

DETAILED PROJECT REPORT

SIKSINGWIL - INTEGRATED WATERSHED MANAGEMENT PROJECT

IWMP – I

2009 – 2010

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) Kemragre
Name of the Project	:	West Garo Hills – IWMP – I
Total Geographical Area	:	750.00 Ha.
Total Treatment Area	:	500.00 Ha
Total Project Cost	:	75.00 lakhs
Project Duration	:	5 Years
Project Implementing Agency	:	Soil & Water Conservation Territorial Division, Tura.

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CHAPTER I

INTRODUCTION AND BACKGROUND

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INTRODUCTION AND BACKGROUND

1.1 Project Background:

The Siksingwil (IWMP-I) 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 singwil and its tributaries flowing in a north to south direction. The total area is 750 Ha. With 500.00 Ha. to be treated under the Integrated Watershed Management Programme (IWMP I).

The Project area is located at a distance of about 16 km from Rongram C.& R.. D. and about 32 km from Tura the District Headquarter. One village is covered under the project. That is –

1 Kemragre

1.2 Micro-watershed Information:

The total area of the micro-watershed is 750.00 Ha., with 500 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 Ranggira village have one road connectivity. The farmers are all marginal and 40 households are below the poverty line, which is 86.95% of the total households. Jhum cultivation is practiced by most of the inhabitants of these villages on the slopes. Even though the area receives ample rainfall during the monsoons, there is acute shortage of water during the dry seasons and the villagers have to travel long distances for fetching water even for domestic use.

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

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

- i. MGNREGS
- ii. Total Sanitation Campaign(TSC)

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 32 km from Tura, the District Headquarter. The geographical location is between $90^{\circ} 07'$ to $90^{\circ} 08' 10''$ E Longitude and $25^{\circ} 35'$ to $25^{\circ} 36' 18''$ N Latitude. There is 1 village within the Watershed area which is as follows –

1. Kemragre

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 340m to a high of 600 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 55 %, and can reach up to 100%.

Table 2.1: Physiographic details

Elevation (metres)	Slope Range (%)	Order of watershed Sub/Micro-watershed	Major streams	Topography
340 m to 600m	<1% - >50%	First Order	Siksingwil	Strongly Sloping

2.3 Drainage: The major stream draining the micro-watershed is the siksingwil which is a 1st order stream flowing in south to west direction. The slopes of the micro-watershed are dissected by numerous small tributaries flowing to singwil.

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 I	Water erosion:				
				a	Sheet	130	2000-3000	450
				b	Rill	90	2000-3000	350
				c	Gully	10	2000-3000	50
				Sub total				
				Wind erosion		Nil	Nil	Nil

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

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

1	2	3	4	5	6	7		8	9	
Sl. No.	Name of State	Name of the Agro-climatic zone	Area (in ha)	Names of the districts	Names of the Projects	Major soil types		Average annual rainfall in mm (preceding 5 years' average)	Major crops	
						a) Type	b) Area (ha)		a) Name	b) Area (ha)
1	Meghalaya	Western Slopes and Valley	750 Ha	West Garo Hills	West Garo Hills – IWMP – I	Deep, excessively drained, coarse – loamy soil on moderately steep side slopes of hills having loamy surfaces with severe erosion hazard and stoniness associated with moderately deep, excessively drained, loamysoils on gently sloping hill tops with very severe erosion hazard and slight stoniness	750 Ha	9000 mm	Betel nut	150
									Betel leaf	50
									Oranges	30
									Ginger	60
									Chilli	20
								Total		310.00 Ha

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

Table 2.4: Crop yield and production

Crops	Area (ha)	Average Yield (Qtl) per ha.	Total Production (Qtl.)
Ginger	50	30	1500
Millet	15	10	150
Yam	25	25	625
Chilli	25	20	500
Tapioca	40	20	800
Betel nut	50	25	1250
Betel leaf	20	5	100
Oranges	10	10	100

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

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

Demographic Status: The total households in the watershed project is 46 with a total population of 132, of which 63 are male and 69 are female.

Infrastructure facilities :

- 2.1.1 *Roads:* The Project Area is connected by a seasonal road. The Project area depends entirely on the kutcha road connected either to Rongram
- 2.1.2 *School:* there are only 1(one) L.P School within the Project Area run by the state Government.
- 2.1.3 *Electricity :* Ther is no connection and the village is yet to have electricity
- 2.1.4 *Health :* Ther is no Health Centre nearby and the entire local population have to either depends on facilities available at Asanang P.H.C. or Tura.
- 2.1.5 *Water Supply :* 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 Rongram. However, the main market where the people sell their produce is at 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 I	(i)	No. of villages connected to the main road by an all-weather road.	1 no.			
		(ii)	No. of village provided with electricity	nil			
		(iii)	No. of households without access to drinking water	10 nos.			
		(iv)	No. of educational institutions: Primary (P)/ Secondary (S)/ Higher Secondary (HS)/ Vocational institution (VI)	(P)	(S)	(HS)	(VI)
				1 No.	-	-	-
		(v)	No. of village with access to Primary Health Centre	Nil			
		(vi)	No. of village with access Veterinary Dispensary	Nil			
		(vii)	No. of village with access Post Office	Nil			
		(viii)	No. of village with access Banks	Nil			
		(ix)	No. of village with access Markets/ mandis	Nil			
		(x)	No. of village with access Agro-Industries	Nil			
		(xi)	Total quantity of surplus milk	Nil			
		(xii)	No. of milk collection centres (e.g. Union (U)/ Society (S)/ Private agency (PA)/ Others (O))	(U)	(S)	(PA)	(O)
				Nil	Nil	Nil	Nil
		(xiii)	No. of villages with access to Aganwadi Centres	1 No.			
		(xiv)	Any other facilities with no. of villages (please specify)	Nil			

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

Table 2.6: Existing livestock population

Type of Animal	Population
Piggery	35
Poultry	379
Cattle	218
Goatery	26

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 I	(i) Large	-	-			
		(ii) Small	-	-			
		(iii) Marginal	41	42	-	10 Ha	10 Ha
		(iv) Landless	5	4	-	-	-
		Sub - Total	46	46		10 Ha	10 Ha

Table 2.5: Common Property Resources in the Project Area

1	2	3	4				5			
Name of District	Name of the Projects	CPR Particulars	Total Area (ha) Area owned/ In possession of				Area available for treatment (ha)			
			Pvt. Person	Govt. (specify deptt.)	PRI	Any other (Community)	Pvt. Person	Govt. (specify deptt.)	PRI	Any other (Community)
West Garo Hills	West Garo Hills – IWMP I	Agri. Land	80.40	-	-	-	20.00	-	-	-
		Horti.	90.90	-	-	-	35.00	-	-	-
		Current jhum		-	-	68.40	-	-	-	68.40
		Forest open area		-	-	509.20	-	-	-	250.20
		Open scrub Forest		-	-	-	-	-	-	126.10
			171.30			707.70	55.00			444.70

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

a) Horticultural plantation	=	198.00 Ha
b) Agricultural land-crop land-kharif crop	=	60.00 Ha
c) Tree clad Area-open	=	145.00 Ha
d) Wastelands open scrub	=	<u>347.00 Ha</u>
Total	=	750.00 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

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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. 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	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	yes
	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	yes
	3. Drainage	Yes
	4. Soil (Soil nutrient status)	Yes
	5. Land use	Yes
	6. Ground water status	No
	7. Watershed boundaries	Yes
	8. Activity	Yes
	Crop simulation models [#]	No
	Integrated coupled analyzer/ near infrared visible spectroscopy/ medium spectroscopy for high speed soil nutrient analysis	No
	Normalized difference vegetation index (NDVI)#	Yes
	Weather Stations	No
B.	Inputs	
	1. Bio-pesticides	No
	2. Organic manures	Yes
	3. Vermi-compost	Yes
	4. Bio-fertilizer	No
	5. Water saving devices	Yes
	6. Mechanized tools/ implements	No
	7. Bio-fencing	No
	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 I	(i) Type of organization#	Government
		(ii) Name of organization	Soil & Water Conservation (T) Division, Tura
		(iii) Designation & Address	Tura
		(iv) Telephone	03651 - 222352
		(v) Fax	
		(vi) E-mail	

3.3 Institution Building

i) Watershed Committee (WC)

The Watershed Committee of the siksingwil, IWMP I was constituted with the active involvement of the villagers with strong support of the Traditional Institutions (Village Council). The siksingwil 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 – I	Siksingwi I		President	M	-	ST									VIII	A to I
				Secretary	M	-	ST									B.E	A to I
				Member	7 M	-	ST									Cl – VII	Do
				Member	2 F	-	ST										Do
				Member													

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

ii) Self Help Group

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

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 I	-				(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 I	3.00 Lakh	Construction of Spring Chamber Construction of Causeway Link Road	0.60 1.75 0.60	3.00	-	-	-

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 I	1 no. W/C 8 nos. Watershed Committee members.	5 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 capac ity	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 (m ³)	Estima ted cost
1	Meg hala ya	West Garo Hills	West Garo Hills – IWMP I	(i) Spring Chamber	-	-	-	-	-	-	-	1	-	4 m ³	0.60	3	-	12.00 m ³	1.50
				(ii) Pond	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				(iii) Lake	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				(iv) Check Dam	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				(v) W/H Farm Pond	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				(vi) Ddug out Pon	-	-	-	-	-	-	-	1	0.50	12.00 m ³	0.50	4	2.00	48.00 m ³	2.00
				(vii) Any others (please specify)															
			Total									2	0.50	16m³	1.10	7	2.00	60.00 m³	3.50

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																	
				(ii)Bore wells																			
				(iii)Any others (Pl. specify)			Nil			Nil		Nil			Nil		Nil		Nil		Nil		
				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 I							

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	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 I	130.00 Ha	18.00	362.0 Ha	18.60	-	-	6.00 Ha	0.90	-	-	-	-	Piggery Poultry	6.85	2.00 Ha.	2.90	-	-	-	-	47.25

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.	10		4.0		4.00	3 yrs							
		Bench terracing	-	D	-	√	-	-	Indiv.	6.0		0.9		0.90	3 yrs							
		Irri. Dam		D		√			UG	6	3.6	2.4		6.00	3 Yrs							
		W/H Farm Pond		D		√			Indiv.	5	3.0	2.0		5.00	3 yrs							
		Prot. Wall		D		√			UG	7	2.1	1.4		3.50	3 yrs							
		Earthen Channel		D		√			UG	150 mts.		0.1		0.10	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
-	250.00	-	-	-	-	-	-	-	18600	9800	8800	18600	-	46	39	7	46

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

1	2	3	4			5			6	7				8			
Dist rict	Pro ject	Name of structure/ work	Type of treatment			Type of land			Executing agency	Target				Achievement			
			(i) Ridge area (R)	(ii) Draina ge line (D)	(iii) Land dev. (L)	(i) Priv ate	(ii) Com muni ty	(iii) Other s (pl. speci fy)	(i) UG (ii)SHG (iii) Others (pl. specify)	Area (ha)	No. of plants	Estimat ed cost (Rs. in lakh)	Expecte d month & year of comple- tion (mm/ yyyy)	Area (ha)	No. of plant s	Expendi- ture incurred (Rs. in lakh)	Actual month & year of comple-tion (mm/ yyyy)
		Afforestation					✓			50.00 Ha.		7.50	3 yrs	50.0 0 Ha.		7.50	3 yrs
		Horticulture				✓				70.00 ha		10.50	3 yrs	70.0 0 ha		10.50	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	S C	ST	Other s	Women	Total	SC	ST	Others	Women	Total
-	-	-	-	-	-	7500	4500	3000	7500	-	46	39	7	46
-	-	-	-	-	-	-	--	-	-	-	-	-	-	-
-	-	-	-	-	-	-	--	-	-	-	-	-	-	-
-	-	-	-	-	-	-	--	-	-	-	-	-	-	-
-	-	-	-	-	-	-	--	-	-	-	-	-	-	-
-	-	-	-	-	-	10500	6300	4200	10500	-	46	39	7	46

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	Siksing wil IWMP I	Tailoring – units			10	Individual	0.80	3 yrs		
		Carpentry			17 units	SHG's /Individual	0.85	3 yrs.		
		Carpentry	17			Indiv.	0.85	3 yrs		
		Piggery Farming	11			SHG/Indiv.	4.40	3 yrs		
		Vermi-Composting								
		Kitchen gardening	15		8	Indiv.	3.45	3 yrs		
		Poultry	7			SHG/Indiv.	2.45	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	
West Garo Hills	IWMP - I	Kemragre	CPR	Maint. & Repairing of CPR	-	3.75	-	(5%) 3.75	-	-	-	-	-	-	3.75

CHAPTER V
PROJECT PHASING & BUDGETING

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 I	2010-11	2012-13	2016-17	875.0 Ha	75.00 Lakh	siksingwil (Reaches)	188.0 Ha	Nil	25.00 Ha.	-	60.00 Ha.	110.0 Ha.	35.00 Ha.	332.00 Ha.	875.0 Ha

CHAPTER V
PROJECT PHASING & BUDGETING

ACTION PLAN OF SIKSINGWIL 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 : 500.00 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.
I	<u>Management Cost :</u>												
A	Administrative Cost : 10 %	-	-	2%		5%		3%		-	-	10%	
	i) Honorarium of 1 WDT Member @ Rs.8000/- per month	-	-	-	0.16	-	0.96	-	0.48	-	-	-	1.60
	ii)Honorarium of watershed Committee Chairman @ Rs.500/- per month	-	-	-	0.06	-	0.06	-	0.06	-	-	-	0.18
	iii) Honorarium of WCM @ Rs.200/- per member per month	-	-	-	0.216	-	0.216	-	0.216	-	-	-	0.648
	iv) Honorarium of Chartered Accountant	-	-	-	0.16	-	0.20	-	0.20	-	-	-	0.56
	v) TA/DA of Field Asst. @ Rs.5000/- per month	-	-	-	0.30	-	0.60	-	0.30	-	-	-	1.20
	vi) Hiring Charges of Office Building @ Rs.1000/- per month	-	-	-	0.12	-	0.12	-	0.12	-	-	-	0.36
	vii) Hiring Charges of Vehicles @ Rs.5000/- per month	-	-	-	0.30	-	0.60	-	0.60	-	-	-	1.50
	viii)Office expenses	-	-	-	0.184	-	0.994	-	0.274	-	-	-	1.452
	Total Of 'A'			2%	1.50	5%	3.75	3%	2.25			10%	7.50
	<u>Preparatory Phase :</u>												
B	Entry Point Activities ; 4 %		4%									4%	
	i) Construction of Spring Chamber @ Rs. 60000/- per no.		0.60										0.60
	ii) Link Road @ Rs130000/- per Km	0.5	0.65	-	-	-	-	-	-	-	-	0.5	0.65
	ii) Construction of Causeway @ Rs.175000/- per no.	1	1.75	-	-	-	-	-	-	-	-	1	1.75
	Total of 'B'		4%	3.00								4%	3.00

...C.O...

