GOVERNMENT OF MEGHALAYA

DETAILED PROJECT REPORT
OF
SATBENGA MICRO WATERSHED
UNDER
INTEGRATED WATERSHED MANAGEMENT PROGRAMME
IWMP – III 2009 – 2010

SOIL & WATER CONSERVATION WEST GARO HILLS
SELSELLA C&RD BLOCK
WEST GARO HILLS
MEGHALAYA

SUMMARY

Name of the Sate	:	Meghalaya
Name of the District	:	West Garo Hills
Name of the C&RD Block	:	Selsella
Name of the Village	:	Alokdia
Name of the Project	:	IWMP-II
Total Geographical Area	:	545 Ha
Total Treatment Area	:	500 Ha
Total Project Cost	:	75 lakhs
Project Duration	:	5 Years
Project Implementing Agency	:	Soil & Water Conservation Territorial Division, Tura.

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INTRODUCTION AND BACKGROUND

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INTRODUCTION AND BACKGROUND

1.1 Project Background:

The Satbenga (IWMP) Project is located in Selsella C&RD Block, West Garo Hills District of Meghalaya. Consisting of a single micro-watershed, the project area is drained by the Satbenga Stream and its tributaries flowing in a north to west direction. The total area is545 Ha. with 500 Ha to be treated under the Integrated Watershed Management Programme (IWMP).

The Project area is located at a distance of about 112 km from Tura the District Headquarter . Only one village is covered under the project. i.e.

i) Alokdia

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 545 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 Satbenga 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

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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 112 km from Tura the District Headquarter . The geographical location is between 90˚07’56” to 90˚06’54”E Longitude and25˚56’09”N to 25˚54’43”N Latitude. There is only one village within the Watershed which is as follows –

i) Alokdia

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 120 m above mean sea level. About 22.96% (125.16 Ha) falls under 40-56 m elevation. The watershed shows flat gentle slopes with 60.45% of the geographical area having <1% slope.

Table 2.1: Physiographic details

Elevation (metres)	Slope Range (%)	Order of watershed Sub/Micro-watershed	Major streams	Topography
40 – 120 m	1 – 50%	2 Order of Jinjiram River Micro W/S	i)Satbenga Stream ii)Pahamjora Stream iii)Makkre jora Stream iv)Agatchi Stream	Flat and gentle slopes

2.3 Drainage:

The major stream draining the micro-watershed is the Satbenga which is a2thto3th order stream flowing in a north-west direction. The slopes of the micro-watershed are dissected by numerous small tributaries flowing to the Satbenga.

2.4 Soil:

Soil in general is moderately deep with clay to loamy clay in surface structure. They are somewhat excessively drained, fine soils on moderately sloping side-slopes of hills and very gently sloping plains having loamy surface with moderate erosion hazards.

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-III	Water erosion:				
				a	Sheet	500		
				b	Rill		NA	NA
				c	Gully			
				Sub total		500		
				Wind erosion		Nil	Nil	Nil

2.5 Climate:

The watershed lies under Central Hyper-thermic Agro-climatic plateau. The average annual rainfall is about 3040 mm. Monsoon normally starts in the middle of May and last till middle of October. About 80% of the total annual rainfall is received from June to September. May and June are the hottest month recording average maximum temperature of 32C. December and January accounts for lowest temperature of 10 to 12 C

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	Central Hypert hermic Plateau 150-300 m	500	West Garo Hills	WGH IWMP-III	Loamy Clayey	500	3040mm	Paddy	9.6
									Maize	4.8
									Ginger	4.8
								Total		**19.2**

2.5 Agriculture:

The Project village has about 9.6 Ha of land under Permanent cultivation system. Crops are cultivated under rain fed condition and thus offer only single cropping. Thus the village hardly produce market surplus of agricultural crops though market is available. The major crop includes paddy with total production of about 144 quintals per annum. Maize is cultivated in about 4.8 Ha of agriculture land with total production of 72 Quintals annually. Due to absence of any irrigation facilities, rabi crops are not grown with negligible area under vegetable cultivation.

Table 2.4: Crop yield and production

Crops	Area (ha)	Average Yield (Qtl) per ha.	Total Production (Qtl.)
Paddy	9.6	144	
Maize	4.8	72	
Ginger	4.8	72	

2.6 Natural Vegetation:

The project area has about 117.3 Ha of degraded forest which comprises 21.52% of the total geographical area. Various biotic factors i.e. deforestation for Commercial use and horticultural activities have destroyed the rich biodiversity and left scrub vegetation in most of the area. The dominant species in the area includes Albizzia spp, Schima wallichii, Emblica officianalis, Bombax cieba and bamboo spp namely, Dendrocalamus and Melocana baccifera.

2.7 Socio-Economic Profile:

The Socio-economic condition of the people is poor. The per capita holding of agricultural land is 0.4 Ha. The entire population depends upon agriculture and horticulture for sustenance. There are about 21 small farmers with average agricultural land holding 1-3 Ha. However, about 57.27% are marginal farmers with average land holding of less than one hectare. While 26 nos of families are landless.

Demographic Status: The total total population of watershed area is 537 of which 257 are male and 280 are female.

Infrastructure facilities **:**

2.1.1 *Roads:* The Project area is about 1 km from the main road and is connected by an all weather road.

2.1.2 *School:* there are only two numbers of Primary Schools within the Project Area run either by the Mission or by the Government.

2.1.3 *Electricit :* Only 54.54% of the village households are electrified.

2.1.4 *Health:* The Project does not have any veterinary dispensary or Primary Health Centre in the village.

2.1.5 *Water Supply: There is no drinking water supply from P.H.E but the entire population depends on springs available in the area to meet the daily requirement. About 40 households do not have access to drinking water system and depend on natural streams.*

2.1.6 *Market :* There is no any market under this project 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	YES			
		(ii)	No. of households without electricity				
		(iii)	No. of households without access to drinking water	40			
		(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	NIL			
		(vi)	Distance of project village from nearest Veterinary Dispensary	NIL			
		(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	1			
		(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 7 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	81140
Poultry	707927
Goatery	120311
Cattle	220562
Buffaloes	8223
Horse & Ponies	18
Sheep	6228
Total	

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 Hils 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-II	(i) Large(>5 Ha)	0	-	-	0	0
		(ii) Small(1-5 Ha)	21	-	-	15	15
		(iii) Marginal(<1 Ha)	63	-	-	30	30
		(iv) Landless	26	-	-	-	-
		Sub – Total	110	-	-	45	45

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-III	(i) Wasteland/ degraded land	-	-	-	369		-	-	343.8
		(ii) Pastures	-	-	-	-		-	-	
		(iii) Orchards	35.5	-	-	-	35.5	-	-	
		(iv) Village woodlot	-	-	-	-		-	-	
		(v) Forest	-	-	-	117.3		-	-	100
		(vi) Village Ponds/ Tanks	-	-	-	-		-	-	
		(vii) Community Buildings	-	-	-	-		-	-	
		(viii) Weekly Markets	-	-	-			-	-	
		(ix) Permanent Markets	-	-	-			-	-	
		(x) Temples/ Places of worship	-	-	-	2		-	-	
		(xi) Jhum Cultivation		-	-	-		-	-	
		(xii)Permanent Cultivation	9.6	-	-	-	9.6	-	-	
		(xiii) Habitation including streams	11.1	-	-		11.1	-	-	
	Total		**56.2**	**-**	**-**	**488.3**	**56.2**	**-**	**-**	**443.8**

2.9 Land use and land cover : As per the map .

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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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	YES
	Whether technical back-stopping for the project has been arranged? If yes, mention the name of the Institute.	-
	Baseline survey	YES
	Hydro-geological survey	NO
	Contour mapping	NO
	Participatory Net Planning (PNP)	NO

1	2	2
	Remote sensing data-especially soil/ crop/ run-off cover	YES
	Ridge to Valley treatment	YES
	Online IT connectivity between	
	(1) Project and DRDA cell/ZP	YES
	(2) DRDA and SLNA	YES
	(3) SLNA and DoLR	YES
	Availability of GIS layers	
	1. Cadastral map	NO
	2. Village boundaries	NO
	3. Drainage	YES
	4. Soil (Soil nutrient status)	YES
	5. Land use	YES
	6. Ground water status	NO
	7. Watershed boundaries	YES
	8. Activity	YES
	Crop simulation models[#]	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 HillsDistrict 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-III	(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)	Designa tion	M/F	SC	ST	SF	MF	LF	Land-less	UG	SHG	GP	Any other	Educa-tional ualify-cation	Function/s assigned#
W.G.H	W.G.H-IWMP-III	Satbenga	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
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
W.G.H	W.G.H-IWMP-III	2 No			2 No	(i) Landless									
						(ii) SF									
						(iii) MF	20		20	20		20	NA	NA	NA
						(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
W.G.H	W.G.H. IWMP-III					(i)Landless									
						(ii) SF									
						(iii) MF									
						(iv) LF									
Total					NIL				NIL			NIL			NIL

CHAPTER IV

PROJECT ACTIVITIES

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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-III	3.00 Lakh	Construction of Spring Chamber/Ringwell Link road	2.40 Lakh 0.60 Lakh	-	-	-	Increase in availability of drinking water Better road connectivity

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 of WDT members d) Off-campus exposure trip to research Institutes/Established farms etc.	a)Pamplets b)Banners c)Posters	a)Participatory Rural Appraisals b)Socio Economic Survey	a)GPS survey b)Engi-neering Survey	a) NIRD b)SIRD c)ICAR d)NEHU	a) NOC with village headman for under-taking develop-mental 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 Districts	Name of Projects	Type of structures	Pre Project			Proposed Project										
								Augmentation/ repair of existing structures				Construction of new structures				Total target			
					No	Area irrigated (ha)	Storage capacity	No	Area to be treated (ha)	Storage capacity	Estimated cost (in lakhs)	No/RM	Area to be treated (ha)	Storage capacity (per unit)	Estimated cost (in lakhs)	No	Area to be treated (ha)	Storage capacity (m^3)	Estimated cost
1	Meghalaya	W.G.H	W.G.H IWMP-III	Dug out Pond	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				C.C Check cum Irrigation Dam	-	-	-	-	-	-	-	6	86	900 m^3	6	6	86	900	6
				Conservation Pond	-	-	-	-	-	-	-								
				Earthen Irrigation Channel	-	-	-	-	-	-	-	400. rmt	24	-	0.20	400 rmt	24	-	0.20
				Earthen embankment	-	-	-	-	-	-	-	100	40	250 m^3	0.70	100	40	250 m^3	
			Total										**150**	**900** m^3	**6.72**		**150**	**900** m^3	**6.72**

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)
							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 irrigated (ha)	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	
1	Meghalaya	West Garo Hills	WGH IWMP-III	(i)Dug out Pond		NIL		NIL	0	8	20	3.20	20	3.20		0	NIL			NIL			NIL		
				Total for the project									**20**	**3.20**											

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-III	1.	C.C Check-cum irrigation dam	6 Nos	86 Ha	2	6.00	0.3
		2	Stone masonry Protection Wall	8Nos	39 Ha	2	4.00	0.20
		3	Earthen Irrigation Channel	400 rmt	24 Ha	1	0.20	0.01
			Total		**149 Ha**	**5**	**10.2**	**0.51**

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	
1.	C.C Check-cum irrigation dam	6 Nos	86 Ha	2	6.00		5925	3075	0.3
2	Stone masonry Protection Wall	8 Nos	39 Ha	2	4.00		960	640	0.20
3	Earthen Irrigation Channel	400 rmt	24 Ha	1	0.20		120	80	0.01
	Total		**149 Ha**	**5**	**10.2**		**7005**	**3795**	**0.51**

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-III	Piggery	6	0.4
		Poultry	5	0.5
		Fingerlings	4	0.42
		Power tiller	2	0.375
	Total		**17**	**1.695**

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		
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-

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-III	i)Improvement of degraded forest(40 Ha)	3.60	i)check dam. ii)protection wall. iii)Earthen embankment iv)dug out pond. v)Channel.	6.00 4.00 0.70 5.6 0.20	i) Poly bag Rubber (21,000 plant)	-	i)Wet Terrace(14Ha)	2.10	-	-	i)Rubber plantation(80 Ha) ii)Arecanut plantation (50 Ha)	12 5.7	i)piggery ii)poultry	2.40 1.75	Supply of fingerlings(40 unit)	0.40	-	-	Kitchen Garden (38unit) Tailoring(9unit) Weaving(9unit) Power tiler(2 nos)	5.700 0.720 1.08 2.80	
	Total		**3.60**		**15.8**				**2.10**				**17.7**		**4.15**		**0.40**				**10.3**	**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) Pri-vate	(ii) Com-munity	(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 comple-tion	Actual month & year of completion (mm/yyyy)
											M	W	O	T			M	W	O	T		
W.G.H	W.G.H IWMP-III																						
		Dug out Pond		√		√			UG/WC	14 Nos		5.83		5.83	31/3/2012								
		Check Dam		√			√		UG/WC	6 Nos	4	9.00		9.00	31/3/2012								
		Wet Terrace			√	√			UG/WC	14 ha		2.8		2.8	31/3/2012								
		Stone masonry Protection Wall		√			√		UG/WC	8 Nos	1.6	2.40		4.00	31/3/2012								
		Earthen irrigation Channel		√			√		UG/WC	400 rmt		0.20		0.20	31/3/2012								
		Earthen embankment		√		√			UG/WC	100 Rmt		0.70		0.70	31/3/2012								
		Total									**5.60**	**20.93**		**20.93**									

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		
NA	262	NA	NA	Paddy (15 Qtls)	Paddy (30 Qtls)	20,000	30,000	nil	7800	nil	5200	13000	nil	66	nil	44	66		
				Maize (42 Qlts)	Maize (53 Qlts)	30,000	50,000												

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

1	2	3	4			5			6	7				8			
			Type of treatment			Type of land			Executing agency	Target				Achievement			
District	Project	Name of structure/ work	(i) Ridge area (R)	(ii) Drainage line (D)	(iii) Land dev. (L)	(i) Private	(ii) Community	(iii) Others (pl. specify)	(i) UG (ii)SHG (iii) Others (pl. specify)	Area (ha)	No. of plants	Estimated cost (Rs. in lakh)	Expected month & year of comple-tion (mm/ yyyy)	Area (ha)	No. of plants	Expendi-ture incurred (Rs. in lakh)	Actual month & year of comple-tion (mm/ yyyy)
WGH	IWMP-III	Improvement of degraded	R		C				WC	40 Ha	4000	0.36	31/3/2013				
		Rubber Plantation	R			P			Farmers	80 Ha	36,000	12	31/3/2012				
		Arecanut	R			P			Farmers	50 Ha	60,000	5.7	31/3/2012				

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 run off (cu.m)	Production (quintal)		Income (Rs.)		Mandays generated					No. of beneficiaries				
		Pre-project	Post project	Pre-project	Post project	SC	ST	Others	Women	Total	SC	ST	Others	Women	Total
Improvement of degraded	NA	0					2160		1440	3600		15		10	25
Rubber Plantation	NA	0	240	0	2400000		7200		4800	12000		35		15	50
Arecanut	NA	535	1283	42,8000	1026400		3420		2280	5700		15		10	25
Total				**42,8000**	**3426400**		**12780**		**8520**	**21300**		**70**		**40**	**110**

4.2.12 Details of allied / other activities:

1	2	3	4			5	6		7	
			Type of land			Executing agency	Target		Achievement	
District	Project	Name of activity@	(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-III	Kitchen gardening	√		Individual	Private	5.700	31/3/2013		
		Piggery			SHG	SHG/UG	2.40	31/3/2032		
		Poultry			SHG	SHG/UG	1.75	31/3/2012		
		Tailoring			SHG	SHG/UG	0.720	31/3/2013		
		Power Tiller			SHG	SHG/UG	2.80	31/3/2012		
		Fingerlings	√			Private	0.40	31/3/2012		
		Weaving				Private	1.08	31/3/2012		
		Total					**14.85**			

(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 coulmn 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	15,000-20,000		3420		2280	5700		15	NIL	23	38
Piggery	20,000-30,000	40,000-60,000		1200		800	2000		2	NIL	2	4
Poultry	10,000-15,000	20,000-25,000		1200		800	2000		2	NIL	2	4
Tailoring	NIL	20,000-30,000		600		400	1000			NIL	10	10
Power Tiller	NIL	15,000-20,000		1680		1120	2800		1	NIL	1	2
Fingerlings	NIL	50,000-80,000		1680		1120	2800		3		4	7
Weaving	NIL	20,000-30,000				800	800				10	10
	Total			**9780**		**7320**	**16300**		**23**		**52**	**75**

14.3 Consolidation and withdrawal phase:

Details of activities in the CPRs in the project areas:

