GOVERNMENT OF MEGHALAYA

DETAILED PROJECT REPORT

OF
BALAL MICROWATERSHED

UNDER
INTEGRATED WATERSHED MANAGEMENT PROGRAMME
WGH-IWMP – III
(2009-2010)

SELSELLA 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 Villages	**:**	Balal Adugre Goeragre
Name of the Project	**:**	IWMP-III
Total Geographical Area	**:**	601.70 Ha
Total Treatment Area	**:**	500 Ha
Total Project Cost	**:**	`75.00 lakhs
Project Duration	**:**	5 Years
Project Implementing Agency	**:**	Soil & Water Conservation Territorial Division, Tura.

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INTRODUCTION AND BACKGROUND

1.1 Project Background:

The Balal (IWMP - III) Project is located in Selsela C&RD Block, West Garo Hills District of Meghalaya. Consisting of a single micro-watershed, the project area is drained by the Balal stream and its tributaries flowing in a South to North direction. The total area is 601.70 Ha. with 500 ha to be treated under the Integrated Watershed Management Programme (IWMP).

The Project area is located at a distance of about 10 km from Selsella Block and about 45 km from Tura the District Headquarter . There are 2(two) villages under the Project Area. i.e. Balal Adugre & Goeragre.

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 601.70 Ha., with 500 hectares to be treated under the Integrated Watershed Management Programme (IWMP)

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1.3 Need and Scope for Watershed Development:

The micro-watershed Balal IWMP-III 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. 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:- 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 in West Garo HillsDistrict of Meghalaya.It lies between 25°36′00″ and 25°38′00″ North Longitude and 90°02′00″ 90°04′00″ East Latitude respectively. It falls under the Jurisdiction of Dadeng Sub-Division at a distance of 45 km from Tura the district Headquater of West Garo Hills . There are two villages within the Project Area. i.e. *Balal Adugre & Goeragre.*

2.2 Physiography:

The physiography of the micro-watershed is highly undulating. The altitude ranges from a minimum of 160.m to a high of 440 m above mean sea level. In the lower reaches (valley lands) the slope ranges from 1-5% , 5-15% in the middle and extent upto 50.%. or more in some areas.

Table 2.1: Physiographic details

Elevation (metres)	Slope Range (%)	Order of watershed Sub/Micro-watershed	Major streams	Topography
40 - 100	1 – 50%	3rd Order Micro W/S	Balal stream, Makbilkol stream, Chibongbong stream, Chigitchak stream, Manggala stream	Flat and Gentle slope.

2.2 Drainage :

The major stream draining the micro-watershed is the Balal Stream which is 3rd order stream flowing in a north-south direction. The slopes of the micro-watershed are dissected by numerous small tributaries flowing to the Balal Stream and drains into Ganol River.

2.3 Soil :-

Soil in general is moderately deep with clay to loamy clay in surface structure. They are moderately acidic in nature. The soil depth is deep to moderately deep. Due to uniform slopes and presence of many water courses, no drainage problem exist. The watershed area does not have a major erosion problem but of moderate erosion.

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	West Garo Hills – IWMP III	Water erosion:				
				a	Sheet			
				b	Rill	500	NA	NA
				c	Gully			
				Sub total		500		
				Wind erosion		nil	nil	Nil

2.4 Climate :-

The Watershed lies under Central Hyper-thermic Agro-climatic plateau. The average annual rainfall is about 3600mm. 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 32°C. December and January accounts for lowest of 10°C to 12°C.

Table 2.4: 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 Hyper-thermic Agro-climatic	500	West Garo Hills.	W.G.H. IWMP III	Clayey	377.95	3600	Paddy	7.20
									Maize	20.00
									Arecanut	60.00
									Cashew	56.30
						Loamy	122.05			
						Total	**500**			143.50

2.5 Agriculture :-

Agriculture is the primary occupation of the people of the area. Jhum cultivation is sparsely practiced. Under settled farming, the principal crops are paddy and maize. Horticulture plantations consist mainly of arecanut and cashew and contribute reasonable income to the farmers.

Table 2.4: Crop yield and production

Crops	Area (ha)	Average Yield (Qtl) per ha.	Total Production (Qtl.)
paddy	7.20	15	108.00
Maize	20.00	42	840.00
Arecanut	60.00	8	480.00
Cashew	56.30	20	1126.00

2.1 Natural Vegetation :

The tree species common to the watershed area includes – *Albizzia spp, Schima wallichii, Emblica officianalis, Bombax cieba*, and *bamboo spp*. Expansion of horticulture plantation including jhumming has resulted in shrinking of natural forest and reduction of biodiversity.

2.2 Socio-Economic Profile :

The Socio-economic condition of the people is poor. The per capita land holding of agricultural land is 1.31 ha. The entire population depends upon agriculture and horticulture for sustenance. There are about 79 small farmers with average agricultural land holding of 0.50-1.50 Ha.

2.3 Demographic Status *:* The total households in the watershed project is 79 nos. with a total population of 423 nos, of which 218 nos. are male and 205 nos are female.

Table 2.5: Infrastructure Status.

Infrastructure facilities **:**

2.1.1 ***Roads :*** The project area is about 5 km from the main road and is connected by an all-weather road

2.1.2 ***School:*** There are 2 nos of L.P Schools within the Project Area run by the Government.

2.1.3 ***Electricity :*** The project villages are yet to be electrified.

2.1.1 *Health :* **:** There is no health centre in the villages. 2(two) nos of anganwadi cetre is located in the project area.

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2.1.2 ***Water Supply :*** There is no drinking water facilities in the project villages. The villagers depend totally on the available drinking well/open well and natural streams to suffice their needs.

2.1.3 ***Market :*** There is a weekly market held once in a week at Garobadha .

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Table 2.5: Infrastructure Status.

1	2	3		4			
Name of District	Name of Project	Parameters:		Status			
West Garo Hills	West Garo Hills – IWMP III	(i)	No. of villages connected to the main road by an all-weather road.	All villages are connected to the main road			
		(ii)	No. of village provided with electricity	none			
		(iii)	No. of households without access to drinking water	70 nos			
		(iv)	No. of educational institutions: Primary (P)/ Secondary (S)/ Higher Secondary (HS)/ Vocational institution (VI)	(P)	(S)	(HS)	(VI)
				2Nos.	-	-	-
		(v)	No. of village with access to Primary Health Centre	Nil			
		(vi)	No. of village with access Veterinary Dispensary	Nil			
		(vii)	No. of village with access Post Office	Nil			
		(viii)	No. of village with access Banks	Nil			
		(ix)	No. of village with access Markets/ mandis	Nil			
		(x)	No. of village with access Agro-Industries	Nil			
		(xi)	Total quantity of surplus milk	Nil			
		(xii)	No. of milk collection centres (e.g. Union (U)/ Society (S)/ Private agency (PA)/ Others (O))	(U)	(S)	(PA)	(O)
				Nil	Nil	Nil	Nil
		(xiii)	No. of villages with access to Aganwadi Centres	2			
		(xiv)	Any other facilities with no. of villages (please specify)	Nil			

2.3 Livestock :

There are only 3 kinds of livestock farming being farmed in the area viz. Piggery, Poultry & cattle .

Table 2.6: Existing livestock population

Type of Animal	Population
Piggery	36
Poultry	329
Cattle	47
Total	**412**

2.4 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
WGH	WGH IWMP III	(i) Large	-	-	-	-	
		(ii) Small	79	-	-	123.50	123.50
		(iii) Marginal	-	-	-		
		(iv) Landless	-	-	-	-	
		Sub - Total	79	-	-	123.50	123.50

Table 2.5: Common Property Resources in the Project Area

1	2	3	4				5			
Name of District	Name of the Projects	CPR Particulars	Total Area (ha) Area owned/ In possession of				Area available for treatment (ha)			
			Pvt. Person	Govt. (specify deptt.)	PRI	Any other (Community)	Pvt. Person	Govt. (specify deptt.)	PRI	Any other (Community)
West Garo Hills	West Garo Hills IWMP III	(i) Wasteland/ degraded land	-	-	-	136.20	-	-	-	136.20
		(ii) Pastures	-	-	-	-	-	-	-	-
		(iii) Private Agriculture land	7.20	-	-		7.20	-	-	-
		(iv) Village woodlot	-	-	-	-	-	-	-	-
		(v) Forest	-	-	-	262.40	-	-	-	200.00
		(vi) Village Ponds/ Tanks	-	-	-	-	-	-	-	-
		(vii) Community Buildings	-	-	-	-	-	-	-	-
		(viii) Weekly Markets	-	-	-	-	-	-	-	-
		(ix) Permanent Markets	-	-	-	-	-	-	-	-
		(x) Temples/ Places of worship	-	-	-	-	-	-	-	-
		(xi) Others (Pl. specify) Jhum cultivation Horticulture Plantation	 79.60 116.30	-	-	 - -	 79.60 77.00	 - -	 - -	
		Total	**203.10**	**-**	**-**	**398.60**	**163.80**	-	-	**336.20**

2.4 Land use and land cover :

As per the land use land cover map generated by NESAC, Meghalaya from Satellite Image taken during 2005 – 2006 (LISS – III, Image) the Watershed area has been broadly classified into the following land uses.

a)	Agricultural land-crop land-kharif crop	=	7.20 Ha
b)	Horticulture Plantation	=	116.30 Ha
c)	Wasteland open-scrub	=	136.20 Ha.
d)	Forest – open	=	262.40 Ha
e)	Shifting cultivation	=	79.60 Ha
	Total	=	601.70 Ha

2.5 Problems of the Area :

About 43.60 % of the project area is under degraded forest. Jhum cultivation is extensively practiced and is one of the major reason for reduction in vegetative cover. As a result about 22.60% of the forest area has been turned into open scrub. To mitigate these 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 is conducted in all the villages within the Watershed.

Further the major problems in the project area are :-

(i) Unsustainable exploitation of forest vegetation.
(ii) Absence of soil and water conservation measures.
(iii) Lack of technical knowledge on crop management and water management.
(iv) Poor socio economic set up.
(v) Fire hazards

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	YES
	Participatory Net Planning (PNP)	YES

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.

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

Table 3.2: Details of Watershed Committees (WC):

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Names of the Districts	Names of projects	Names of WCs	Date of Registration as a Society (dd/mm/yyyy)	Designation	M/F	SC	ST	SF	MF	LF	Land-less	UG	SHG	GP	Any other	Educa-tional ualify-cation	Function/s assigned#
W.G.H	W.G.H-IWMP III	Balal	2010	President	M		ST									X	A to I
				Secretary	M		ST									M.Sc	A to I
				Member	5 M		ST									II to X	A to I
				Member	3 F		ST										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. HIW MP III		1		1	(i) Landless									
						(ii) SF		10	10		10	10	-	-	-
						(iii) MF									
						(iv) LF									

iii) User group

To manage the assets created and ensure their sustainability User Groups will be formed. The people have been sensitized on the importance of ensuring that the assets created are sustainably used and the essentiality of having User Groups for maintenance and operation of their assets.