1	2	3	4	5	6	7	8	9	10	11	12	13	14
C.	Institution & Capacity Building ; 5 %	1%		2%		1%		1%				5%	
	i) Awareness Campaign	-	0.20	-	0.20	-	0.15	-	0.20	-	-	-	0.75
	ii) Exposure visits off-campus	-	-	-	0.50	-	0.30	-	0.35	-	-	-	1.15
	iii) Capacity Building of SHGs/UGs	-	0.20	-	0.40	-	0.20	-	0.20	-	-	-	1.00
	iv) Capacity Building of WC members	-	0.15	-	0.40	-	0.10	-	-	-	-	-	0.65
	v) Capacity Building of WDT/W Volunteer	-	0.20	-	-	-	-	-	-	-	-	-	0.20
	Total of 'C'	1%	0.75	2%	1.50	1%	0.75	1%	0.75			5%	3.75
D.	Detail Project Report (DPR) - 1%	1%										1%	
	i) Cost of Resources Inventories works	-	0.25	-	-	-	-	-	-	-	-	-	0.25
	ii) Cost of PRA	-	0.10	-	-	-	-	-	-	-	-	-	0.10
	iii) Cost of Land use survey	-	0.25	-	-	-	-	-	-	-	-	-	0.25
	iv) Cost of formulating	-	0.15	-	-	-	-	-	-	-	-	-	0.15
	Total of 'D'	1%	0.75									1%	0.75
E.	i) Monitoring - 1%	-	-	-	0.15	-	0.375	-	0.225	-	-	1%	0.75
				0.2%	0.15	0.5%	0.375	0.3%	0.225			1%	0.75
F.	ii) Evaluation - 1%	-	-	-	0.225	-	0.375	-	0.15	-	-	1%	0.75
	Total of 'E'			0.3%	0.225	0.5%	0.375	0.2%	0.15			1%	0.75
	Total of I (A to F)	6%	4.50	4.5%	3.375	7%	5.25	4.5%	3.3750			22%	16.50
II	<u>Watershed Works Phase : 50 %</u>			7.50%		35%		7.50%				50%	
A.	Arable Land Treatment :												
	iii) Terracing - @ Rs.15000/- ha.	-	-	2.00	0.30	4.00	0.60	-	-	-	-	6.00	0.90
	Total of 'A'				0.30		0.60						0.90
B.	Non-Arable Land Treatment :												
	i) Afforestation - @ Rs.15000/- per ha.												
	Prelim. Works @ Rs.6000/- per Ha.	-	-	-	-	50.00	3.00	-	-	-	-	50.00	3.00
	1st year Planting @ Rs. 9000/- per Ha.	-	-	-	-	-	4.50	-	-	-	-	-	4.50
	ii) Rubber Plantation - @ Rs.15000/- per ha.	-	-	-	-	-	-	-	-	-	-	-	-
	Prelim. Works @ Rs.6000/- per Ha.	-	-	-	-	70.00	4.20	-	-	-	-	70.00	4.20
	1st year Planting @ Rs. 9000/- per Ha.	-	-	-	-	-	6.30	-	-	-	-	-	6.30
							18.00						18.00

1	2	3	4	5	6	7	8	9	10	11	12	13	14
C.	Drainage Line Treatment :												
i)	C.C. Irrigation Dam @ Rs. 100000/- per no.	-	-	2	2.00	2	2.00	2	2.00	-	-	6	6.00
ii)	W/H Farm Pond @ Rs.100000/- per no.	-	-	2	2.00	2	2.00	1	1.00	-	-	5	5.00
iii)	Dug out-cum-Fishery Pond @ Rs. 40000/- per no.	-	-	2	0.80	4	1.60	4	1.60	-	-	10	4.00
iv)	Protection Wall @ Rs.50000/- per no.	-	-	1	0.50	4	2.00	2	1.00	-	-	7	3.50
v)	Earthen Irrigation Channel @ Rs.50/-per R/m	-	-	50.00	0.025	100.00	0.05	50.00	0.025	-	-	150	0.10
Total of 'C'					5.325		7.65		5.625				18.60
Total of II (A to C)				7.5%	5.625	35%	26.25	7.5%	5.625			50%	37.50
III	<u>Livelihood Activities for Assetless Person - 10%</u>			1%		3%		6%				10%	
i)	Kitchen Garden @ Rs.15000/- per unit	-	-	2	0.30	8	1.20	13	1.95	-	-	23	3.45
ii)	Weaving @ Rs. 12000/- per unit	-	-	2	0.24	4	0.48	14	1.68	-	-	20	2.40
iii)	Carpentry @ Rs. 5000/- per unit	-	-	1	0.05	5	0.25	11	0.55	-	-	17	0.85
iv)	Tailoring @ Rs. 8000/- per unit	-	-	2	0.16	4	0.32	4	0.32	-	-	10	0.80
Total of III				1%	0.75	3%	2.25	6%	4.50			10%	7.50
IV	<u>Production System & Micro Enterprises - 13%</u>			1%		5%		7%				13%	
i)	Piggery @ Rs. 40000/- per unit	-	-	1	0.40	5	2.00	5	2.00	-	-	11	4.4
ii)	Poultry @ Rs. 35000/- per unit	-	-	1	0.35	5	1.75	1	0.35	-	-	7	2.45
iii)	Supply of Fingerlings @ Rs.1000/- per unit	-	-	-	-	-	-	5	0.50	-	-	5	0.50
iv)	Fishery Pond @ Rs. 40000/- per unit	-	-	-	-	-	-	6	2.40	-	-	6	2.4
Total of IV				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
V	<u>Consolidation & withdrawal Phase - 5 %</u>									5%		5%	
i) Repairing & maintenance of CPR's		-	-	-	-	-	-	-	-	-	1.75	-	1.75
ii) Improving the sustainability of various intervention		-	-	-	-	-	-	-	-	-	1.00	-	1.00
iii) Documentation of successful experience and preparation of Completion Report.		-	-	-	-	-	-	-	-	-	1.00	-	1.00
Total of V										5%	3.75	5%	3.75
Grand Total													
(I + II + III + IV + V)		6%	4.50	14%	10.50	50%	37.50	25%	18.75	5%	3.75	100%	75.00

Deputy Commissioner,
West Garo Hills, Tura
Meghalaya.

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

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)		
		Central Share	State Share	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 I	67.50	7.50	NREGS	3.00	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	78.00

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 I	State Bank of India, Tura		Saving	Shri S.Ch. Sangma, DS&WCO	siksingwil Watershed Committee	Axis Bank Tura	911010006289810	Saving	Chairman W.C, Secretary W.C.

Details of Convergence of IWMP with other Schemes:

	1	2	3	4	5	6	7
Sl. No.	District	Names of projects	Names of Departments with Schemes converging with IWMP	Fund made available to IWMP due to convergence (Rs. in lakh)	Name of activity/task/structure undertaken with converged funds	Reference no. of activity/ task/ structure in DPR [@]	Level at which decision for convergence was taken ^{\$}
					(a) Structures (b) livelihoods (c) Any other (pl. specify) [#]		
1	West Garo Hills	West Garo Hills – IWMP I	* Community Rural Development Department NREGS	2.00	1. Protection wall 2. Rubber Plantation 3.Irrigation Dam 4.W/H Farm Pond 5.Dugout Pond	-	Block Level & District Level

Note:

(i) Kemragre

Wages – 12.32;

Material– 3.00;

Protection wall
Rubber Plantation
Irrigation Dam
W/H Farm Pond
Dug out Pond

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 [#]	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	Umran	Director	Don-Bosco	Agri-Horti, Animal Husbandry, Entrepreneurship	NA					
4		ICAR	Umiam	Director	Central Govt.	Do	NA					
5		VTC	Kyrdem Kulai	Director	State Govt.	Animal Husbandry	NA					
6		Fruit Garden	Shillong	Director	State Govt.	Agri-Horti, Fruit Processing	NA					

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

- # Central govt. Dept./ State govt. Dept./ Autonomous Body/ Research Institutes/ Universities/ Others (pl. specify)
- \$ Capacity Building/ Agriculture/ Horticulture/ Animal Husbandry/ Pisciculture/ Remote Sensing/ Water conservation/ Ground water/ Forestry/ livelihoods/ entrepreneurship development/ others (pl. specify)
- @ The training institutes must fulfill the conditions mentioned in the operations guidelines.

- (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	10 Nos.	-	10 Nos.	-	5%	-	1%	-
DRDA/ZP cell	5 Nos.	-	5 Nos.	-				
PIAs	5 Nos.	-	5 Nos.	-				
WDTs	4 Nos.	-	4 Nos.	-				
UGs	5Nos.	-	5Nos.	-				
SHGs	6 Nos.	-	6 Nos.	-				
WCs	9 Nos.	-	9 Nos.	-				
GPs	-	-	-	-				
Community	100 Nos.	-	100 Nos.	-				
Others (Pl. specify)								

Table 6.3: Information, Education & Communication (IEC) activities for the year 2009 - 10 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	0.75	0.75	
2.	PRA Exercises	S&WC (T) Division	0.10	0.10	
3.	Exposure Visits	S&WC (T) Division	1.15	1.15	
4.	Capacity Building	S&WC (T) Division	1.85	1.85	

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.	Kemragre		100 %	3200	1300	4500		100 %	39	7	46		-	-	-	-

Table 7.2 Migration Details:

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

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

Table 7.3 Economic benefits accrued to women:

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

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

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

1	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-I									

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

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

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

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

Table 7.5 Water related outcomes:

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

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

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

Table 7.5.2 Status of Drinking water:

1	2	3			4			5
District	Name of the project	Availability of drinking water (no. of months in a year)			Quality of drinking water			Comments
		Pre-project	Post-project	Change in availability	Pre-project	Post-project	Change in quality	
West Garo Hills District	WGH-IWMP I	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 ^{\$}	through water conserving agronomic practices [#]	Any other (pl specify)	Total
West Garo Hills District	WGH-IWMP I					

* 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.
		Millet	-	30	-	15	-	450	-	30	-	15	-	450	-	50	-	30	-	1500
		Yam	-	25	-	20	-	500	-	25	-	20	-	500	-	40	-	40	-	1600
		Ginger	-	30	-	35	-	1050	-	30	-	35	-	1050	-	55	-	70	-	3850
		Tapioca	-	20	-	20	-	400	-	20	-	20	-	400	-	35	-	40	-	1400
		Betel nut	-	45	-	25	-	1125	-	45	-	25	-	1125	-	75	-	50	-	3750
		Betel leaf	-	10	-	15	-	150	-	10	-	15	-	150	-	20	-	30	-	600

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

Irri. – Irrigated Rf – Rainfed

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

1	2	3	4	5	6						7						8					
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 I	Betel leaf	-	-	-	-	-	-	120	-	28	-	3360	-	150	-	30	-	4500	-
			Total for the District																			

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

Irri. – Irrigated Rf – Rainfed

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

1	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 I	Jute	-	-	-	-	-	-	60 Ha	-	27	-	1620	-	120	-	29	-	3480	-
			Total for the District																			

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

Irri. – Irrigated Rf – Rainfed

Table 7.6.4 Increase/ Decrease in area under fodder:

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

* 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 I	5 yrs	-	2009 - 10	110 Ha	50 Ha	50 Ha	50 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 I	5 yrs	-	2009-10	188 Ha.	70 Ha.	70.00 Ha.	70.00 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 I	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	
ss West Garo Hills District	WGH-IWMP I	Milch- animals	218	165	0.66/-	-	-	-	436	350	0.14/-	
		Piggery	35	1400	2.10/-	-	-	-	70	2800	4.20/-	
		Poultry	379	560	0.84/-	-	-	-	758	1137	1.70/-	
	Total for all projects		632	2125	3.60				1264	4287	6.04	
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 I																	
		Kitchen Garden	3.45	3.45	23	-	3.45	-										
		Weaving	2.40	2.40	20	-	2.40	-										
		Carpentry	0.85	0.85	17	-	0.85	-										
		Tailoring	0.80	0.80	10	-	0.80	-										