1	2	3	4	5	6				7						
					Target				Achievement						
Names of the Districts	Names of projects	Name(s) of the villages	CPR particulars	Activity proposed	Target area under the activity (ha)	Estimated expenditure (Rs.)	Expected no. of beneficia-ries	Estimated contri-bution to WDF (Rs.)	Area treated under the activity (ha)	Expenditure incurred (Rs.)	Actual no. of benefici-aries	No. of mandays			WDF collected (Rs.)
												SC	ST	F	
West Garo Hills	WGH IWMP-III	Alokdia		Repairing maintenance of CPR's		1.75		0.0875							
		Total													

CHAPTER V

PROJECT PHASING & BUDGETING

CHAPTER V

PROJECT PHASING & BUDGETING

ACTION PLAN OF SATBENGA WATERSHED UNDER IWMP TERRITORIAL DIVISION: TURA

Name of District :- West Garo Hills — No. of Villages: 1 nos

Name of C&RD Block:- Dadenggre — Project Area : 500 Ha

Sl. No	**Activities**	Ist Year(6%)		IInd Year(14%)		IIIrd Year(50%)		IV Year(25%)		V Year(5%)		Total(in lakhs)	
		Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	**MANAGEMENT COST:**												
A	**Administrative Cost:-10%**	**-**		**2%**		**5%**		**3%**				**10%**	
i	*Honourarium of WDT Members @ Rs.8000/- month-1 no.*				0.96		0.96		0.96				**2.88**
ii	*Honourarium of Watershed Committee Chairman @500/ month*				0.01		0.06		0.02				**0.09**
iii	*Honourarium of WCM @ Rs. 200/Members/month for 9 nos.*				0.036		0.216		0.072				**0.324**
iv	*Honourarium of Charter Accountant*				0.15		0.15		0.15				**0.45**
v	*TA/DA/ of Field Asst. @ 5000/- month*				0.05		0.6		0.2				**0.85**
vi	*Hiring charges of office building @ 1000/ month*				0.02		0.12		0.12				**0.26**
vii	*Hiring charges of vehicle @ 5000/ month*				0.1		0.6		0.2				**0.90**
viii	*Office expenses*				0.174		1.044		0.528				**1.746**
	TOTAL OF A:	**-**	**0.00**		**1.50**		**3.75**		**2.25**				**7.50**
	PREPARATORY PHASE: 4%												
B	**Entry Point Activities:**	**4%**										**4%**	
i	*Construction of Spring Chamber @Rs60,000/- each*	4 Nos.	2.40									**4 Nos.**	**2.40**
	Link road @ Rs.130000/- per km	0.46 km	0.60									**0.46 km**	**0.60**
	TOTAL OF B:		**3.00**		**0**		**0**		**0**		**0**		**3.00**

C	**Training: - 5%**	**1%**		**2%**		**1%**		**1%**				**5%**	
i	*Awareness Campaign & Capacity building of farmer*	1 nos	0.2	1 nos	0.20	1 nos	0.20	1 nos	0.20			**4 nos**	**0.80**
ii	*Exposure visits - Off Campus*			1 nos	0.30			1 nos	0.35			**2 nos**	**0.65**
iii	*Capacity building of SHG's/UG's.*	1 nos	0.2	3 nos	0.60	1 nos	0.20	1 nos	0.20			**6 nos**	**1.20**
iv	*Capacity building of WC Members.*	1 nos	0.35	1 nos	0.20	1 nos	0.35					**3 nos**	**0.90**
v	*Capacity building of WDT/WV*			1 nos	0.20							**1 nos**	**0.20**
	Total of C:	**3 nos**	**0.75**	**7 nos**	**1.50**	**3 nos**	**0.75**	**3**	**0.75**				**3.75**
D	**Detailed Project Report: 1%**	**1%**										**1%**	
i	*Cost of Resources Inventories works*		0.25										**0.25**
ii	*Cost of PRA Exercises*		0.1										**0.10**
iii	*Cost of Land use Survey works*		0.25										**0.25**
iv	*Cost of formulating*		0.15										**0.15**
	Total of D:		**0.75**										**0.75**
E	**Monitoring & Evaluation: 2%**	**-**		**0.50%**		**1%**		**0.50%**				**2%**	
i	*Monitoring*			**0.20%**	0.15	**0.50%**	0.375	**0.30%**	0.225				**0.75**
ii	*Evaluation*			**0.30%**	0.225	**0.50%**	0.375	**0.20%**	0.15				**0.75**
	Total of E:				0.375		0.75		0.375				**1.50**
	TOTAL OF I (A - E)		**4.50**		**3.375**		**5.25**		**3.375**		**0.00**		**16.50**
II	PROJECT COST WATERSHED WORKS PHASE: 50%			**7.50%**		**35%**		**7.50%**				**50%**	
A	**Arable Land Treatment:**												
i	*Wet terrace@15000/ ha -14 Ha*			3.5	0.525	10.5	1.58		0			**14**	**2.10**
ii	*Rubber plantation -80 Ha*												
	(a) Pre-works @Rs.6000/ ha				0	80	4.80		0.00			**80**	**4.800**
	(b) 1st yr. planting @Rs.9000/ha				0		7.2		0				**7.200**
iii	*Arecanut plantation - 50 Ha*												
	(a) Pre-works @Rs.4200/ ha				0	30	1.26	20	0.84			**50**	**2.100**
	(b) 1st yr. planting @Rs.7200/ha				0		2.16		1.44				**3.60**
	TOTAL OF - A				**0.525**		**17.00**		**2.28**				**19.800**
B	**Non-Arable Land treatment:**												
i	*Improvement of degraded forest@3600/ ha- 40 Ha*				0	60	2.16	40	1.44			**100**	**3.60**
	Total of B:				**0**		**2.16**		**1.44**				**3.6**

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 @100,000/ each - 86 Ha*			**2**	2.00	3	3.00	1	1.00			**6**	**6.00**
ii	*Stone masonery protection wall @50,000/each - 39 ha*			3	1.50	4	2.00	1	0.50			**8**	**4.00**
iii	*Dug-out pond @40,000/-each -20 ha*			4	1.60	4	1.60		0			**8**	**3.20**
v	*Earthen Embankment @Rs.700/- per rmt- 40 Ha*				0.00	50	0.35	50	0.35			**100**	**0.70**
vi	*Earthern irrigation channel @Rs. 50 /- Rm. -24 ha*				0.000	290	0.15	110	0.055			**400**	**0.20**
	TOTAL-C				**5.10**		**7.0950**		**1.91**				**14.10**
	TOTAL OF A+B+C				**5.625**		**26.250**		**5.625**				**37.50**
D	**Livelihood Activities for landless person: 10%**			**1%**		**3%**		**6%**				**10%**	
i	*Kitchen garden @15000/ unit*			5	0.75	15	2.25	18	2.7			**38**	**5.700**
	Tailoring @Rs.8000/- per unit				0		0	9	0.72			**9**	**0.720**
	Weaving @Rs.12000/- per unit				0		0	9	1.08			**9**	**1.08**
	Total of D:				**0.75**		**2.25**		**4.5**				**7.50**
E	**Production system and Micro Enterprises (SHG's) - 13%**			**1%**		**5%**		**7%**				**13%**	
i	*Piggery unit @Rs.40,000 /- per unit*			1	0.4	2	0.8	3	1.2			**6**	**2.40**
	Power tiller				0	1	1.4	1	1.4			**2**	**2.80**
iii	*Poultry unit @Rs.35,000 /- per unit*			1	0.35	1	0.35	3	1.05			**5**	**1.75**
iv	*Dugout pond @Rs. 40000/- each*				0	3	1.2	3	1.2			**6**	**2.40**
v	Supply of fingerlings @Rs.1000/- per unit				0		0	40	0.4			**40**	**0.40**
	Total of E:				**0.75**		**3.75**		**5.25**				**9.75**

1	2	3	4	5	6	7	8	9	10	11	12	13	14
F	**Consolidation & Exit Phase:**									**5%**		**5%**	
i	*Repairing maintanance 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)		**0**		**7.125**		**32.25**		**15.375**		**3.75**		**58.500**

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

1	2	3	4	5	6		7	8	9	10				11				
SL No	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	Comm unity land	Others (pl. specify)Horticultural land	Total area (ha)
												a) Temporary fallow	b) Permanent					
1	Meghalaya	West Garo Hills	W.G.H IWMP-III		2010	2015	500	7.5	Satbenga	45.1	0	443.4	11.5	42	40	288	130	**500**

Fund provision for the IWMP projects from all sources:

1	2	3		4										5
District	Name of Projects	IWMP Fund		Funds from other sources in addition to IWMP funds										Total
				Convergence funds		PPP		Community		Institutional finance		Others (Pl. specify)		
		Central Share	State Share	Name of Scheme	Amount (Lakhs)	Name of private sector	Financial contri-bution	Name	Financial contri-bution	Name	Financial contri-bution	Name	Financial contri-bution	
Meghalaya	W.G.H IWMP-III	67.5	7.5	NREGS	4.2	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	79.2

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

1	2	3	4	5				6				
				Distt. Agency's Project Account details				Watershed Committee (WC) account details:				
Sl. No.	Names of States	Name of Districts	Names of Projects	Name of the Bank and Branch where project account has been opened	Account Number (to be obtained confiden-tially)	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 confiden-tially	Account type (Savings/ current others)	Name & Designation of authorized persons who operate the account.
1	Meghalaya	W.G.H	W.G.H IWMP-III	NA	NA	NA	Chairman W.C Secretary W.C Project Leader/WDT	Satbenga	SBI Chandmari Branch	31077581836	Savings	Chairman W.C Secretary W.C Project Leader/WDT

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	WGH IWMP III	NIL	NIL			NIL	NIL	NIL	NIL	NIL	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[$]	Accre-ditation details	Performance				
								Refer-ence 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 Meghalaya	Director	Don-Bosco	Agri-Horti, Animal Husbandry, Entrepreneurship	NA	-	-	-	-	-
4		ICAR	Umiam / Tura Meghalaya.	Director	Central Govt.	Do	NA	-	-	-	-	-
5		MRDS	Shillong	Director	State Govt.	Animal Husbandry	NA	-	-	-	-	-
6		NEHU	Tura / Shillong	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	4	NIL	4	NIL				
UGs	40	NIL	40	NIL				
SHGs	50	NIL	50	NIL				
WCs	10	NIL	10	NIL				
GPs	NIL	NIL	NIL	NIL				
Community	218	NIL	109	NIL				
Others Pl. specify)								
TOTAL	**232**	**0**	**223**	**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/yyy)*

	1	2	3	4	5
	Activity	**Executing agency**	**Estimated expenditure (Rs.)**	**Expenditure incurred (Rs.)**	**Outcome (may quantity, wherever possible)**
1.	Awareness	S&WC (T) Division	0.40	-	-
2.	Exposure Visits	S&WC (T) Division	0.95	-	-
3.	Capacity Building	S&WC (T) Division	0.20	-	-
	TOTAL		**1.55**	**-**	-

CHAPTER VII

EXPECTED OUTCOME

CHAPTER VII
EXPECTED OUTCOME

Table 7.1 Employment related outcomes :-

Sl No	Name of Village	1										2				
		Wage employment										Self employment				
		No. of mandays					No. of beneficiaries					No. of beneficiaries				
		SC	ST	Others	Women	Total	SC	ST	Others	Women	Total	SC	ST	Others	Women	Total
1.	Alokdia		30360	-	21040	51400	-	66	-	44	110	-	66	-	44	110
TOTAL			**30360**	**-**	**21040**	**51400**	**-**	**66**	**-**	**44**	**110**	**-**	**66**	**-**	**44**	**110**

Table 7.2 Migration Details :-

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

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

Table 7.3 Economic benefits accrued to women:

1		2		3		4
Wages		**Training**		**Livelihoods**		
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)**	**Total (Rs. in lakh)**
21040	14.728	160	1.6	119	7.95	24.278

* 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-III	Alokdia	Reserved forest	FW/MFP/ T	Unpurified		110		110	NIL
			Spring Chamber	Wd	Unpurified		40		40	NIL
			Check dam	Wi	Unpurified		110		110	NIL
			Conservation pond.	Wi	Unpurified		45		45	NIL
					Total		**305**		**305**	

* 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**
Meghalaya	W.G.H IWMP-III	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 monyhs 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-III	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**
W.G.H	WGH IWMP-III	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-III	Paddy	-	83	-	15	-	1245	**33.7**	57	30	15	1011	855	54.5	47	30	15	1635	705
		Maize	-	33	-	24	-	792	-	33	-	24	-	792		33		24	-	792
		Vegetable	-	5	-	30	-	150	**6**	5	36	30	216	150	6	5	36	30	216	150
		Total	**-**	**121**	**-**	**69**	**-**	**2187**	**39.7**	**95**	**66**	**69**	**1227**	**1797**	**60.5**	**85**	**66**	**69**	**1851**	**1647**

* 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	WGH IWMP - III	Paddy	-	-	-	-	-	-	-	136.6	-	15	-	2049	197	-	15	-	2955	-
				Vegetables	-	-	-	-	-	-	-	6	-	36	-	216	6	-	36	-	216	-
				Total	**-**	-	-	-	-	-	-	**142.6**	-	**51**	-	**2265**	**203**	-	**51**	-	3171	-

* 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 III		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

* 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		
			Existing area under fodder (ha)			Achievement (ha)		
District	**Name of project**	**Duration of Project**	**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-III	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		
			Existing area tree cover (ha)			Achievement (ha)		
District	Name of project	Duration of Project	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-III	5 yrs	Land use survey conducted by the Department		32.3	40	40	40

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

Table 7.6.6 Increase/ Decrease in area under horticulture:

1	2	3	4			5		
			Existing area under horticulture (ha)			Achievement (ha)		
District	Name of project	Duration of Project	Source/Name of report	Year of reference	Area already under horticulture	Area under horticulture proposed to be covered through IWMP	Area under horticulture actually covered through IWMP	Change in area under horticulture
W.G.H	W.G.H IWMP-III	5 yrs	Land use survey conducted by the Department	-	35.5	130	130	130

* 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-III	5 yrs	Land use survey conducted by the Department		33.8	10	10	10

* 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 IWM III	Milch-animal	252	112.5 lits	0.045/-							
		Piggery	30	1200 Kgs	1.8 /-	50	1800 Kgs	2.7	100	4000 Kgs	5 /-	
		Poultry	320	480 Kgs	0.96 /-	380	570 Kgs	1.14	600	900 Kgs	1.8 /-	

	Total for all projects		**602**	**179.25**	**2.8**	**430**	**2370**	**3.84**	**700**	**4900**	**6.8**	
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	**Benefi-ciary**	**Others (pl. specify)**	**Total**		**SC**	**ST**	**Others**	**Women**	**Total**	**SC**	**ST**	**Others**	**Women**	**Total**
		Kitchen garden	5.700	5.700		-	5.700	-	-	-	-	-		-	22	-	16	38
		Tailoring	0.720	0.720		-	0.720	-									15	15
		Weaving	1.08	1.08		-	1.08	-									21	21

		TOTAL	**7.5**	**7.5**		**-**	**7.5**	**-**	**-**	**-**	**-**	**-**		**-**	**-**	**-**	**52**	**74**

(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	WGH IWMP VIII	Kitchen garden		2.950			2.950									
		Dug- out	-	1..0	-	-	1..0		-	-	-	-	-	-	-	-

		pond														
		Supply of fingerlings	-	3.5	-	-	3.5		-	-	-	-	-	-	-	-
		Rubber budded poly-bag	-	5.50	-	-	5.50		-	-	-	-	-	-	-	-
		TOTAL	**-**	**12.95**	**-**	**-**	**9.75**		**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**

* 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	WGH IWMP VIII	**(A) Backward linkages**	NIL	NIL	NIL
		(i) Seed certification	NIL	NIL	NIL
		(ii) Seed supply system	NIL	NIL	NIL
		(iii) Fertilizer supply system	NIL	NIL	NIL
		(iv) Pesticide supply system	NIL	NIL	NIL
		(v) Credit institutions	1	4	5
		(vi) Water supply	1	5	5
		(vii) Extension services	NIL	NIL	NIL
		(viii) Nurseries	NIL	NIL	NIL
		(ix) Tools/machinery suppliers	NIL	NIL	NIL
		(x) Price Support system	NIL	NIL	NIL
		(xi) Labour	NIL	NIL	NIL
		(xii) Any other (please specify)	NIL	NIL	NIL
		(A) Forward linkages			
		(i) Harvesting/threshing machinery	NIL	NIL	NIL
		(ii) Storage (including cold storage)	NIL	NIL	NIL
		(iii) Road network	1	1	1
		(iv) Transport facilities	NIL	NIL	NIL
		(v) Markets / Mandis	NIL	NIL	NIL
		(vi) Agro and other Industries	NIL	NIL	NIL
		(vii) Milk and other collection centres	NIL	NIL	NIL