Table 3.4: User Group Details

1	2	3				4				5			6		
Names of Districts	Names of Projects	Total no. of Ugs				No. of members				No. of SC/ST in each category			No. of BPL in each category		
		Men	Women	Both	Total	Categories	M	F	Total	M	F	Total	M	F	Total
W.G.H	W.G.H. IWMP					(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	3.00 Lakh	3.00 Lakh	-	N.A	Improvement in drinking water facilities

i) 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 III	a) Rapport Building b) Community meeting c)Formation of Watershed committee m	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 es-tablishing /maintaing forest reserves. c) Agreement for convergence of NREGS scheme with IWMP with VEC.	a)Resource inventory works. b) Geo-refering. c) Printing & publishing work.	Done	Entry Point Activity	4.50

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										
					Pre Project			Proposed Project										
								Augmentation/ repair of existing structures				Construction of new structures				Total target			
Sl. No	Name of States	Name of Districts	Name of Projects	Type of structures	No	Area irrigated (ha)	Storage capacity	No	Area to be treated (ha)	Storage capacity	Estimated cost (in lakhs)	No	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	Check Dam-Cum irrigation dam	-	-	-	-	-	-	-	3 Nos	60 Ha	250	3.00	3 Nos	60 Ha	750	3.00
				Water harvesting farm pond	-	-	-	-	-	-	-	4 Nos	94 Ha	1200	4.00	4 Nos	94 Ha	4800	4.00
				Earthern Irri channel	-	-	-	-	-	-	-	800 rmt	30 Ha	0.10	0.40	800 rmt	24 Ha	80	0.40
			Total		**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**184**	**1450.10**	**7.40**		**184**	**5630**	**7.40**

8											9	10
Achievement due to project												
Augmentation/ repair of existing structures				Construction of new structures				Total achievement			Change in storage capacity (col 8-6)	Change in irrigated area (ha) Col. (8-6)
No	Area irrigated (ha)	Storage capacity	Expenditure incurred (in lakhs)	No	Area irrigated (ha)	Storage capacity	Expenditure incurred (in lakhs)	Area irrigated (ha)	Storage capacity (m^3)	Estimated incurred		
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-
				-	-	-	-	-	-	-	-	-

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

1	2	3	4	5	6		7								8								9
S. No.	Names of States	Names of Districts	Names of projects	Type of structures	Pre-project		Proposed target								Achievement due to project								Change in irrigated area (Col. 8-6) (ha)
					No.	Area irrigated (ha)	Augmentation/ repair of existing recharging structures			Construction of new recharging structures			Total target		Augmentation/ repair of existing recharging structures			Construction of new recharging structures			Total achievement		
							No.	Area to be irrigated (ha)	Estimated cost	No.	Area to be irrigated (ha)	Estimated cost	Area to be irrigated (ha)	Estimated cost	No.	Area irrigated (ha)	Expendi-ture incurred	No	Area irri-gated (ha)	Expendi-ture incurred	Area irri-gated (ha)	Expendi-ture incurred	
	Meghalaya	West Garo Hills	WGH IWMP III	(i)Open wells		Nil		NIL			NIl		NIL			NIL			NIL		NIL		NIL
				(ii)Bore wells																			
				(iii)Any others (Pl. specify)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Total for the project	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**

4.2.3 Activities executed by User Groups in the Project Areas.

	2	3						
Names of Districts	Names of Projects	Major activities of the UGs –Targets						
		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 Dam cum irrigation Dam	3 Nos	60 Ha	2	3.00	0.15
		2	Stone Masonry Protection wall	2 Nos	33 Ha	1	1.00	0.05
		3	Water Harvesting Farm Pond	4 Nos	94 Ha	2	4.00	0.20
		4	Earthen Irrigation Channel	800 rmt	30 Ha	1	0.40	0.02
		5	Dug out Pond	24 Nos	20 Ha	6	9.60	0.48
		6	Earthen embankment	350 rmt	40 Ha	1	2.45	0.1225
					277 Ha	`13	20.45	1.0225

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 Dam cum Irrigation Dam	-	-	-	-	-	-	-	-
2	Stone Masonary Protection wall	-	-	-	-	-	-	-	-
3	Water Harvesting Farm Pond	-	-	-	-	-	-	-	-
4	Earthen Irrigation Channel	-	-	-	-	-	-	-	-
5	Dug out Pond	-	-	-	-	-	-	-	-
6	Earthen embankment	-	-	-	-	-	-	-	-
	Total	-	-	-	-	-	-	-	-

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	**WGH-IWMP-III**	Piggery	2	0.80
		Poultry	2	0.70
		Total	4	1.50

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

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

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		Horticulture Development		Pasture 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) (Rs)	(a)	(b)	(a)	(b) (Rs)	(a)	(b) (Rs)	(a)	(b)	(a)	(b)	
W G H	W.G.H IWMP-III	128 Ha	13.50	277 Ha	20.45	-	-	20 Ha	3.00	75Ha	8.55	-	-	Piggery Poultry	0.80 0.70	Supply of fingerlings	0.25	-	-	Kitchen garden	7.5	
	Total	**-**	**13.50**		**20.45**				**3.00**		**8.55**	**-**	**-**		**1.50**	**-**	**0.25**	**-**	**-**		**7.50**	**54.75**

4.2.8 Details of engineering structures in watershed works:

1	2	3	4			5			6	7						8							
District	Project	Name of structures	Type of treatment			Type of land			Executing agency	Target						Achievement							
			(i) Ridge area (R)	(ii) Drainage line (D)	(iii) Land Dev. (L)	(i) 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	-	**D**	-	**P**		-	UG/WC	24 nos		9.60		9.60	4 yrs.								
		Check Dam cum irrigation Dam	-	**D**	-	-	**C**	-	UG/WC	3 nos	1.20	1.80		3.00	4 yrs.								
		Wet Terrace	-		**L**	**P**		-	UG/WC	20 Ha		3.00		3.00	4 yrs.								
		Stone masonry Protection Wall	-	**D**	-	-	**C**	-	UG/WC	2 nos	0.40	0.60		1.00	4 yrs.								
		Earthen irrigation Channel	-	**D**	-	-	**C**	-	UG/WC	800 rmt		0.40		0.40	4 yrs.								
		Water Harvesting farm pond.	-	**D**	-	-	**C**	-	UG/WC	4 nos	1.60	2.40		4.00	4yrs.								
		Earthen embankment	-	**D**	-	-	-	-	UG/WC	350 rmt		2.45		2.45	3 yrs.								
		Total									**3.20**	**20.25**		**23.45**									

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	-	NA	-	NA	-	NA	-	-	14175	-	6075	20250	-	140		60	200	

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

1	2	3	4			5			6	7				8			
District	Project	Name of structure/ work	Type of treatment			Type of land			Executing agency	Target				Achievement			
			(i) Ridge area (R)	(ii) Drainage line (D)	(iii) Land dev. (L)	(i) Private	(ii) Community	(iii) Others (pl. specify)	(i) UG (ii)SHG (iii) Others (pl. specify)	Area (ha)	No. of plants	Estimated cost (Rs. in lakh)	Expected month & year of comple-tion (mm/ yyyy)	Area (ha)	No. of plants	Expendi-ture incurred (Rs. in lakh)	Actual month & year of comple-tion (mm/ yyyy)
West Garo Hills	WGH-IWMP-III	Afforestation	R	-			C		UG/SHG	50	5000	1.80	4 yrs				
		Rubber Plantation	-	-	C		C		UG/SHG	78	35100	11.70	3 yrs				
		Arecanut	-	-	C	P			UG/SHG	75	90000	8.55	4 yrs				
Total										165	130100	22.05					

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

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

9															
Outcomes															
Reduction in run off (cu.m)	Production (quintal)		Income (Rs.)		Mandays generated					No. of beneficiaries				
	Pre-project	Post project	Pre-project	Post project	SC	ST	Others	Women	Total	SC	ST	Others	Women	Total
NA	0	-			-	756		324	1080		75		32	107
NA	0	234	0	3510000	-	4914		2106	7020		491		210	701
NA	900	2025	720000	1620000	-	3591		1539	5130		359		153	512
Total	**900**	**2259**	**720000**	**5130000**	**-**	**9261**		**3969**	**13230**		**925**		**395**	**1320**

4.2.12 Details of allied / other activities:

1	2	3	4			5	6		7	
District	Project	Name of activity@	Type of land			Executing agency	Target		Achievement	
			(i) Private	(ii) Community	(iii) Others (landless)	(i) UG (ii)SHG (iii) Others (pl. specify)	Estimated cost (Rs. in lakh)	Expected month & year of completion (mm/yyyy)	Expendi-ture incurred (Rs. in lakh)	Actual month & year of completion (mm/yyyy)
West Garo Hills	WGH-IWMP-III	Kitchen garden	P			Individual	7.50	4 years		
		Piggery		C		SHG	0.80	4 years		
		Poultry		C		SHG	0.70	4 years		
		Supply of fingerlings	P			Individual	0.25	4 years		
		Total					**9.25**			

(Contd.)

* from column no. 2, no. of States; from column no. 3, no. of Districts; from column no. 4, total no. of Projects; from column no. 5, activity-wise totals, from column no. 6, type-wise totals, from 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				
Pre-project	Post project	SC	ST	Others	Women	Total	SC	ST	Others	Women	Total
-	15000-20000		3150		1350	4500		315		135	450
-	20000-25000				480	480				48	48
-	20000-25000				420	420				42	42
-	15000-20000				-	-		5			5
Total			**3150**		**2250**	**5400**		**320**		**225**	**545**

4.3 Consolidation and withdrawal phase

Details of activities in the CPRs in the project areas:

1	2	3	4	5	6				7						
Names of the Districts	Names of projects	Name(s) of the villages	CPR particulars	Activity proposed	Target				Achievement						
					Target area under the activity (ha)	Estimated expenditure (Rs.)	Expected no. of 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	W.G.H IWMP III	Balal Adugre	Waste land	Improvement of degraded forest	5.00	0.165	94	0.008	-	-	-	-	-	-	-
		Goeragre	Streams	C.C.Check Dam cum irrigation Dam	60 Ha	0.30	40	0.015	-	-	-	-	-	-	-
			Agri-land	1. Stone masonary Protection Wall 2. Earthen irrigation Channel. 3. Earthen embankment.	103 Ha	0.385	40	0.19	-	-	-	-	-	-	-
			Spring	Spring chamber	-	0.30	30	0.015	-	-	-	-	-	-	-
			Water Conservation	Water harvesting farm pond	94 Ha	0.60	94	0.03	-	-	-	-	-	-	-

CHAPTER V

PROJECT PHASING & BUDGETING

CHAPTER V

PROJECT PHASING & BUDGETING

ACTION PLAN OF BALAL WATERSHED UNDER IWMP TERRITORIAL DIVISION: TURA

Name of District :- West Garo Hills — No. of Villages: 2 nos

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

sl	Activities	Ist Year(6%)		IInd Year(14%)		IIIrd Year(50%)		IV Year(25%)		V Year(5%)		Total(in lakhs)	
no		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*	5 Nos.	3.00									**4 Nos.**	**3.00**
	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 -20 Ha*			10	1.500	10	1.500		0			**20**	**3.00**
ii	*Rubber plantation -78 Ha*												
	(a) Pre-works @Rs.6000/ ha				0	78	4.68		0.00			**78**	**4.680**
	(b) 1st yr. planting @Rs.9000/ha				0		7.02		0				**7.020**
iii	*Arecanut plantation – 75 Ha*												
	(a) Pre-works @Rs.4200/ ha				0	35	1.47	40	1.68			**75**	**3.150**
	(b) 1st yr. planting @Rs.7200/ha				0		2.52		2.88				**5.40**
	TOTAL OF - A				**1.500**		**17.19**		**4.56**				**23.250**
B	**Non-Arable Land treatment:**												
i	*Improvement of degraded forest@3600/ ha- 50 Ha*			5	0.18	45	1.62		0			**50**	**1.80**
	Total of B:				**0.18**		**1.62**		**0**				**1.80**