(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 I															

* 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.)
West Garo Hills District	WGH-IWMP I	(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		-	18 nos.	
		Change in cropping/ land use pattern		-	-	
		Area under agricultural crop				
		i Area under single crop		-	-	
		ii Area under double crop		-	100 ha	
		iii Area under multiple crop		50 ha	100 ha	
		Net increase in crop production area				
		Increase in area under vegetation		-	100 ha	
		Increase in area under horticulture		-	150 ha	
		Increase in area under fuel & fodder				
		Increase in milk production		-	-	
		No. of SHGs		2 nos.	10 nos.	
		Increase in no. of livelihoods		-	12 nos.	
		Increase in income		-	45,000	
		Migration		-	-	
		No. of school going children		120 nos.	350 nos.	
		SHG Federations formed		-	-	
		Credit linkage with banks		-	15 nos.	
		Resource use agreements		-	5 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*

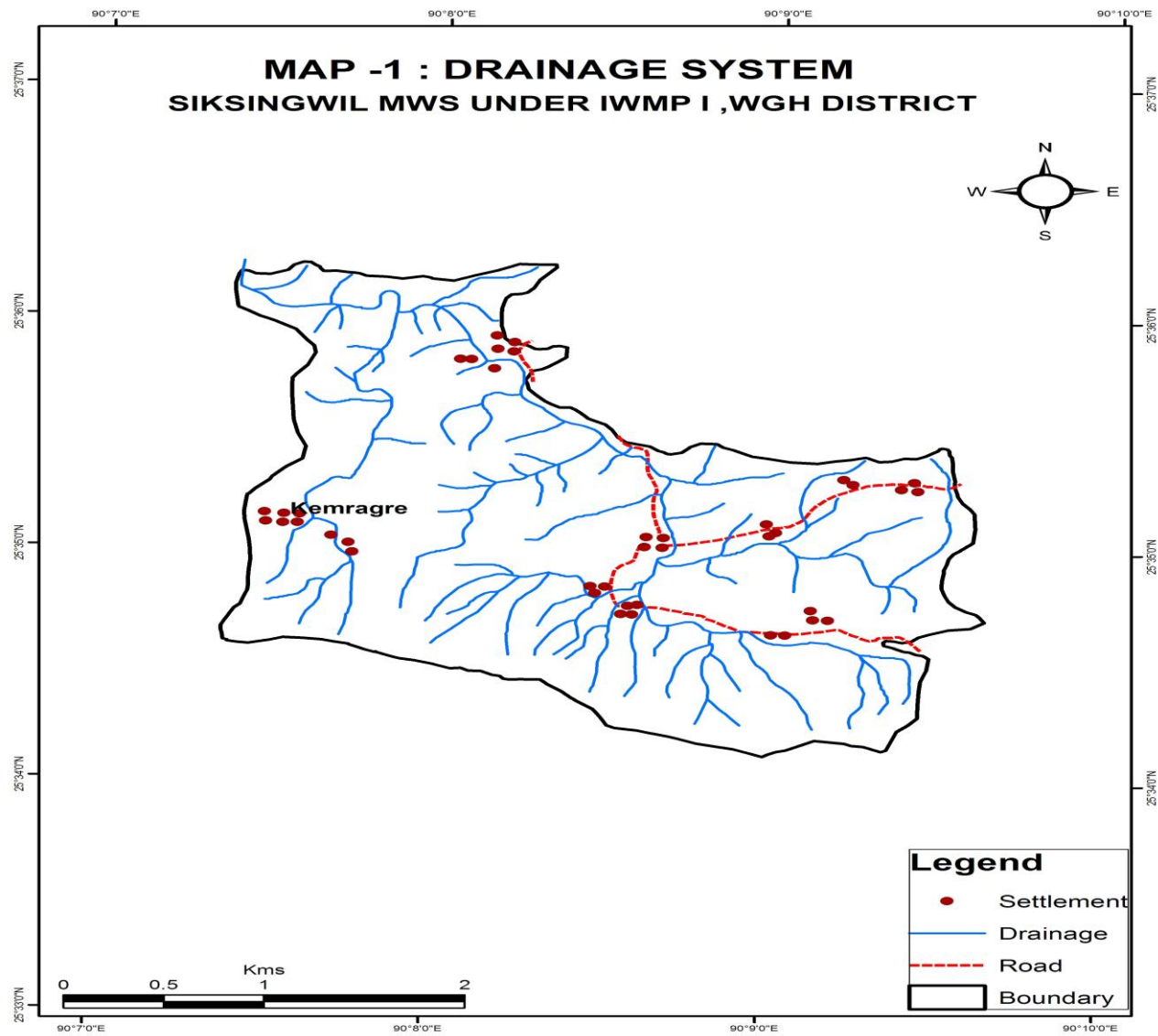
1	2	3	4	5	6	7	8	9	10
District	Name of project	Name of WC	Name of structure/ activity	Estimated cost (Rs.)	Expected quantifiable benefits (Rs.)	Expenditure incurred (Rs.)	Actual quantifiable benefit (Rs.)	Benefit: Cost ratio [#]	IRR
West Garo Hills District	WGH-IWMP I	Siksingwil	As per Treatment Plan	54.75	86.2	-	-	1:1.57	

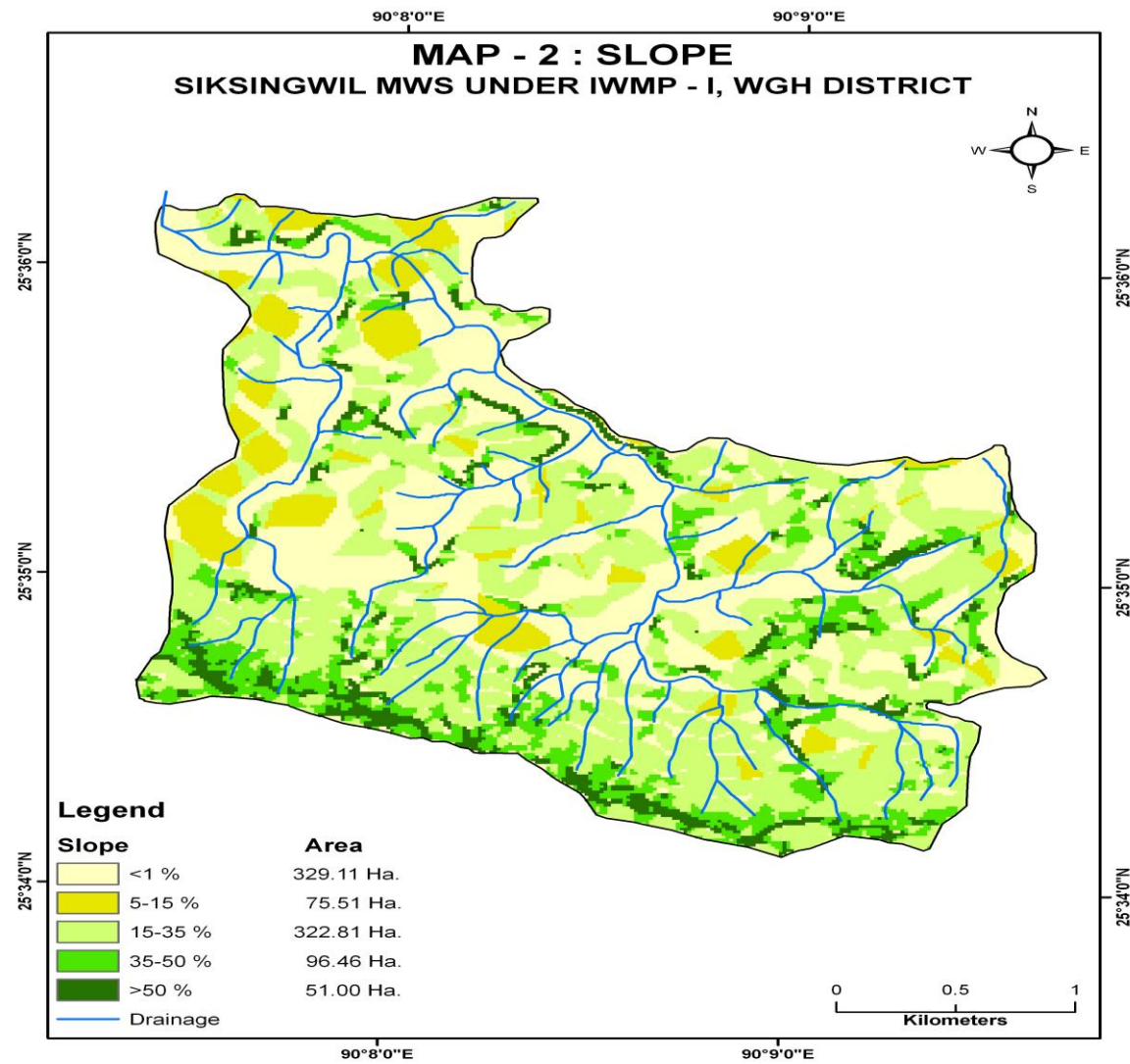
* from column no. 2, total no. of States implementing the programme, from column no. 3, total no. of Districts; from Column no. 4, no. of projects, from column no. 5, no. of WCs, from column no. 6, no. of structures/ activities, from column no. 7 to 10, category-wise# totals, may be mentioned at the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

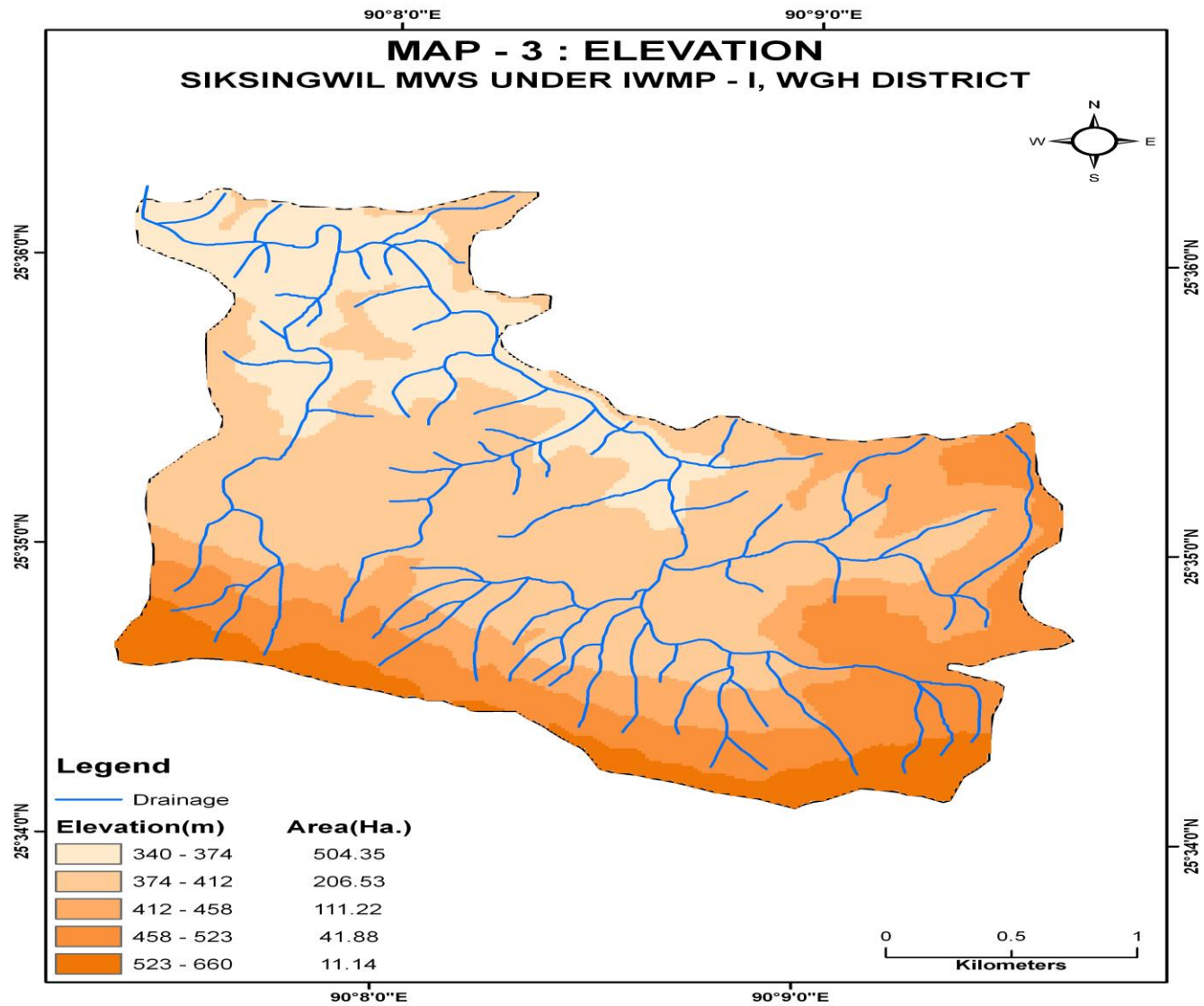
[#] B:C ratio more than 1 – cost effective
less than 1 – Not cost effective