		(viii) Labour	NIL	5	5
		(ix) Any other (please specify)	NIL	NIL	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	-	100% rainfed	94% irrigated	
		Change in cropping/ land use pattern	-	Single cropping	Double Cropping	
		Area under agricultural crop				
		i Area under single crop	Ha	9.6	nil	
		ii Area under double crop	Ha	nil	23.6	
		iii Area under multiple crop	Ha	nil	nil	
		Net increase in crop production area	Ha	9.6	23.6	145% increase in cropping area
		Increase in area under vegetation	Ha	117.3	100	85.25% increase in vegetation cover
		Increase in area under horticulture	Ha	35.5	130	181.69% increase in horticulture and cash crop plantation
		Increase in area under fuel & fodder	Ha	117.3	100	85.25% improvement in the existing fuel and fodder area
		Increase in milk production		NA	NA	NA
		No. of SHGs		2	2	
		Increase in no. of livelihoods	Activities	1.) Agriculture 2) Horticulture	1. Agriculture. 2. Horticulture. 3. vegetable Cultivation. 4. Piggery. 5. Poultry.	
		Increase in income	Rs.	20000-30000	50000-60000	
		Migration	Nos	nil	nil	
		No. of school going children				
		SHG Federations formed	Nos.	nil	1	

		Credit linkage with banks	Nos.	nil	1	
		Resource use agreements	Nos.	None	a.) NOC for development work. b.) Agreements	
		WDF collection & management		None		
		Summary of lessons learnt	Nil			

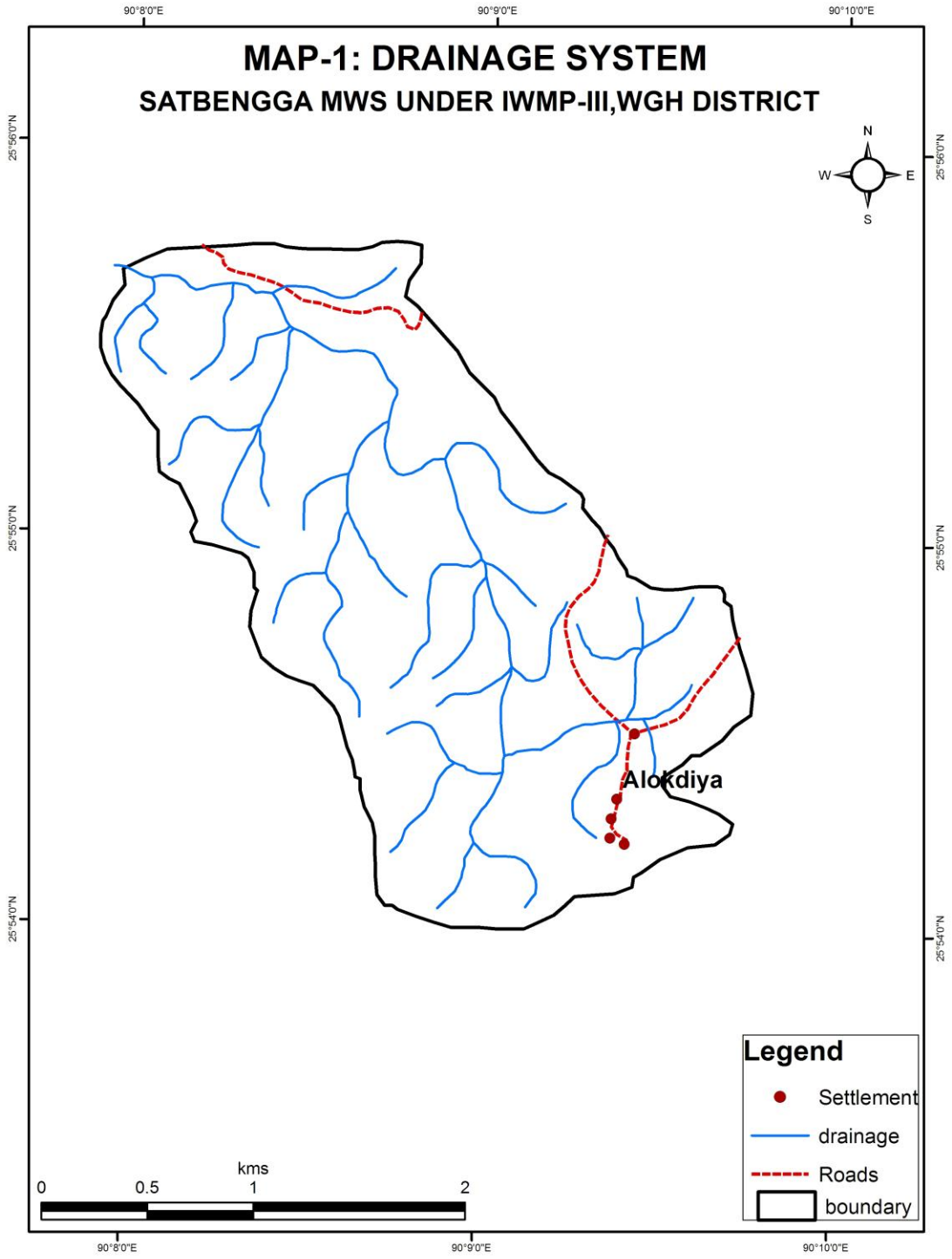
Table 7.10 Cost effectiveness of structures/ activities*

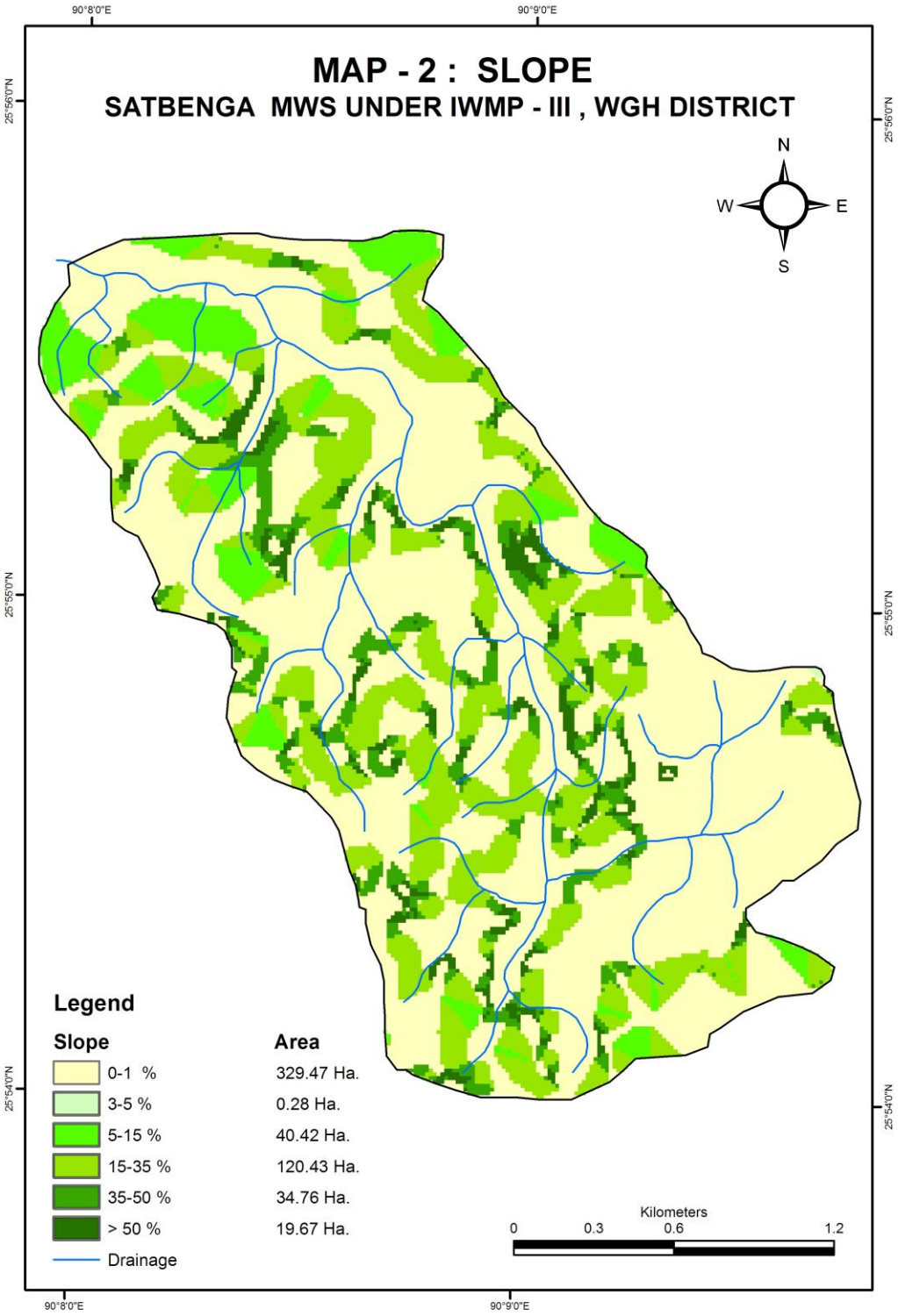
1	2	3	4	5	6	7	8	9	10
District	**Name of project**	**Name of WC**	**Name of structure/ activity**	**Estimated cost (Rs.)**	**Expected quantifiable benefits (Rs.)**	**Expenditure incurred (Rs.)**	**Actual quantifiable benefit (Rs.)**	**Benefit: Cost ratio#**	**IRR**
WGH	WGH IWMP III	Satbenga	As per action plan	5475000	17127073	5475000	6645073	1.21	16.78

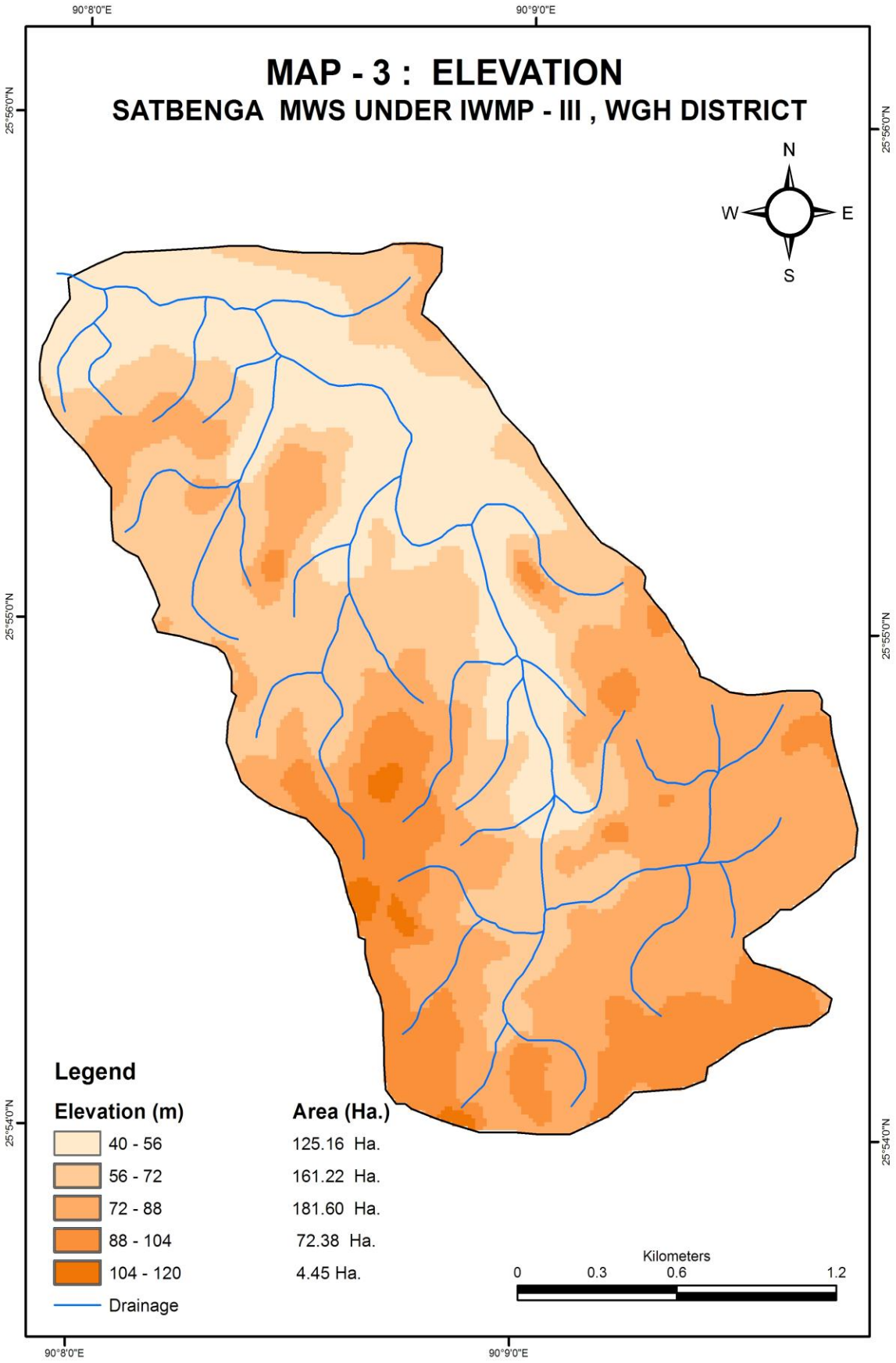
***** from column no. 2, total no. of States implementing the programme, from column no. 3, total no. of Districts; from Column no. 4, no. of projects, from column no. 5, no. of WCs, from column no. 6, no. of structures/ activities, from column no. 7 to 10, category-wise# totals, may be mentioned at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

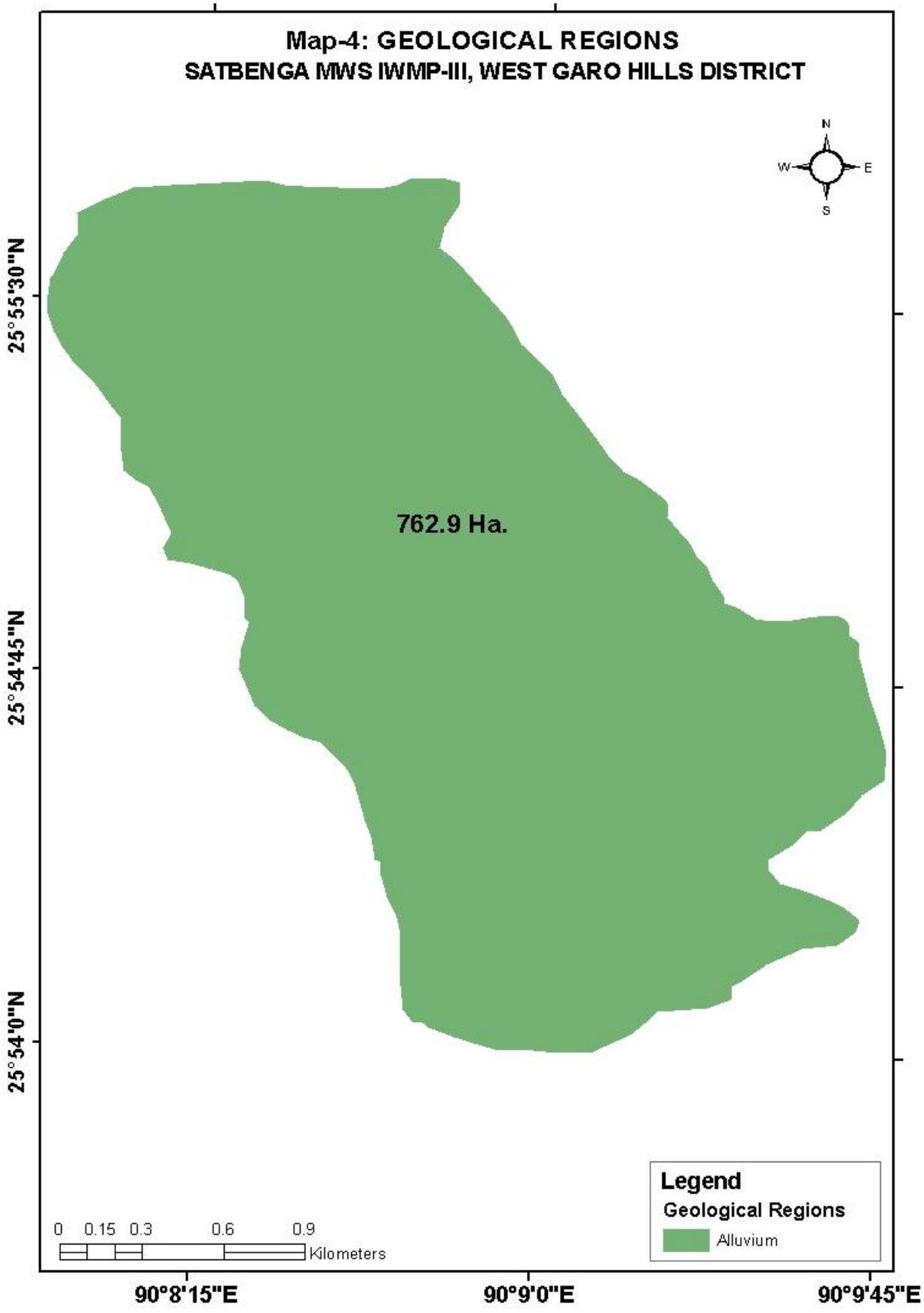
#B:C ratio more than 1 – cost effectivess than 1– Not cost effecti