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 - 60 Ha*			**1**	1.00	1	1.00	1	1.00			**3**	**3.00**
ii	*Stone masonery protection wall @50,000/each - 33 ha*				0.00	2	1.00		0.00			**2**	**1.00**
iii	*Dug-out pond @40,000/-each -20 ha*			2	0.80	2	0.80		0			**4**	**1.60**
	Water harvesting farm pond @100,000/- each -94 ha			2	2.00	2	2.00		0.00			**4**	**4.00**
v	*Earthen Embankment @Rs.700/- per rmt- 40 Ha*				0.00	350	2.45		0.00			**350**	**2.45**
vi	*Earthern irrigation channel @Rs. 50 /- Rm. 30 ha*			290	0.145	380	0.19	130	0.065			**800**	**0.40**
	TOTAL-C				**3.95**		**7.44**		**1.07**				**12.45**
	TOTAL OF A+B+C				**5.625**		**26.25**		**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	30	4.5			**50**	**7.500**
	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		0	1	0.4			**2**	**0.80**
iii	*Poultry unit @Rs.35,000 /- per unit*			1	0.35	1	0.35		0			**2**	**0.70**
iv	*Dugout pond @Rs. 40000/- each*				0	8	3.2	12	4.8			**20**	**8.00**
v	*Supply of fingerlings @Rs.1000/- per unit*				0	20	0.2	5	0.05			**25**	**0.25**
	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**
	Grand Total (I+II)	**6%**	**4.50**	**14%**	**10.50**	**50%**	**37.50**	**25%**	**18.75**	**5%**	**3.75**	**100%**	**75.00**

VILLAGE WISE ACTION PLAN OF BALAL MICROWATERSHED UNDER WGH-IWMP-III

Name of District: West Garo Hills
Name of C&RD Block: Selsella/Rongram

Name of villages: a) Balal Adugre b) Goeragre
Project area: 500 Ha

sl	Activities	Balal Adugre		Goeragre		Total	
no		Phy	Fin	Phy	Fin	Phy	Fin
1	2	3	4	5	6	7	8
B	**Entry Point Activities:**						
i	*Construction of Spring Chamber @Rs60,000/- each*	2 nos	1.80	2 nos	1.2		**3.00**
II	PROJECT COST WATERSHED WORKS PHASE: 50%						
A	**Arable Land Treatment:**						
i	*Wet terrace@15000/ ha -14 Ha*	10 Ha	1.5	7 Ha	1.5	10 Ha	**3.00**
ii	*Rubber plantation -78 Ha*						
	(a) Pre-works @Rs.6000/ ha	39 Ha	2.34	39 Ha	2.34	78 Ha	**4.68**
	(b) 1st yr. planting @Rs.9000/ha		3.51		3.51		**7.02**
iii	*Arecanut plantation – 75 Ha*						
	(a) Pre-works @Rs.4200/ ha	37.50 Ha	1.575	37.50 Ha	1.575	75 Ha	**3.15**
	(b) 1st yr. planting @Rs.7200/ha		2.7		2.7		**5.40**

B	**Non-Arable Land treatment:**						
i	*Improvement of degraded forest@3600/ ha- 50 Ha*	25 Ha	0.9	25 Ha	0.9	50 Ha	**1.80**
C	**Drainage Line Treatment:**						
i	*C.C.Check-Cum-Irrigation dam - 60 Ha*	2 nos	2	**1 nos**	1.00	3 nos	**3.00**
ii	*Stone masonery protection wall @50,000/each - 33 ha*	1 nos	0.5	1 nos	0.50	2 nos	**1.00**
iii	*Dug-out pond @40,000/-each -20 ha*	2 nos	0.8	2 nos	0.80	4 nos	**1.60**
	Water harvesting farm pond @100,000/- each -94 ha	2 nos	2	2 nos	2.00	4 nos	**4.00**
v	*Earthen Embankment @Rs.700/- per rmt- 40 Ha*	200 rmt	1.4	150 rmt	1.05	350 rmt	**2.45**
vi	*Earthern irrigation channel @Rs. 50 /- Rm. -30 ha*	400 rmt	0.2	400 rmt	0.2	800 rmt	**0.40**
D	**Livelihood Activities for landless person: 10%**						
i	*Kitchen garden @15000/ unit*	25 unit	3.75	25 unit	3.75	50 unit	**7.50**
E	**Production system and Micro Enterprises (SHG's) - 13%**						
i	*Piggery unit @Rs.40,000 /- per unit*	1 unit	0.4	1 unit	0.4	2 unit	**0.80**
iii	*Poultry unit @Rs.35,000 /- per unit*	1 unit	0.35	1 unit	0.35	2 unit	**0.70**
iv	*Dugout pond @Rs. 40000/- each*	10 nos	4	10 nos	4.00	4 nos	**8.00**
v	*Supply of fingerlings @Rs.1000/- per unit*	10 unit	0.1	15 unit	0.15	25 unit	**0.25**
	GRAND TOTAL		**29.825**		**27.925**		**57.75**

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		Agri. Land	Forest land	Comm unity land	Others (pl. specify) Horticulture & Build up Area	Total area (ha)
												a) Temporary fallow	b) Permanent					
1	Meghalaya	West Garo Hills	W.G.H IWMP -III	2009-10	2009	2010	500	75.00	Balal	84.2		279.6	136.2	163.8	200	136.2		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	23.32	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	**98.32**

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

1	2	3	4	5				6				
Sl. No.	Names of States	Name of Districts	Names of Projects	Distt. Agency's Project Account details				Watershed Committee (WC) account details:				
				Name of the Bank and Branch where project account has been opened	Account Number (to be obtained 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	Tura Axis Bank		Savings	Chairman W.C Secretary W.C Project Leader/WDT	Balal	AXIS Bank Hawakhana, Tura.	910020008760999	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				
West Garo Hills	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	Director	Don-Bosco	Agri-Horti, Animal Husbandry, Entrepreneurship	NA					
4		ICAR	Umiam	Director	Central Govt.	Do	NA					
5		KVK	Tura	Director	Central Govt	Agriculture						
		MRDS	Shillong	Director	State Govt	Rural development						

- 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	10	10	NIL	3.75	NIL	NIL	NIL
WDTs	4	4	4	NIL				
Ugs	78	-	40	NIL				
SHGs	60	20	50	NIL				
WCs	10	10	10	NIL				
GPs	NIL	-	NIL	NIL				
Community	423	60	120	NIL				
Others Pl. specify)								
TOTAL	**585**	**104**	**234**	**0**	**3.75**	**0**	**0**	**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	0.80		a) Better understanding of Project Concept. b) Preview of Project achievement.
2.	Publish of Pamplets/booklets	S&WC (T) Division	0.10		
3.	Exposure Visits	S&WC (T) Division	0.65		
4.	Capacity Building	S&WC (T) Division	2.30		

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.	Balal Adugre Goeragre	-	26586	-	12294	38880	-	1385	-	680	2065	-	-	-	-	-

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
West Garo Hills	WGH-IWMP-III	Balal Adugre Goeragre		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)
12294	12.294	60	1.2	40	1.50	14.994

* 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	Balal Adugre Goeragre	Reserved forest	FW/MFP /T	unspecified		94		94	NIL
			Spring Chamber	Wd	Unspecified		40		40	NIL
			Check dam	Wi	Unspecified		40		40	NIL
			Water conservation	Wi	unspecified		94		94	NIL
			Total				268		268	

* From column no. 2, no. of States; from column no. 3, no. of Districts; from column no. 4, no. of projects; from column no. 5, no. of villages; from column nos. 9 & 10, particular-wise totals for the entire country may be given at the end of the table.
@ In column no. 6, the categories given in table no. M(SP) 10, column 5 may be filled as required.

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

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

Table 7.5 Water related outcomes:

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

1	2	3	4	5	6	7	8
Names of Districts	**Names of Projects**	**Sources**	**Pre-Project level**	**Mid-term project level**	**Post-Project level**	**Increase/decrease (Col. 8 – Col. 6)**	**Remarks**
West Garo Hills	W.G.H IWMP-III	Open Well	1.80	1.60	1.55	0.25	Increase
		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**	
West Garo Hills	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					
			Pre-project						Mid-term						Post-project					
Names of the Districts	Name of Projects	Name of crops	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.
		Paddy	0	7.2		12	0	86.4	17.2	0	15		258	0	27.2	0	15		408	0
		Maize		20		24		480		33		24	0	792		33		24	0	792
		Vegetables		5		30		150	6	5	36	30	216	150	6	5	36	30	216	150
Total				**32.2**	**0**	**66**	**0**	**716.4**	**23.2**	**38**	**51**	**54**	**474**	**942**	**33.2**	**38**	**51**	**54**	**624**	**942**

* 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					
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.
		Paddy	0	0	0	0	0	0	17.2	0	15	0	258	0	27.2	0	15	0	408	0
		Vegetables	0	0	0	0	0	0	6	0	36	0	216	0	6	0	36	0	216	0
Total			**0**	**0**	**0**	**0**	**0**	**0**	**23.2**	**0**	**51**	**0**	**474**	**0**	**33.2**	**0**	**51**	**0**	**624**	**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 7.6.3 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	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	-	-	262.40 ha	128 ha	-	-

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

Table 7.6.6 Increase/ Decrease in area under horticulture:

1	2	3	4			5		
			Existing area under horticulture (ha)			Achievement (ha)		
District	Name of project	Duration of Project	Source/Name of report	Year of reference	Area already under horticulture	Area under horticulture proposed to be covered through IWMP	Area under horticulture actually covered through IWMP	Change in area under horticulture
W.G.H	W.G.H IWMP-III	5 yrs	NA	NA	116.30	75 ha	NILL	-

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

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

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

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

Table 7.7 Livelihood related outcomes:

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

1	2	3	4			5			6			7
Names of the Districts	Name of Projects	Type of Animal	Pre-project			Mid-term			Post-project			Remarks
			No.	Yield	Income	No.	Yield	Income	No.	Yield	Income	
West Garo Hills	W.G.H IWMP-III	Cattle	47	84 litre/day	`.0.016 /day	56	99 l/day	`.0.02 /day	64	114 l/day	`0.022 /day	
		Piggery	36	10.00 qtl/annum	`1.20 lac	40	11.2 qtl/annum	`.1.34 lac	60	16.80 qtl/annum	`2.01 lac	
		Poultry	329	2.30 qtl/annum	`.0.276 lac	429	3.60 qtl/annum	`.0.43 lac	514	4.32 qtl/annum	`0.51 lac	

* 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 to be 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
West Garo Hills	WGH IWMP III																	
		Kitchen garden	7.50	7.50	-	-	750	-	-	30	-	20	50	-	30	-	20	50

(Contd.)