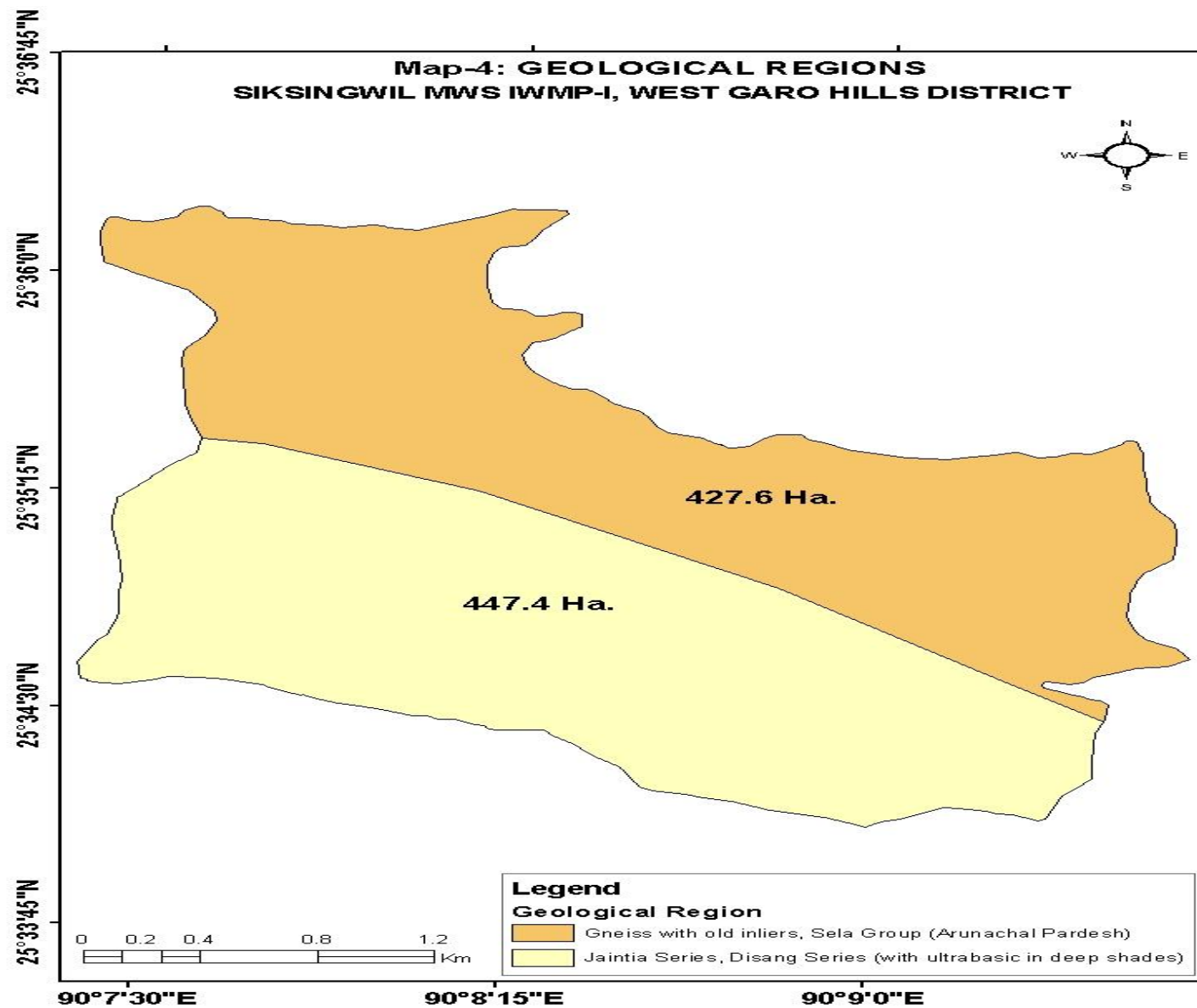
ANNEXURE I

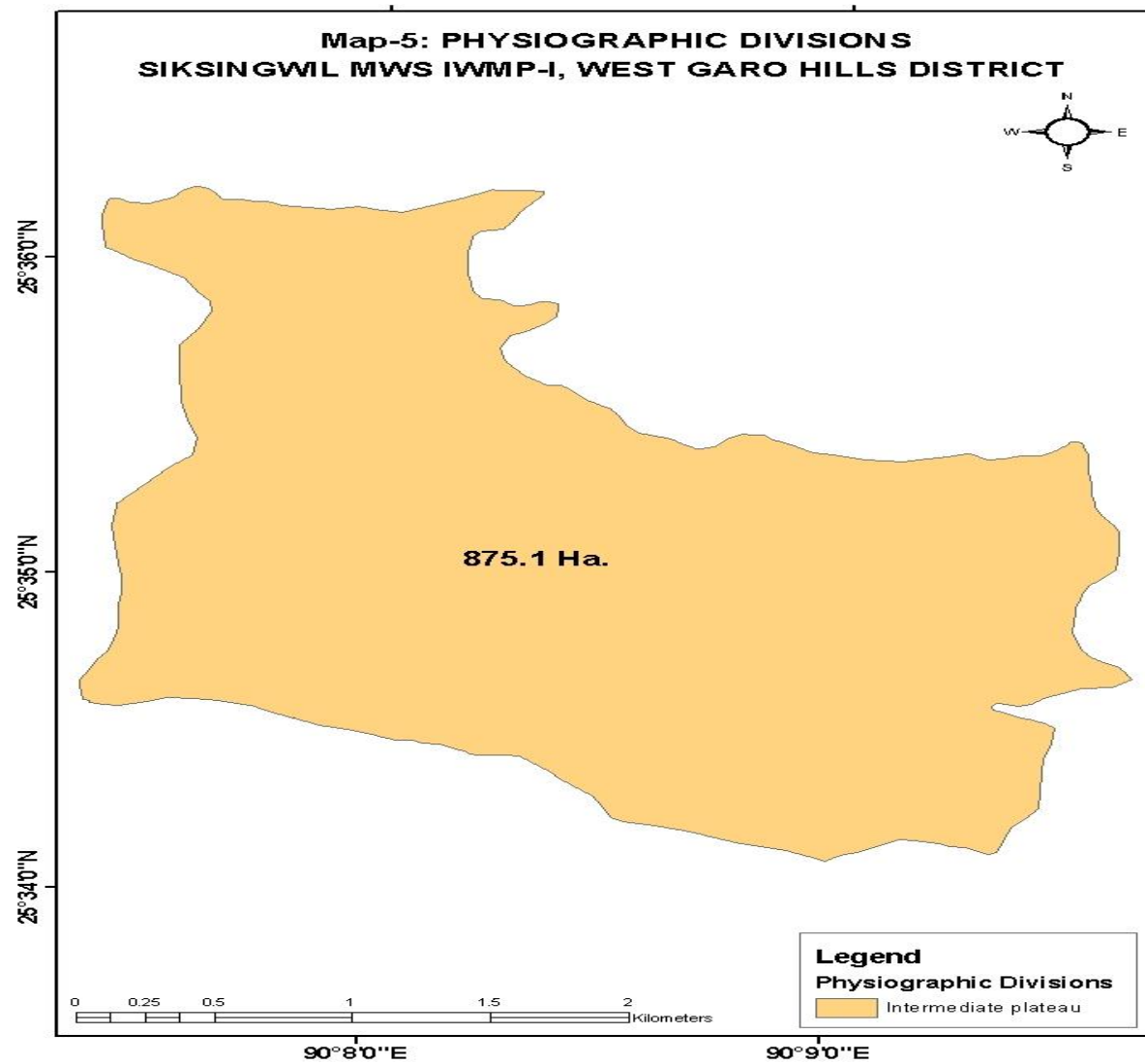
MAPS

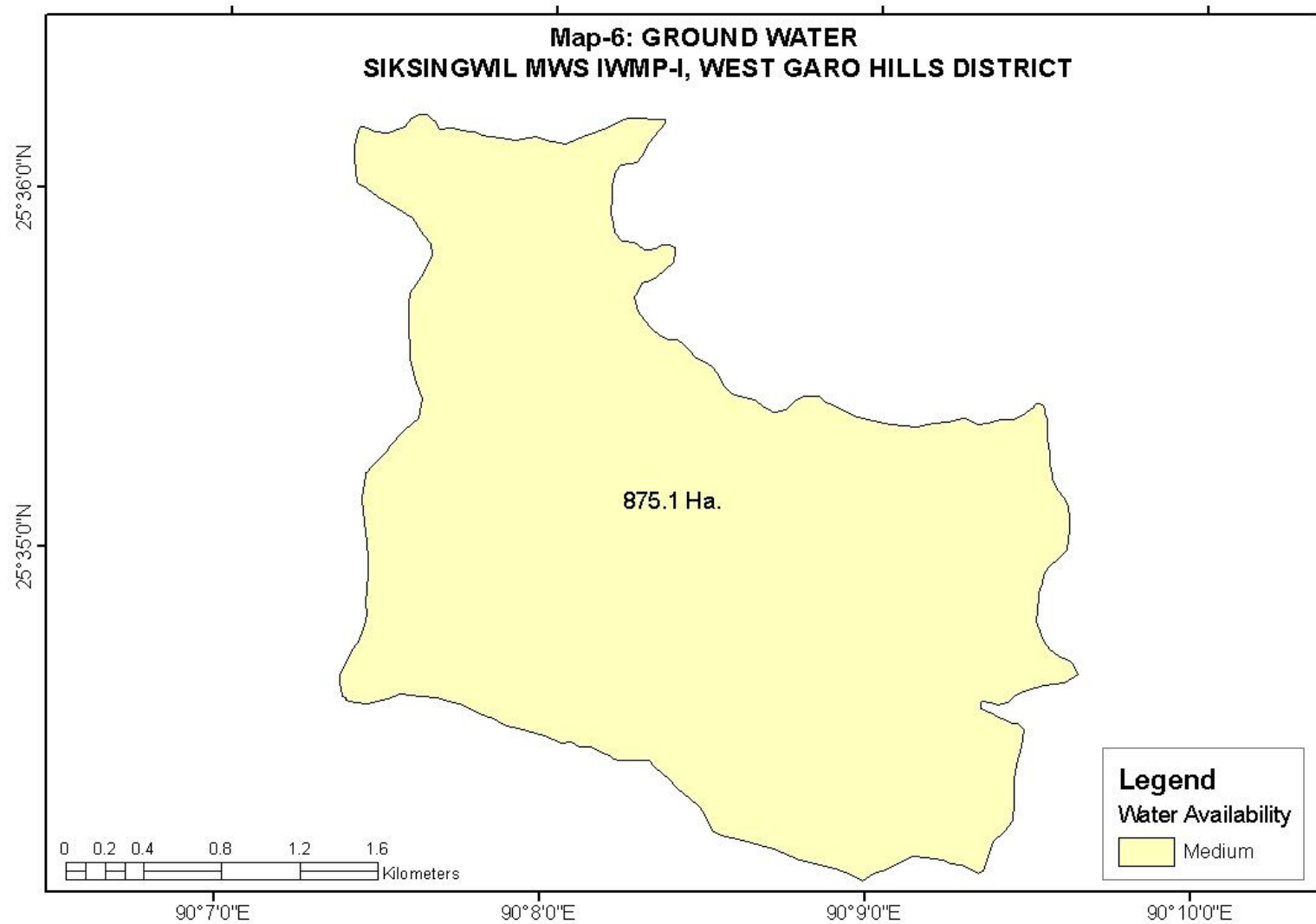


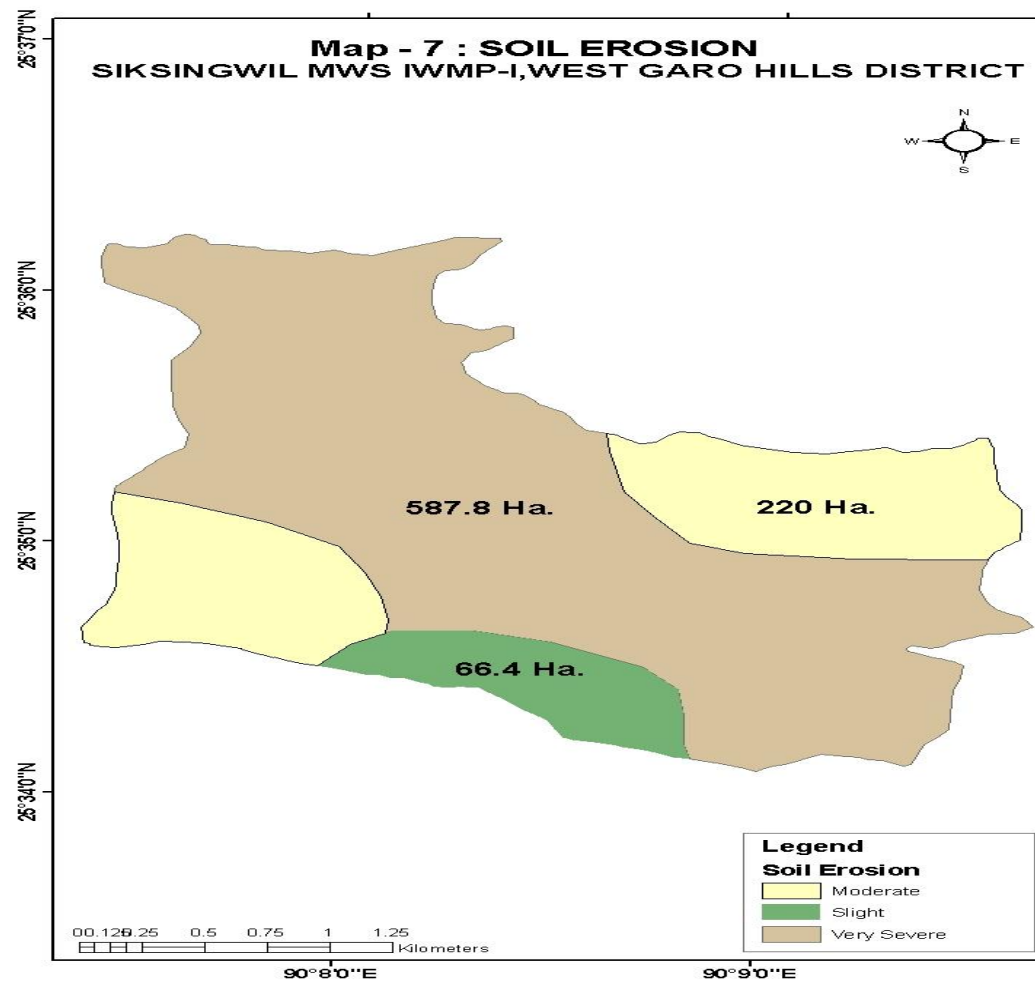


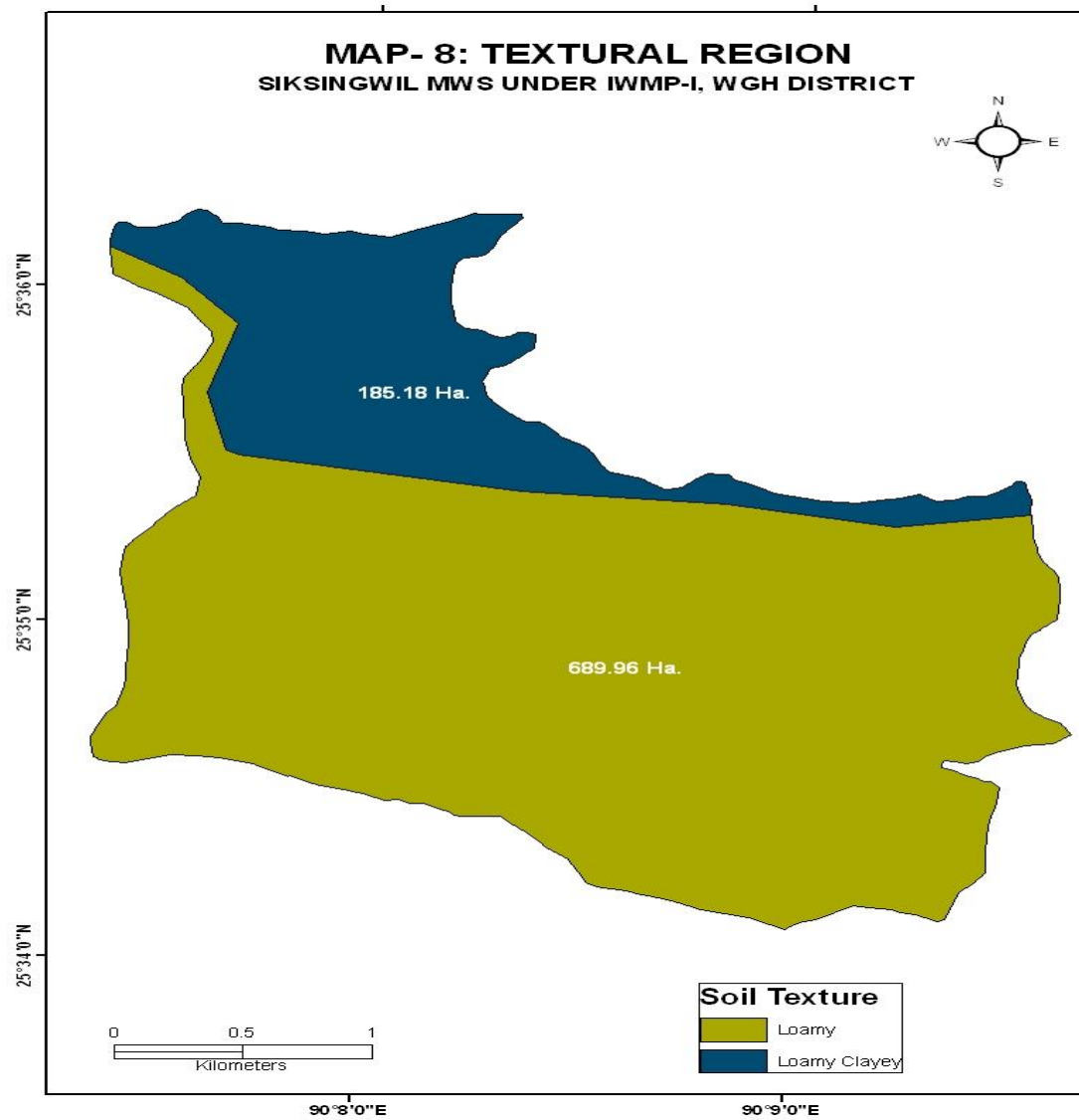


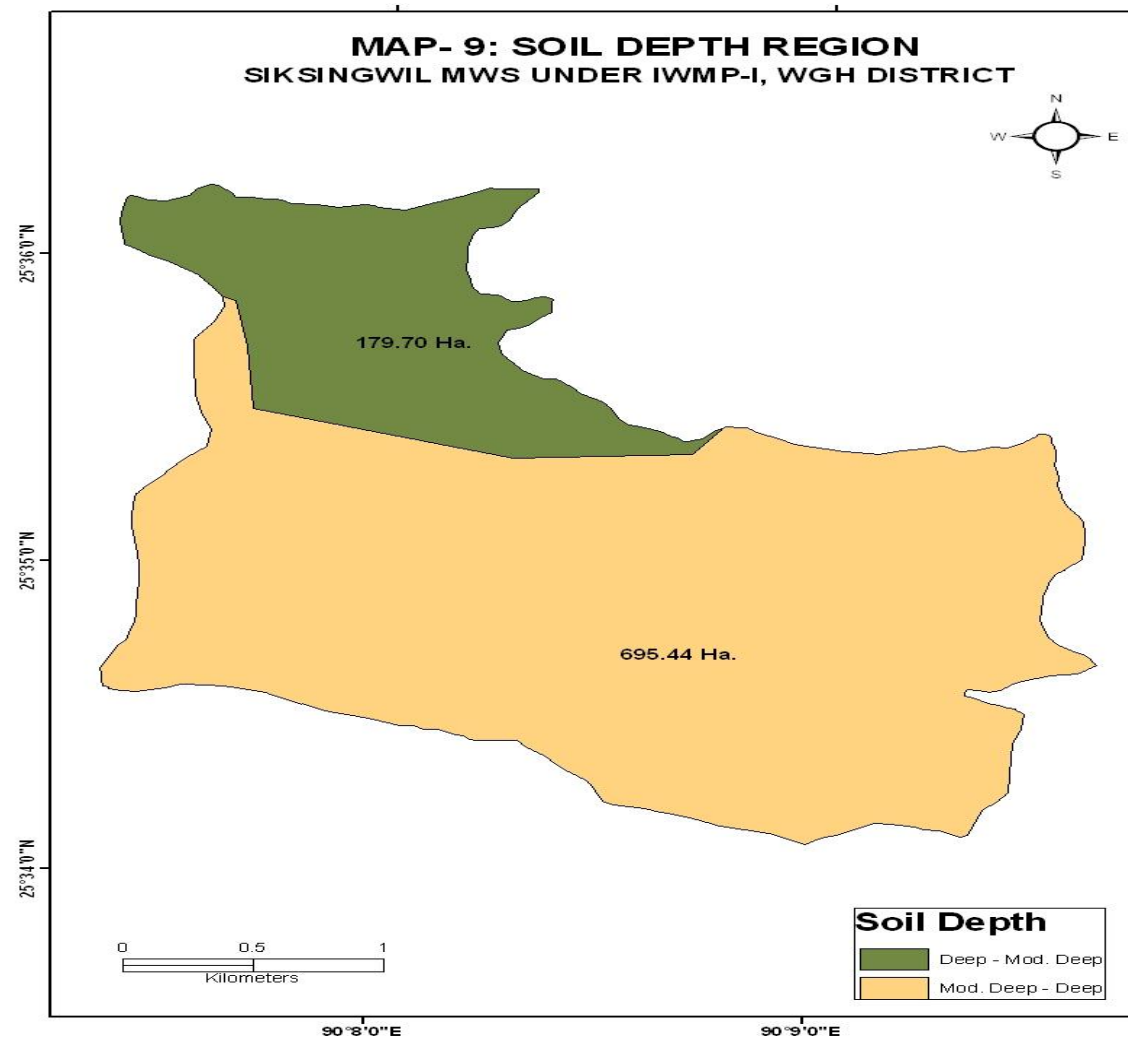


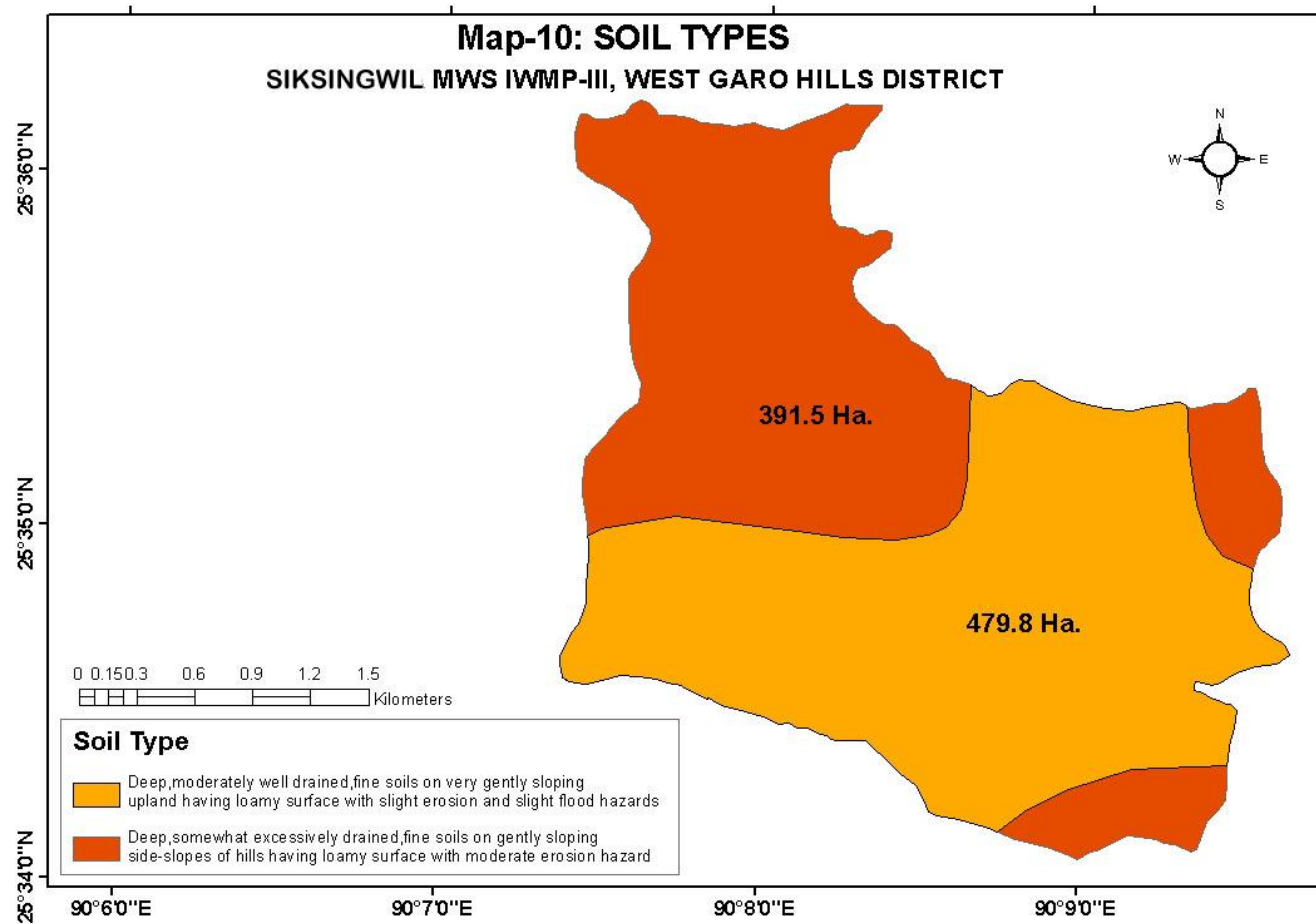


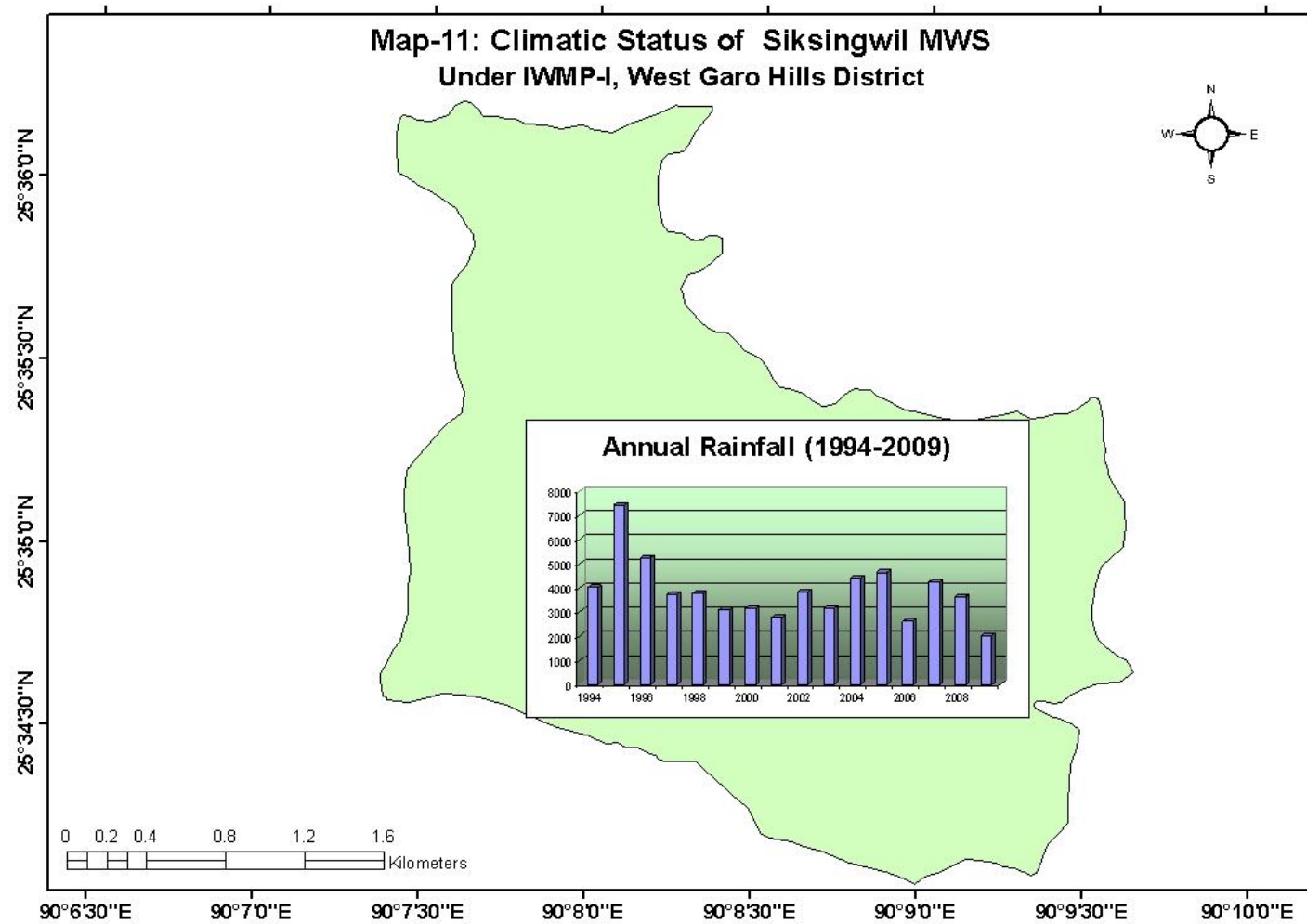


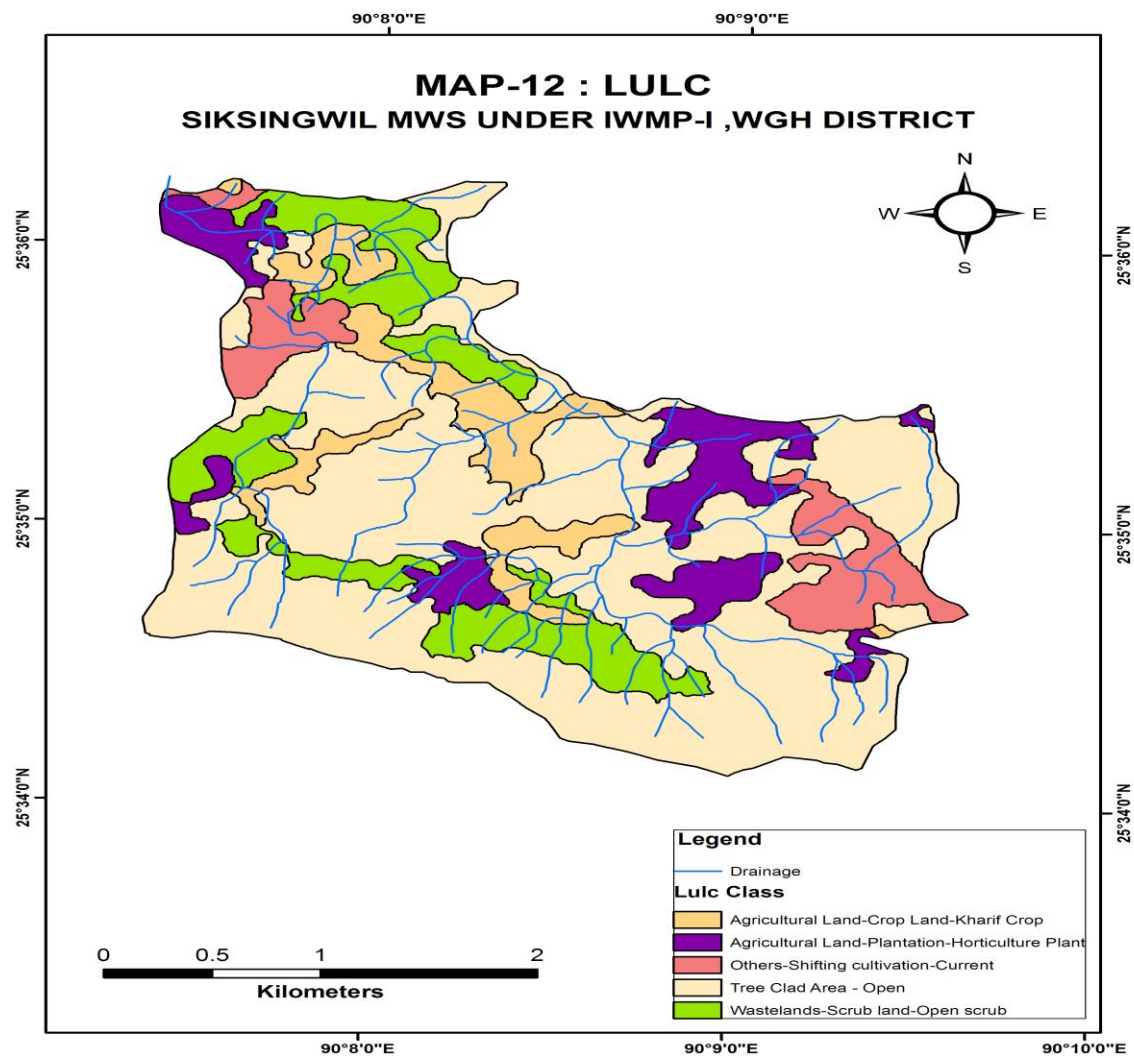




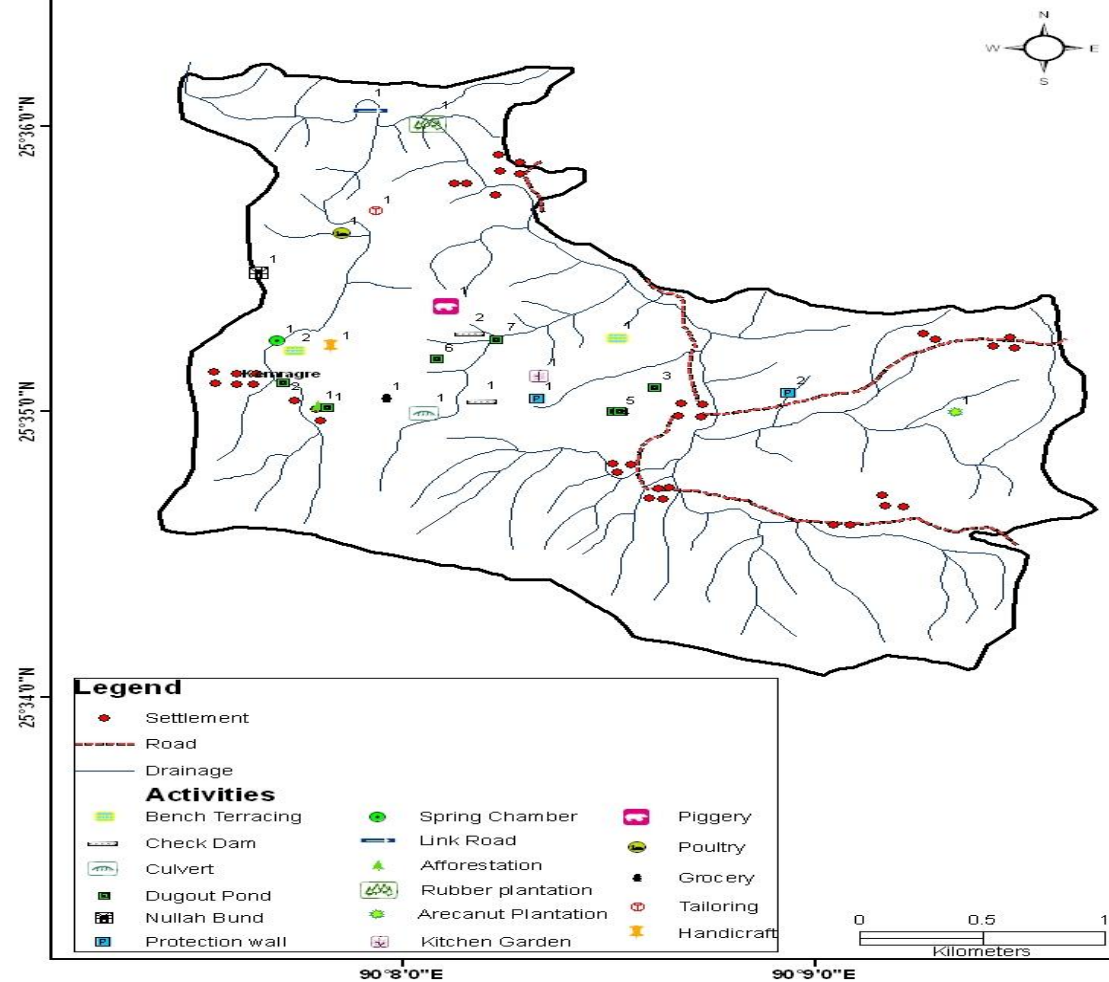








**MAP-13 : LOCATION OF PLANNED ACTIVITIES
SIKSINGWIL MWS UNDER IWMP-I, WEST GARO HILLS DISTRICT**



ANNEXURE II
COST ESTIMATES

MODEL NORM PER HECTARE FOR AGRO-HORTICULTURE WITH ARECANUT PLANTATION (INTEGRATED WATERSHED MANAGEMENT PROGRAMME)

Spacing 3.5 m x 2.35 m
Plant
density 1200 nos

