i)piggery	1.50	ii)poultry	1.50	Fishery-cum-piggery(6unit)	1.50	-	-	Kitchen Garden (140Ha)	3.50	
	Total		0.36		31.70		5.25		2.40				7.04		3.00		1.50															3.50	54.75	

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		
W.G.H	W.G.H IWMP-IX																					
		Dug out Pond		√		√			UG/WC	18 Nos		7.50	7.50	31/3/2013								
		Check Dam		√			√		UG/WC	4 Nos	4	6.00	10.00	31/3/2013								
		Wet Terrace			√	√			UG/WC	12 Nos		2.40	2.40	31/3/2013								
		Stone masonry Protection Wall		√			√		UG/WC	8 Nos	1.6	2.40	4.00	31/3/2013								
		Earthen irrigation Channel		√			√		UG/WC	400 rmt		0.20	0.20	31/3/2013								
		Water Harvesting farm pond		√		√			UG/WC	4 Nos	4.00	6.00	10.00	31/3/2013								
		Total										9.60	24.50	34.10								

4.2.9 Details of engineering structures in watershed works.

[illegible]

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

1	2	3	4			5			6	7				8			
Distr ict	Proj ect	Name of structure/ work	Type of treatment			Type of land			Executing agency	Target				Achievement			
			(i) Ridge area (R)	(ii) Drainag e line (D)	(iii) Land dev. (L)	(i) Priva te	(ii) Com munit y	(iii) Other s (pl. specif y)	(i) UG (ii)SHG (iii) Others (pl. specify)	Area (ha)	No. of plants	Estimate d cost (Rs. in lakh)	Expected month & year of comple- tion (mm/ yyyy)	Area (ha)	No. of plants	Expendi-ture incurred (Rs. in lakh)	Actual month & year of comple-tion (mm/ yyyy)
WG H	IW MP -IX	Improvement of degraded	R		C				WC	10 Ha	1000	0.36	31/3/2012				
		Rubber Plantation	R			P			Farmers	40 Ha	18,000	4.40	31/3/2014				
		Arecanut	R			P			Farmers	30 Ha	36,000	2.64	31/3/2014				

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															
Name of activities	Reduction in runoff (cu.m)	Production (quintal)		Income (Rs.)		Mandays generated					No. of beneficiaries				
						SC	ST	Others	Women	Total	SC	ST	Others	Women	Total
		Pre-project	Post project	Pre-project	Post project										
Improvement of degraded	NA	0					230		130	360		46		20	66
Rubber Plantation	NA	0	122	0	1464,000		4200		1800	6000		30		10	40
Arecanut	NA	315	775	252,000	620,000		2400		1020	3420		25		5	30
Total		315	897	252,000	2084,000		6830		2950	9780		101		35	136

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)	Expendi-ture incurred (Rs. in lakh)	Actual month & year of completion (mm/yyyy)
West Garo Hills	W.G.H IWMP-IX	Kitchen gardening	√		Individual	Private	3.50	31/3/2014		
		Piggery			Individual	SHG/UG	1.50	31/3/2012		
		Poultry			SHG	SHG/UG	1.50	31/3/2013		
		Fishery cum piggery unit			SHG	Private	1.50	31/3/2014		
		Rubber Poly Bag	√		SHG	SHG/UG	5.25	31/3/2014		
		Dugout Pond	√		Individual	Private	4.00	31/3/2014		
		Total					17.25			

(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				
Name of activities	Pre-project	Post project	SC	ST	Others	Women	Total	SC	ST	Others	Women	Total
Kitchen gardening	5000-6000	20,000-25,000		2400		2100	4500		20	NIL	10	30
Piggery	25,000-30,000	60,000-70,000		350		650	1000			NIL	30	30
Poultry	13,000-15,000	40,000-45,000		430		570	1000			NIL	30	30
Fingerlings	NIL	50,000-60,000		140		110	250		15	NIL	10	25
Rubber budded poly bag nursery	NIL	85,000-90,000		3200		1300	4500			NIL	30	30
	Total			6520		4730	11250		35		110	145

14.3 Consolidation and withdrawal phase:

Details of activities in the CPRs in the project areas:

[illegible]

CHAPTER V
PROJECT PHASING & BUDGETING

PROJECT PHASING & BUDGETING

Project Area : 500 Ha

[illegible]

1	2	3	4	5	6	7	8	9	10	11	12	13	14
C	Drainage Line Treatment:												
I	C.C.Check-Cum-Irrigation dam @2,50,000/ each - 95 Ha					4	10.00					4	10.00
ii	Stone masonry protection wall @50,000/each - 85 ha			2	1.00	4	2.00	2	1.00			8	4.00
iii	Dug-out pond @50,000/-each -15 ha			3	1.50	3	1.50	1	0.50			7	3.50
iv	Water harvesting farm pond @2,50,000/- each -127 ha					3	7.50	1	2.50			4	10
V	Earthern irrigation channel @Rs. 50 /- Rm. -55 ha			180	0.090	160	0.08	60	0.03			400	0.20
	TOTAL-C				2.59		21.08		4.03				27.7
	TOTAL OF A+B+C			7.5%	5.625	35%	26.25	7.5%	5.625			5%	
D	Livelihood Activities for landless person: 10%												
ii	Kitchen garden @2,500/unit			30	0.75	50	1.25	60	1.50			140	3.50
iii	Dug-out pond @50,000/-each-15 ha					2	1.00	6	3.00			8	4.00
	Total of D:			1%	0.75	3%	2.25	6%	4.50			10%	7.50
E	Production system and Micro Enterprises (SHG's) - 13%												
I	Piggery unit @Rs.30,000 /- per unit					1	0.30	4	1.20			5	1.50
ii	Poultry unit @Rs.30,000 /- per unit					1	0.30	4	1.20			5	1.50
iii	Fishey-cum-piggery unit @25,000 /- each							6	1.50			6	1.50
iv	Group Rubber nursery @25000/- per plant			3000	0.75	12600	3.15	5400	1.35			21000	5.25
	Total of E:			1%	0.75	5%	3.75	7%	5.25			13%	9.75

1	2	3	4	5	6	7	8	9	10	11	12	13	14
F	Consolidation & Exit Phase:												
I	Repairing maintainance of CPR's										1.75		1.75
ii	Improveing the sustainability of various intervention										1.00		1.00
iii	Documentation of successful experience and preparation of complation report										1.00		1.00
	Total of F:										3.75		3.75
	Total of II (A+B+C+D+E+F)				7.125		32.25		15.375		3.75		58.50
	Grand Total (I+II)	6%	4.50	14%	10.50	50%	37.50	25%	18.75	5%	3.75	100%	75.00

VILLAGEWISE ACTION PLAN OF UPPER DABANG MICRO WATERSHED UNDER IWMP - II
TERRITORIAL DIVISION : TURA .

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

No. of village : 2 nos.
 Project Area : 250.00 Ha.

Sl. No.	Activities	Dajingpara		Ampangdamgre		Total	
		Phy.	Fin.	Phy.	Fin.	Phy.	Fin.
1	2	3	4	5	6	7	8
I	<u>Watershed works Phase :</u>						
A.	<u>Arable Land Treatment :</u>						
	i) Rubber Plantation @ Rs. 8600/- per Ha.	25	2.15	25	2.15	50	4.30
	ii) Arecanut Plantation @ Rs.8600/-	15	1.29	15	1.29	30	2.58
	ii) Terracing @ Rs.20000/- per Ha.	6	1.20	6	1.20	12	2.40
B.	<u>Non-arable Land Treatment :</u>						
	i) Improvrmnt of Degraded Forest @ Rs. 20000/-	5	0.18	5	0.18	10	0.36
C.	<u>Drainage Line Treatment :</u>						
	i) Check Dam cum Irrigation Dam @ 250000/-	2	5.00	2	5.00	4	10.00
	ii) W/H Farm Pond @ Rs. 250000/- per no.	2	5.00	2	5.00	4	10.00
	iii) Dug out Pond @ Rs. 50000/- per no.	4	2.00	3	1.50	7	3.50
	iv) Protection Wall @ Rs. 50000/- per no.	4	2.00	4	2.00	8	4.00
	v) Earthen Irrigation Channel @ 50/- per R/ m	200	0.10	200	0.10	400	0.20
III	<u>Livelihood Activities for Assetless Household :</u>						
	i) Kitchen Garden @ 2500/-	70	1.75	70	1.75	140	3.50
	ii) Dug out pond @ 50000/-	4	2	4	2	8	4.00
IV	<u>Production System and Micro Enterprises :</u>						
	i) Piggery/Poultry @ Rs. 30000/-	5	1.50	5	1.50	10	3.00
	ii) Fishry cum piggery @ Rs. 25000/-	3		3		6	1.50
	iii) Rubber nursery @ 25000/- per plant	11000	2.75	10000	2.50	21000	5.25
	-						

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)	Treated Area (ha) of the projects				Treated Area details (ha) (falling within the projects)				
					From	To												
										Cultivated rainfed area	Cultivated irrigated area	Uncultivated wasteland		Agri. Land	Forest land (open)	Community land	Others (pl. specify)	Total area (ha)
												a) Temporary fallow	b) Permanent				Horti.	
1	Meghalaya	West Garo Hills	W.G.H IWMP -IX	2010	2010	31/3 / 2015	500	7.5	Upper Dabang	0	490	10	0	95	30	0	375	500

Fund provision for the IWMP projects from all sources:

[illegible]

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	W.G.H	W.G.H IWMP-IX	-	-	-	-	Upper Dabang Micro Watershed	S.B.I Lower Chandmary	31629504368	Saving	Chairman W.C Secretary W.C Project Leader/WD T

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				
WGH	IWMP-IX										
			NIL								