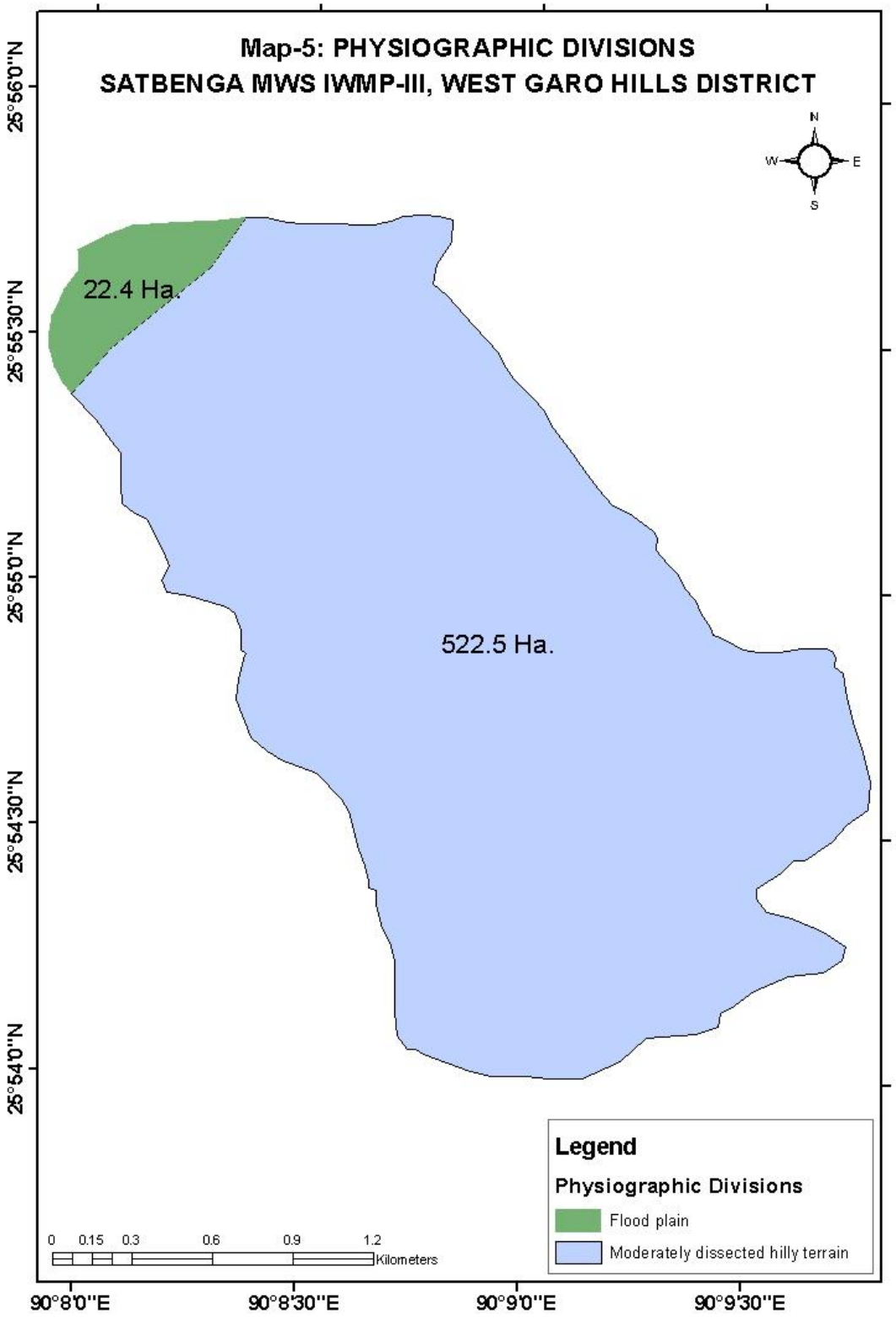
ANNEXTURE I
MAPS

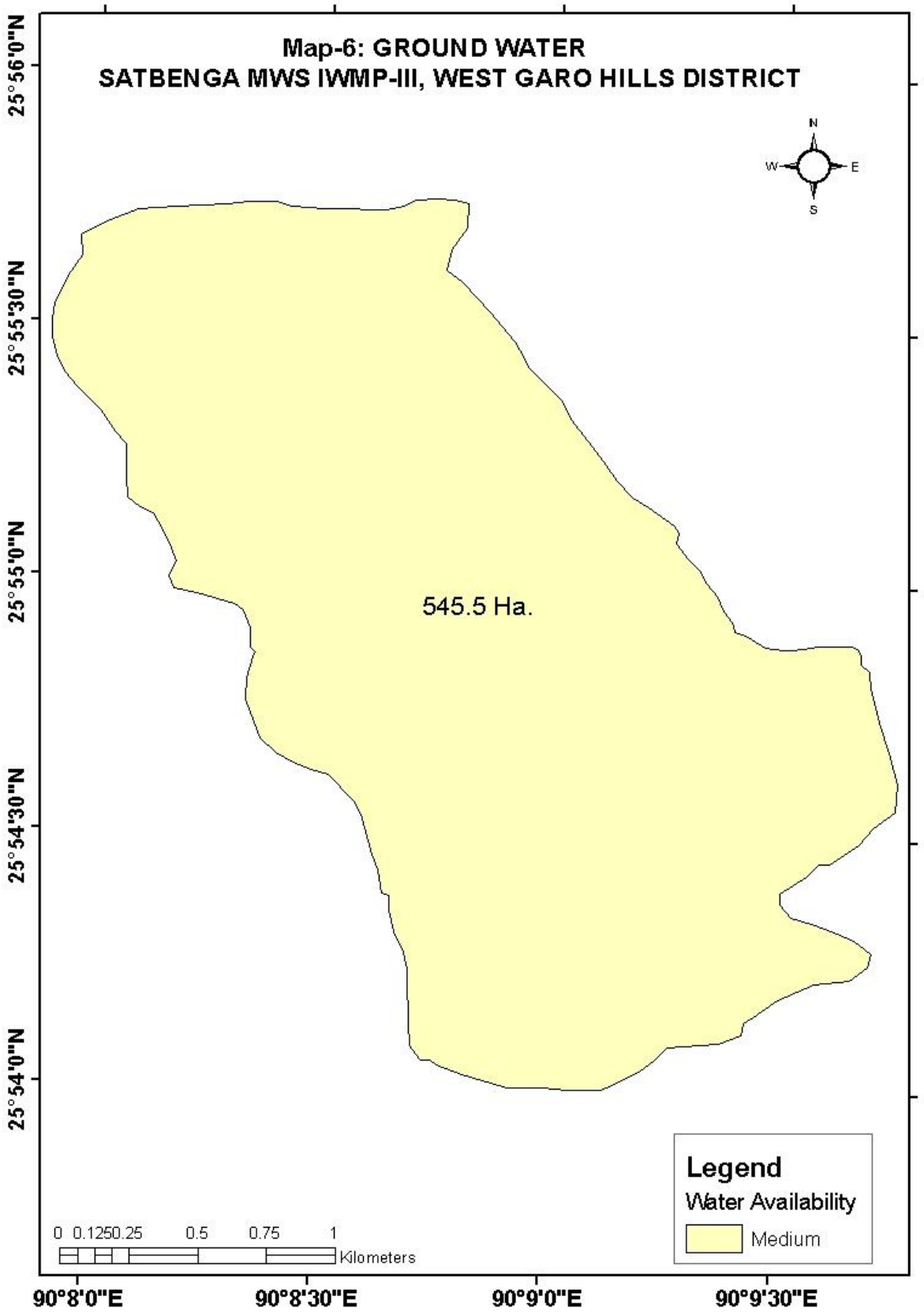

MAP-1: DRAINAGE SYSTEM
SATBENGGA MWS UNDER IWMP-III,WGH DISTRICT
90°8'0"E
90°9'0"E
90°10'0"E
25°56'0"N
25°55'0"N
25°54'0"N
N
W
E
S
Alokdiya
Legend
Settlement
drainage
Roads
boundary
kms
0
0.5
1
2

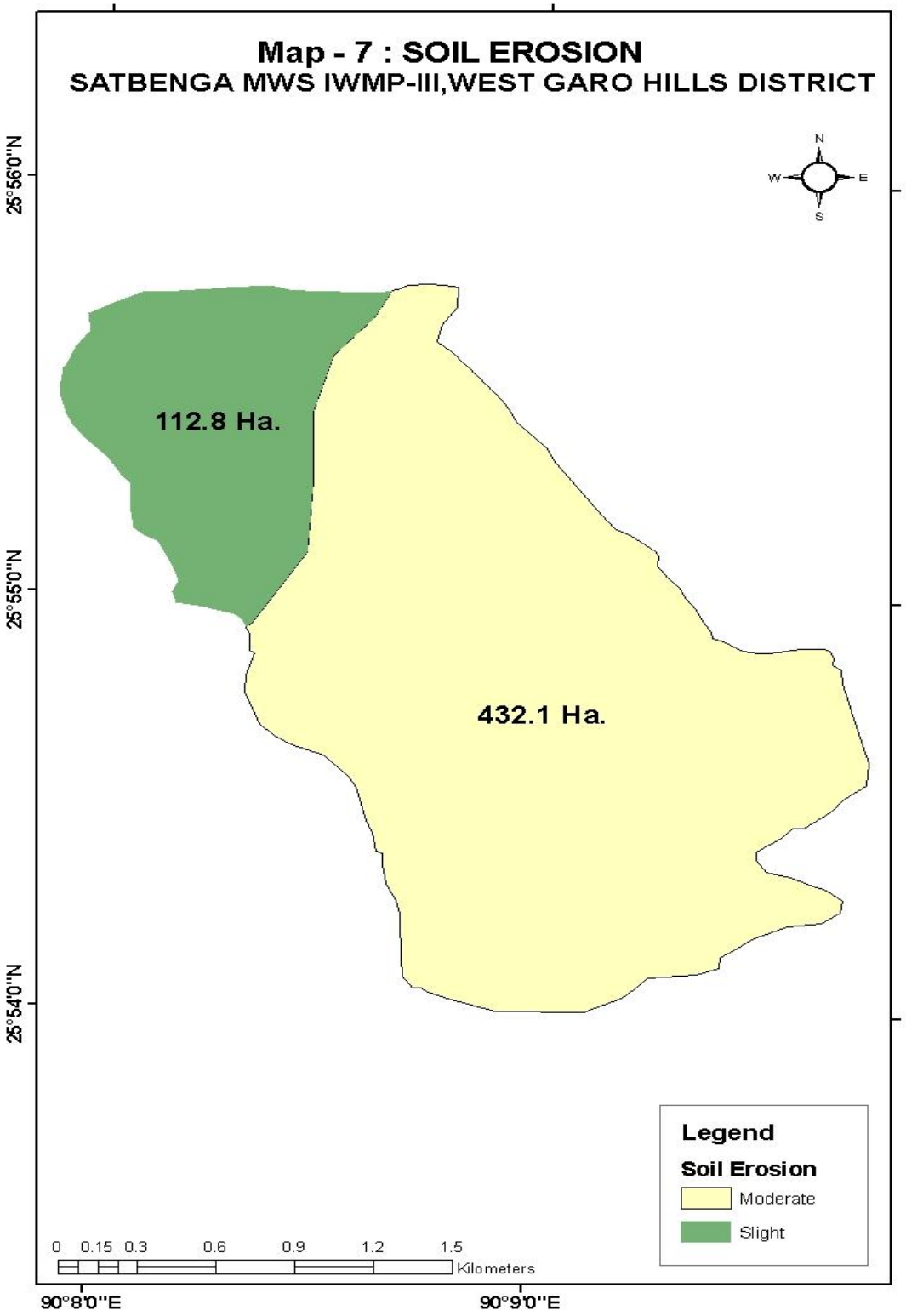

MAP - 2 : SLOPE
SATBENGA MWS UNDER IWMP - III , WGH DISTRICT
90°8'0"E
90°9'0"E
25°56'0"N
25°55'0"N
25°54'0"N
N
W
E
S
Legend
Slope
Area
0-1 %
329.47 Ha.
3-5 %
0.28 Ha.
5-15 %
40.42 Ha.
15-35 %
120.43 Ha.
35-50 %
34.76 Ha.
> 50 %
19.67 Ha.
Drainage
Kilometers
0
0.3
0.6
1.2

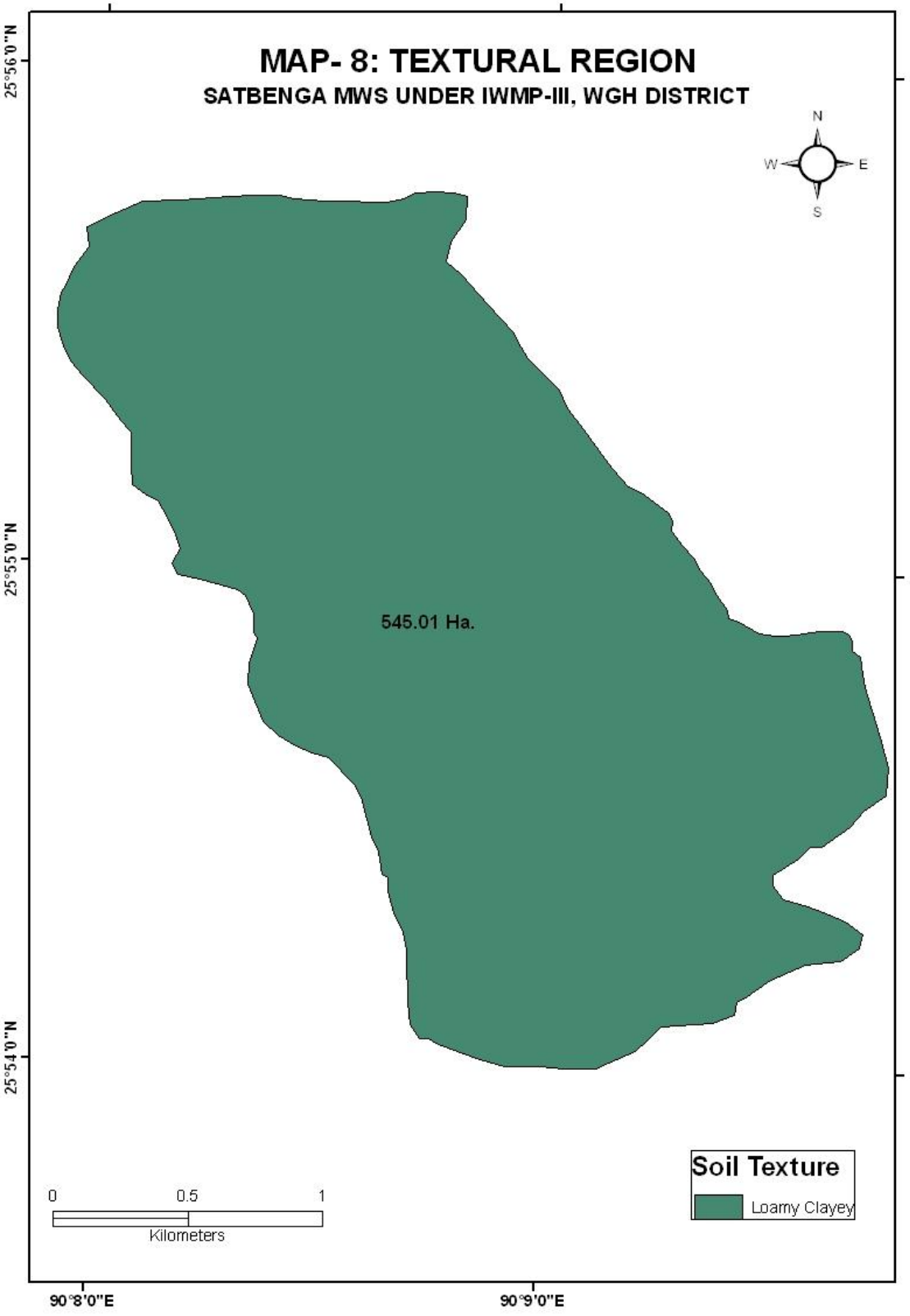

MAP - 3 : ELEVATION
SATBENGA MWS UNDER IWMP - III , WGH DISTRICT
90°8'0"E
90°9'0"E
25°56'0"N
25°55'0"N
25°54'0"N
N
W
E
S
Legend
Elevation (m)
Area (Ha.)
40 - 56
125.16 Ha.
56 - 72
161.22 Ha.
72 - 88
181.60 Ha.
88 - 104
72.38 Ha.
104 - 120
4.45 Ha.
Drainage
Kilometers
0
0.3
0.6
1.2