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

Table 7.7.3 Details of other livelihoods created for landless people:

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

Table 7.7.4 Details of other livelihoods created for farmers:

1	2	3	4	5				6	7				8			
District	Project	Name of activity	Fund required for the activity (Rs.) in lakhs	Sources of funding (Rs.) in Lakhs				Actual Expenditure incurred on activity (Rs.)	No. of farmers trained				No. of farmers taking up activity			
				Project Fund	Benefi -ciary	Others (pl. specify)	Total		SF	MF	LF	Total	SF	MF	LF	Total
West Garo Hills	WGH IWMP III	Wet Terrace	3.00	3.00	NIL	NIL	3.00	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL
		Dugout Pond	9.60	9.60	NIL	NIL	9.60	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL
		Arecanut Plantation	8.55	8.55	NIL	NIL	8.55	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL
		Rubber plantation	11.70	11.70	NIL	NIL	11.70	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL

* From column no. 2, total number of States; from column no. 3, total no. of Districts; from column no. 4, total no. of projects, from column no. 5, total no. of 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**	
NIL	NIL		NIL	NIL	NIL	NIL	NIL
NIL	NIL		NIL	NIL	NIL	NIL	NIL
NIL	NIL		NIL	NIL	NIL	NIL	NIL

Table 7.8 Marketing related outcomes:

Backward-Forward linkages *

1	2	3	4	5	6
District	**Project**	**Type of Marketing Facility**	**Pre-project (no.)**	**During the project (no.)**	**Post-project (no.)**
West Garo Hills	WGH IWMP III	**(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	NIL	2	2
		(vi) Water supply	NIL	3	3
		(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	NIL	NIL
		(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	5 nos	unsafe	Better quality	
		Availability of drinking water	-	10 months in a year	12 months availability	
		Increase in irrigation potential	11 nos	-	100% irrigated	
		Change in cropping/ land use pattern	-	Single cropping	Double Cropping	
		Area under agricultural crop				
		i Area under single crop	Ha	7.20	27.20	
		ii Area under double crop	Ha	-	27.20	
		iii Area under multiple crop	Ha	nil	nil	
		Net increase in crop production area		7.20	27.20	
		Increase in area under vegetation		262.40	340.40	29% increase in vegetation cover
		Increase in area under horticulture		116.30	191.30	64% increase in area
		Increase in area under fuel & fodder		262.40	340.40	29% increase in vegetation cover
		Increase in milk production		84 litre/day	114 litre/day	
		No. of SHGs		nil	5	
		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.	30000-40000	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	`2.73 lac	
		Summary of lessons learnt	Nil			

Table 7.10 Cost effectiveness of structures/ activities*

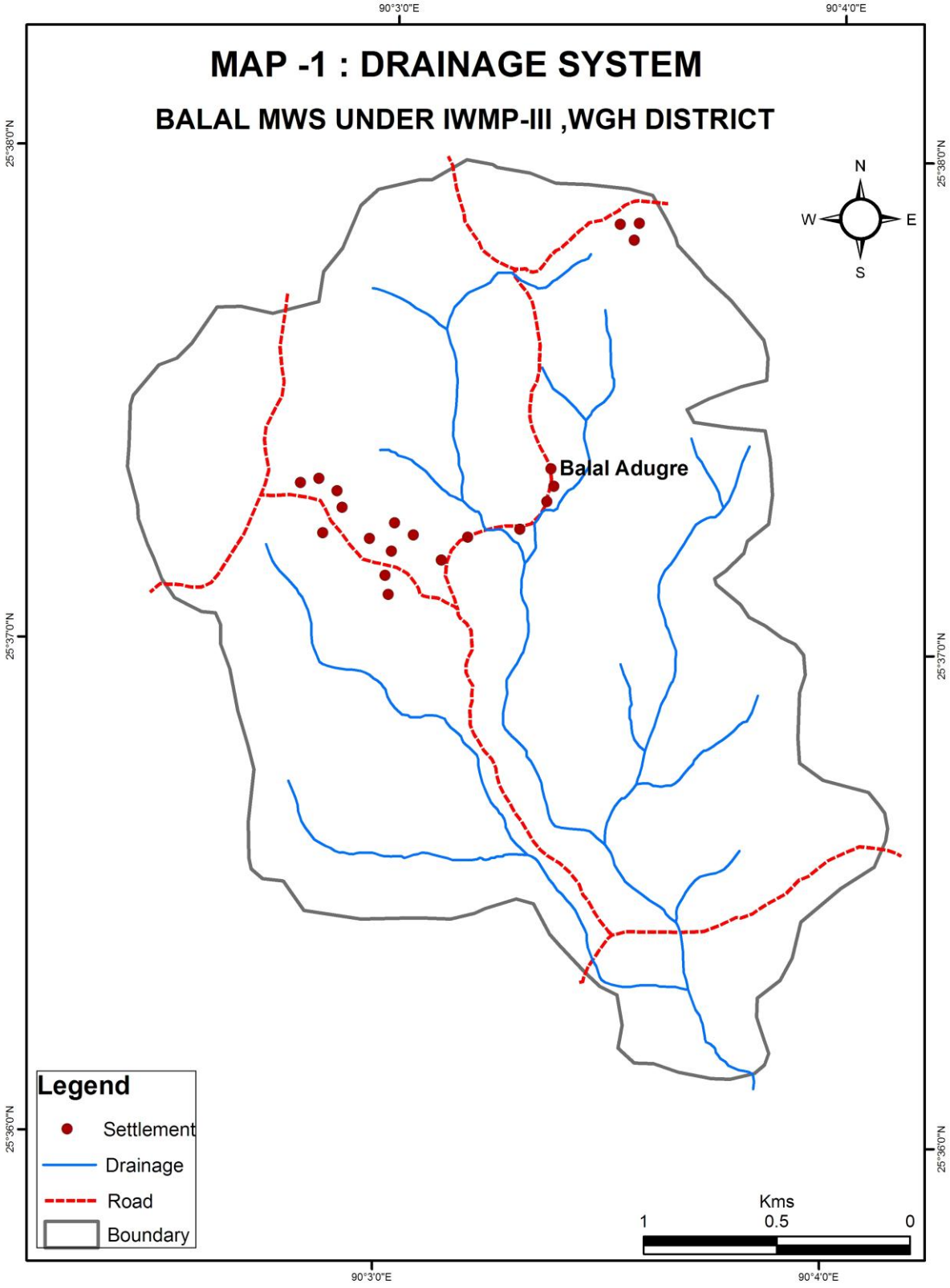
1	2	3	4	5	6	7	8	9	10
District	**Name of project**	**Name of WC**	**Name of structure/ activity**	**Estimated cost (Rs.)**	**Expected quantifiable benefits (Rs.)**	**Expenditure incurred (Rs.)**	**Actual quantifiable benefit (Rs.)**	**Benefit: Cost ratio#**	**IRR**
West Garo Hills	WGH IWMP III	Balal	As per work plan	58.50	71.73	58.50		1.22	

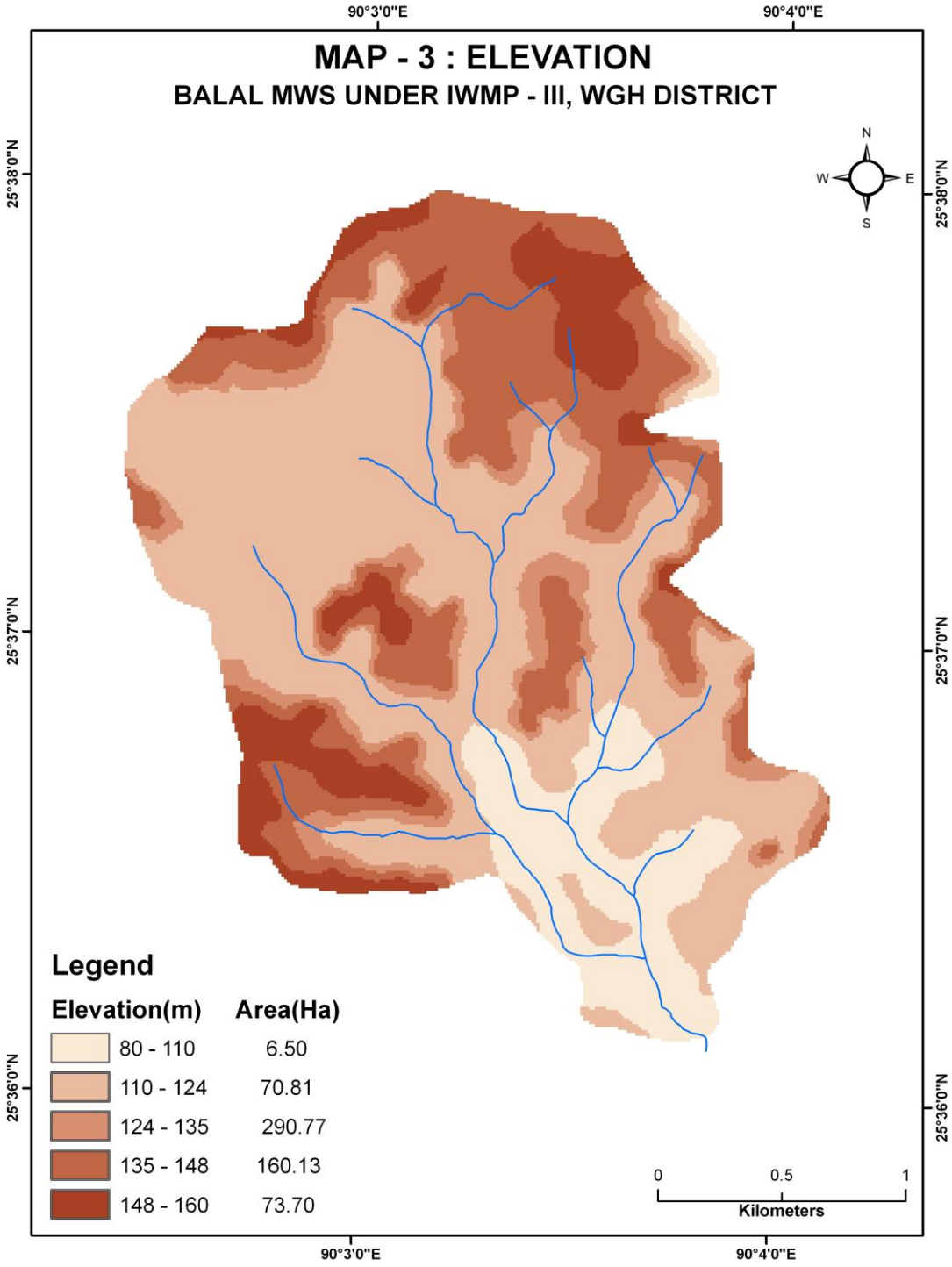
* from column no. 2, total no. of States implementing the programme, from column no. 3, total no. of Districts; from Column no. 4, no. of projects, from column no. 5, no. of WCs, from column no. 6, no. of structures/ activities, from column no. 7 to 10, category-wise# totals, may be mentioned at the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