* from Column no. 2, total no. of States implementing the programme, from Column no. 3, total no. of Districts; from Column no. 4, total no. of projects 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 [#]	Area(s) of specialization ^{\$}	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	Umrang Meghalaya	Director	Don-Bosco	Agri-Horti, Animal Husbandry, Entrepreneurship	NA	-	-	-	-	-
4		ICAR/KV IC	Umiam/Tura Meghalaya	Director	Central Govt.	Do	NA	-	-	-	-	-
5		MRDS	Shillong Meghalaya	Director	State Govt.	Animal Husbandry	NA	-	-	-	-	-
6		NEHU	Shillong/Tura Meghalaya	Director	Central Govt.	Agri-Horti, Fruit Processing	NA	-	-	-	-	-

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

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

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

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

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

Table 6.2: Capacity Building activities for the year 2010 – 11 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)
PIAs	10	NIL	10	NIL	3.75	NIL	0.75	NIL
WDTs	5	NIL	4	NIL				
UGs	40	NIL	40	NIL				
SHGs	50	NIL	50	NIL				
WCs	11	NIL	11	NIL				
GPs	NIL	NIL	NIL	NIL				
Community	280	NIL	150	NIL				
Others Pl. specify)								
TOTAL	396	0	266	0	3.75	0	0.75	0

Table 6.3: Information, Education & Communication (IEC) activities for the year 10-11 as on 31/03/10 (dd/mm/yyyy)*

	1	2	3	4	5
	Activity	Executing agency	Estimated expenditure (Rs.)	Expenditure incurred (Rs.)	Outcome (may quantity, wherever possible)
1.	Awareness	S&WC (T) Division	0.25	-	-
2.	Exposure Visits	S&WC (T) Division	0.25	-	-
3.	Capacity Building	S&WC (T) Division	0.15	-	-
		Total	0.75	-	-

CHAPTER VII
EXPECTED OUTCOME

CHAPTER VII EXPECTED OUTCOME

Table 7.1 Employment related outcomes:

SI 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.	Dabang Gajingpara		12600	-	7120	19720	-	120	-	110	230	-	25	-	18	43
2.	Dabang Ampangdamgre		6300	-	3580	9880	-	64	-	53	117	-	15	-	8	23
	Total		18900	-	10700	29600	-	184	-	163	347	-	40	-	26	66

Table 7.2 Migration Details:

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

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

Table 7.3 Economic benefits accrued to women:

1		2		3		4
Wages		Training		Livelihoods		Total (Rs. in lakh)
Woman days	Amount (Rs. in lakh)	No. of women participants	Amount (Rs. in lakh)	No. of women beneficiaries	Value of assistance provided (Rs. in lakh)	
10,700	10.70	66	0.40	20	3.00	14.10

* 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	
Meghalaya	W.G.H IWMP-IX	Dabang Gajingpara	Reserved forest	FW/MFP/T	Unspecified		43		43	NIL
			Spring Chamber	Wd	Unspecified		18		18	NIL
			Check dam	Wi	Unspecified		30		30	NIL
			Irrigation Channel	Wi	Unspecified		30		30	NIL
		Dabang Ampangdamgre	Reserved forest	FW/MFP/T	Unspecified		23		23	NIL
			Spring Chamber	Wd	Unspecified		12		12	NIL
			Check dam	Wi	Unspecified		15		15	NIL
			Irrigation Channel	Wi	Unspecified		15		15	NIL

* 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 |
- for any right other than indicated above (please specify)

Table 7.5 Water related outcomes:

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

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

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

Table 7.5.2 Status of Drinking water:

1	2	3			4			5
District	Name of the project	Availability of drinking water (no. of months in a year)			Quality of drinking water			Comments
		Pre-project	Post-project	Change in availability	Pre-project	Post-project	Change in quality	
Meghalaya	WGH IWMP-IX	10 months	12 months	2 months	Unsafe	Potable	Improved	Better drinking water supply

* 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 cum.			
			through water saving devices ^{\$}	through water conserving agronomic practices [#]	Any other (pl specify)	Total
W.G.H	WGH IWMP-IX	Paddy	NA	NA	NA	
		Maize	NA	NA	NA	

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

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

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

Table 7.6: Vegetation/ crop related outcomes:

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

1	2	3	4						5						6					
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.
W.G.H	WGH IWMP-IX	Paddy		22.06		18		397.08	22.06	5	36	18	794.16	90	27.06	25	36	18	974.16	450
		Maize		18.00		15		270	0	18	0	15	0	270	0	18	0	15	0	270
		Vegetable		5		25		125	6	5	30	25	180	125	6	5	30	25	180	125
		Total		45.06		58		792.08	28.06	28	66	58	974.16	485	33.06	48	66	58	1154.16	845

* 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)	
					Irr i	Rf.	Irri	Rf.	Irri	Rf.	Irri	R f.	Irri	Rf.	Irri	R f.	Irri	R f .	Irri	Rf.	Irri	R f.
	Meghalaya	West Garo Hills	WGH IWM P-IX	Paddy	-	-	-	-	-	-	22.06	-	36	-	794.16	-	27.06	-	36	-	974.16	-
				Vegetables	-	-	-	-	-	-	6	-	30	-	180	-	6	-	30	-	180.00	-
				Total	-	-	-	-	-	-	28.06	-	66	-	974.16	-	33.06	-	66	-	1154.66	

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

Irri. – Irrigated Rf – Rainfed

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

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

* 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
W.G.H	W.G.H IWMP-IX	5 yrs	NA	NA	NA	NIL	NIL	NIL

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

Table 7.6.5 Increase/ Decrease in Forest/vegetation cover:

1	2	3	4			5		
District	Name of project	Duration of Project	Existing area tree cover (ha)			Achievement (ha)		
			Source/Name of report	Year of reference	Area already under forest/vegetative cover	Forest/vegetative cover area proposed to be covered under IWMP	Forest/vegetative cover area actually covered under IWMP	Change in forest/vegetative cover area
W.G.H	W.G.H IWMP-IX	5 yrs	Land use survey conducted by the Department	2010	25	10	-	35

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

Table 7.6.6 Increase/ Decrease in area under horticulture:

1	2	3	4			5		
District	Name of project	Duration of Project	Existing area under horticulture (ha)			Achievement (ha)		
			Source/Name of report	Year of reference	Area already under horticulture	Area under horticulture proposed to be covered through IWMP	Area under horticulture actually covered through IWMP	Change in area under horticulture
W.G.H	W.G.H IWMP-IX	5 yrs	Land use survey conducted by the Department	2010	66.02	70	-	136.02

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

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

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

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

Table 7.7 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	W.G.H IWMP-IX	Cattle	210		16.80	210		16.80	-	-	-	Use for ploughing & local consumption self production earning.
		Piggery	35		2.45	45		3.60	60		4.80	
		Poultry	1221		3.05	1321		3.96	1500		4.50	
		Goatery	107		1.60	107		1.60	-	-	-	
	Total for all projects		1573		23.90	1683		25.96	1560		9.30	

* 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	WGH IWMP-IX	Kitchen garden	-	3.50	-	-	3.50	-	-	-	-	-	-	-	-	-	-	-
		Dug out Pond	-	4.00	-	-	4.00	-	-	-	-	-	-	-	-	-	-	-
								-	-	-	-	-	-	-	-	-	-	-
		Total	-	7.50	-	-	7.50	-	-	-	-	-	-	-	-	-	-	-
								-	-	-	-	-	-	-	-	-	-	-

(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	
Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil

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	WGH IWMP-IX	Wet terrace	2.40	2.40	NIL	NIL	2.40	-	10	-	-	10	10	-	-	10
		Dug-out pond	4.00	4.00	NIL	NIL	4.00	-	18	-	-	18	18	-	-	18
		Rubber Plantation	4.40	4.40	NIL	NIL	4.40	-	40	-	-	40	40	-	-	40
		Arecanut Plantation	2.64	2.64	NIL	NIL	2.64	-	30	-	-	30	30	-	-	30
		Total	13.44	13.44	0	0	13.44	-	98	-	-	98	98	-	-	98

* 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	
10	20	10,000-12,000	NIL	NIL	NIL	NIL	-
18	36	30,000-35,000	NIL	NIL	NIL	NIL	-
40	80	25,000-30,000	NIL	NIL	NIL	NIL	-
30	60	35,000-40,000	NIL	NIL	NIL	NIL	-

Table 7.8 Marketing related outcomes:

Backward-Forward linkages *

1	2	3	4	5	6
District	Project	Type of Marketing Facility	Pre-project (no.)	During the project (no.)	Post-project (no.)
WGH	IWMP-IX	(A) Backward linkages		-	-
		(i) Seed certification	Nil	-	-
		(ii) Seed supply system	Nil	-	-
		(iii) Fertilizer supply system	Nil	-	-
		(iv) Pesticide supply system	Nil	-	-
		(v) Credit institutions	Nil	1	1
		(vi) Water supply	Nil	1	1
		(vii) Extension services	Nil	-	-
		(viii) Nurseries	Nil	-	-
		(ix) Tools/machinery suppliers	Nil	-	-
		(x) Price Support system	Nil	-	-
		(xi) Labour	Nil	-	-
		(xii) Any other (please specify)	Nil	-	-
		(A) Forward linkages			
		(i) Harvesting/threshing machinery	Nil	-	-
		(ii) Storage (including cold storage)	Nil	-	-
		(iii) Road network	1	1	1
		(iv) Transport facilities	Nil	-	-
		(v) Markets / Mandis	Nil	-	-
		(vi) Agro and other Industries	Nil	-	-
		(vii) Milk and other collection centres	Nil	-	-
		(viii) Labour	Nil	10	10
		(ix) Any other (please specify)	Nil	-	-

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

Table 7.9 Abstract of outcomes:

1	2	3	4	5	6	7
Sl. No.	State	Item	Unit	Pre-project Status	Post-project Status	Remarks
	Meghalaya	Status of water table		Lack of management	Improved	
		Ground water structures repaired/ rejuvenated	Nil	Nil	Nil	
		Quality of drinking water		Unsafe	Better quality	
		Availability of drinking water		10 months in a year	12 months availability	
		Increase in irrigation potential		24% irrigated	94 % irrigated	
		Change in cropping/ land use pattern		Single cropping	Double cropping	
		Area under agricultural crop				
		i Area under single crop	Ha	38.70	102.9	
		ii Area under double crop	Ha	21.40	60.30	
		iii Area under multiple crop				
		Net increase in crop production area				
		Increase in area under vegetation				
		Increase in area under horticulture	Ha	66.02	122.04	
		Increase in area under fuel & fodder				
		Increase in milk production		NA	NA	
		No. of SHGs	No.	2	6	
		Increase in no. of livelihoods	Activities	a) Agriculture b) Horticulture	a) Agriculture b) Horticulture c) Farm Pond d) Rubber Plantation e) Piggery Poultry	
		Increase in income	Rs.	200000-300000	500000-600000	
		Migration	Nos	Nil	Nil	
		No. of school going children	Nos.			
		SHG Federations formed	Nos	Nil	Nil	
		Credit linkage with banks	Nos	1	1	
		Resource use agreements	Nos			
		WDF collection & management		None	a) Total WDF to be collected=Rs.5% b) WC shall formulate guidelines for utilization of WDF	
		Summary of lessons learnt	Nil			

Table 7.10 Cost effectiveness of structures/ activities*

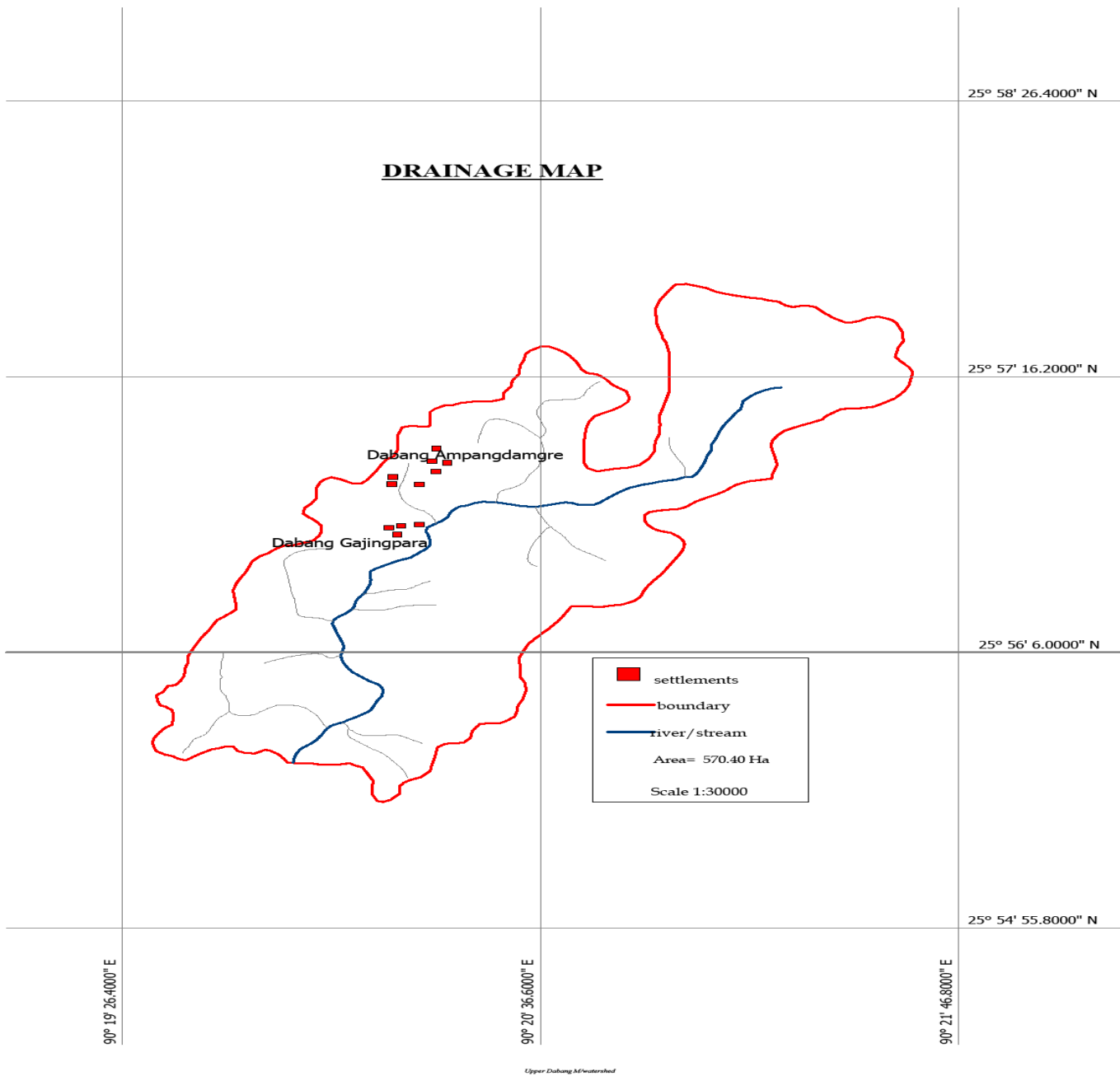
1	2	3	4	5	6	7	8	9
District	Name of project	Name of WC	Name of structure/ activity	Estimated cost (Rs.)	Expected quantifiable benefits (Rs.)	Expenditure incurred (Rs.)	Actual quantifiable benefit (Rs.)	Benefit: Cost ratio[#]
WGH	WGH IWMP_IX	Upper Dabang	As per action plan	54.75	74.55	-	-	1:1.45

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

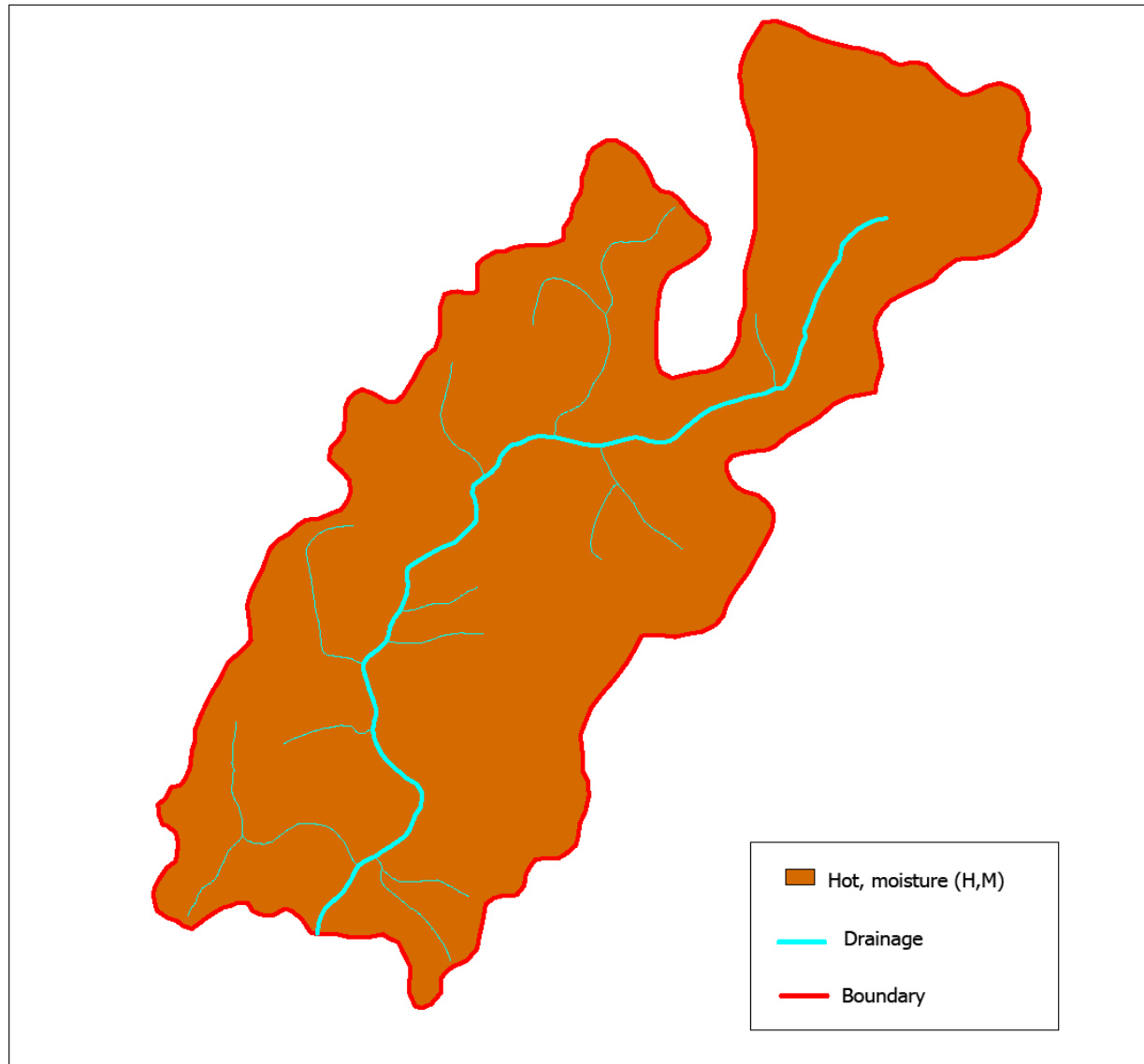
[#]B:C ratio more than 1 – cost effectiveness than 1– Not cost effective