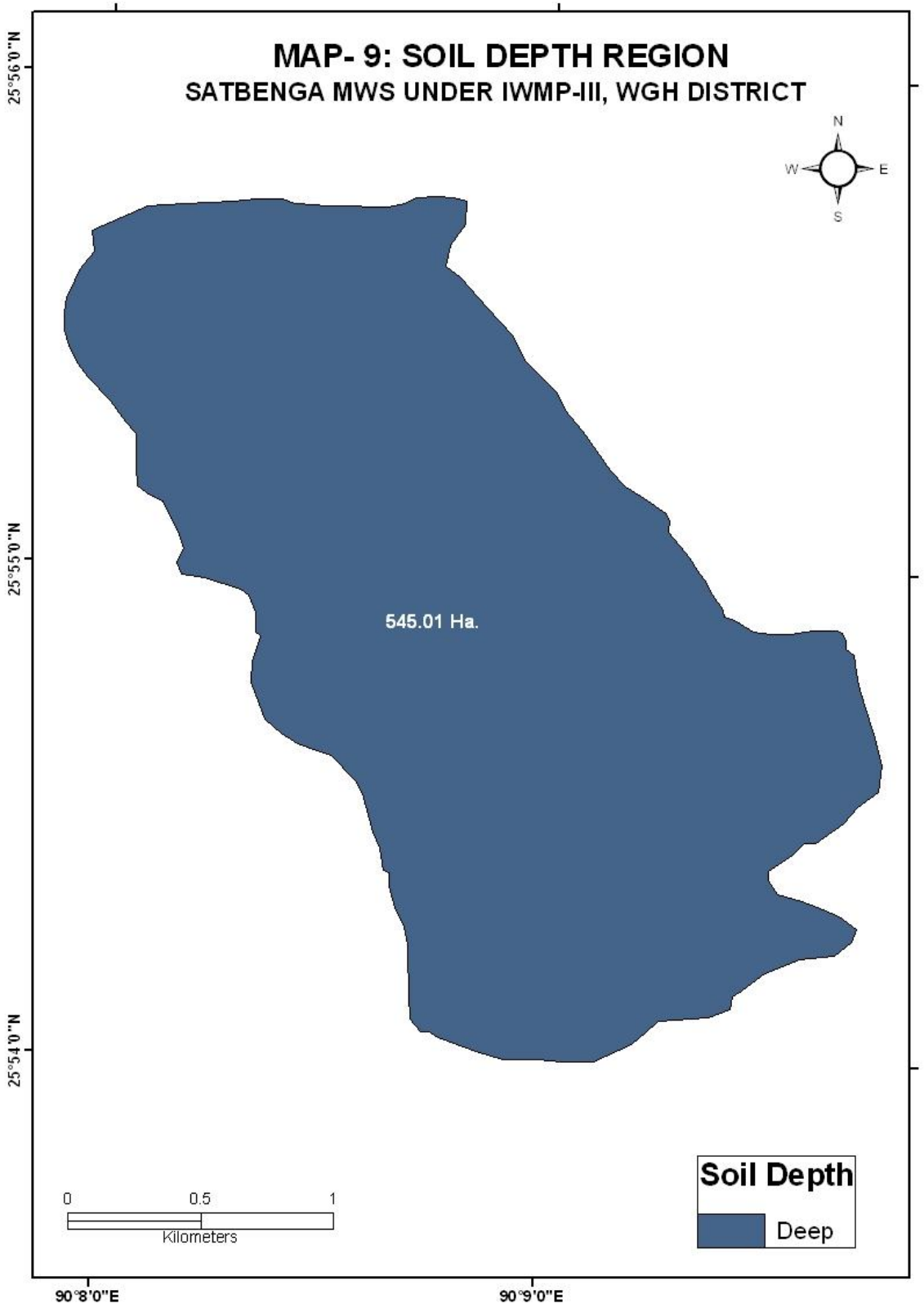

Map-4: GEOLOGICAL REGIONS
SATBENGA MWS IWMP-III, WEST GARO HILLS DISTRICT
N
W
E
S
762.9 Ha.
25°55'30"N
25°54'45"N
25°54'0"N
90°8'15"E
90°9'0"E
90°9'45"E
0 0.15 0.3 0.6 0.9
Kilometers
Legend
Geological Regions
Alluvium

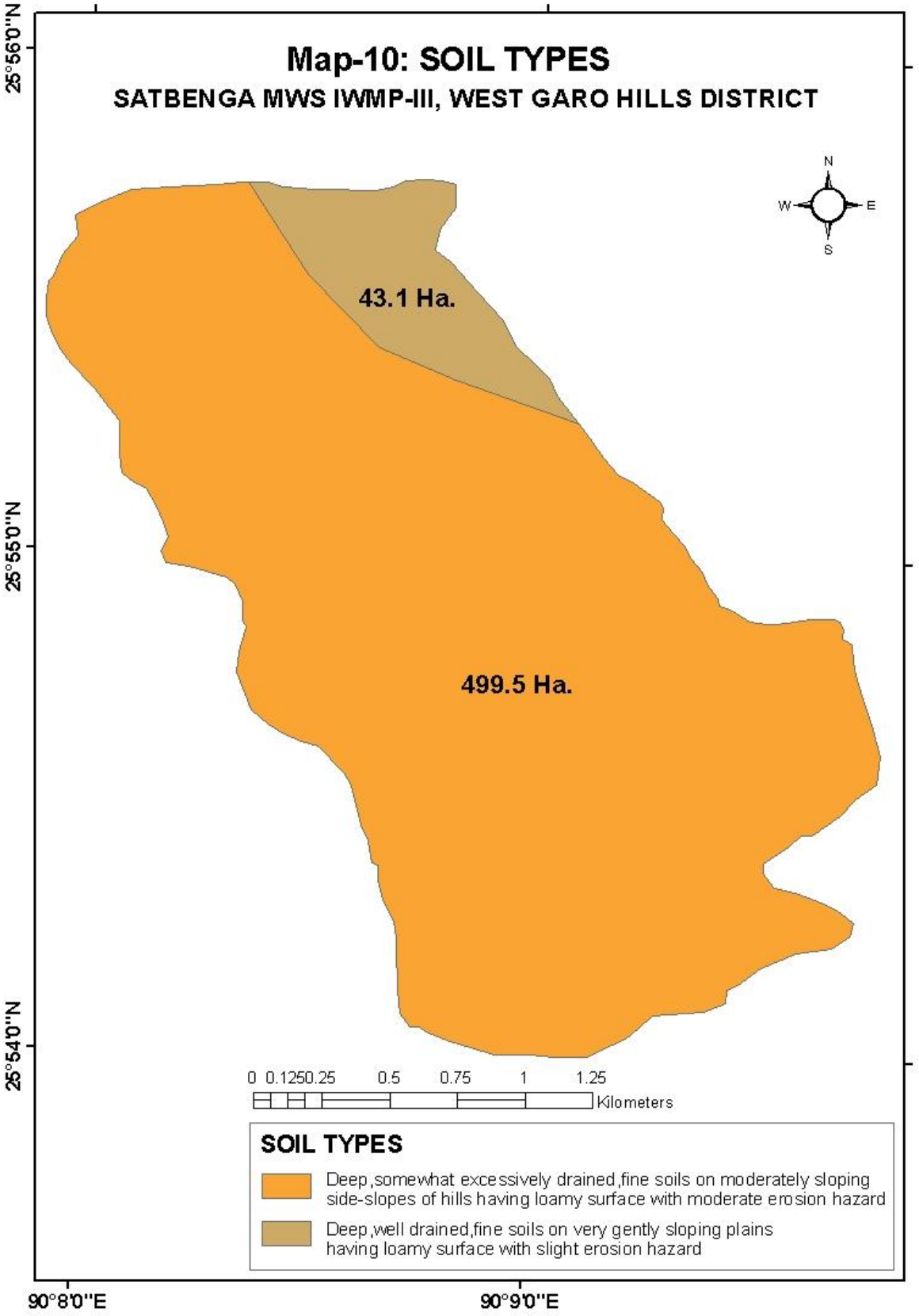

Map-5: PHYSIOGRAPHIC DIVISIONS
SATBENGA MWS IWMP-III, WEST GARO HILLS DISTRICT
N
W
E
S
22.4 Ha.
522.5 Ha.
25°56'0"N
25°55'30"N
25°55'0"N
25°54'30"N
25°54'0"N
90°8'0"E
90°8'30"E
90°9'0"E
90°9'30"E
0 0.15 0.3 0.6 0.9 1.2
Kilometers
Legend
Physiographic Divisions
Flood plain
Moderately dissected hilly terrain


Map-6: GROUND WATER
SATBENGA MWS IWMP-III, WEST GARO HILLS DISTRICT
N
W
E
S
545.5 Ha.
25°56'0"N
25°55'30"N
25°55'0"N
25°54'30"N
25°54'0"N
90°8'0"E
90°8'30"E
90°9'0"E
90°9'30"E
0 0.1250.25 0.5 0.75 1
Kilometers
Legend
Water Availability
Medium


Map - 7 : SOIL EROSION
SATBENGA MWS IWMP-III,WEST GARO HILLS DISTRICT
N
W
E
S
25°56'0"N
25°55'0"N
25°54'0"N
112.8 Ha.
432.1 Ha.
Legend
Soil Erosion
Moderate
Slight
0 0.15 0.3 0.6 0.9 1.2 1.5
Kilometers
90°8'0"E
90°9'0"E

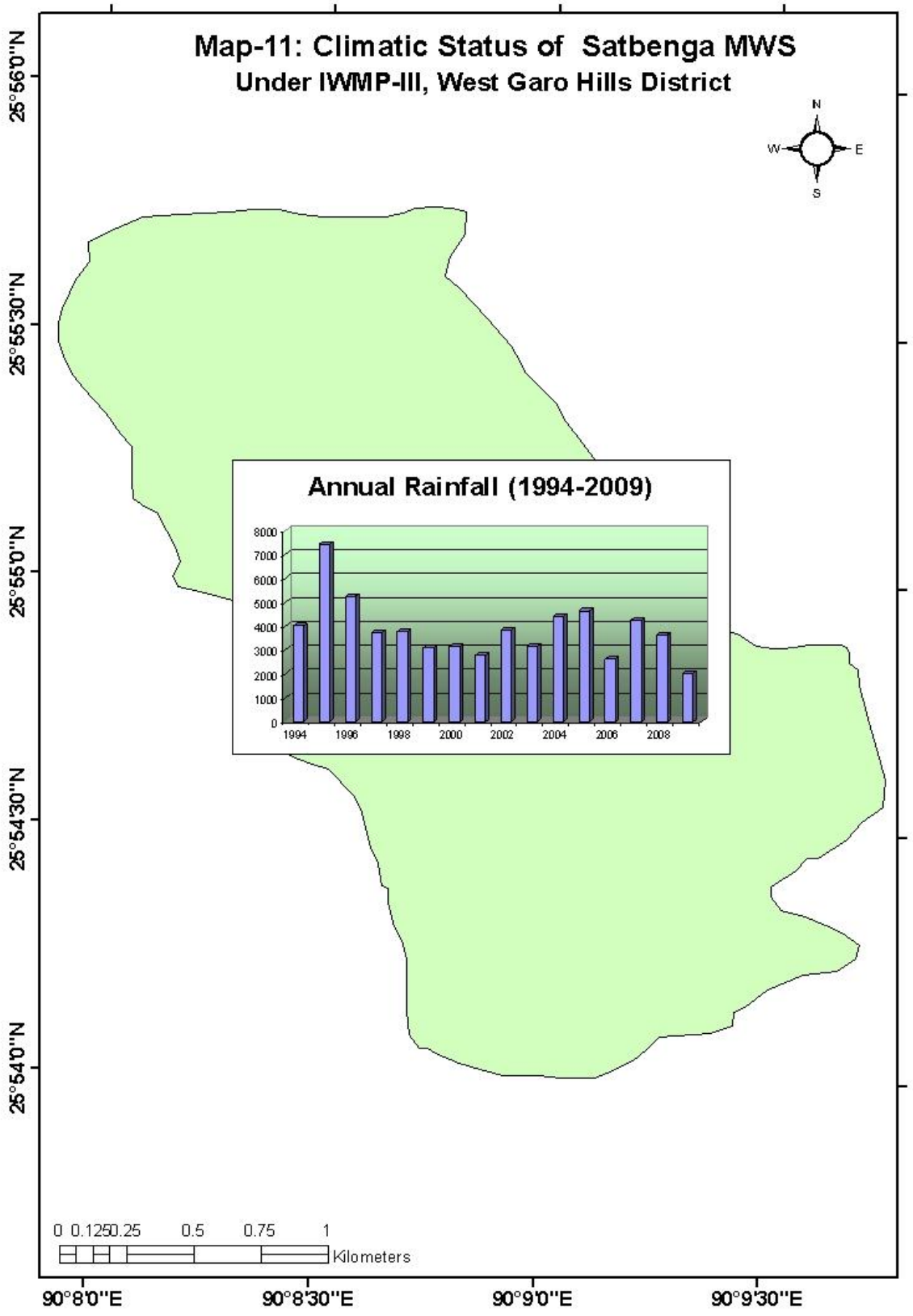

MAP- 8: TEXTURAL REGION
SATBENGA MWS UNDER IWMP-III, WGH DISTRICT
N
W
E
S
545.01 Ha.
25°56'0"N
25°55'0"N
25°54'0"N
90°8'0"E
90°9'0"E
0
0.5
1
Kilometers
Soil Texture
Loamy Clayey

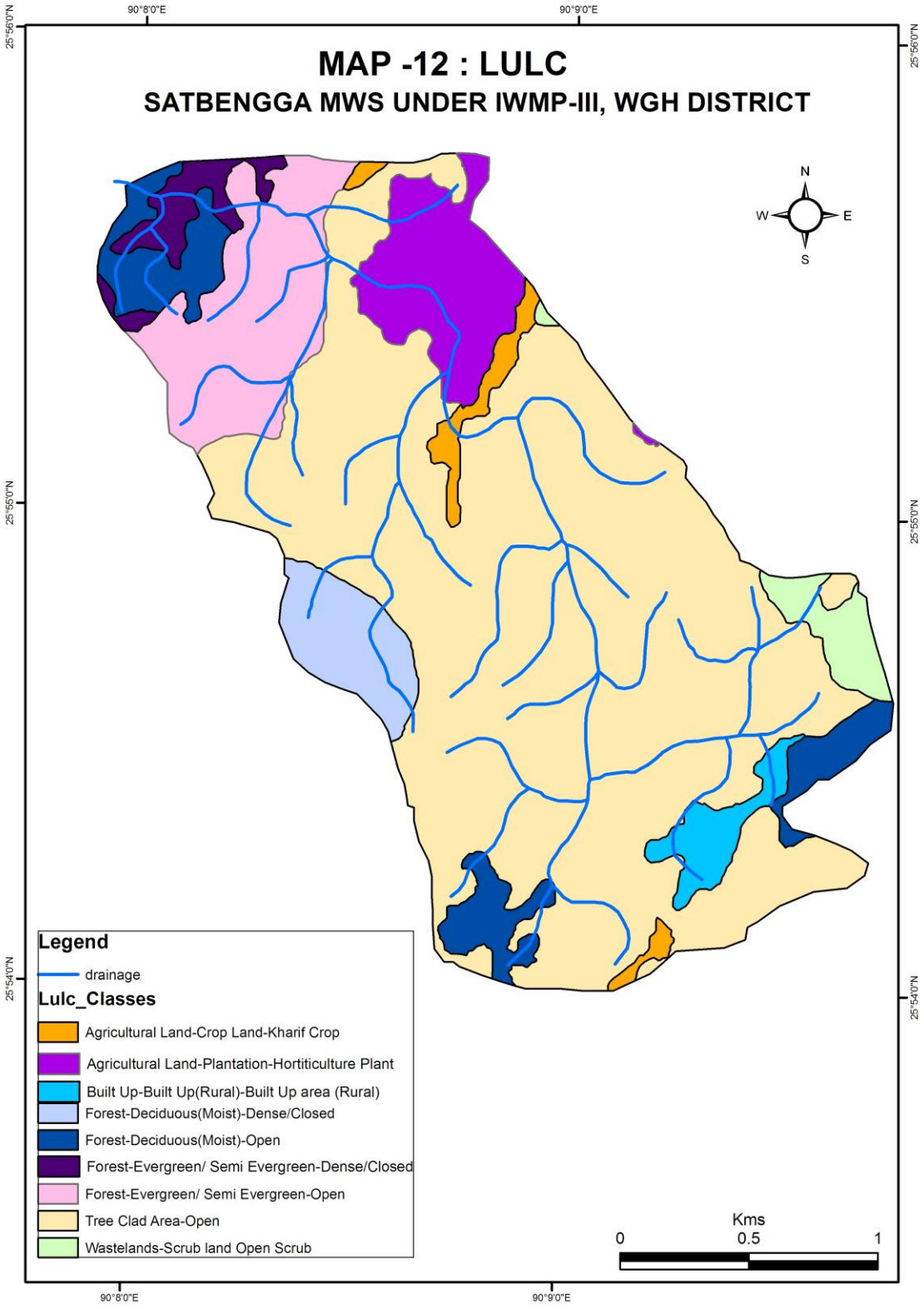

MAP- 9: SOIL DEPTH REGION
SATBENGA MWS UNDER IWMP-III, WGH DISTRICT
N
W
E
S
545.01 Ha.
25°56'0"N
25°55'0"N
25°54'0"N
90°8'0"E
90°9'0"E
0
0.5
1
Kilometers
Soil Depth
Deep