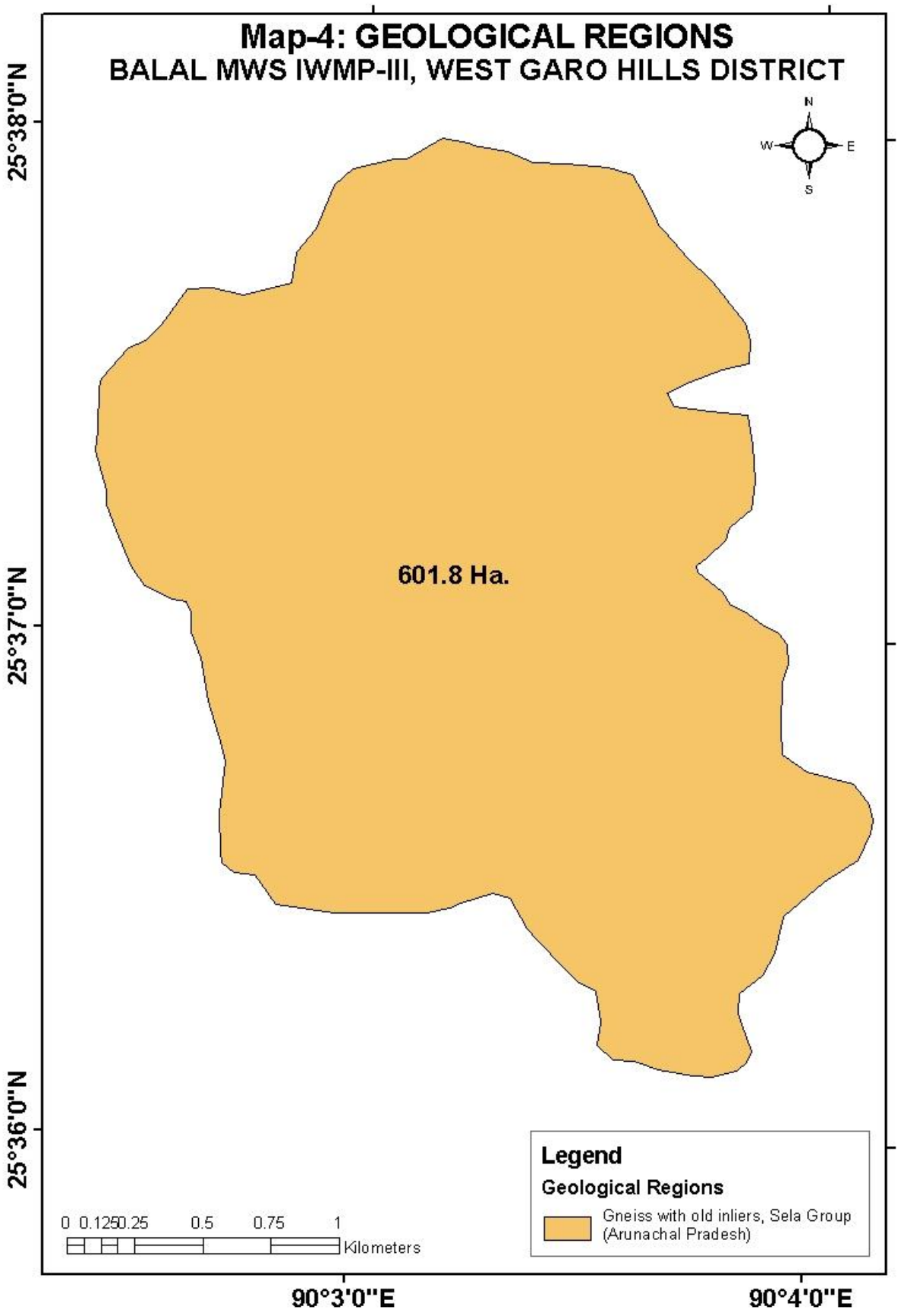
B:C ratio more than 1 – cost effective
less than 1 – Not cost effective