A Preliminary Works

I. Site clearance	
6 mandays @Rs. 100/- per manday	600
Pit digging (pit size 0.45mx0.45mx0.45m) 1200 nos	
II. @Rs. 3/- each	3600
Total:	4200

B First year Planting

I. Cost of arecanuts 1200 nos @Rs. 1/- each	7200
Cost of planting 1200 nos @Rs. 2/- each = Rs. 2400.00 (Contribution	
II. from	
the beneficiaries)	
III. Weeding two times	
10 mandays @Rs. 100/- per manday = Rs. 2000	
(Contribution from the beneficiaries)	7200
Total:	7200

11400

(Rupees Eleven Thousand Four Hundred) only.

* The cost of norms in Arable Land for Arecanut Plantation has been worked out keeping in mind the demand for Arecanut planting by the farmers in the proposed projects. The crop also has consistency in generating income which will help the people in the watershed project to improve their economic condition. The cost of norms has been worked at the minimum by taking into account the expected beneficiary contributions by way of plantings and weedings.

ESTIMATE FOR THE CONSTRUCTION OF C.C. IRRIGATION DAM WITH DISPOSAL CHANNEL ACROSS _____ STREAM AT _____

(Rates as per P.W.D. S.O.R. for roads, bridges and E & D works 2007-2008).

- 1/134. Excavation for structures (earth work in excavation of the foundation of structures as per drawing and technical specification, including setting out, construction of shoring and bracing, removal of stumps and other detrious matters, dressing of sides and bottom and back filling with approved materials.)

(I) Ordinary soil.

(A) Manual means.