ANNEXTURE I

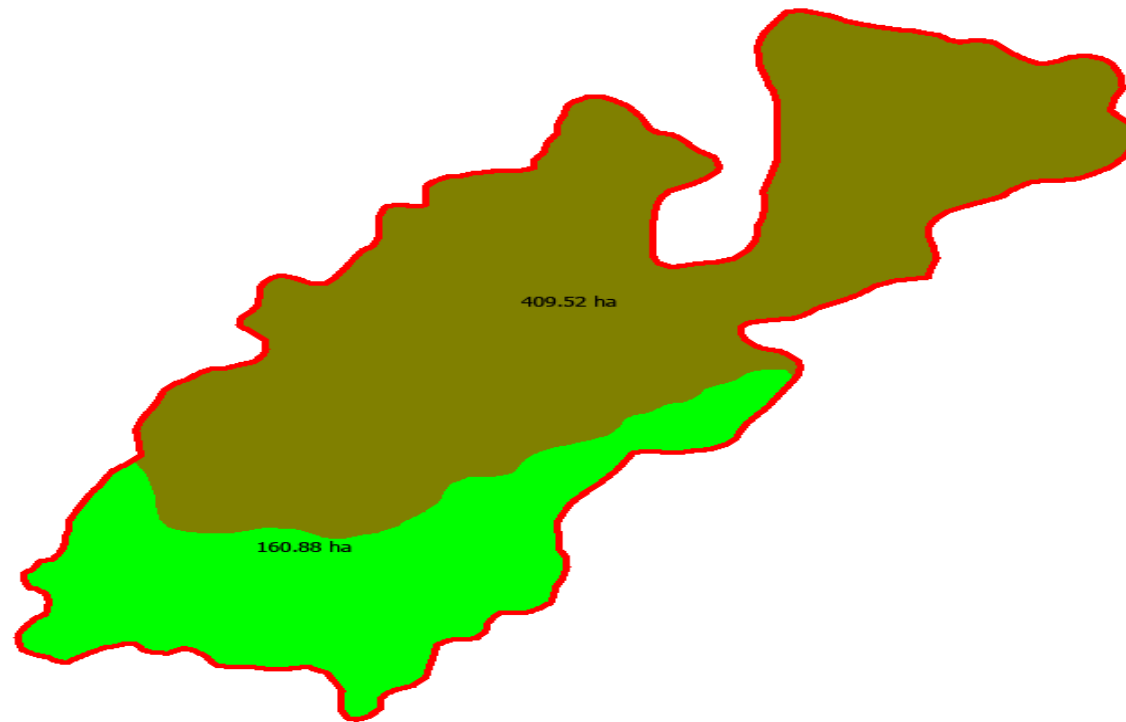
MAPS



AGROCLIMATIC ZONE MAP

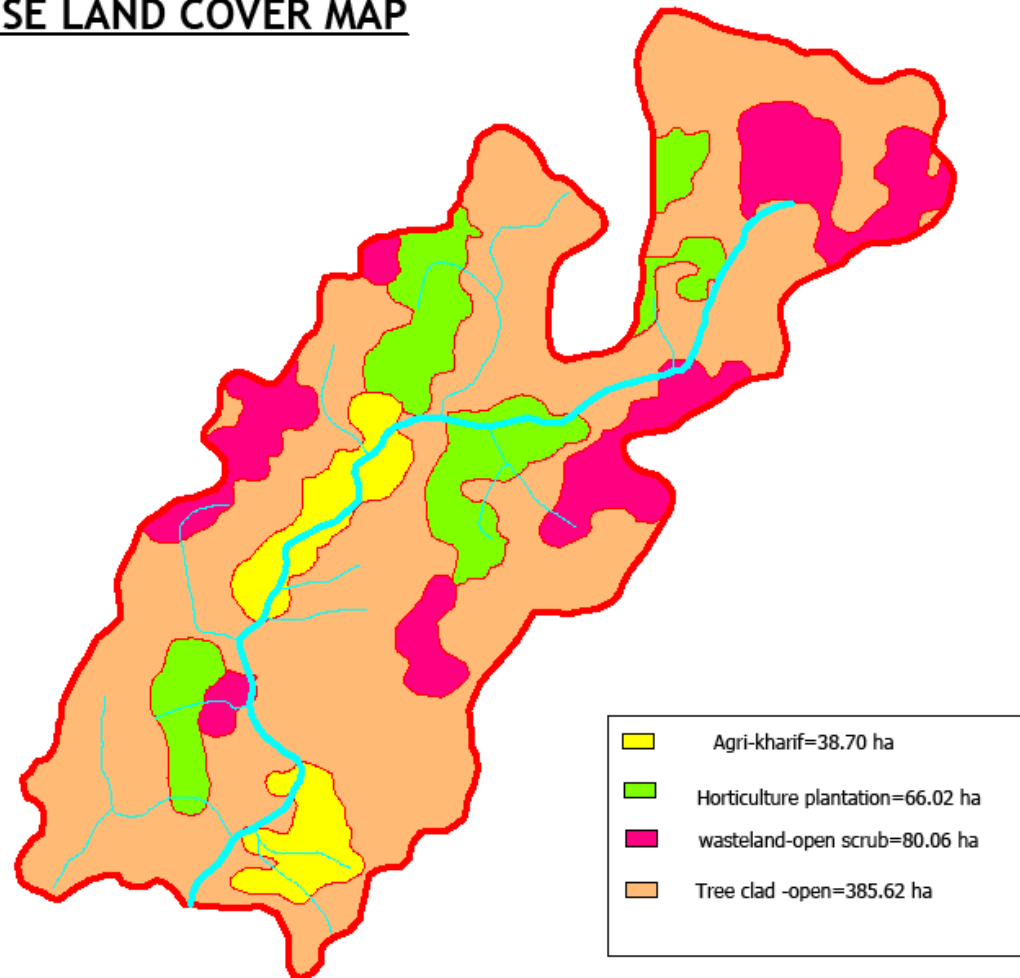


SOIL MAP

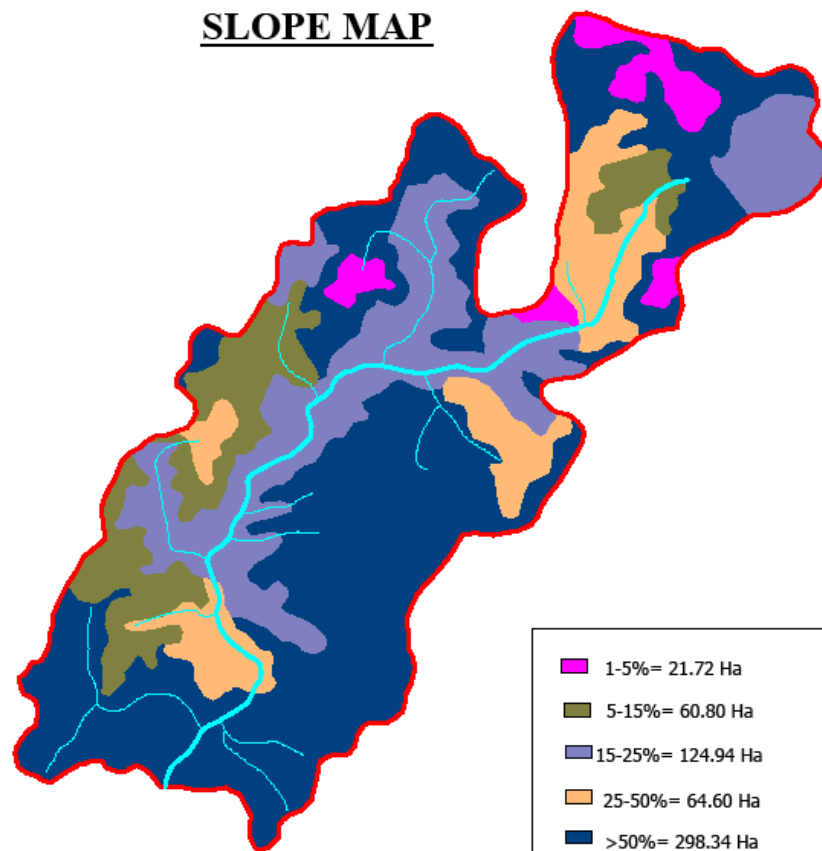


- Deep, excessively drained fine loamy soils
- Moderately deep, excessively drained, coarse loam soil