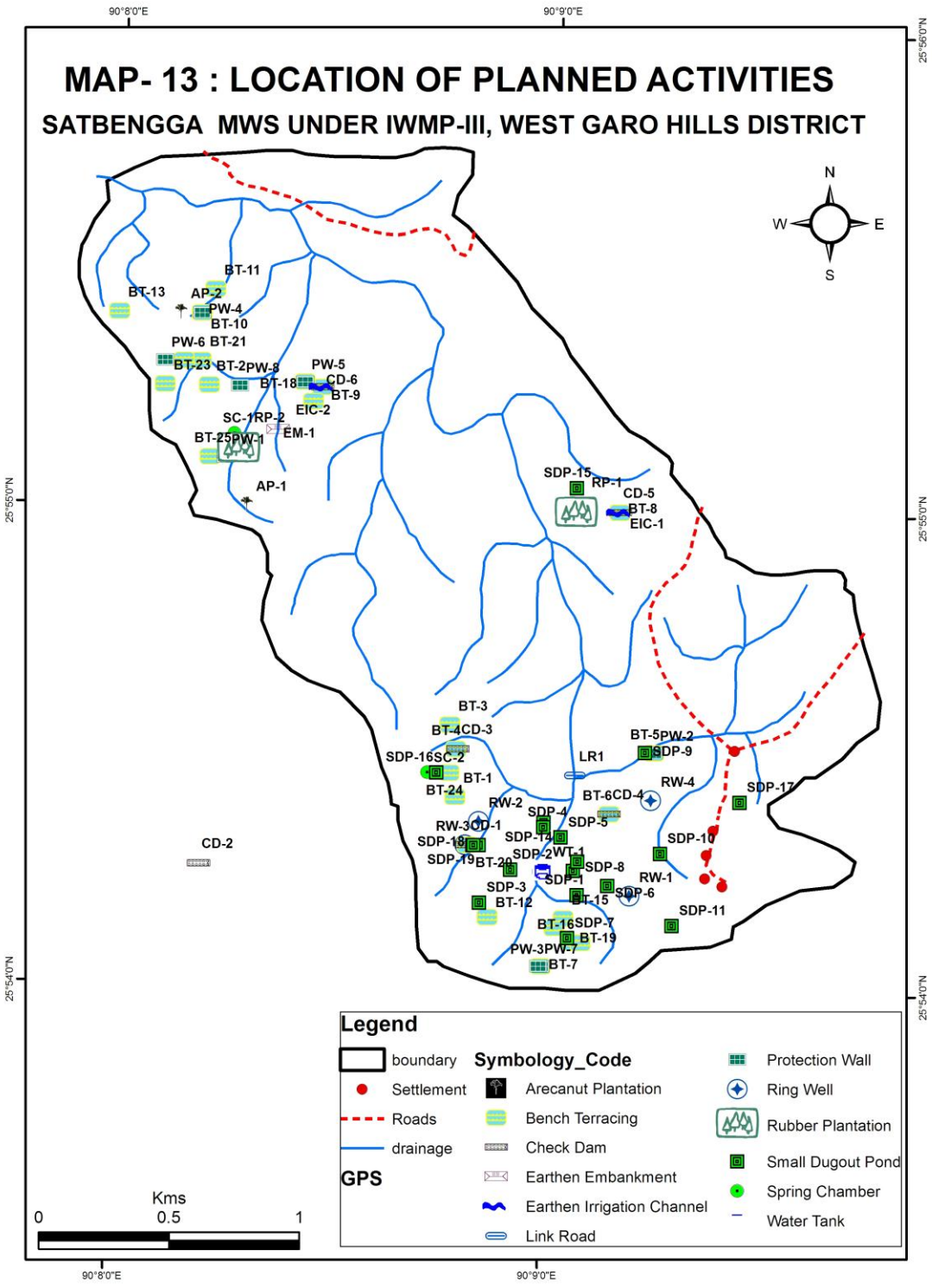

Map-10: SOIL TYPES
SATBENGA MWS IWMP-III, WEST GARO HILLS DISTRICT
N
W
E
S
43.1 Ha.
499.5 Ha.
25°56'0"N
25°55'0"N
25°54'0"N
90°8'0"E
90°9'0"E
0 0.1250.25 0.5 0.75 1 1.25
Kilometers
SOIL TYPES
Deep,somewhat excessively drained,fine soils on moderately sloping side-slopes of hills having loamy surface with moderate erosion hazard
Deep,well drained,fine soils on very gently sloping plains having loamy surface with slight erosion hazard

Map-11: Climatic Status of Satbenga MWS

Under IWMP-III, West Garo Hills District




MAP -12 : LULC
SATBENGGA MWS UNDER IWMP-III, WGH DISTRICT
90°8'0"E
90°9'0"E
25°56'0"N
25°55'0"N
25°54'0"N
N
W
E
S
Legend
drainage
Lulc_Classes
Agricultural Land-Crop Land-Kharif Crop
Agricultural Land-Plantation-Hortiticulture Plant
Built Up-Built Up(Rural)-Built Up area (Rural)
Forest-Deciduous(Moist)-Dense/Closed
Forest-Deciduous(Moist)-Open
Forest-Evergreen/ Semi Evergreen-Dense/Closed
Forest-Evergreen/ Semi Evergreen-Open
Tree Clad Area-Open
Wastelands-Scrub land Open Scrub
Kms
0
0.5
1


MAP- 13 : LOCATION OF PLANNED ACTIVITIES
SATBENGGA MWS UNDER IWMP-III, WEST GARO HILLS DISTRICT
90°8'0"E
90°9'0"E
25°55'0"N
25°54'0"N
N
W
E
S
BT-11
BT-13
AP-2
PW-4
BT-10
PW-6
BT-21
BT-23
BT-2
PW-8
BT-18
PW-5
CD-6
BT-9
EIC-2
SC-1
RP-2
EM-1
BT-25
PW-1
AP-1
SDP-15
RP-1
CD-5
BT-8
EIC-1
BT-3
BT-4
CD-3
SDP-16
SC-2
BT-1
BT-24
LR1
BT-5
PW-2
SDP-9
RW-4
SDP-17
BT-6
CD-4
RW-2
SDP-4
SDP-5
RW-3
CD-1
SDP-18
SDP-14
SDP-10
SDP-19
BT-20
SDP-2
WT-1
SDP-8
SDP-1
RW-1
SDP-3
BT-12
BT-15
SDP-6
SDP-11
BT-16
SDP-7
BT-19
PW-3
PW-7
BT-7
CD-2
Kms
0
0.5
1
Legend
boundary
Settlement
Roads
drainage
GPS
Symbology_Code
Arecanut Plantation
Bench Terracing
Check Dam
Earthen Embankment
Earthen Irrigation Channel
Link Road
Protection Wall
Ring Well
Rubber Plantation
Small Dugout Pond
Spring Chamber
Water Tank

ANNEXTURE II
SOCIO ECONOMIC SURVEY DETAILS

SOCIO - ECONOMIC SURVEY FOR DABANG MICRO WATERSHED

Sl No	Name of the Family	Name of the family Members					Literacy				Occupation			Horticulture		Live- Stock				Annual Income in Rs.
		Major Male	Major Female	Minor Male	Minor Female	Total	Illiterate	L.P .School	M. E. School.	H.E. School	Farmer.	Service	Business	Existing Paddy land.	Arecanut	Cattle	Piggery	Goatary	Poultry	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
	DABANG GAJINGPARA																			
1.	Shri Jongnan Marak	2	2	1	3	8	4	2	1	1	4	-	-	.40	1.0	2	1	-	9	18,000.00
2.	Shri Mingnan Sangma	1	1	1	1	4	2	2	-	-	2	-	-	.35	1.5	4	4	-	16	12,000.00
3	Smt Ringdak Marak	-	1	2	2	5	1	2	2	-	1	-	-	.25	.50	3	2	-	24	13,500.00
4	Shri Jongsin Sangma	2	2	2	1	7	4	2	1	-	4	-	-	.60	2.0	7	2	-	17	16,000.00
5.	Smt Nangre Marak	-	1	2	-	3	1	2	-	-	1	-	-	.40	.50	-	-	-	9	8,000.00
6	Shri Chajing Sangma	2	1	1	1	5	1	1	1	-	2	-	-	.50	.20	4	-	-	21	10,000.00
7	Smt Plimre Sangma	1	1	1	-	3	2	1	-	-	2	-	-	.30	.75	-	2	-	9	8,500.00
8	Smt Winchi Sangma	-	1	1	-	2	1	1	-	-	1	-	-	-	.50	-	-	-	4	5,500.00
9	Shri Jinggin Sangma	2	2	2	1	7	2	2	2	1	2	-	-	.60	2.0	6	7	-	42	20,000.00
10	Shri Seren Momin	2	1	1	1	5	3	2	-	-	3	-	-	.80	3.0	2	2	-	11	17,000.00
11	Shri Tune Marak	1	1	-	1	3	2	1	-	-	2	-	-	.10	2.50	3	-	-	10	9,000.00
12	Shri Saman Sangma	1	1	2	2	6	2	2	2	-	2	-	-	.35	.30	2	-	-	17	11,000.00
13	Shri Plillipson Marak	1	1	1	1	4	2	2	-	-	2	-	-	.15	1.0	4	1	-	11	10,000.00
12	Shri Nilwith Marak	2	1	2	2	7	2	3	1	1	2	-	-	.80	2.50	6	4	-	27	19,500.00

15	Shri Namgchan Marak	1	1	–	1	3	2	1	–	–	2	–	–	–	1.0	2	2	–	12	9,500.00
16	Shri Katjing Sangma	22	2	1	1	6	3	2	1	1	3	–	–	.60	3.0	9	–	–	40	25,000.00
17	Shri Sangjen Sangma	1	1	2	2	6	3	2	1	1	2	–	–	.10	.60	–	–	–	4	7,500.00
18	Shri Pingsonsing Sangma	3	2	–	1	6	4	1	–	–	4	–	–	.35	3.0	1	–	–	17	8,500.00
19	Shri Kriteson Sangma	1	1	1	1	4	2	2	–	–	2	–	–	.30	1.50	4	–	–	9	11,000.00
20	Shri Jening Marak	1	1	–	–	2	1	–	1	1	2	–	–	.15	1.0	2	–	–	22	9,500.00

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
21	Shri Jobiram Marak	1	1	-	3	5	3	2	-	-	2			.25	.30	25	-	-		13,500.00
22	Shri Will Marak	1	1	3	1	6	3	4	-	-	2	-	-	-	.50	-	-	1	-	12,500.00
23	Shri Sengjing Marak	1	2	1	1	5	2	2	1	1	2	-	-	.90	.80	20	-	4	-	2,45,000/-
24	Shri Soning Marak	2	2	2	2	8	3	3	2	-	3	-	-	.70	.45	10	-	1	-	17,000.00
25	Shri Tongban Marak	1	1	-	-	2	2	-	-	-	2	1	-	.30	.50	-	-	-	-	9,500.00
26	Shri Injing Sangma	2	1	3	1	7	3	2	-	1	3	-	-	.15	.40	20	-	2	-	17,000.00
27	Shri Jamal Sangma	1	1	1	1	4	2	2	-	-	2	-	-	.35	.25	15	-	3	-	13,000.00
28	Shri Sonjing Marak	2	2	-	-	4	2	-	1	1	2	-	-	50	.50	05	-	1	-	14,500.00
29	Shri Tejeng Marak	1	1	-	3	5	2	2	-	-	2	-	-	.30	20	-	-	1	-	11,500.00
30	Shri Mingchang Sangma	1	1	1	4	7	4	3	-	-	2	-	-	.25	30	-	-	2	-	12,000.00
31	Shri Aldinathson Marak	1	1	2	2	6	2	2	1	1	2	-	-	.20	.50	10	-	1	-	11,000.00
32	Shri Dingson Marak	1	1	-	1	3	-	-	-	-	2	-	-	-	.10	30	-	6	-	12,000.00
33	Shri Wea Sangma	1	2	1	3	7	3	2	1	1	3	-	-	-	.25	-	-	1	-	10,500.00
34	Shri Rongban Sangma	1	3	1	2	7	2	2	2	1	2	-	-	.75	.50	30	-	6	-	20,000.00
35	Shri Terison Sangma	1	1	-	1	3	3	-	-	-	2	-	-	.20	.30	10	-	-	-	9,500.00
36	Shri Armithson Sangma	2	2	2	2	8	2	2	1	1	2	-	-	.65	.50	-	2	2	-	17,500.00
37	Shri Gelberth Sangma	1	2	1	1	5	3	2	-	-	3	-	-	.45	.30	25	-	2	-	20,000.00
38	Shri Rogen Marak	1	1	-	1	3	3	-	-	-	2	-	-	.10	.30	10	-	-	-	8,000.00
39	Smt Nengdik Marak	-	1	-	1	1	1	1	-	-	1	-	-	-	.10	15	-	1	-	6,500.00
40	Shri Dingjing Marak	2	2	1	1	2	2	2	1	1	2	-	-	.70	.50	20	2	2	-	18,500.00
41	Shri Pollendro Marak	1	1	1	1	4	2	2	-	-	2	-	-	.30	.15	10	-	2	-	12,500.00
42	Shri Nanjing Sangma	2	1	2	2	7	2	3	2	-	2	-	-	.45	.35	20	-	-	-	15,000.00
43	Shri Mingnan Sangma	1	1	-	3	5	2	3	-	-	2	-	-	.15	.20	10	-	-		10,000.00

	DABANG AMPANGDAMGRE:																		
44	Shri Ninggin Marak	1	2	2	2	7	3	2	1	1	2	–	–	.56	.40	.25	–	1	–	12,500.00
45	Smt Donilla Marak	–	1	1	1	3	1	1	1	–	1	–	–	.30	.20	.10	–	–	–	5,500.00
46	Shri Jonga Sangma	1	1	1	1	4	2	2	–	–	2	–	–	.10	.30	.15	–	1	–	9,500.00
47	Shri Ringban Sangma	2	2	–	2	6	2	1	1	2	2	–	–	.50	.50	.10	–	3	–	15,500.00
48	Shri Minggin Marak	1	1	–	3	5	2	2	1	–	2	–	–	.10	.40	.20	–	1	–	9,500.00

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
49	Shri Matneng Sangma	1	2	2	-	5	3	2	-	-	3	-	-	.35	.60	.20	-	4	-	16,000.00
50	Shri Gadan Sangma	1	1	-	-	2	2	1	1	-	2	-	-	.20	.30	-	-	-	-	10,500.00
51	Shri Satjeng Sangma	1	1	3	3	8	1	2	2	1	1	-	-	.90	.50	.30	-	2	-	20,500.00
52	Shri Nengran Marak	1	1	2	2	6	2	2	1	1	2	-	-	.25	.25	.15	-	-	-	8,500.00
53	Shri Ringgin Marak	1	2	1	-	4	2	-	1	1	2	-	-	.50	.35	.10	-	-	-	9,500.00
54	Shri Konal Marak	1	1	-	1	3	2	1	-	-	2	-	-	-	.50	.50	-	1	-	12,500.00
55	Shri Pilling Marak	1	1	1	1	4	3	1	-	-	2	-	-	.10	.20	.10	-	-	-	5,500.00
56	Shri Tebarson Momin	1	1	-	-	2	-	-	1	1	2	-	-	.30	.20	.15	-	2	-	10,500.00
57	Smt Witson Sangma	1	1	-	-	2	1	-	1	-	2	-	-	.10	.30	.20	-	2	-	6,500.00
58	Smt Sengdon Marak	1	3	-	1	5	2	1	-	2	2	-	-	.50	.40	.10	-	4	-	15,000.00
59	Shri Raban Sangma	2	2	-	2	6	3	1	1	1	2	-	-	.45	.30	.25	-	6	-	17,500.00
60	Smt Nonring Marak	1	-	1	2	2	1	1	-	-	1	-	-	-	.15	.10	2	1	-	5,000.00
61	Shri Roseng Sangma	1	1	3	3	8	2	2	2	2	2	-	-	.60	.50	.20	-	4	-	19,500.00
62	Shri Nangseng Sangma	1	1	2	-	4	2	2	-	-	2	-	-	.30	.30	.10	2	1	-	8,500.00
63	Shri Ningban Sangma	2	2	-	-	4	-	1	2	1	2	-	-	.40	.35	.15	-	4	-	14,500.00
64	Shri Koban Sangma	1	1	-	-	2	2	-	-	-	2	-	-	.10	.40	.10	-	-	_	5,000.00
65	Shri Ranjing Marak	3	2	1	1	6	2	1	1	2	4	-	-	.50	.20	.30	-	2	-	19,500.00
66	Shri Nengmin Sangma	1	1	1	1	4	2	1	1	-	2	-	-	.20	.30	-	-	3		11,500.00
	TOTAL :-	81	88	66	84	319	130	101	43	27	140	1	-	22.06	44.50	210	35	107	1221	10,48,000/

ANNEXTURE III
COST ESTIMATES

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

Spacing	6.06 m x 3.65 m
Plant density	450 nos

A	Preliminary Works		
I.	Site clearance 15 mandays @Rs. 100/- per manday		1500
II.	Pit digging (pit size 0.75mx0.75mx0.75m) 450 nos @Rs. 10/- each		4500
		Total:	6000
B	First year Planting		
I.	Cost of planting materials 450 nos @Rs. 20/- each		9000
II.	Cost of planting 450 nos @Rs. 3/- each = Rs. 1350.00 (Contribution from the beneficiaries)		
III.	Weeding two times 20 mandays @Rs. 100/- per manday = Rs. 2000/- (Contribution from the beneficiaries)	Total:	9000
	Grand Total:		**15000**
	(Rupees Fifteen thousand) only.		