(i) Upto 3 m, depth.

$$\text{M/Dam : } 1 \times 8.00 \times 1.40 \times 1.05 = 11.76\text{m}^3$$

$$\text{W/wall : } 2 \times 2.50 \times 0.45 \times 0.50 = 1.13\text{m}^3$$

$$\text{G/wall : } 2 \times 3.00 \times 0.30 \times 0.50 = 0.90\text{m}^3$$

$$\text{T/wall : } 1 \times 6.00 \times 0.45 \times 0.60 = 1.62\text{m}^3$$

$$\text{Apron : } 1 \times 6.00 \times 3.00 \times 0.35 = 6.30\text{m}^3$$

$$\text{D/channel : } 1 \times 5.00 \times 1.30 \times 0.90 = 5.85\text{m}^3$$

$$\hline = 27.56\text{m}^3$$

@ Rs. 34/- m³ Rs. 937.04

- 2/103. Providing and laying of dry rubble flooring complete as per drawing and technical specifications.

$$\text{M/Dam : } 1 \times 8.00 \times 1.40 \times 0.10 = 1.12\text{m}^3$$

$$\text{Apron : } 1 \times 6.00 \times 3.00 \times 0.25 = 4.50\text{m}^3$$

$$\text{D/channel : } 1 \times 5.00 \times 1.00 \times 0.25 = 1.25\text{m}^3$$

$$\hline = 6.87\text{m}^3$$

@ Rs. 852/- m³ Rs. 5853.24

3/137. PCC 1 : 3 : 6 in foundation (plain cement concrete 1:3:6 nominal mix in foundation etc).

$$\text{M/Dam : } 1 \times 8.00 \times 1.40 \times 0.10 = 1.12\text{m}^3$$

@ Rs. 3232/- m³ Rs. 3619.84

4/141 . Plain cement concrete in open foundation complete as per drawing and technical specifications.

A. P.C.C. Grade M15 :

$$\text{M/Dam : } 1 \times 8.00 \times 1.20 \times 0.80 = 7.68\text{m}^3$$

$$1 \times 8.00 \times \frac{0.50 + 1.20}{2} \times 1.05 = 7.14\text{m}^3$$

$$2 \times 1.00 \times 0.50 \times 0.50 = 0.50\text{m}^3$$

$$\text{W/wall : } 2 \times 2.50 \times 0.30 \times 2.05 = 3.08\text{m}^3$$

$$\text{Deduct : } 1 \times 1.00 \times 0.30 \times 0.60 = (-)0.18\text{m}^3$$

$$\text{G/wall : } 2 \times 3.00 \times 0.25 \times 0.95 = 1.43\text{m}^3$$

$$\text{T/wall : } 1 \times 6.00 \times 0.30 \times 0.70 = 1.26\text{m}^3$$

$$\text{Apron : } 1 \times 6.00 \times 3.00 \times 0.10 = 1.80\text{m}^3$$

$$\text{D/channel : } 2 \times 5.00 \times 0.15 \times 0.98 = 1.47\text{m}^3$$

$$1 \times 5.00 \times 1.00 \times 0.10 = 0.50\text{m}^3$$

$$= 24.68\text{m}^3$$

@ Rs. 3630/- m³ Rs. 89588.40

/

GRAND TOTAL = Rs. 99998.52

Say, Rs. 1,00,000.00

(Rupees One lakh) only.

**ESTIMATE FOR THE CONSTRUCTION OF CAUSEWAY AT KEMRAGRE UNDER SIKSINGWIL
MICRO WATERSHED (IWMP) 2009 AS PER PWD SCHEDULE OF RATE FOR ROADS,
BRIDGES AND E& D WORKS FOR THE YEAR 2007-08**

1) Site preparation including jungle clearance, removal of stumps, burning and clearing the debris,
etc.,.....L/S=Rs 4535

2/134[A(i)] Excavation for structures(earthwork in excavation of foundation of structures as per
drawing and technical specification, including setting out, construction of shoring and
bracing, removal of stumps and other deleterious matter, dressing of sides and bottom
and backfilling with approved material)

Abutment= $2 \times 2.50 \times 1.75 \times 1.00 = 8.75$ 5 cum.

@ Rs 34/ cum.....=Rs 297.5

=Rs
298

3/141(B) Plain cement concrete in open foundation complete as per drawing and technical
specifications

PCC Grade M 20

Abutment (foundation)= $2 \times 2.50 \times 1.75 \times 1.00 = 8.75$.75 cum.

@Rs 4129/ cum.....=Rs 36129

3/141(B) Plain cement concrete in open foundation complete as per drawing and technical
specifications

PCC Grade M20

Causeway= $2 \times 9.00 \times 2.50 \times 0.40 = 18$ cum.

@ Rs 4129/ cum.....=Rs 74322

4/141.G(i). Plain cement concrete in open foundation complete as per drawing and technical
specification.

RCC Grade M 30

RCC slab=1x12.00x2.50x0.35=10.5 cum.

@ Rs 4648/cum.....=Rs 48804

5/78 Plastering with cement mortar (1:4) ,15 mm thick on brickwork in substructure
as per technical specification

Abutment=2x2.50x1.75x1.00=8.75

Causeway=2x9.00x2.50x0.40=18

Slab =1x12.00x2.50x0.35=10.5

Total =
37.25sqm

@ Rs 75/sqm.....=Rs 2793.75
=Rs 2794

Total= Rs
1,62,347 1,66,882
(+) 5% contingency Rs 8117.35

Grand total =Rs 1,74,000.35

Say, Rs. 1,75,000.00

(Rupees one lakh seventy five thousand)
only.

**ESTIMATE FOR CONSTRUCTION OF DUGOUT POND AS PER SCHEDULE
OF RATES FOR ROADS,BRIDGES AND E&D WORKS FOR THE YEAR 2007-2008**

1/130(i). Excavation in soil for dugout farm pond by manual means with lead upto 50m

Dugout Farm Pond

$$\begin{aligned}
 \text{Volume:} & \quad D/6 (AT) + 4(AM) + (AB) \\
 & \quad 2.5/6 (30.00 \times 15.00) + 4(28.00 \times 13.00) + (26.00 \times \\
 & \quad = 11.00) \\
 & \quad = 2.5/6(450+1456+286) \\
 & \quad = 913.33 \quad \quad \quad m^3
 \end{aligned}$$

.@Rs.34/- cum

Rs. 31053.22

6/37. Furnishing and laying of the live sods of perrennial turf forming grass on embankment slope,verges or other locations shown on the drawing including preparation of ground, fetching of sods and watering as per technical specification

2	x	30	x	2.5	150	m ²
2	x	15	x	2.5	75	m ²
					<u>225</u>	<u>m²</u>

.@Rs.41.00/sq.m

9225

40278.22

Grand Total

Say

Rs.

40,000.00

(Rupees Forty thousand)only.

**ESTIMATE FOR CONSTRUCTION OF EARTHEN DISTRIBUTION CHANNEL
AS PER SCHEDULE OF RATES FOR
ROADS, BRIDGES AND E&D WORKS FOR THE YEAR 2007-2008**

- 1/134. Excavation for structures (earthwork in excavation of the foundation of structures as per drawing and technical specification, including setting out, construction of showing and bracing, removal of stumps and deleterious matters, dressing of sides and bottom and

backfilling with appropriate materials)

I.A(i) Ordinary soil

Earthen Channel	1	x	1.00	x	1.10	x	1.35	1.49	m ³
.@Rs.34/- cum							Rs.	50.49	
							Rs.	50.49	
Grand Total						Say	Rs.	50.00	

Cost per Running metre=(Rupees Fifty)only.

**ESTIMATE FOR CONSTRUCTION OF EARTHEN EMBANKMENT
AS PER SCHEDULE OF RATES FOR ROADS,BRIDGES AND E&D**

WORKS FOR THE YEAR 2007-2008

- 4/29. Construction of embankment with approved material obtained from borrow pits with a lift upto 1.50 m transporting to site, spreading, grading to required slope and compacting to meet requirement with a lead upto 1000 m as per technical specification.

Dam	1	x	1.00	x	2.20	x	1.2	2.64 m ³
.@Rs.247/- cum							Rs.	652.08

- 6/37. Furnishing and laying of the live sods of perennial turf forming grass on embankment slope, verges or other locations shown on the drawing including preparation of ground, fetching of sods and watering as per technical specification

	2	x	1.00	x	1.2	2.4 m ²
.@ Rs.41.00/sq.m						Rs. 98.4

750.48

Grand Total					Say	Rs. 700.00
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Cost per Running metre= Rupees Seven hundred only

**ESTIMATE FOR THE CONSTRUCTION OF CC PROTECTION WALL THE PADDY FIELD
AS PER SCHEDULED OF RATE FOR ROAD , BRIDGES & E&D FOR THE
YEAR 2007-08**

- 1/134. Excavation for structures(earthwork in excavation of the foundation of structures as per drawing and technical specification,including setting out,construction of showing and bracing,removal of stumps and deleterious matters,dressing of sides and bottom and backfilling with appropriate materials)

$$1 \times 9.4 \times 1 \times 0.9 = 8.46 \text{ m}^3$$

.@Rs.34/- per
cum

Rs. 287.64

- 3/137 PCC 1:3:6 in foundation(plain cement concrete 1:3:6 nominal mix
in foundation
etc)

$$\begin{array}{rclclcl} 1 \times 9.4 \times 1 \times 0.1 & = & 0.94 \text{ m}^3 \\ 1 \times 9.4 \times 0.8 \times 0.8 & = & 6.02 \text{ m}^3 \\ 1 \times 9.4 \times 0.6 \times 1.5 & = & 8.46 \text{ m}^3 \\ & & 15.42 \text{ m}^3 \end{array}$$

.@ Rs.3232/- per
cum

Rs 49824.51

Say, **Rs. 50,112.15**
 Rs. 50,000.00

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

**ESTIMATE FOR CONSTRUCTION OF CC CORE WALL WITH EARTH FILLED DAM AND LEAD
CHANNEL AS PER SCHEDULE OF RATES FOR ROADS,BRIDGES AND E&D
WORKS FOR THE YEAR 2007-2008**

- 1/134. Excavation for structures(earthwork in excavation of the foundation of structures as per drawing and technical specification,including setting out,construction of showing and bracing,removal of stumps and deleterious matters,dressing of sides and bottom and backfilling with appropriate materials)

I.A(i) Ordinary soil

Core wall	1	x	12.30	x	0.90	x	0.80	8.86	m ³
L/Channel	1	x	5.00	x	1.10	x	1.25	6.88	m ³
								15.73	m ³
.@Rs.34/- cum							Rs.	534.854	

- 2/137 PCC 1:3:6 in foundation(Plain cement concrete 1:3:6 nominal mix in foundation with crushed stone aggregate 40mm nominal size.

Core wall	1	x	12.30	x	0.90	x	0.10	1.11	m ³
	1	x	12.30	x	0.80	x	0.70	6.89	m ³
	1	x	12.30	x	0.55	x	1.50	10.15	m ³
L/ channel	2	x	5.00	x	0.15	x	1.25	1.88	m ³
	2	x	5.00	x	0.10	x	0.80	0.80	m ³
								20.82	m ³
.@ Rs.3232/- cum							Rs.	67282.16	

- 4/29. Construction of embankment with approved material obtained from borrow pits with a lift upto 1.50 m transporting to site, spreading, grading to required slope and compacting to meet requirement with a lead upto 1000 m as per technical specification.

Dam	1	x	12.30	x	5.20	x	1.8	115.13	m ³
Deduct	1	x	12.30	x	0.55	x	1.50	10.15	m ³
								104.98	m ³
.@Rs.247/- cum							Rs.	25930.18	

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

L/channel	2	x	5.00	x	0.90			9.00	m ²
	2	x	5.00	x	0.15			1.50	m ²
	1	x	5.00	x	0.8			4.00	m ²
								14.50	m ²
.@ Rs.75/- per sq.m							Rs.	1087.50	

C.O. Rs. **94834.70**

B.F. Rs. **94834.70**

6/37. Furnishing and laying of the live sods of perennial turf forming grass on embankment slope, verges or other locations shown on the drawing including preparation of ground, fetching of sods and watering as per technical specification

Dam	1	x	12.30	x	2.01			24.723	m ²
	1	x	12.30	x	2.5			30.75	m ²
								55.473	m ²
.@ Rs.41.00/sq.m							Rs.	2274.393	

7/100 Providing and laying pitching on slopes laid over prepared filter media as per drawing and technical specification.

I. Stone/Boulder

Dam	12.30	x	2.01	x	0.15			3.70845	m ³
.@ Rs.			884/- per cum					3278.27	

Rs. **100387.36**

Grand Total Say Rs. **1,00,000**

(Rupees One lakhs)only.

***ESTIMATE FOR THE CONSTRUCTION OF SPRING CHAMBER WITH WATER
RESERVOIR.
UNDER IWMP.
(Rates as per P.W.D Schedule of rates for building works) 2007 – 2008***

- 1/1.1 Earth work in excavation in foundation trenches, including dressing of sides and ramming of the bottom including stacking etc.
d) Soft laminated rock or medium shale.

For Spring Chamber:

$$1 \times 1 \times 2.5 \times 0.80 \times 1.10 = 2.20 \text{ m}^3$$

$$1 \times 2 \times 2.5 \times 0.80 \times 0.70 = 2.24 \text{ m}^3$$

For Reservoir:

$$1 \times 2 \times 2.5 \times 0.30 \times 0.50 = 0.75 \text{ m}^3$$

$$1 \times 2 \times 1.5 \times 0.30 \times 0.50 = 0.45 \text{ m}^3$$

For Pipe Pedestals:

$$\frac{10 \times 0.40 \times 0.40 \times 0.60}{6.60 \text{ m}^3} = 0.96 \text{ m}^3$$

@ Rs. 85/- m³

Rs.