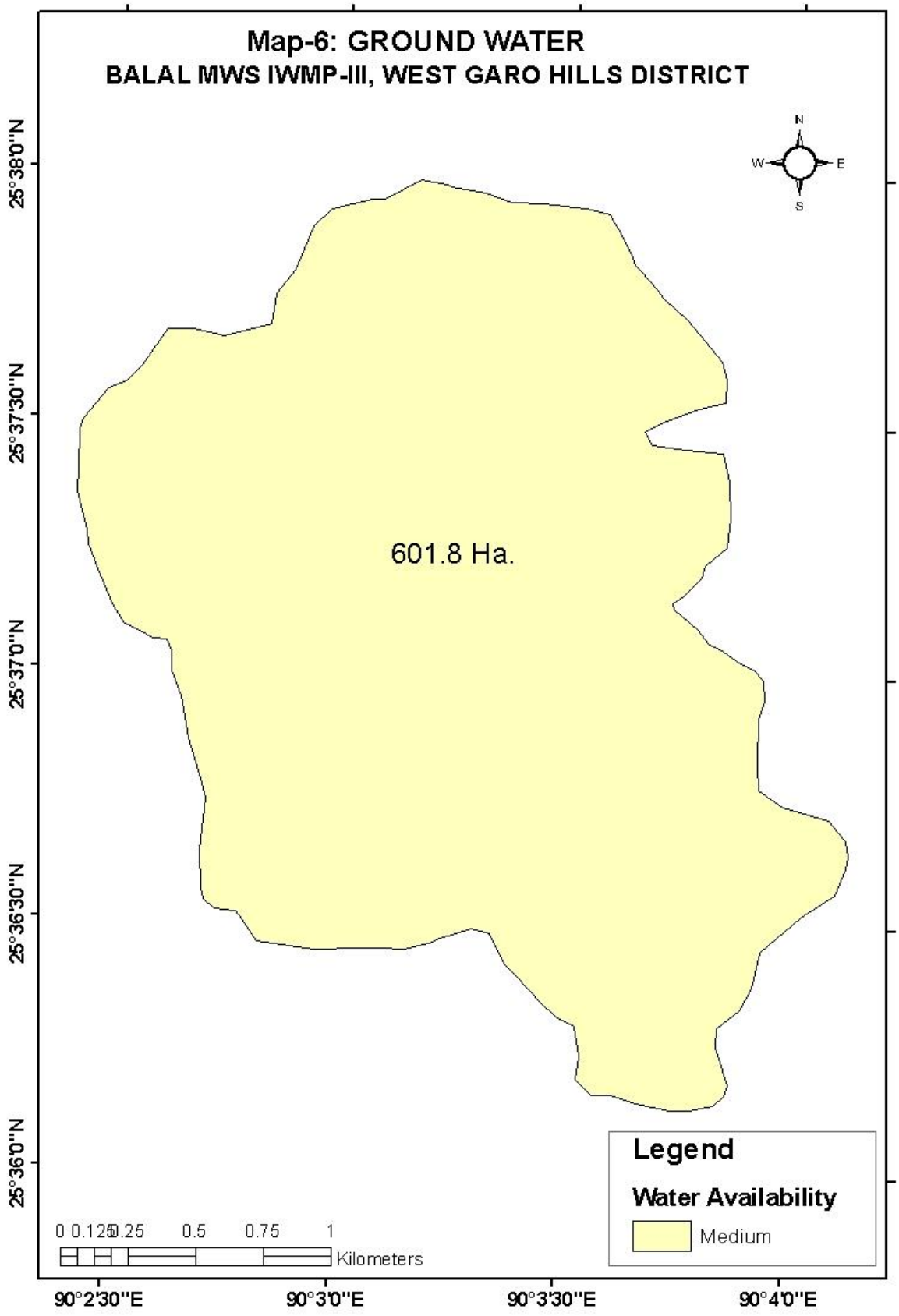
ANNEXURE-I

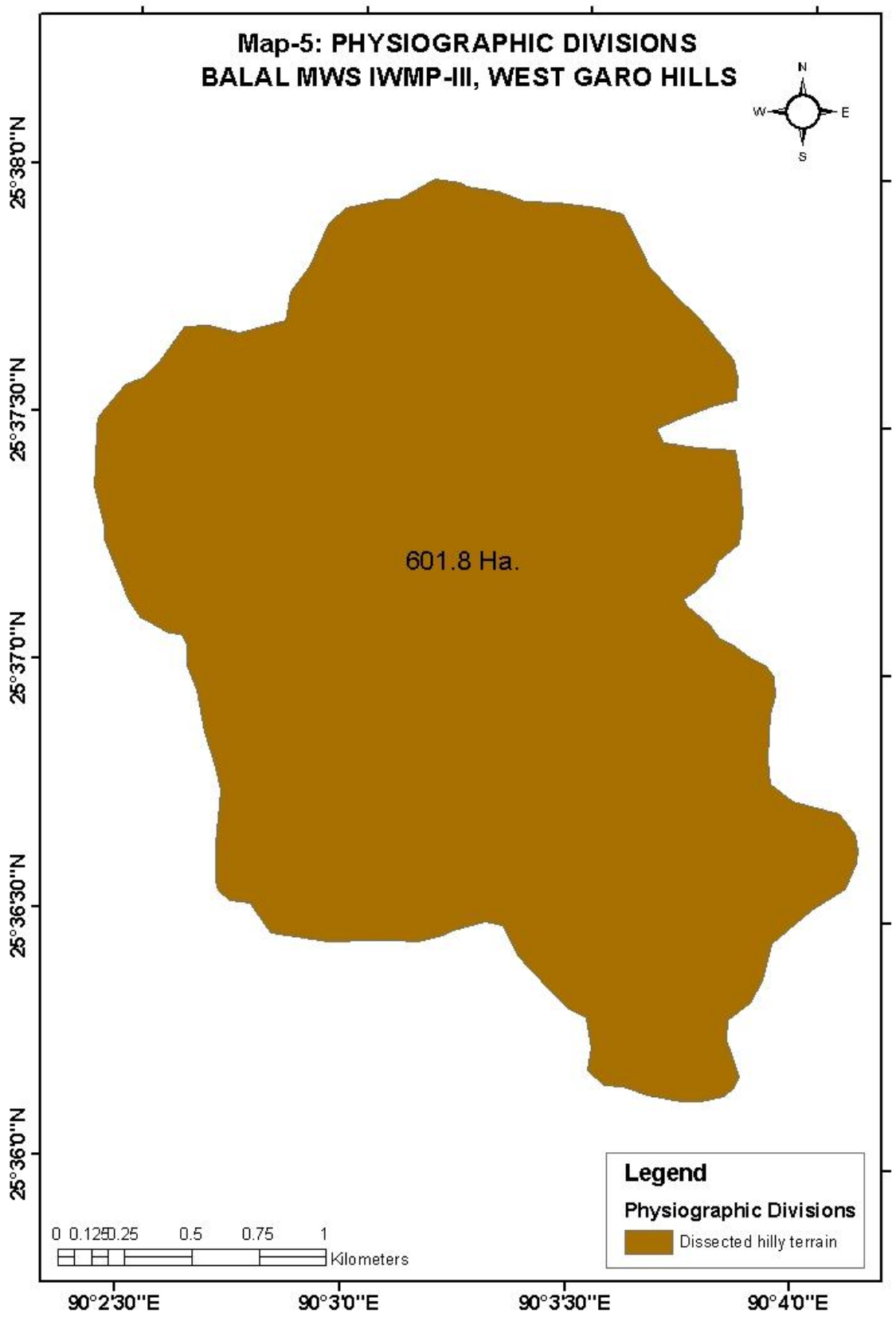
MAPS

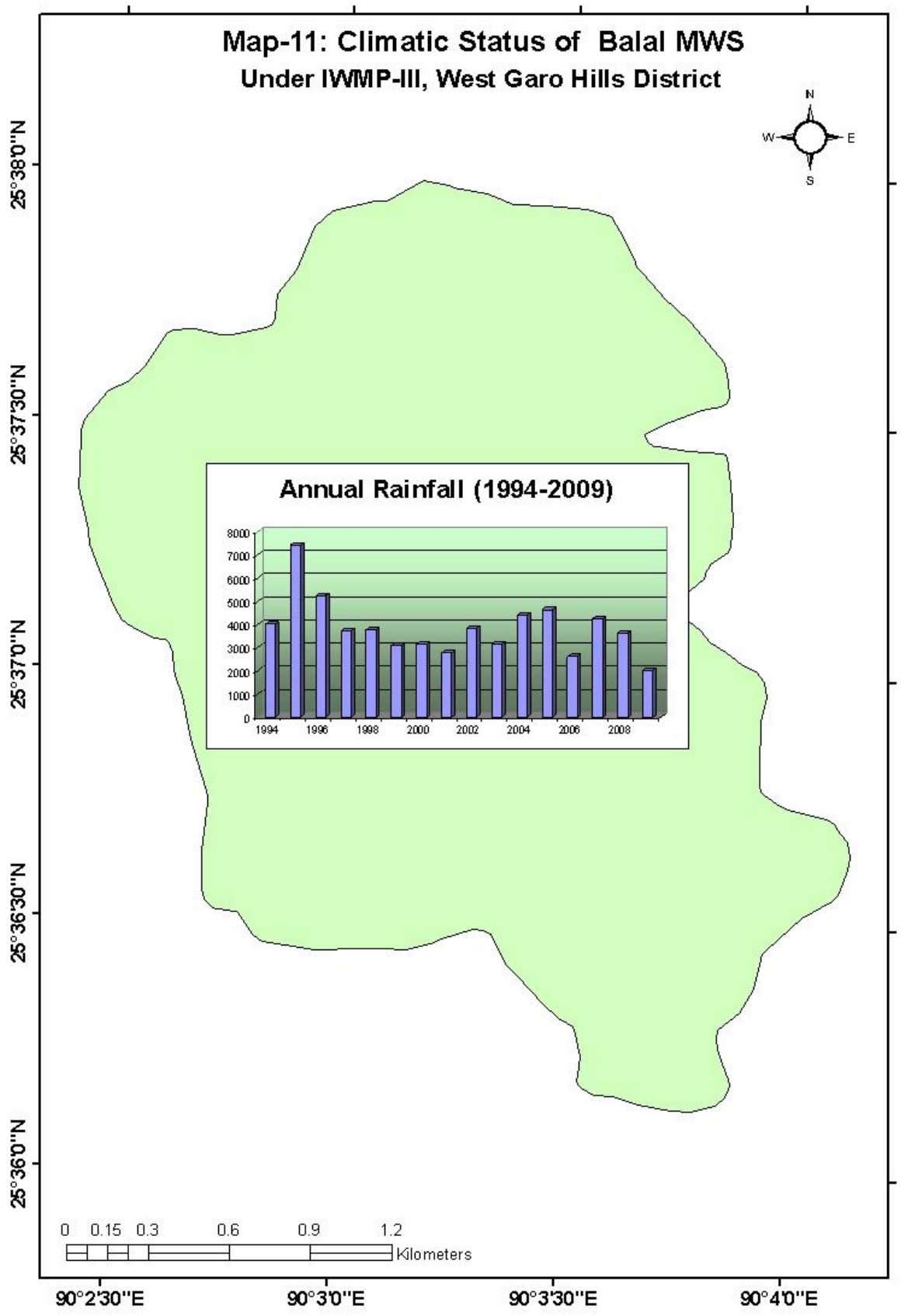

MAP -1 : DRAINAGE SYSTEM
BALAL MWS UNDER IWMP-III ,WGH DISTRICT
90°3'0"E
90°4'0"E
25°38'0"N
25°37'0"N
25°36'0"N
N
W
E
S
Balal Adugre
Legend
Settlement
Drainage
Road
Boundary
Kms
1
0.5
0

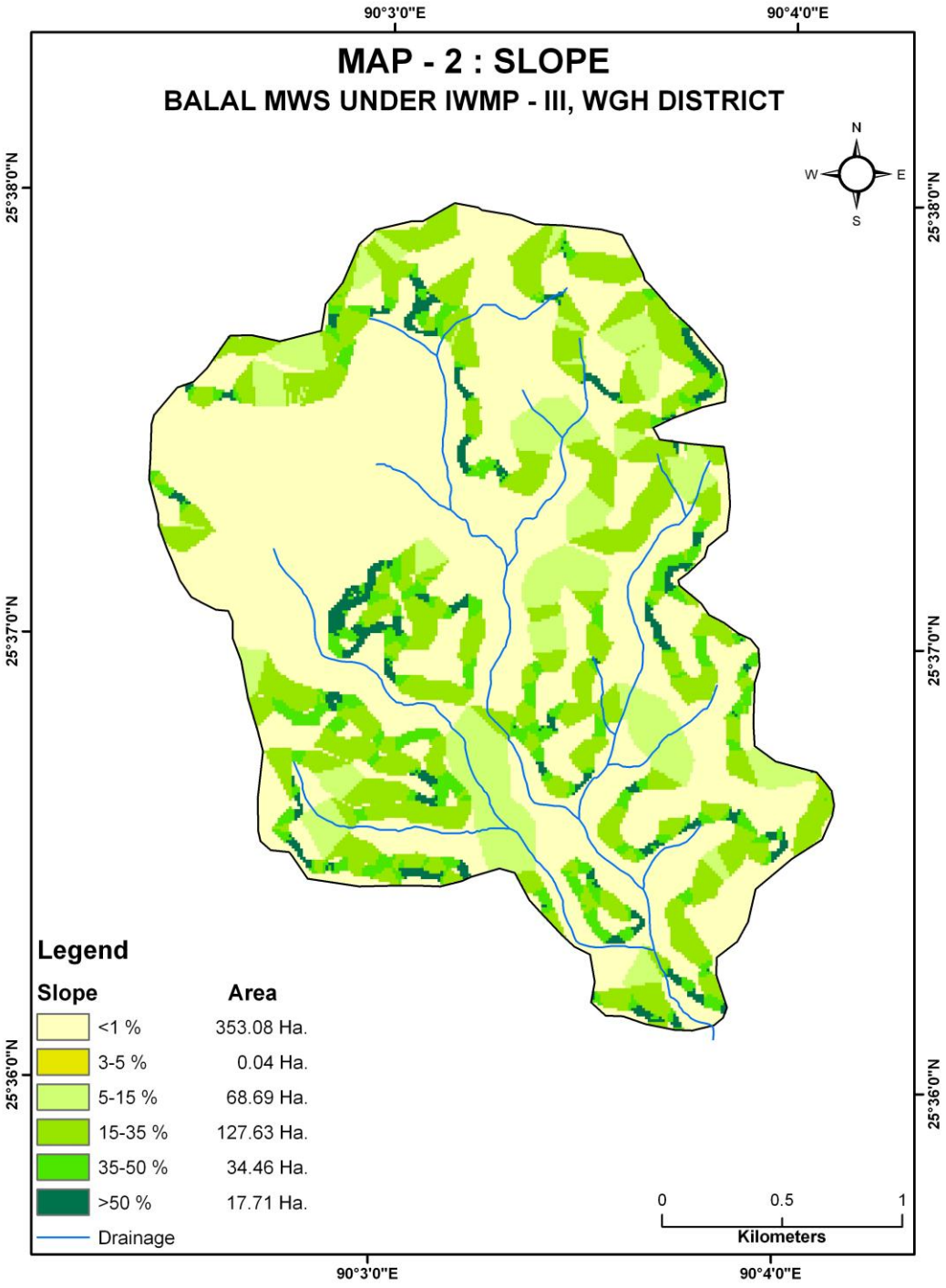

90°3'0"E
90°4'0"E
MAP - 3 : ELEVATION
BALAL MWS UNDER IWMP - III, WGH DISTRICT
N
W
E
S
25°38'0"N
25°37'0"N
25°36'0"N
Legend
Elevation(m)
Area(Ha)
80 - 110
6.50
110 - 124
70.81
124 - 135
290.77
135 - 148
160.13
148 - 160
73.70
0
0.5
1
Kilometers

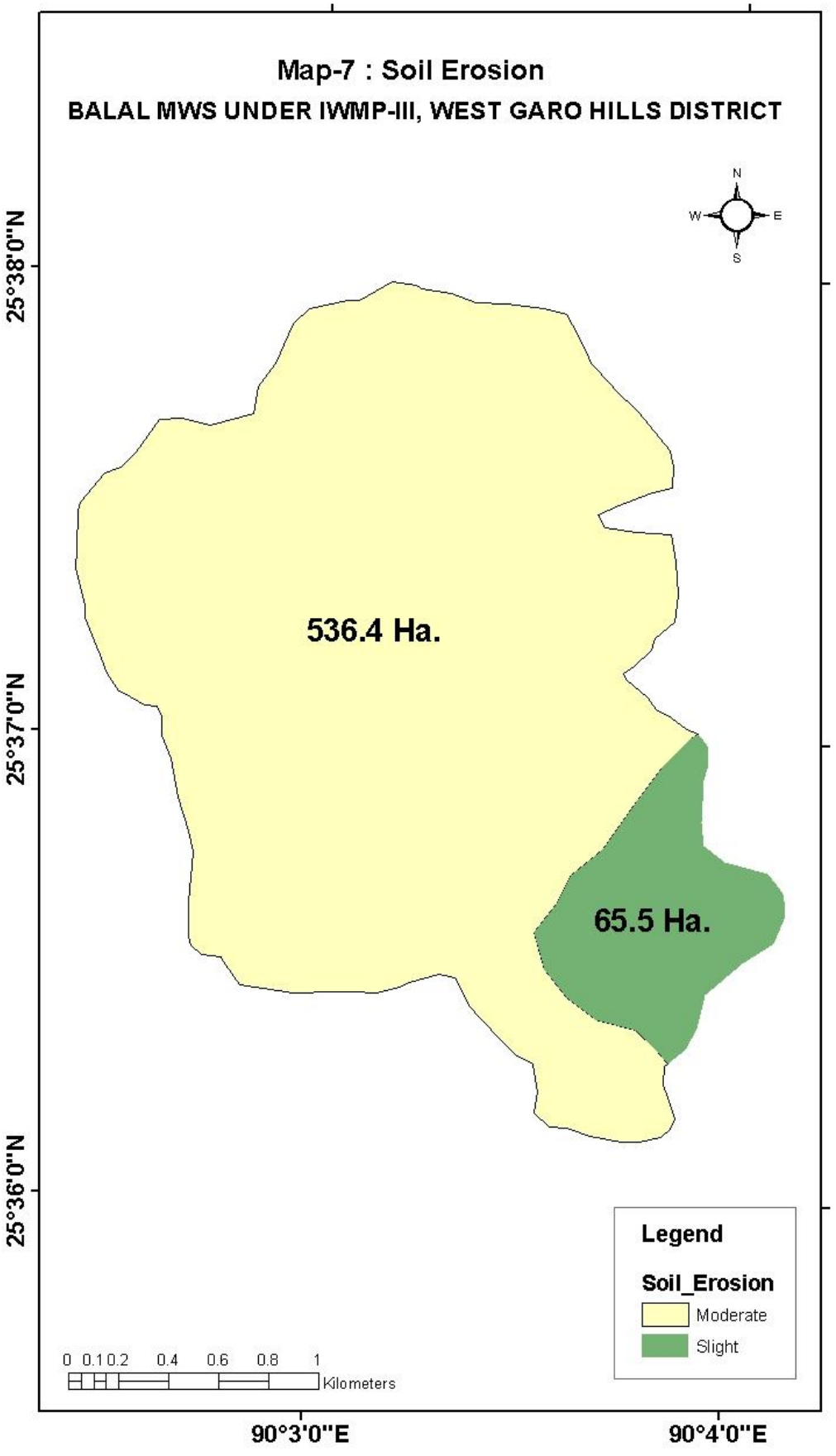

Map-4: GEOLOGICAL REGIONS
BALAL MWS IWMP-III, WEST GARO HILLS DISTRICT
N
W
E
S
25°38'0"N
25°37'0"N
25°36'0"N
601.8 Ha.
Legend
Geological Regions
Gneiss with old inliers, Sela Group (Arunachal Pradesh)
0 0.125 0.25 0.5 0.75 1
Kilometers
90°3'0"E
90°4'0"E