* The cost of norms in Arable Land for Rubber Plantation has been worked out keeping in mind the high demand for rubber planting by the farmers in the proposed projects, besides it is a high income generating crop 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.

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
II.	Pit digging (pit size 0.45mx0.45mx0.45m) 1200 nos @Rs. 3/- each		3600
		Total:	4200
B	First year Planting		
I.	Cost of arecanuts 1200 nos @Rs. 1/- each		7200
II.	Cost of planting 1200 nos @Rs. 2/- each = Rs. 2400.00 (Contribution from the beneficiaries)		
III.	Weeding two times 10 mandays @Rs. 100/- per manday = Rs. 2000 (Contribution from the beneficiaries)	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.

Table 52 : Details of Convergence of IWMP with other Schemes:

Name of Village: Alokdia

1	2	3	4	5			6	7
District	Names of project	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 (a) Structures (b) livelihoods (c) Any other (pl. specify)	Nos/Rmt/Ha	Amount (Rs)	Reference no. of activity/ task/ structure in DPR	Level at which decision for convergence was taken
West Garo Hills	WGH-IWMP-III	NREGS (DRDA, West Garo Hills, Meghalaya)	32.2	a) Dugout Pond	16 nos	480000	Enclosure of Abstract of Perspective Plan for Convergence of NREGs with IWMP in DPR	District Level
				b) Bench Terrace	11 Ha	165000		
				c) Nallah Bund	5 nos	750000		
				d) CC Irrigation dam	2 nos	300000		
				e) Earthen Irri channel	1380 Rmt	69000		
				f) Arecanut Plantation	10 Ha	88000		
				g) Rubber Plantation	90 Ha	1368000		
Grand Total						**3220000**		

Grand Total: Rupees Thirtytwo Lakhs Twenty Thousand only

Enclosed: Abstract of Perspective Plan for Convergence of NREGS with IWMP

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

Divisional officer
Tura Soil & Water Conservation(T) Division

Deputy Commissioner
West Garo Hills, Tura.

Deputy Commissoner
West Garo Hills, meghalaya

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 deterious matters, dressing of sides and bottom and back filling with approved materials.)
(I) Ordinary soil.
(A) Manual means.
(i) Upto 3 m, depth.

M/Dam :	1 x 8.00 x 1.40 x 1.05	= 11.76m^3
W/wall :	2 x 2.50 x 0.45 x 0.50	= 1.13m^3
G/wall :	2 x 3.00 x 0.30 x 0.50	= 0.90m^3
T/wall :	1 x 6.00 x 0.45 x 0.60	= 1.62m^3
Apron :	1 x 6.00 x 3.00 x 0.35	= 6.30m^3
D/channel :	1 x 5.00 x 1.30 x 0.90	= 5.85m^3
		= 27.56m^3

@ Rs. 34/- m^3 .... Rs. 937.04

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

M/Dam :	1 x 8.00 x 1.40 x 0.10	= 1.12m^3
Apron :	1 x 6.00 x 3.00 x 0.25	= 4.50m^3
D/channel :	1 x 5.00 x 1.00 x 0.25	= 1.25m^3
		= 6.87m^3

@ Rs. 852/- m^3 .... Rs. 5853.24

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

M/Dam :	1 x 8.00 x 1.40 x 0.10	= 1.12m^3		
	@ Rs. 3232/- m^3	.....	.....	Rs. 3619.84

4/141 . Plain cement concrete in open foundation complete as per drawing and technical specifications.
A. P.C.C. Grade M15 :

M/Dam :	1 x 8.00 x 1.20 x 0.80	= 7.68m^3		
	1 x 8.00 x $\frac{0.50 + 1.20}{2}$ x 1.05	= 7.14m^3		
	2 x 1.00 x 0.50 x 0.50	= 0.50m^3		
W/wall :	2 x 2.50 x 0.30 x 2.05	= 3.08m^3		
Deduct :	1 x 1.00 x 0.30 x 0.60	= (-)0.18m^3		
G/wall :	2 x 3.00 x 0.25 x 0.95	= 1.43m^3		
T/wall :	1 x 6.00 x 0.30 x 0.70	= 1.26m^3		
Apron :	1 x 6.00 x 3.00 x 0.10	= 1.80m^3		
D/channel :	2 x 5.00 x 0.15 x 0.98	= 1.47m^3		
	1 x 5.00 x 1.00 x 0.10	= 0.50m^3		
		= 24.68m^3		
	@ Rs. 3630/- m^3	.....	.....	Rs. 89588.40

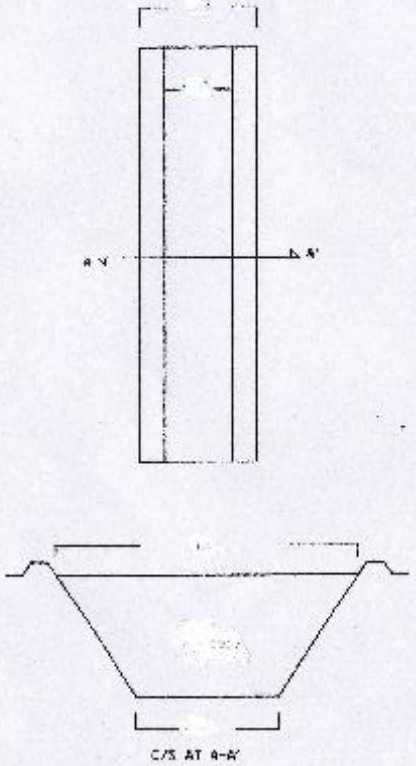
/

GRAND TOTAL = Rs. 99998.52

Say, Rs. 1,00,000.00

(Rupees One lakh) only.

Plan for Irrigation Channel



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=2x2.50x1.75x1.00=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)=2x2.50x1.75x1.00=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=2x9.00x2.50x0.40=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 EARTHEN EMBANKMENT

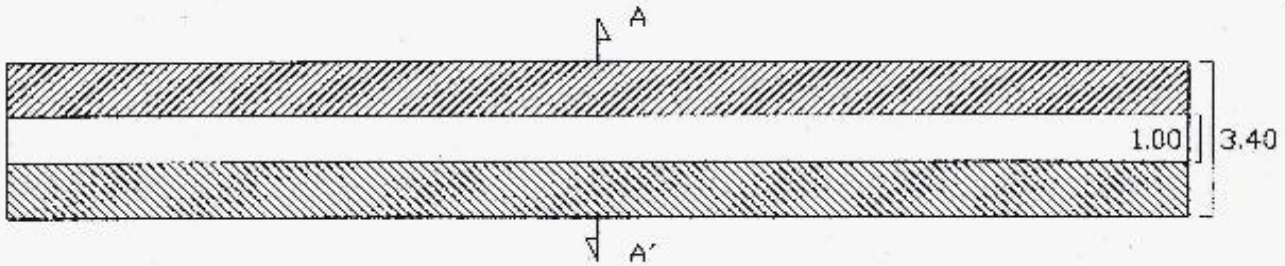
AS PER SCHEDULE OF RATES FOR ROADS,BRIDGES AND E&D

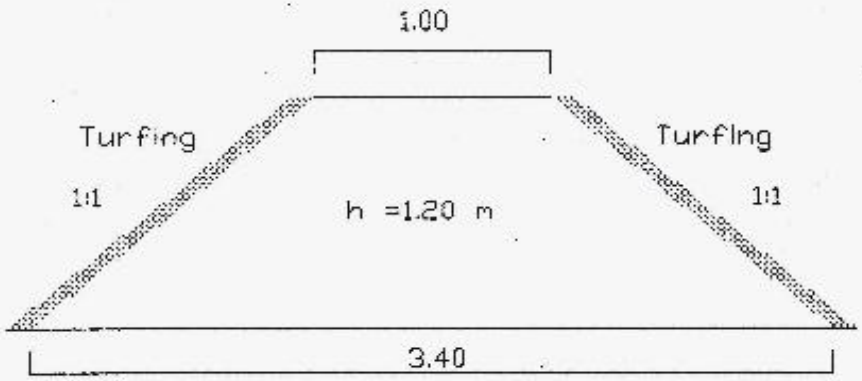
WORKS FOR THE YEAR 2007-2008

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 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	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**	

Cost per Running metre= Rupees Seven hundred only

CONSTRUCTION OF EARTHEN EMBANKMENT





NOT TO SCALE

C/S at A-A'

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	x	9.4	x	1	x	0.9	=	8.46	m³
.@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)

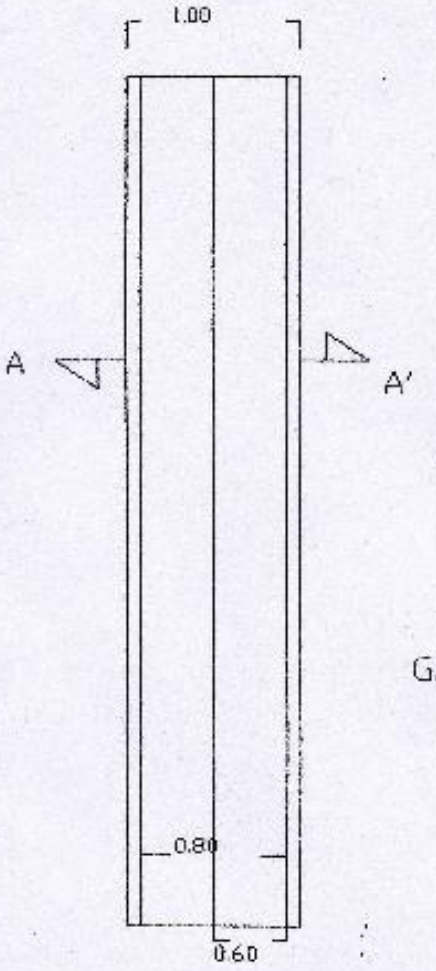
1	x	9.4	x	1	x	0.1	=	0.94	m³
1	x	9.4	x	0.8	x	0.8	=	6.02	m³
1	x	9.4	x	0.6	x	1.5	=	8.46	m³
								15.42	m³
.@ Rs.3232/- per cum							Rs	49824.51	

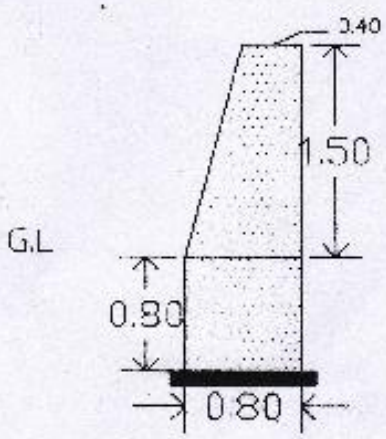
Rs. 50,112.15

Say, **Rs. 50,000.00**

Grand total(Rupees fifty thousand) only.

CONSTRUCTION OF CC PROTECTION WALL





C/S AT A-A'

TOTAL LENGTH =9.40 m

NOT TO SCALE

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 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

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**	

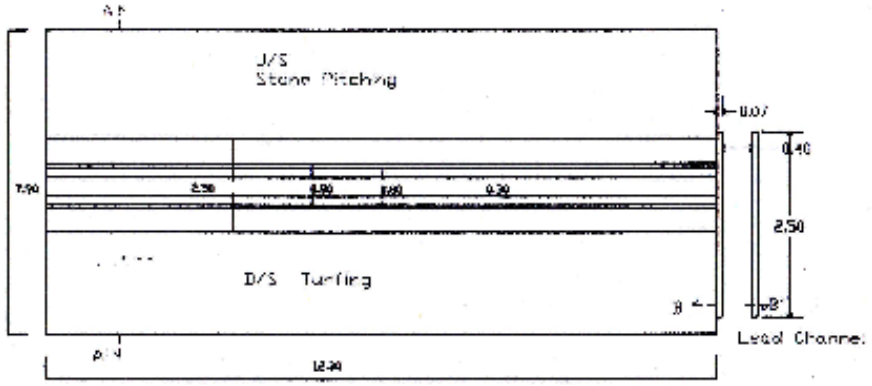
7/100 Providing and laying pitching on slopes laid over prepared filter media as per drawing and technical specification.

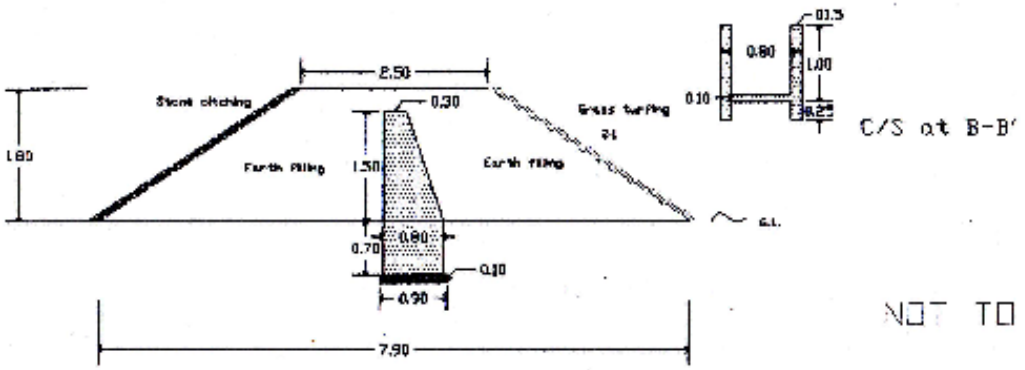
I. Stone/Boulder

Dam	12.30	×	2.01	×	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.