LAND USE LAND COVER MAP

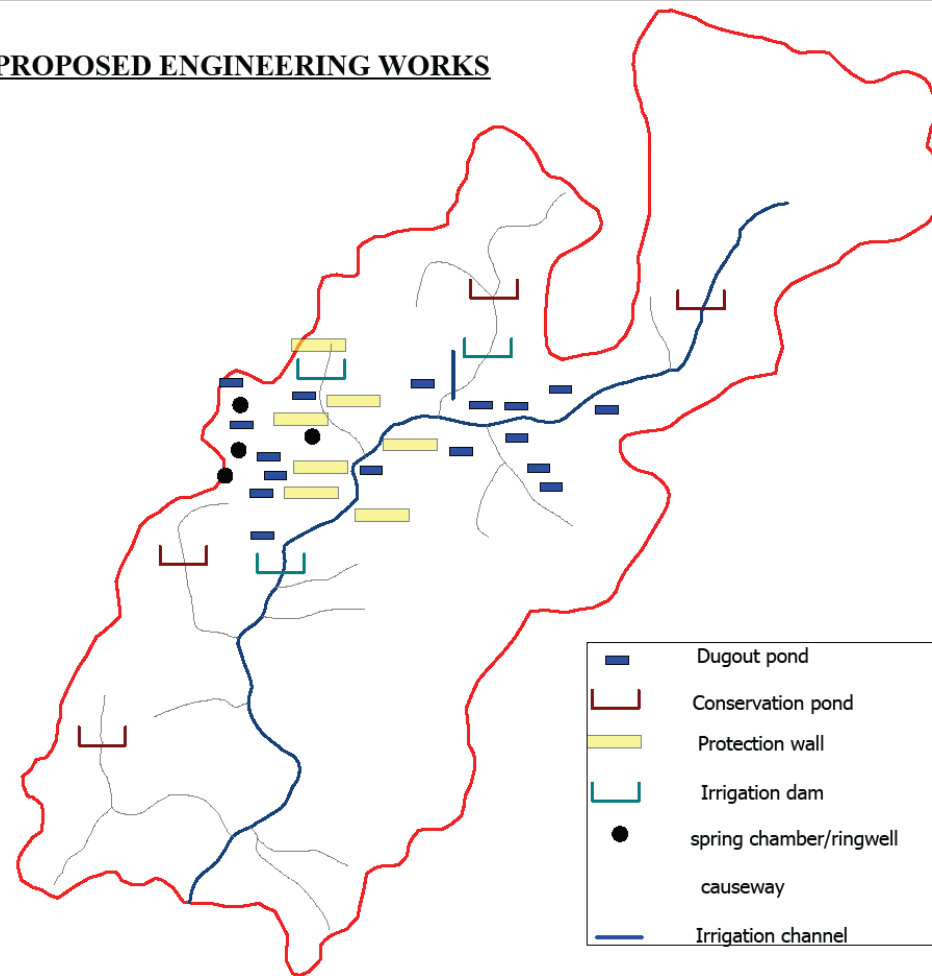


SLOPE MAP

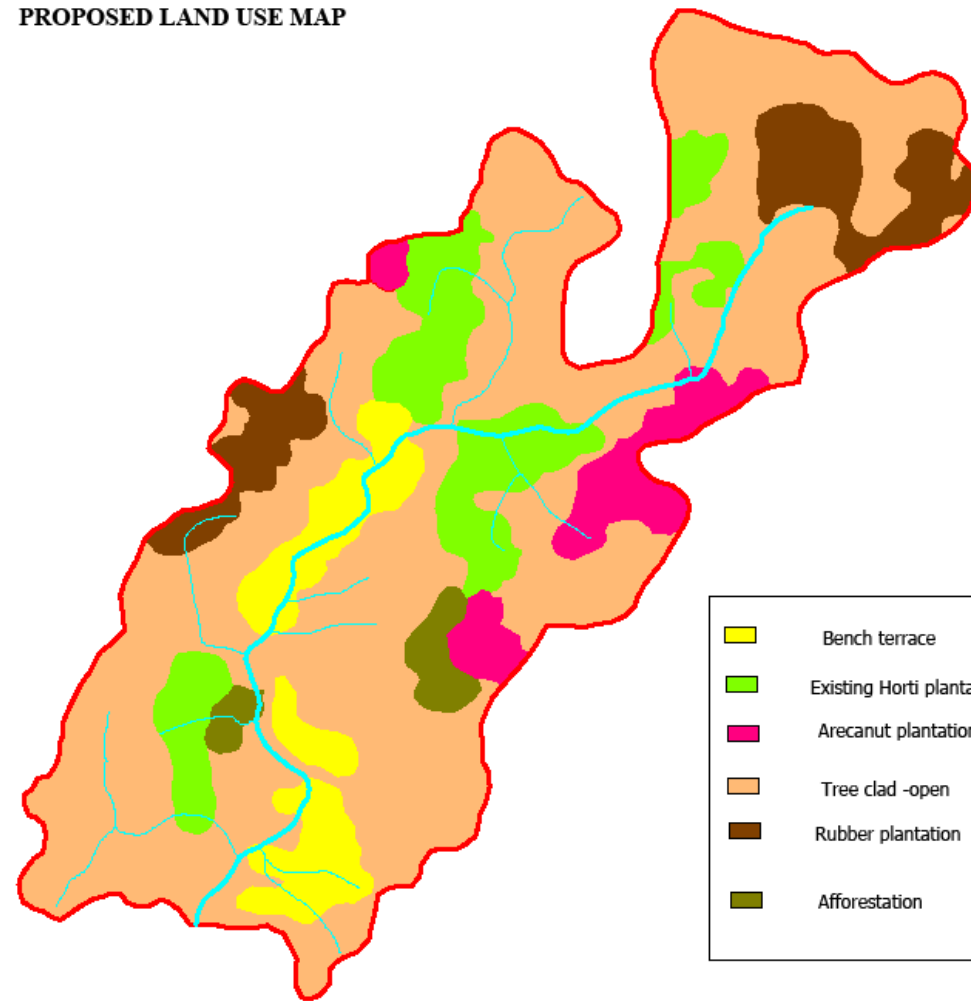


- 1-5% = 21.72 Ha
- 5-15% = 60.80 Ha
- 15-25% = 124.94 Ha
- 25-50% = 64.60 Ha
- >50% = 298.34 Ha

PROPOSED ENGINEERING WORKS



PROPOSED LAND USE MAP



- Bench terrace
- Existing Horti plantation
- Arecanut plantation
- Tree clad -open
- Rubber plantation
- Afforestation

ANNEXTURE III

COST ESTIMATES

MODEL NORMS PER HACTARE FOR TERRACING (IWMP)

A. Technical Parameters .

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

B. Cost estimate .

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

(Rupees twenty thousand) only .

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

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

A. Preliminary works .

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

B. I st year Planting .

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

C. II year Planting .

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

(Rupees three thousand six hundred) only.

MODEL NORMS PER HACTARE FOR RUBBER CULTIVATION .

Spacing - (4.75 x 4.75) m

Plant density - 450 nos.

Preliminary works

A.

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	<u>500.00</u>
sub-total	Rs. 9000.00	1300.00

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	<u>Rs. 1200.00</u>	
Sub-total	Rs. 4600.00	

C.

II nd year maintenance .

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

Grand Total Rs. 8600.00

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

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
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 equipmqnts and tools etc.	Rs.	1500.00
iv) Cost of seeds including sowing etc.	Rs.	1500.00
G. Total	Rs.	125000.00

(Rupees one lakh twenty five thousand) only.

(Based as per P.W.D. S.O.R. for roads, bridges and E&D works 2009-2010)

1/134

(i) Upto 3m.depth.

@ Rs. 61 /- m³

@	Rs.	47	/-	m ³	Rs.	84.60
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2/69

@ Rs. 5621 /- m

3/103

@ Rs. 1065 /- m³

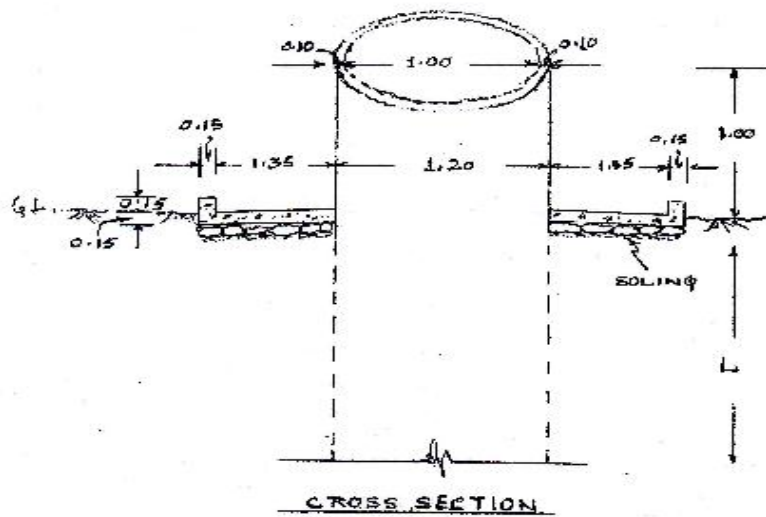
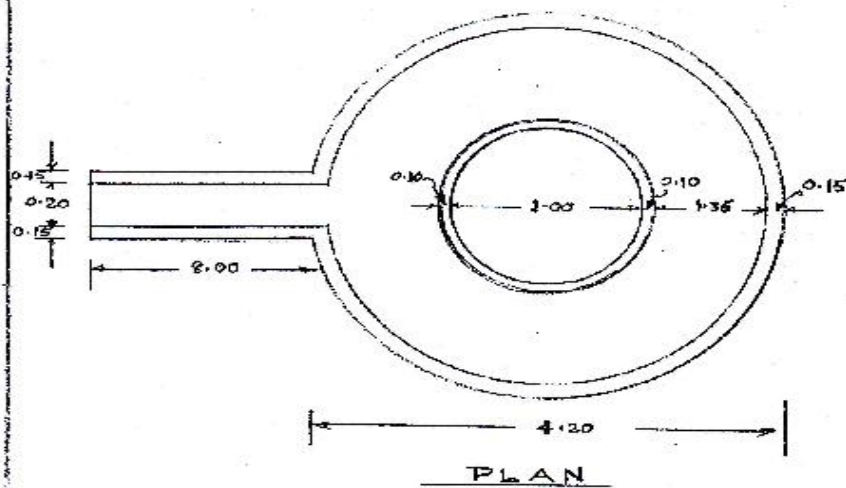
⁴/141 Plain/Reinforced c.c. in open foundation complete.
 (A) PCC G - M
 -15

$$\begin{array}{rclclclcl}
 1 & \times & \pi & \times & 4.20 & \times & 1.50 \times 0.15 & = & 2.97 & \text{m}^3 \\
 1 & \times & \pi & \times & 4.20 & \times & 0.15 \times 0.15 & = & 0.30 & \text{m}^3 \\
 2 & \times & 8.00 & \times & 0.15 & \times & 0.45 & = & 1.08 & \text{m}^3 \\
 1 & \times & 8.00 & \times & 0.20 & \times & 0.15 & = & 0.24 & \text{m}^3 \\
 & & & & & & & & \hline
 & & & & & & & & 4.59 & \text{m}^3
 \end{array}$$

@ Rs. 4090 /- m ³	Rs. 18773.10
GRAND TOTAL :	Rs. 60025.24
Say Rs. 60,000/-	
(Rupees Sixty Thousand) only.	

DRAWING OF RING HELL

NOT TO SCALE



ESTIMATE FOR THE CONSTRUCTION OF C.C CHECK DAM.

(Based as per P.W.D., Schedule of rates for roads, bridges and E & D works for the year 2009-2010).

1/134.

Excavation for structures.