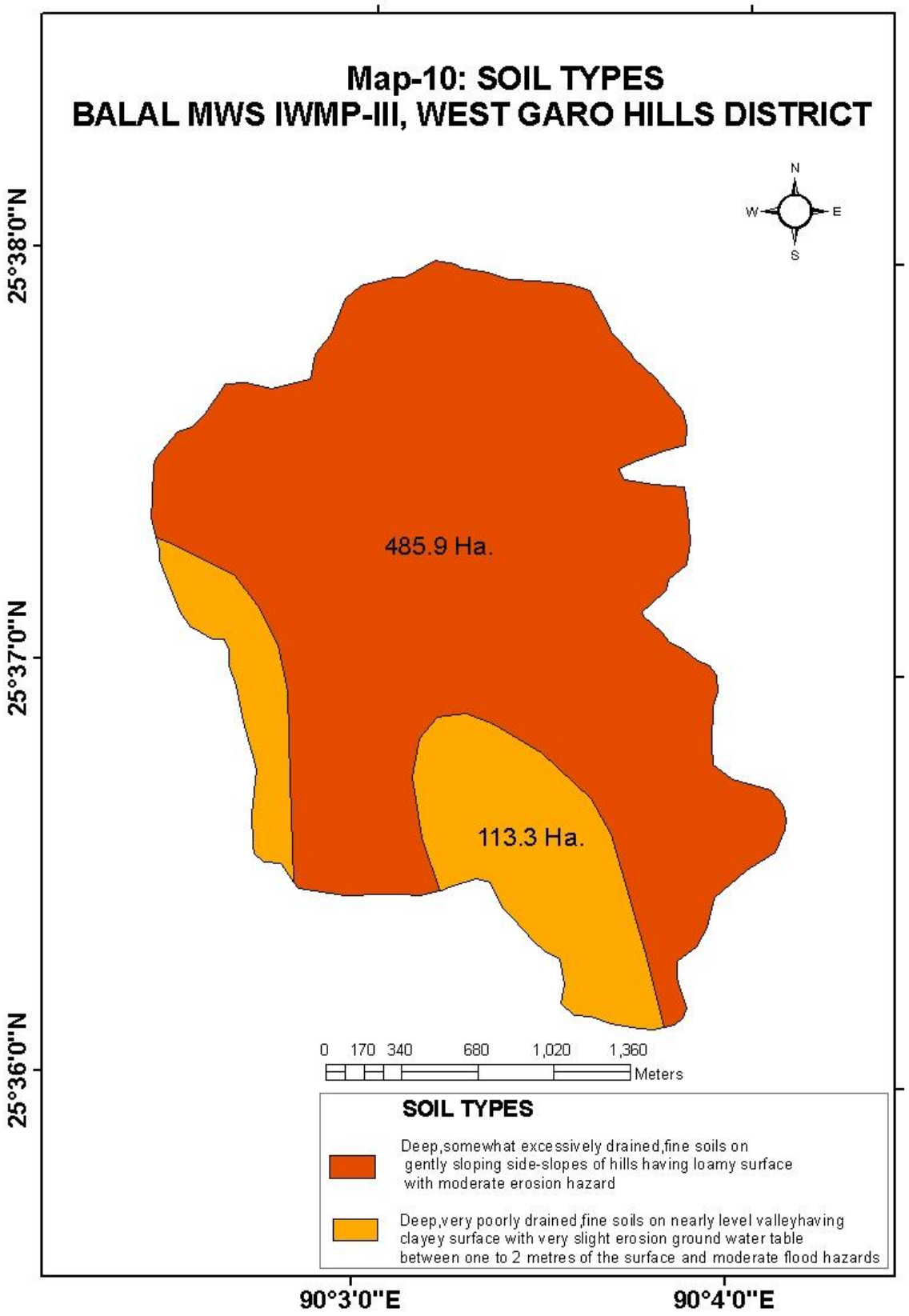

Map-6: GROUND WATER
BALAL MWS IWMP-III, WEST GARO HILLS DISTRICT
N
W
E
S
601.8 Ha.
25°38'0"N
25°37'30"N
25°37'0"N
25°36'30"N
25°36'0"N
90°2'30"E
90°3'0"E
90°3'30"E
90°4'0"E
0 0.125 0.25 0.5 0.75 1
Kilometers
Legend
Water Availability
Medium

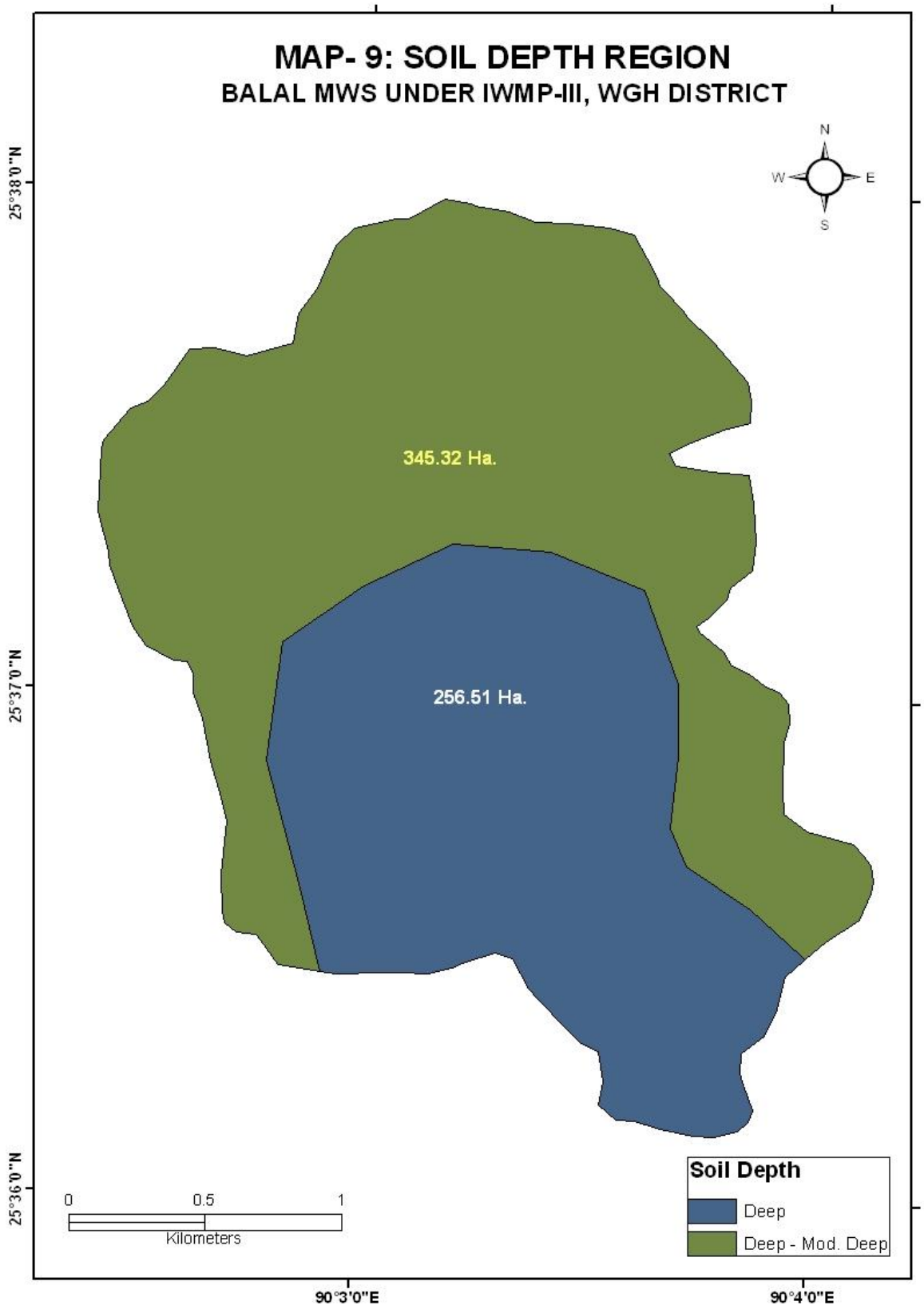

Map-5: PHYSIOGRAPHIC DIVISIONS
BALAL MWS IWMP-III, WEST GARO HILLS
N
W
E
S
601.8 Ha.
25°38'0"N
25°37'30"N
25°37'0"N
25°36'30"N
25°36'0"N
90°2'30"E
90°3'0"E
90°3'30"E
90°4'0"E
0 0.125 0.25 0.5 0.75 1
Kilometers
Legend
Physiographic Divisions
Dissected hilly terrain