CONSTRUCTION OF CC CORE WALL
ALONG WITH EARTHEN EMBANKMENT WITH CC LEAD CHANNEL





C/S at B-B'

C/S AT A-A'

NOT TO SCALE

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 x 1 x 2.5 x 0.80 x 1.10 = 2.20 m^3

1 x 2 x 2.5 x 0.80 x 0.70 = 2.24 m^3

For Reservoir:

1 x 2 x 2.5 x 0.30 x 0.50 = 0.75 m^3

1 x 2 x 1.5 x 0.30 x 0.50 = 0.45 m^3

For Pipe Pedestals:

10 x 0.40 x 0.40 x 0.60 = 0.96 m^3

6.60 m^3

@ Rs. 85/- m^3 Rs. 561.00

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

For Spring Chamber:

1 x 1 x 2.50 x 0.80 = 2.00 m^3

1 x 2 x 2.00 x 0.80 = 3.20 m^3

For Reservoir: m^3

1 x 2 x 2.50 x 0.30 = 1.50 m^3

1 x 2 x 1.50 x 0.30 = 0.90 m^3

1 x 1 x 2.50 x 1.50 = 3.75 m^3

For Pipe Pedestal: m^3

10 x 0.40 x 0.40 = 1.60 m^3

= 12.95 m^3

@ Rs. 115/- m^3 Rs. 1,489.25

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

For Spring Chamber:

1 x 1 x 2.50 x 0.80 x 0.10 = 0.20 m^3

1 x 2 x 2.00 x 0.80 x 0.10 = 0.32 m^3

For Reservoir:

1 x 2 x 2.50 x 0.30 x 0.10 = 0.15 m^3

1 x 2 x 1.50 x 0.30 x 0.10 = 0.09 m^3

For Pipe Pedestals:

10 x 0.40 x 0.40 x 0.10 = 0.16 m^3

= 0.92 m^3

@ Rs. 2393/- m^3 Rs. 2,201.56

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

For Spring Chamber:

1 x 1 x 2.50 x 0.60 x 0.70 = 1.05 m^3

1 x 2 x 2.00 x 0.60 x 0.65 = 1.56 m^3

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

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

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

For Reservoir :

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

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

1 x 1 x 2.50 x 1.50 x 0.20 = 0.75 m^3

For Pipe Pedestals:

10 x 0.30 x 0.30 x 0.40 = 0.36 m^3

= 10.40 m^3

@ Rs. 2719/- 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 x 2 x 2.50 x 0.70 = 3.50 m^2

2 x 2 x 2.00 x 0.65 = 5.20 m^2

1 x 1 x 2.50 x 1.50 = 3.75 m^2

1 x 1 x 2.50 x 1.60 = 4.00 m^2

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

2 x 2 x 2.00 x 0.70 = 5.60 m^2

2 x 2 x 0.60 x 0.70 = 1.68 m^2

2 x 1 x 2.00 x 1.50 = 6.00 m^2

2 x 1 x 2.00 x 1.60 = 6.40 m^2

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

For Reservoir :

1 x 2 x 2.50 x 0.30 = 1.50 m^2

1 x 2 x 0.30 x 0.30 = 0.18 m^2

1 x 2 x 1.50 x 0.30 = 0.90 m^2

1 x 2 x 2.50 x 1.50 = 7.50 m^2

1 x 2 x 1.50 x 1.50 = 4.50 m^2

1 x 1 x 2.50 x 1.50 = 3.75 m^2

1 x 2 x 2.50 x 0.10 = 0.50 m^2

1 x 2 x 1.50 x 0.10 = 0.30 m^2

For Pipe Pedestals:

10 x 4 x 0.30 x 0.40 = 4.80 $m^{\square}$
10 x 4 x 0.15 x 0.15 = 0.90 $m^{\square}$
= 62.46 $m^{\square}$

@ Rs. 148/- m^2 Rs. 9,244.82

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

For Reservoir:
1 x 2 x 2.50 x 0.15x 1.50 = 1.12 m^3
1 x 2 x 1.50 x 0.15x 1.50 = 0.67 m^3
1 x 1 x 2.50 x 1.50x 0.10 = 0.37 m^3
For pipe pedestals:
10 x 0.15 x 0.15 x 1.20 = 0.27 m^3
= 2.43 m^3

@ Rs. 3280/- $m^{\square}$ 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:
2 x 12 x 2.30 = 27.60 Rm.
2 x 9 x 2.30 = 41.40Rm.
For pipe pedestals:
10 x 4 x 1.50 = 60.00Rm.
= 128.00 Rm.

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

8#Tor steel :

For Reservoir:
2 x 12 x 1.40 = 33.60Rm.
2 x 9 x 2.40 = 43.20Rm.
2 x 10 x 1.40 = 28.00Rm.
2 x 10 x 1.40 = 28.00Rm.
= 132.80 Rm.

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

For pipe pedestals:

10 x 9 x 0.50 = 45.00Rm.

@ 0.22kg./Rm . = 9.90/ kgs
2.572 Qntls.

@ Rs.5373/- Qtl. Rs. 138.23

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

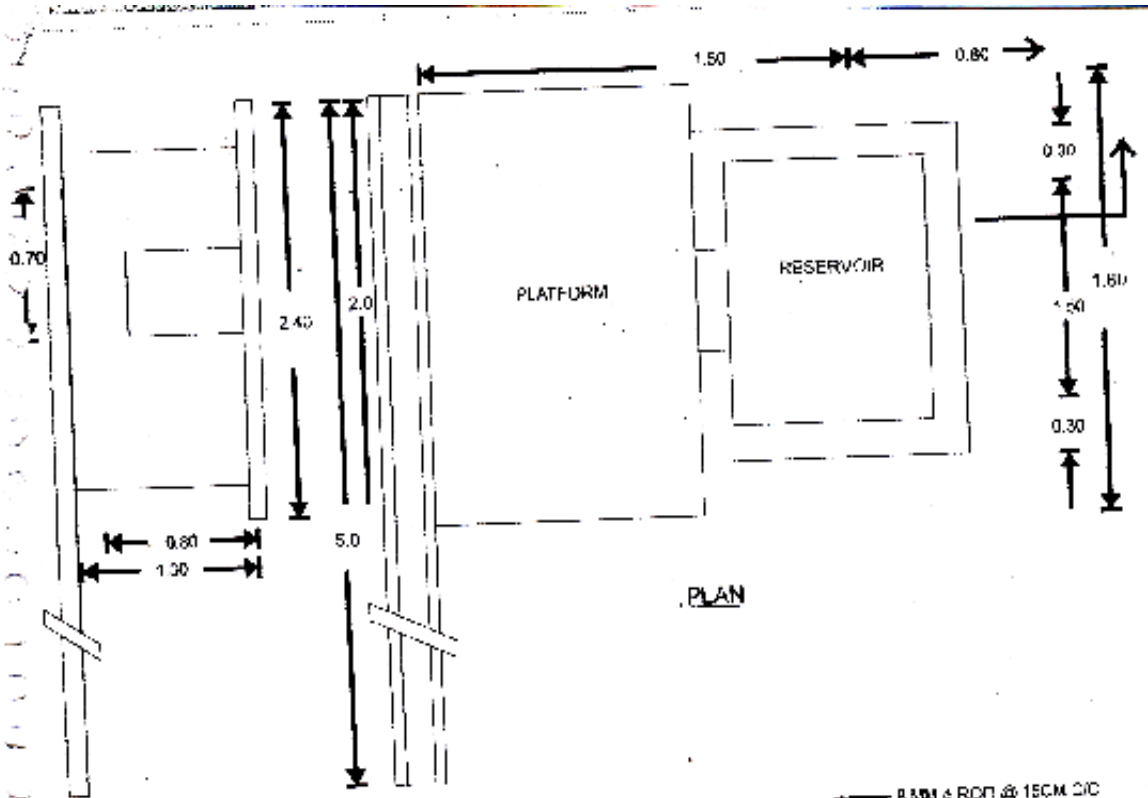
(a) 75mm G.I. Pipes.
Length – 1.30R.M. @ Rs.500/-Rm. Rs. 650.00

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

GRAND TOTAL : Rs. 60,002.82

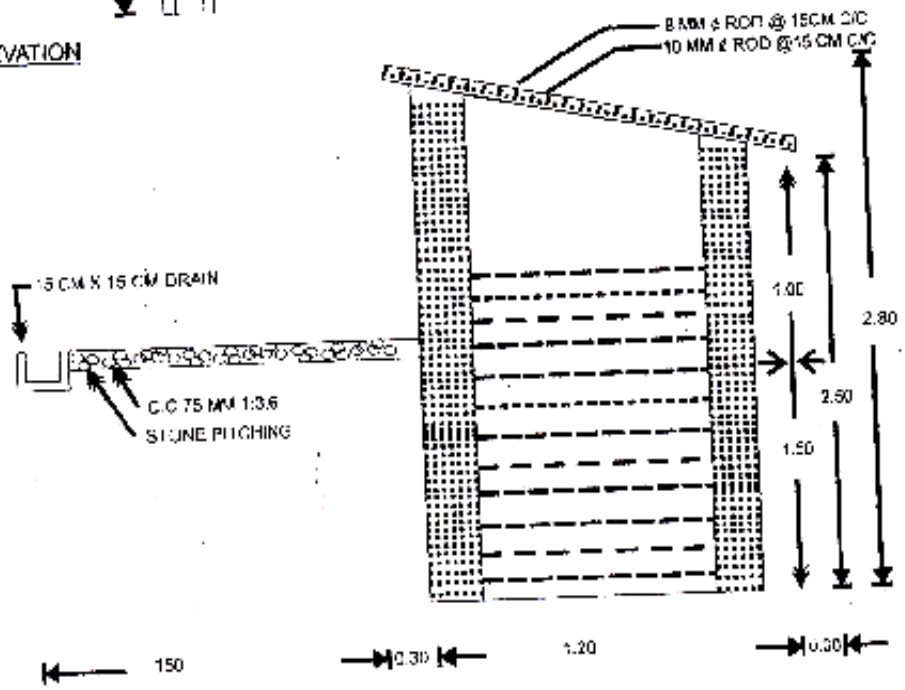
Say, Rs. 60,000.00

(Rupees sixty thousand) only.



PLAN

ELEVATION



CROSS SECTION AT A-B

CONSTRUCTION OF DRINKING WELL WITH WASHING PLATFORM

ALL DIMENSION ARE IN METER
NOT TO SCALE

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

Volume: D/6 (AT) + 4(AM) +(AB)

= 2.5/6 (30.00 x 15.00) +4(28.00 x 13.00) + (26.00 x 11.00)

= 2.5/6(450+1456+286)

= 913.33 m³

.@.Rs.34/- cum	**Rs.**	**31053.22**

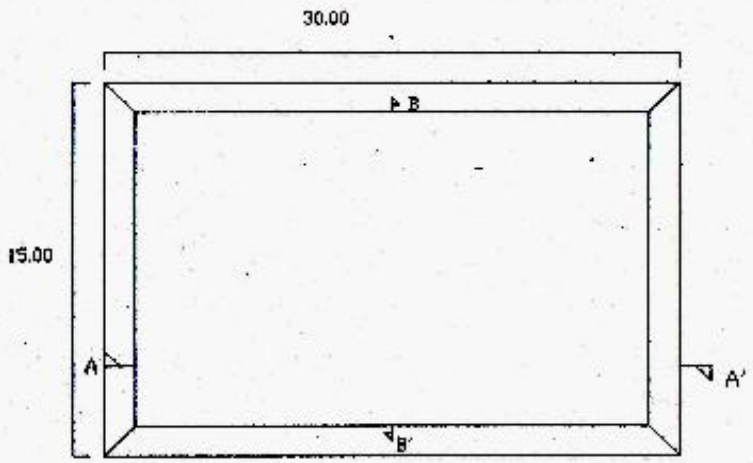
6/37. Furnishing and laying of the live sods of perrennial turf forming grass on embankment slope,verges or other locations shown on the drawing including preparation of ground, fetching of sods and watering as per technical specification

2	x	30	x	2.5	150	m²
2	x	15	x	2.5	75	m²
					225	m²
.@Rs.41.00/sq.m					**9225**	
					40278.22	

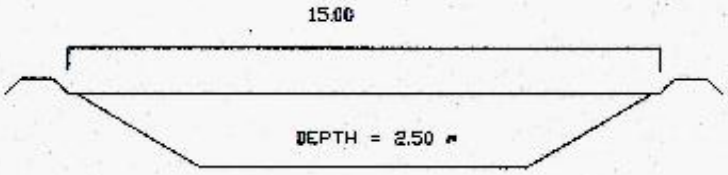
Grand Total **Say** **Rs.** **40,000.00**

(Rupees Forty thousand)only.

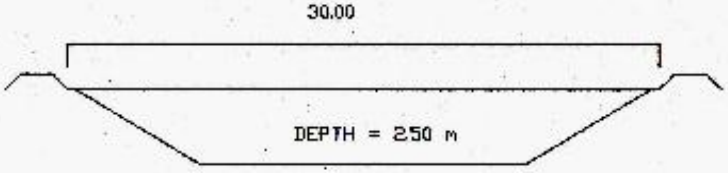
CONSTRUCTION OF DUGOUT POND



NOT TO SCALE



C/S AT A-A'



C/S AT B-B'

ANNEXTURE IV
MoA, SUB-COMMITTEE DETAILS ETC

NO OBJECTION CERTIFICATE OF THE AKING NOKMA FOR SATBENGA MICRO WATERSHED DEVELOPMENT PROJECT TO BE TAKEN UP UNDER I.W.M.P PROJECT BY TURA SOIL & WATER CONSERVATION (T) DIVISION

The A'king Nokma of Alokdia village under Satbenga Micro Watershed project, WGH-IWMP-II has No Objection to the developmental activities to be undertaken in my A'king land by Soil & Water Conservation Department.

The villagers of Alokdia 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

Blessen Ch. Momin

B.ch.Momin
Nokma III-29(1)
Alokdia-Badagre A.hills
West Garo Hills.

Countersigned by

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

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NO OBJECTION CERTIFICATE OF THE AKING NOKMA FOR UNDERTAKING ENTRY POINT ACTIVITY (EPA) AT SATBENGA MICRO WATERSHED, WGH-I.W.M.P-II BY TURA SOIL & WATER CONSERVATION (T) DIVISION.

The A'king Nokma of Alokdia village under Satbenga Micro Watershed project, WGH-IWMP-II has No Objection to the Entry Point Activity (EPA) to be undertaken in my A'king land Soil & Water Conservation Department.

The proposed activity under Entry point Activity shall benefit the villagers and there will be No Objection in future from the villagers of the watershed area. We also pledge to maintain the asset created through EPA to ensure sustainability.

Name & Signature of A'king Nokma

B.Ch.Momin
Nokma (I-29(1)
Alokdia-Sadagre A.king
West Garo Hills.

Countersigned by

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

ABSTRACT OF PERSPECTIVE PLAN FOR CONVERGENCE OF NREGs WITH IWMP AT ALOKDIA VILLAGE
UNDER SATBENGA MICRO-WATERSHED, WGH-IWMP-III

Name of Village: Alokdia
Total No. of Job Card Holder: 100 Households

Total Wage Component(@Rs.70/- per annum) Rs 700000
Amount earmarked for Convergence per annum Rs 700000

(In Rupees)

SL.NO	ACTIVITIES	Units	PROJECT PERIOD												Total			Mandays to be generated
			2010-11			2011-12			2012-13			2013-14						
			PHY	FIN		PHY	FIN		PHY	FIN		PHY	FIN		PHY	FIN		
				Wages	material		Wages	Material		Wages	Material		wages	material		wages	material	
1	Dugout Pond(@Rs.30000/- per no)	Nos	5	150000		2	60000		2	60000		7	210000		**16**	**480000**	**0**	6857
2	Bench Terrace(@Rs.15000/- per Ha)	Ha	4	60000		4	60000					3	45000		**11**	**165000**	**0**	2357
	CC Core wall(@Rs.150000/- per no)	Nos				2	180000	120000	2	180000	120000	1	90000	60000		**450000**	**300000**	6429
4	CC irrigation dam(@Rs.150000/- per no)	Nos	1	90000	60000				1	90000	60000				**2**	**180000**	**120000**	2571
	Earthen Irrigation Channel(@Rs.50/- rmt)	Rmt	280	14000		280	14000		560	28000		260	13000			**69000**	**0**	986
7	Rubber Plantation	Ha																
	i) Planting(@Rs.1800/- per Ha)	Ha	90	162000		90	162000		90	162000		90	162000			**648000**	**0**	9257
	ii) Weeding(@Rs.2000/- per Ha)	Ha	90	180000		90	180000		90	180000		90	180000			**720000**	**0**	10286
8	Arecanut Plantation	Ha																
	i) Planting(@Rs.2400/- per Ha)	Ha	10	24000		10	24000									**48000**	**0**	686
	ii) Weeding(@Rs.2000/- per Ha)	Ha	10	20000		10	20000									**40000**	**0**	571
	GRAND TOTAL			**700000**	**60000**		**700000**	**120000**		**700000**	**180000**		**700000**	**60000**		**2800000**	**420000**	**40000**

Amount allocated for convergence for the period 2010-11 to 2013-14

1 Wage Component: Rs 2800000
2 Material Component: Rs 420000
Grand total **3220000**

Grand Total(Rupees Thirtytwo Lakhs twenty thousand) only.

Blenson Momin
President
Alokdia VEC
Selsella Block, WGH
President
Of Alokdia V. E. C.
West Garo Hills (Megh)

Abdul Marak
Secretary
Alokdia VEC
Selsella Block,WGH
Secretary
Of Alokdia V. E. C.
West Garo Hills (Megh)

AGREEMENT FOR CONVERGENCE OF SCHEME

The Village Employment Council (VEC) and the Communities of Alokdia Village, Selsella Block, West Garo Hills, Meghalaya have no objection to the Convergence of NREGS with Integrated Watershed Management Project (IWMP) at Alokdia village under Satbonga Micro-Watershed, WGH-IWMP-III being implemented by Tura Soil& Water Conservation (I) Division.

We also agreed to allocate 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. Bench Terrace.
3. Nallah Bund.
4. CC Irrigation Dam.
5. Earthen Irrigation Channel.
6. Rubber Plantation.
7. Arecanut Plantation.

Blenson Momin

President,
Village Employment Council
Alokdia
Selsella Block, WGH

President
Of Alokdia V. E. C.
West Garo Hills (Megh)

Abdul Marak

Secretary.
Village Employment Council
Alokdia
Selsella Block, WGH

Secretary
Of Alokdia V. E. C.
West Garo Hills (Megh)