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

M/dam :	$1 \times 10.00 \times 1.20 \times 1.25$	=
	15.00m^3	
G/wall :	$2 \times 4.60 \times 0.50 \times 0.80$	=
	3.68m^3	
W/wall :	$2 \times 4.00 \times 0.50 \times 0.80$	=
	3.20m^3	
T/wall :	$1 \times 6.60 \times 0.60 \times 1.00$	=
	3.96m^3	
Apron :	$1 \times 4.60 \times 6.00 \times 0.45$	=
	12.42m^3	

38.26m³

@ Rs. 47/- m³
Rs. 1798.22

2/137.

Providing c.c. work in 1:3:6 foundation etc.

M/dam : $1 \times 10.00 \times 1.20 \times 0.23$
= 2.76m^3

@ Rs. 3571/- m³
Rs. 9855.96

3/141(a).

Plain/ reinforcement c.c. in open foundation etc.

M/dam :	$1 \times 10.00 \times 0.90 \times 1.00$
=	9.00m^3
	$1 \times 10.00 \times \frac{0.45 + 0.90}{2} \times 1.80$
=	12.15m^3
	$2 \times 2.00 \times 0.45 \times 0.75$
=	1.35m^3
G/wall :	$2 \times 4.60 \times 0.30 \times 0.80$
=	2.21m^3
	$2 \times 5.45 \times 0.30 \times 2.55$
=	8.33m^3

$$\begin{array}{rcl} \text{Less :} & & 2 \times \frac{1}{2} \times 3.20 \times 0.30 \times 1.35 \\ = (-) & 1.30\text{m}^3 & \end{array}$$

$$\begin{array}{rcl} \text{W/wall :} & & 2 \times 4.00 \times 0.30 \times 3.35 \\ = & 8.04\text{m}^3 & \end{array}$$

$$\begin{array}{rcl} \text{T/wall :} & & 1 \times 6.60 \times 0.40 \times 1.00 \\ = & 2.64\text{m}^3 & \end{array}$$

$$\begin{array}{rcl} \text{Apron :} & & 1 \times 6.15 \times 6.00 \times 0.15 \\ = & 5.54\text{m}^3 & \end{array}$$

$$= 47.96\text{m}^3$$

@ Rs. 4090/- m³
Rs. 196156.40

4/140(b).
complete.

Stone masonry work in cement mortar 1:3 etc.

$$\begin{array}{rcl} \text{Apron :} & & 1 \times 4.60 \times 6.00 \times 0.30 \\ = & 8.28\text{m}^3 & \end{array}$$

$$\begin{array}{rcl} & & 1 \times \frac{1}{2} \times 1.80 \times 6.00 \times 1.80 \\ = & 9.72\text{m}^3 & \end{array}$$

$$\begin{array}{rcl} \text{Less :} & & 1 \times \frac{1}{2} \times 0.45 \times 6.00 \times 1.80 \\ = (-) & 2.43\text{m}^3 & \end{array}$$

$$= 15.57\text{m}^3$$

..... @ Rs. 2714/- m³
Rs. 42256.98

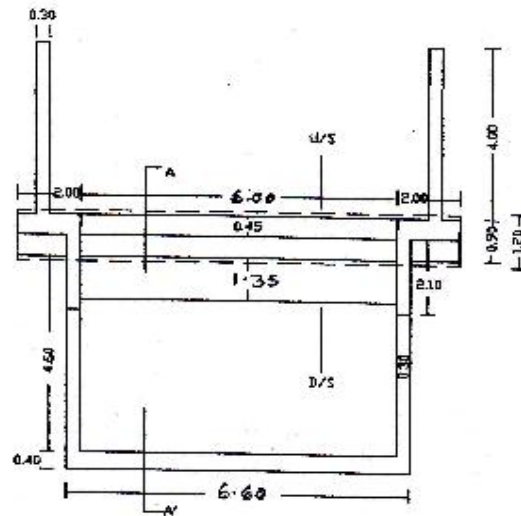
GRAND TOTAL = Rs. 250067.56

Say, Rs. 2,50,000.00

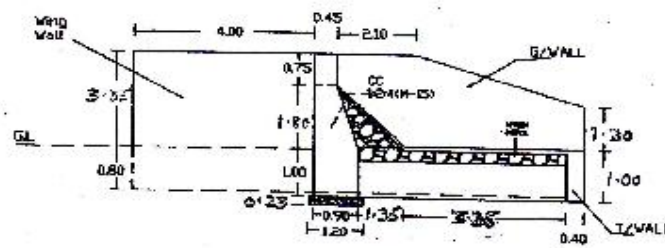
(Rupees Two lakh fifty thousand) only.

C. C. CHECK DAM

Not to Scale



PLAN



C/S At A-A'

ESTIMATE FOR THE CONSTRUCTION OF C.C. CORE WALL WITH EARTH FILLED DAM (EARTHEN EMBANKMENT) FOR WATER HARVESTING STRUCTURES.

(Rates as per P.W.D S.O.R for Roads, Bridges and E & D Works 2009-2010).

1/134.	Excavation for structures. (I) Ordinary soil. (A) Manual Means. (i) Upto 3m depth.		
	Core wall :	1 x 18.00 x 1.20 x 1.25	= 27.00m ³
	L/Channel :	1 x 8.00 x 1.40 x 1.10	= 12.32m ³

			= 39.32m ³
	@ Rs. 47/- m ³	Rs. 1848.04
2/137.	P.C.C 1:3:6 in foundation.....etc.		
	Core wall :	1 x 18.00 x 1.20 x 0.11	= 2.38m ³
	@ Rs. 3571/- m ³	Rs. 8498.98

3/141. Plain/reinforced c.c in open foundation complete.
(A) P.C.C M-15.

$$\text{Core wall : } 1 \times 18.00 \times \frac{0.40 + 1.00}{2} \times 3.50 = 44.10\text{m}^3$$

$$\begin{aligned} \text{L/channel : } & 2 \times 8.00 \times 0.20 \times 1.15 = 3.68\text{m}^3 \\ & 1 \times 8.00 \times 1.00 \times 0.10 = 0.80\text{m}^3 \\ & \text{-----} \\ & = 48.58\text{m}^3 \end{aligned}$$

@ Rs. 4090/- m³ Rs. 198692.20

4/28. Construction of embankment.

$$\text{Dam : } 1 \times 18.00 \times \frac{2.50 + 8.50}{2} \times 3.00 = 297.00\text{m}^3$$

$$\begin{aligned} \text{Less : } & 1 \times 18.00 \times \frac{0.40 + 0.80}{2} \times 2.50 = (-) 27.00\text{m}^3 \\ & \text{-----} \\ & = 270.00\text{m}^3 \end{aligned}$$

@ Rs. 71/- m³ Rs. 19170.00

5/100(I). Providing and laying stone/ boulders pitching
on slope ...etc.

(I) Stone /boulders.

Dam U/S :

$$1 \times 18.00 \times 4.24 \times 0.20 = 15.26\text{m}^3$$

$$\text{L/Channel : } 1 \times 8.00 \times 1.00 \times 0.20 = 1.60\text{m}^3$$

$$= 16.86\text{m}^3$$

$$\text{@ Rs. 1086/- m}^3 \quad \text{.....} \quad \text{Rs. 18309.96}$$

6/37. Turfing with sods.

$$\text{Dam D/S : } 1 \times 18.00 \times 4.24 = 76.32\text{m}^2$$

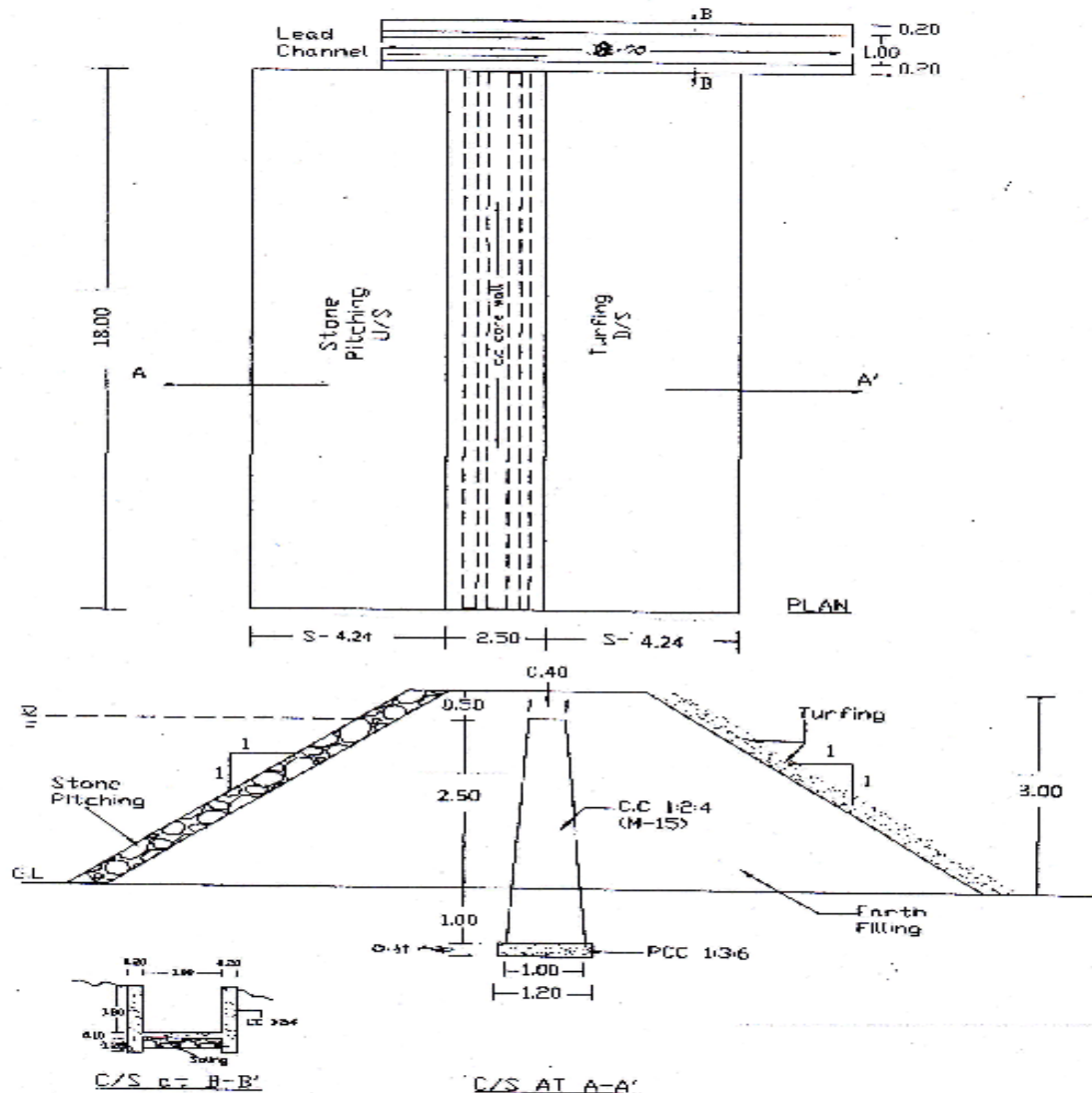
$$\text{@ Rs. 46/- m}^2 \quad \text{.....} \quad \text{Rs. 3510.72}$$

GRAND TOTAL = Rs. 250029.90

Say, Rs. 2,50,000.00

(Rupees Two lakh fifty thousand) only.