561.00

2/4.5 Providing 100 mm thick soling with approved quality of stone etc.

For Spring Chamber:

$$1 \times 1 \times 2.50 \times 0.80 = 2.00 \text{ m}^3$$

$$1 \times 2 \times 2.00 \times 0.80 = 3.20 \text{ m}^3$$

For Reservoir: m³

$$1 \times 2 \times 2.50 \times 0.30 = 1.50 \text{ m}^3$$

$$1 \times 2 \times 1.50 \times 0.30 = 0.90 \text{ m}^3$$

$$1 \times 1 \times 2.50 \times 1.50 = 3.75 \text{ m}^3$$

For Pipe Pedestal: m³

$$10 \times 0.40 \times 0.40 = 1.60 \text{ m}^3$$

$$= 12.95 \text{ m}^3$$

@ Rs. 115/- m³

Rs.

1,489.25

3/2.1 Providing and laying cement concrete in prop. 1:4:8 etc.

For Spring Chamber:

$$1 \times 1 \times 2.50 \times 0.80 \times 0.10 = 0.20 \text{ m}^3$$

$$1 \times 2 \times 2.00 \times 0.80 \times 0.10 = 0.32 \text{ m}^3$$

For Reservoir:

$$1 \times 2 \times 2.50 \times 0.30 \times 0.10 = 0.15 \text{ m}^3$$

$$1 \times 2 \times 1.50 \times 0.30 \times 0.10 = 0.09 \text{ m}^3$$

For Pipe Pedestals:

$$10 \times 0.40 \times 0.40 \times 0.10 = 0.16 \text{ m}^3$$

$$= 0.92 \text{ m}^3$$

@ Rs. 2393/- m³

Rs.

2,201.56

4/2.2 Providing and laying cement concrete in prop. 1:3:6 etc.

For Spring Chamber:

$$1 \times 1 \times 2.50 \times 0.60 \times 0.70 = 1.05 \text{ m}^3$$

$$1 \times 2 \times 2.00 \times 0.60 \times 0.65 = 1.56 \text{ m}^3$$

$$1 \times 1 \times 2.50 \times \frac{0.26 + 0.55}{2} \times 1.35 = 1.36 \text{ m}^3$$

$$1 \times 2 \times 2.00 \times \frac{0.25 + 0.26}{2} \times 0.45 = 1.80 \text{ m}^3$$

$$1 \times 2 \times 2.00 \times \frac{0.25 + 0.55}{2} \times 1.80 = 2.80 \text{ m}^3$$

For Reservoir :

$$1 \times 2 \times 2.50 \times 0.30 \times 0.30 = 0.45 \text{ m}^3$$

$$1 \times 2 \times 1.50 \times 0.30 \times 0.30 = 0.27 \text{ m}^3$$

$$1 \times 1 \times 2.50 \times 1.50 \times 0.20 = 0.75 \text{ m}^3$$

For Pipe Pedestals:

$$10 \times 0.30 \times 0.30 \times 0.40 = 0.36 \text{ m}^3$$

$$= 10.40 \text{ m}^3$$

$$@ \text{Rs. } 2719/- \text{ m}^3$$

Rs.

28,277.60

5/2.9(a)

Providing shuttering including centering for flat surface such as slabs,shelves,chajja and for vertical faces such as column etc.

For spring chamber:

$$1 \times 2 \times 2.50 \times 0.70 = 3.50 \text{ m}^{\square\square}$$

$$2 \times 2 \times 2.00 \times 0.65 = 5.20 \text{ m}^{\square\square}$$

$$1 \times 1 \times 2.50 \times 1.50 = 3.75 \text{ m}^{\square}$$

$$1 \times 1 \times 2.50 \times 1.60 = 4.00 \text{ m}^{\square}$$

$$1 \times 2 \times \frac{0.25+0.26}{2} \times 0.45 = 0.225 \text{ m}^{\square}$$

$$2 \times 2 \times 2.00 \times 0.70 = 5.60 \text{ m}^{\square}$$

$$2 \times 2 \times 0.60 \times 0.70 = 1.68 \text{ m}^{\square}$$

$$2 \times 1 \times 2.00 \times 1.50 = 6.00 \text{ m}^{\square}$$

$$2 \times 1 \times 2.00 \times 1.60 = 6.40 \text{ m}^{\square}$$

$$2 \times 1 \times \frac{0.25+0.55}{2} \times 1.60 = 1.28 \text{ m}^{\square}$$

For Reservoir :

$$1 \times 2 \times 2.50 \times 0.30 = 1.50 \text{ m}^{\square\square}$$

$$1 \times 2 \times 0.30 \times 0.30 = 0.18 \text{ m}^{\square}$$

$$1 \times 2 \times 1.50 \times 0.30 = 0.90 \text{ m}^{\square}$$

$$1 \times 2 \times 2.50 \times 1.50 = 7.50 \text{ m}^{\square}$$

$$1 \times 2 \times 1.50 \times 1.50 = 4.50 \text{ m}^{\square\square}$$

$$1 \times 1 \times 2.50 \times 1.50 = 3.75 \text{ m}^{\square}$$

$$1 \times 2 \times 2.50 \times 0.10 = 0.50 \text{ m}^{\square}$$

$$1 \times 2 \times 1.50 \times 0.10 = 0.30 \text{ m}^{\square}$$

For Pipe Pedestals:

$$10 \times 4 \times 0.30 \times 0.40 = 4.80 \text{ m}^{\square\square}$$

$$10 \times 4 \times 0.15 \times 0.15 = 0.90 \text{ m}^{\square\square}$$

$$= 62.46 \text{ m}^{\square}$$

$$@ \text{Rs. } 148/- \text{ m}^2$$

Rs.

9,244.82

6/2.3 Providing and laying cement concrete in prop 1:2:4...etc.

For Reservoir:

$$\begin{aligned} 1 \times 2 \times 2.50 \times 0.15 \times 1.50 &= 1.12 \text{ m}^3 \\ 1 \times 2 \times 1.50 \times 0.15 \times 1.50 &= 0.67 \text{ m}^3 \\ 1 \times 1 \times 2.50 \times 1.50 \times 0.10 &= 0.37 \text{ m}^3 \end{aligned}$$

For pipe pedestals:

$$\begin{aligned} 10 \times 0.15 \times 0.15 \times 1.20 &= 0.27 \text{ m}^3 \\ &= 2.43 \text{ m}^3 \end{aligned}$$

@ Rs. 3280/- m³

Rs.

7,970.04

7/6.2(a) Providing to steel reinforcement in R.C.C.works including cutting, bending, cranking and tying in position.....etc.

10#Tor steel:

For Reservoir:

$$\begin{aligned} 2 \times 12 \times 2.30 &= 27.60 \text{ Rm.} \\ 2 \times 9 \times 2.30 &= 41.40 \text{ Rm.} \end{aligned}$$

For pipe pedestals:

$$\begin{aligned} 10 \times 4 \times 1.50 &= 60.00 \text{ Rm.} \\ &= 128.00 \text{ Rm.} \end{aligned}$$

@ 0.62kg./Rm. = Rs.79.36 /kgs.

8#Tor steel :

For Reservoir:

$$\begin{aligned} 2 \times 12 \times 1.40 &= 33.60 \text{ Rm.} \\ 2 \times 9 \times 2.40 &= 43.20 \text{ Rm.} \\ 2 \times 10 \times 1.40 &= 28.00 \text{ Rm.} \\ 2 \times 10 \times 1.40 &= 28.00 \text{ Rm.} \\ &= 132.80 \text{ Rm.} \end{aligned}$$

@ 0.39kg./Rm. = Rs.51.79/ kgs

For pipe pedestals:

$$10 \times 9 \times 0.50 = 45.00 \text{Rm.}$$

$$@ 0.22 \text{kg./Rm} \quad . \quad = \quad \frac{9.90/ \text{kgs}}{2.572 \text{ Qntls.}}$$

138.23 @ Rs.5373/- Qtl. Rs.

8/ Providing and fixing G.I. pipes including necessary
Sockets, bends, jamnuts, elbows, tees etc.complete.
(Rate as per market rates).

(a) 75mm G.I. Pipes.
Length – 1.30R.M. @ Rs.500/-Rm. Rs.
650.00

(b) 50mm G.I. Pipes.
Length – 27.05 R.M. @ Rs. 350/-Rm. Rs.
9,467.50

60,002.82 GRAND TOTAL : Rs.

Say, Rs.

60,000.00

(Rupees sixty thousand) only.

ANNEXURE IV

MoA and OTHER DETAILS ETC.

Name of village
Tula No. of Jot Card Holder

Kennage
49 Nos

ABSTRACT OF PERSPECTIVE PLAN FOR CONVERGENCE OF AREAS WITH IWM/AT KE/MAHRE VILLAGE
UNDER SIKS, NGVCL AND/OR WATERSHED.

Total Wage Component @ Rs. 70/- per day/annum
Amount estimated for Convergence per annum

Rs. 3,38,000.00
Rs. 3,38,000.00

PROJECT PERIOD (In Rupees)

Sl. No.	ACTIVITIES	Units	PROJECT PERIOD						Total		Months to be generated			
			2010-11		2011-12		2012-13		2013-14					
			Pty.	Fin.	Pty.	Fin.	Pty.	Fin.	Pty.	Fin.				
			Wages	Material	Wages	Material	Wages	Material	Wages	Material				
1	1. Jangam Ponds 3000/- per ha.	Nos.	2	80000	2	60000	2	80000	4	120000	10	300000	0	4282
2	2. Bench Terrace 2000/- per ha.	Ha.	2	30000	2	30000	4	30000	4	72000	12	120000	0	2271
3	3. CC Core walls 15000/- per 10.	Nos.			1						2	180000	-20000	2571
4	4. CC Irrigation dam 15000/- per 10.	Nos.	1	90000		90000		90000			1	140000	90000	1298
5	5. Earthen Irrigation Channel 50/- per ft.	FT.	520	26000	520	26000	520	26000	280	14000	1800	90000	0	1357
6	6. CC Protection walls 75000/- per 10.	Nos.		45000		45000		30000	1	45000	4	180000	120000	2571
7	7. Rubber Plaster	Ha.												
	8. Planting 2000/- per Ha.	Ha.	15	27000	15	27000	15	27000	15	27000		120000	0	1642
	9. Weeding 2000/- per Ha.	Ha.	15	30000	15	30000	15	30000	15	30000		120000	0	1714
GRAND TOTAL:			308000	60000	308000	90000	308000	90000	308000	30000	1252000	300000		17598

Amount allocated for convergence for the period 2010-11 to 2013-14
1. Wage component Rs. 12,32,000.00
2. Material component Rs. 3,00,000.00
Grand total Rs. 15,32,000.00 (Rupees fifteen lakh thirty two thousand) only.

Dr. G. G. G. G.
Kannige VED
Kannige V. E. G.
Ward Goro Hk.

T. J. J. J. J.
Kannige VED
Kannige V. E. G.
Ward Goro Hk.

**NO-OBJECTION CERTIFICATE FOR UNDERTAKING ENTRY POINT
ACTIVITIES (EPA) AT KEMRAGRE VILLAGE UNDER
SILANGAILL MICRO WATERSHED TO BE IMPLEMENTED
UNDER INTEGRATED WATERSHED MANAGEMENT PROJECT (IWP)
BY TURA SOIL & WATER CONSERVATION (T) DIVISION :: WEST
GARO HILLS :: MEGHALAYA.**

I, Shri/Smt. Gazi Marak Nokma of Kemragre
A'kingland alongwith the Chras and Muharis of village Kemragre
have no objection for undertaking Entry Point Activities in our A'kingland by Tura Soil
& water Conservation (T) Division, West Garo Hills, Meghalaya.

We are ready to accept the Developmental Scheme after clearly understanding the
proposed project to be implemented in our A'kingland.

There will be no objection from our villagers in future as they have also learnt about the
Scheme proposed by Tura Soil & Water Conservation (T) Division.

Signature of Nokma :

Gazi Marak


Village :

Seal :

Name & signature of the Chras & Muharis :

1. Angon Songma
2. Kearing unonin
3. Mijeng unonin
4. Ripjeng unonin
5. Calming unonin


Counter signed.
Divisional Officer,
Tura Soil & Water Cons.(T) Division,
West Garo Hills, Meghalaya.

Smt. Ganje Ch. Marak
Nokma

Kemragre A'king II-24 (1)
P.O. Rongram
Dist. West Garo Hills
Meghalaya.



Date : _____

No - OBJECTION CERTIFICATE

Anga Smt Ganje Ch Marak aro
angni chra dparfilarang iano indake si
onnega. chomatan chigni songna socia
and water conservation tribal departmt
ni rabangpisa mlyrelid mltirshid
mangmt program (Zu mP) ni ongo.

Chigni songna diglar diglar kam-
rangho kai onanio chiga dparmt
baksa name kumag margime kararag.
ko kaanio chusokalg. aro Chiga
Maragho nirek sandiano masto
angpaga ine mihedi Maragho
anilarglarni bil jak ama dipeti aro
departmt ni angni niam gila
jakkalgn ine mihlen bak iro
si angpaga.

Jako si angpaga.

Chra dparlwar:

1. Shri, Buserg Ch Marak
2. " Ramin Marak



Smt. Ganje Ch. Marak
Nokma II-24 (1)
Kemragre A'king
West Garo Hills.