C.C Core Wall With Earthen Filled Dam Embankment) For Water Harvesting Structure



NB: All Dimension are In Metre

C/S AT A-A'
Not to Scale

ESTIMATE FOR THE CONSTRUCTION OF DUG OUT POND.

(Rates as per P.W.D S.O.R for Roads, Bridges and E & D Works 2009-2010).

1/30(i). Excavation in cutting in soil by manual means.

Dug out Pond :

$$\text{Vol : } \frac{D}{6} (26.00 \times 24.00) + 4 (24.00 \times 22.00) + (22.00 \times 20.00)$$

$$= \frac{2.00}{6} (624.00) + (2112.00) + (440.00)$$

$$= \frac{2.00}{6} (3176.00)$$

$$= 1058.67\text{m}^3$$

@ Rs. 47/- m³

.....

Rs. 49757.49

2/44(i). Surface drains in soil.
(A) Manual Means.

Length : 10.00 metres.

@ Rs. 25/- m³

.....

Rs. 250.00

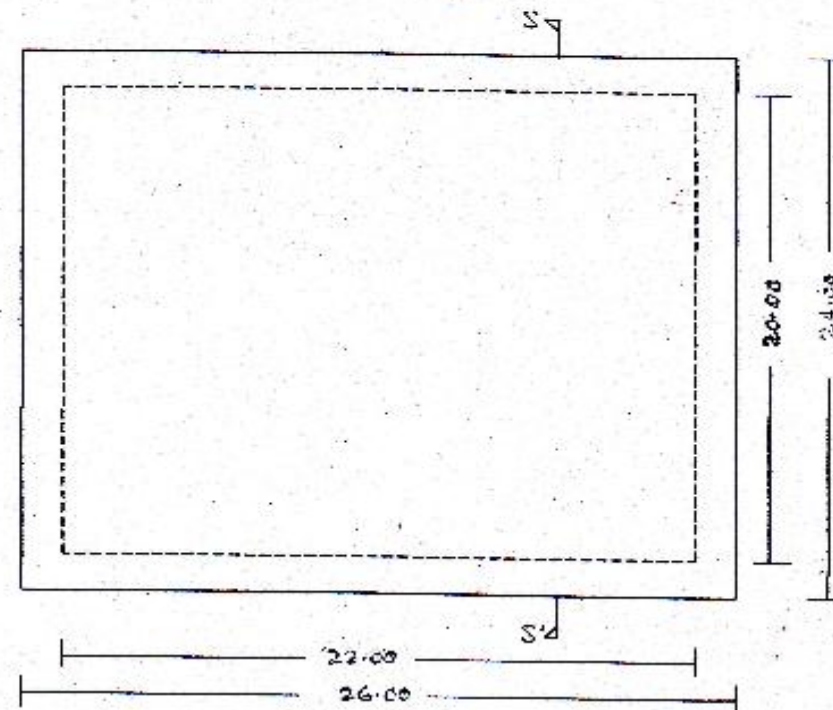
GRAND TOTAL = Rs. 50007.49

Say, Rs. 50,000.00

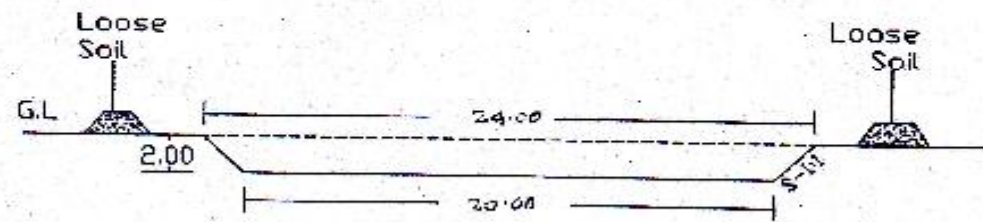
(Rupees Fifty thousand) only

DUG OUT POND

Not to Scale



PLAN



C/S AT S-S'

ESTIMATE FOR THE CONSTRUCTION OF STONE MASONRY PROTECTION WALL.

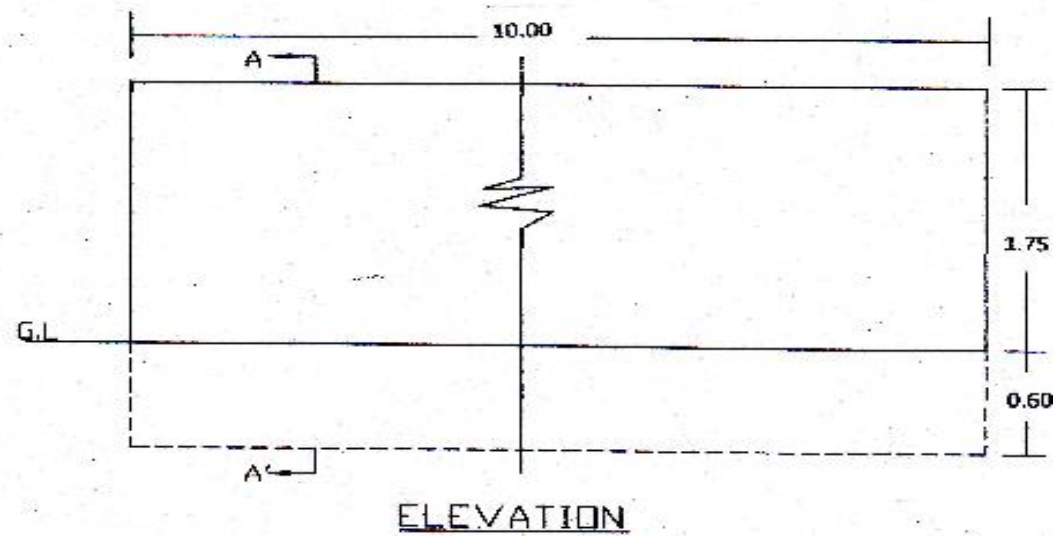
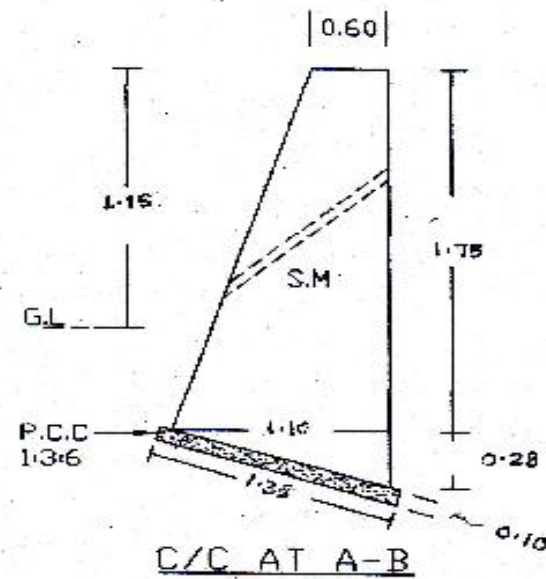
(Rates as per P.W.D S.O.R for Roads, Bridges and E & D Works 2009-2010).

1/134.	Excavation for structures. (I) Ordinary soil. (A) Manual Means. (i) Upto 3m depth.	$1 \times 10.00 \times 1.35 \times \frac{1}{2} (1.10 + 0.60) = 11.48\text{m}^3$ $1 \times 10.00 \times \frac{1}{2} \times 1.35 \times 0.38 = 2.57\text{m}^3$ ----- $= 14.05\text{m}^3$ @ Rs. 47/- m^3	Rs. 660.35
2/137.	P.C.C 1:3:6 in foundation.....etc.	$1 \times 10.00 \times 1.35 \times 0.10 = 1.35\text{m}^3$ @ Rs. 3571/- m^3	Rs. 4820.85
3/140(b).	Stone masonry works in cement mortar 1:3 etc.	$1 \times 10.00 \times \frac{0.60 + 1.10}{2} \times 1.75 = 14.88\text{m}^3$ $1 \times 10.00 \times \frac{1}{2} \times 1.10 \times 0.28 = 1.54\text{m}^3$ ----- $= 16.42\text{m}^3$ @ Rs. 2714/- m^3	Rs. 44563.88
GRAND TOTAL =			Rs. 50045.08
Say, Rs. 50,000.00			

(Rupees Fifty thousand) only.

STONE MASONRY PROTECTION WALL

Not to Scale



ANNEXTURE IV
MoA, SUB-COMMITTEE DETAILS ETC

Details of Convergence of IWMP with other Schemes:									
Name of Villages: a) Dabang-Gajinpara b) Dabang-Ampangdamgre									
	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	undertaken with converged funds			Reference no. of activity/ task/ structure in DPR [@]	Level at which decision for convergence was taken ^{\$}
					(a) Structures (b)Livelihoods (c)Any other (pl specify)	Nos/Rmt/Ha	Amount(Rs)		
1	WGH	WGH-IWMP-IX	NREGS (DRDA, West Garo Hils, Meghalaya)	3688000	a)Dugout pond	16 Nos	800000	Enclosure of Abstract of Perspective Plan for Convergence of NREGs with IWMP in DPR	District Level
							700000		
					b)Stone masonry protection wall	14 Nos			
					c) Water harvesting farm pond	2 Nos	750000		
					d) C.C Check cum Irrigation dam	1 Nos	750000		
					e) Earthen irrigation channel	2292 Rmt	89000		
					f) Wet terrace	17 Ha	75000		
					g)Rubber Plantation	40 Ha	292000		
				h) Arecanut Plantation	20 Ha	232000			
				Grand Total		3688000			
Grand Total: Thirty six lakhs and eighty eight thousand only.									
Enclosed: Abstract of Perspective Plan for Convergence of NREGS with IWMP.									

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



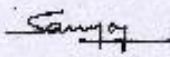
Phone: 03651-223835(O), 223826(R)
Fax: 03651-221179, 222236
e-mail: sanjaygoyal_ias@yahoo.com

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/Programme within West Garo Hills District.

Dated: Tura
The 14th April, 2011.




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

ABSTRACT OF PERSPECTIVE PLAN FOR CONVERGENCE OF MREGS WITH IAMP AT DABANG-GAJINPARA VILLAGE
UNDER UPPER DABANG MICRO WATERSHED, WDH-WMP-13

Name of the Village: **Dabang-Gajinpara**

Pin No. of the Village: **781005**

Est. Works Component (Rs. 1 Cr. per Village) = **Rs. 4,44,60,000**

Amount allocated for Convergence per annum = **Rs. 4,44,60,000**

Balance from MWP funds for the year 2012-13 = **Rs. 0**

Sl. No.	ACTIVITY	Unit	FISCAL PERIOD												Average In the Component
			2011-12			2012-13			2013-14			2014-15			Total
			Qty	Rate	Rs.	Qty	Rate	Rs.	Qty	Rate	Rs.	Qty	Rate	Rs.	
1	Dug out and 2000,000 per number	No.	2	150,000	3,00,000	-	-	-	-	-	-	5	2,60,000	13,00,000	474
2	Stone masonry Protection walling 50 CM x 100 CM per meter	Mtr	2	80,000	1,60,000	1	30,000	30,000	2	60,000	1,20,000	4	1,20,000	4,80,000	280
3	Water harvesting from 2000,000 per number	No.	-	-	-	1	1,50,000	1,50,000	-	-	-	-	-	-	284
4	C.C. check dam masonry 2000,000 per number	No.	1	20,000	20,000	1	1,50,000	1,50,000	-	-	-	-	-	-	288
5	Soil conservation 2000,000 per Ha	Ha	242	1,100	2,66,200	272	1,500	4,08,000	-	-	-	92	4,500	4,14,000	415
6	Water conservation 2000,000 per Ha	Ha	200	5,500	1,10,000	-	-	-	-	-	-	-	-	-	220
7	Rubber plantation 2000,000 per Ha	Ha	-	-	-	15	27,000	4,05,000	-	-	-	-	-	-	300
8	Acacia plantation 2000,000 per Ha	Ha	-	-	-	15	30,000	4,50,000	-	-	-	20	40,000	8,00,000	340
9	Planting 2000,000 per Ha	Ha	-	-	-	10	24,000	2,40,000	-	-	-	-	-	-	300
10	Water conservation 2000,000 per Ha	Ha	-	-	-	10	20,000	2,00,000	-	-	-	10	30,000	3,00,000	600
GRAND TOTAL					4,44,60,000			4,44,60,000			4,44,60,000			17,78,40,000	15,300

Amount allocated for the year 2011-12 to 2014-15

1. Works Component = **Rs. 17,78,40,000**

2. Material Component = **Rs. 8,20,00,000**

Grand Total = **Rs. 25,98,40,000**

Amount allocated for the year 2011-12 to 2014-15 for the year 2011-12

Kalyan H. Sangma
President

Dabang-Gajinpara V.B.C
West Garo Hills, Meghal

MEMBER VCH

Jangnam Parak
Secretary

V.B.C
Village Development Committee
West Garo Hills, Meghal

Name of the Village Library: Hampton
Total books at the library: 22,000

For more information on the company, call 1-800-257-4264.

[illegible]

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- | | |
|------------------------|--------------|
| 1 Weight (g) = 0.01 | - Rs. 10.00 |
| 2 Material Components: | - Rs. 100.00 |
| Card Total | - Rs. 110.00 |

sp. at. gend. sp. Sangre

Odbang-Gadisaang P. E. C.
West-Gadisaang (Meyha)

[illegible]

Jongman Marak.
Secretary,
P.H. Dabang-Gelungwano P.E.C
MR. S. T. J. K. H. Day, Binc'
West Coast Hills, Ceylon

AGREEMENT FOR CONVERGENCE OF SCHEME

The Village Employment Councils (VEC) and the Communities of Dahang Gajingpara Villages, Tikrikilla Blocks, West Garo Hills, Meghalaya have no objection to the Convergence of NREGS with Integrated Management Project (IWMP) at Upper Dahang village under Upper Dahang Micro-Watershed, WGH-IWMP-IX being implemented by Tura Soil & Water Conservation (T) Division.

We also agreed to allocated and commit Funds for wage as well as material component under NREGS in our Annual Work Plan for various Soil & Water Conservation Works which shall be taken up during the Project Period (2010-11 to 2013-14). The wage and material component under NREGS shall be utilised for following works:

1. Dugout Pond
2. Wet Terrace
3. C.C. Irrigation Dam
4. Areca nut Plantation
5. Stone Masonry Protection Wall
6. Earthen Irrigation Channel
7. Water Harvesting Farm Pond
8. Rubber Plantation

Phatying K. Longma
President,

Dahang-Gajingpara V.E.C.
West Garo Hills, (Mekh.)

President,

Village Employment Council
Upper Dahang
Tikrikilla Block, WGH

Jangnam Marak
Secretary,

Vill. Dahang Gajingpara V.E.C.
NREGS Tikrikilla Dev. Block
West Garo Hills, (Mekh.)
Secretary

Village Employment Council
Upper Dahang
Tikrikilla Block, WGH

AGREEMENT FOR CONVERGENCE OF SCHEME

The Village Employment Councils (VEC) and the Communities of Ampangdamgre Villages, Tikrikilla Blocks, West Garo Hills, Meghalaya have no objection to the Convergence of NREGS with Integrated Management Project (IWMP) at Ampangdamgre village under Upper Dabang Micro-Watershed, WGH-IWMP-IX being implemented by Tura Soil & Water Conservation (T) Division.

We also agreed to allocated and commit Funds for wage as well as material component under NREGS in our Annual Work Plan for various Soil & Water Conservation Works which shall be taken up during the Project Period (2010-11 to 2013-14). The wage and material component under NREGS shall be utilised for following works:

1. Dugout Pond
2. Wet Terrace
3. C.C. Irrigation Dam
4. Area nut Plantation
5. Stone Masonry Protection Wall
6. Earthen Irrigation Channel
7. Water Harvesting Farm Pond
8. Rubber Plantation

Pratijog A. Langma

President,

Dabang-Gajingpara V.E.C.
West Garo Hills, (Megh.)

President,

Village Employment Council
Ampangdamgre
Tikrikilla Block, WGH

Jangnan Marak

Secretary,

Vill. Dabang Gajingpara V.E.C.
NREGS Tikrikilla Dev. Block
West Garo Hills, (Megh.)
Secretary

Village Employment Council
Ampangdamgre
Tikrikilla Block, WGH

**NO OBJECTION CERTIFICATE OF THE
A-KING NOKMA FOR UPPER DABANG
MICRO WATERSHED DEVELOPMENT PROJECT TO BE TAKEN UP
UNDER IWMP-IX
PROJECT BY TURA SOIL & WATER CONSERVATION(T)DIVISION**

The A-king Nokma of Dabang Gajingpara village under Upper Dabang Micro-watershed project, WGH-IWMP-IX has No Objection to the developmental activities to be undertaken in my A-king land by Soil & Water Conservation Department.

The villagers of Dabang Gajingpara A-king Land are ready to accept the Development Scheme after clear understanding of the objectives and the activities proposed under the project to be implemented in our Watershed area.

There will be No Objection in future from the villagers of the watershed area as they have understood the objectives of the proposed scheme of the Soil & Water Conservation Department.

Name & Signature of A-king Nokma

Katjing K. Langma

NOKMA

VIII, Dabang-Gajingpara,
West Garo Hills (Megh)

Countersigned by

[Signature]
Divisional Officer,
Tura Soil & Water Conservation Division
West Garo Hills, Meghalaya

**NO OBJECTION CERTIFICATE OF THE
A-KING NOKMA FOR UPPER DABANG
MICROWATERSHED DEVELOPMENT PROJECT TO BE TAKEN UP
UNDER IWMP-VIII
PROJECT BY TURA SOIL & WATER CONSERVATION (T) DIVISION**

The A-king Nokma of Ampangdamgre village under Upper Dahang Micro-watershed project, WGI-IWMP-IX has No Objection to the developmental activities to be undertaken in my A-king land by Soil & Water Conservation Department.

The villagers of Ampangdamgre A-king Land are ready to accept the Development Scheme after clear understanding of the objectives and the activities proposed under the project to be implemented in our Watershed area.

There will be No Objection in future from the villagers of the watershed area as they have understood the objectives of the proposed scheme of the Soil & Water Conservation Department.

Name & Signature of A-king Nokma

Katjing N. Ragma
NOKMA

VIII. Dahang-Balingorra,
West Garo Hills & District

Countersigned by

[Signature]
Divisional Officer,
Tura Soil & Water Conservation Division
West Garo Hills, Garo Hills