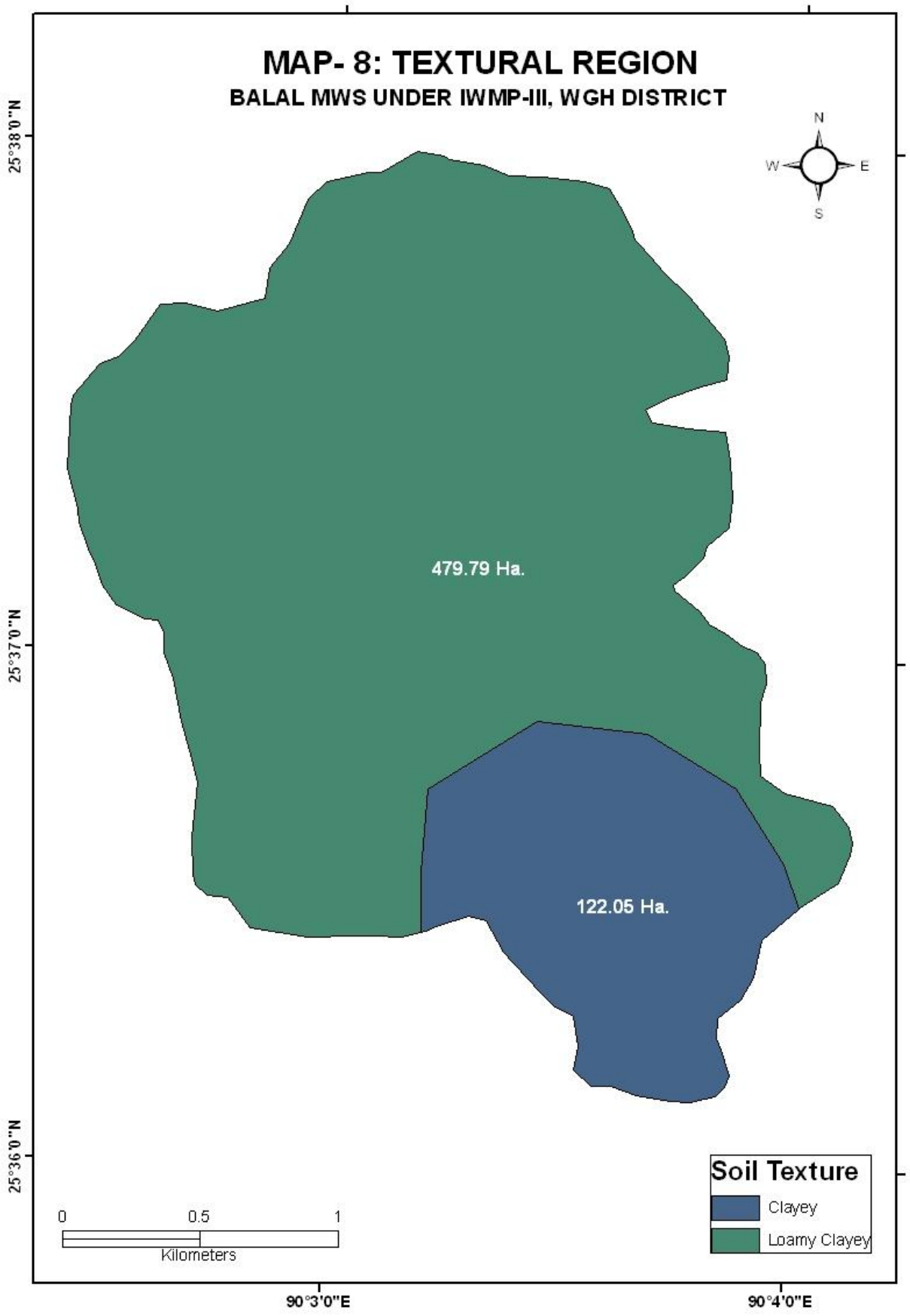

Map-11: Climatic Status of Balal MWS
Under IWMP-III, West Garo Hills District
N
W
E
S
Annual Rainfall (1994-2009)
8000
7000
6000
5000
4000
3000
2000
1000
0
1994
1996
1998
2000
2002
2004
2006
2008
25°38'0"N
25°37'30"N
25°37'0"N
25°36'30"N
25°36'0"N
0 0.15 0.3 0.6 0.9 1.2
Kilometers
90°2'30"E
90°3'0"E
90°3'30"E
90°4'0"E

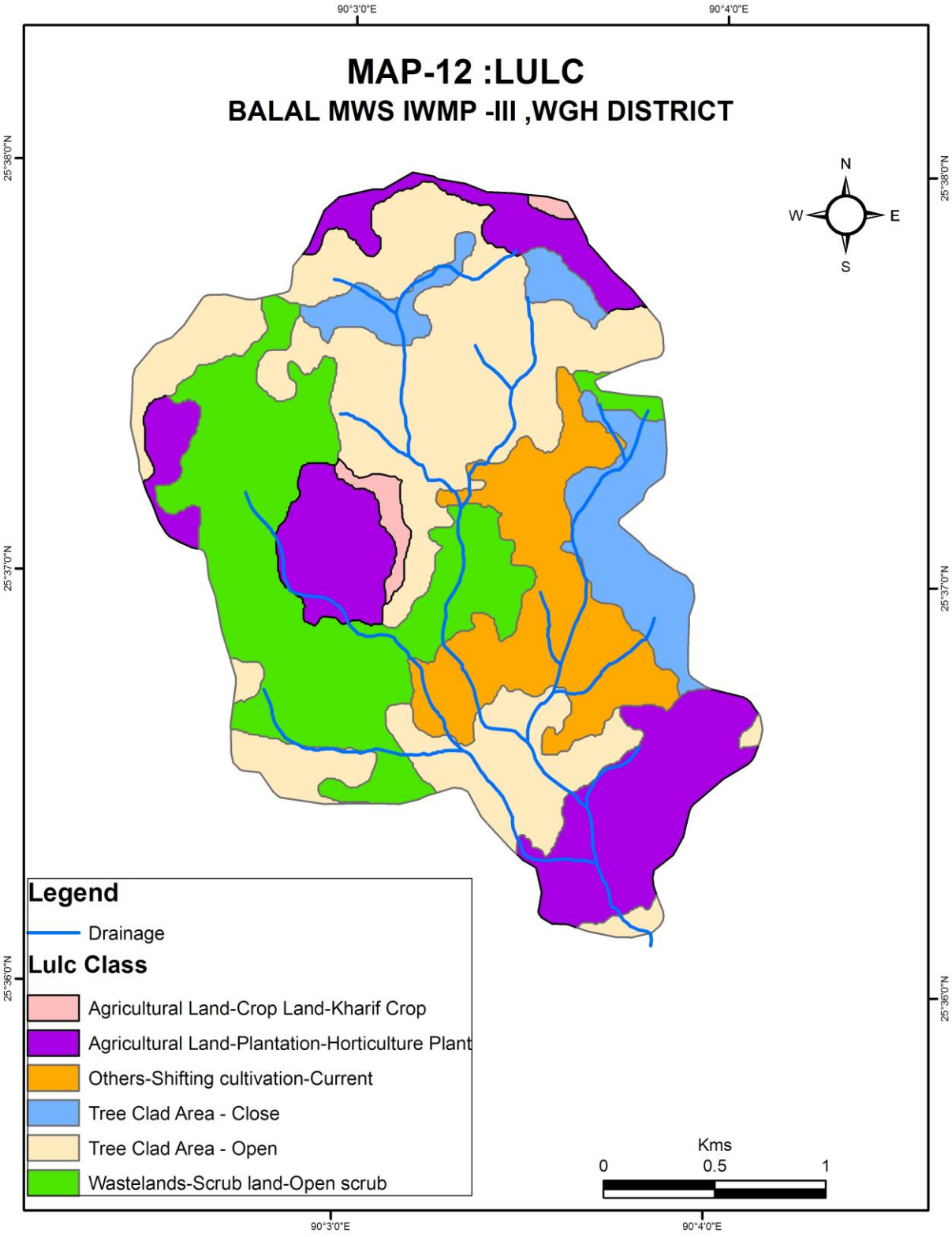

MAP - 2 : SLOPE
BALAL MWS UNDER IWMP - III, WGH DISTRICT
90°3'0"E
90°4'0"E
25°38'0"N
25°37'0"N
25°36'0"N
N
W
E
S
Legend
Slope
Area
<1 %
353.08 Ha.
3-5 %
0.04 Ha.
5-15 %
68.69 Ha.
15-35 %
127.63 Ha.
35-50 %
34.46 Ha.
>50 %
17.71 Ha.
Drainage
0
0.5
1
Kilometers

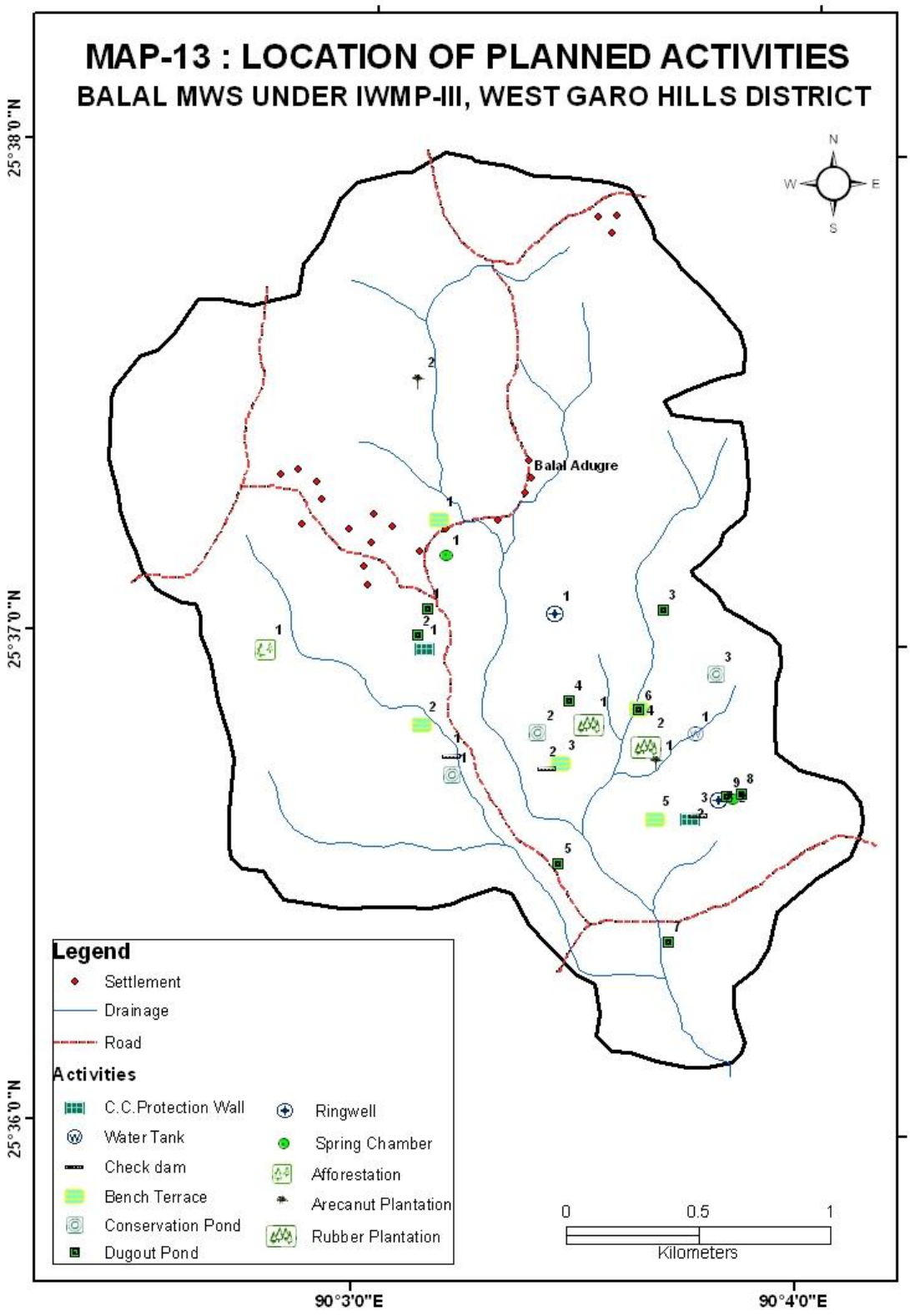

Map-7 : Soil Erosion
BALAL MWS UNDER IWMP-III, WEST GARO HILLS DISTRICT
N
W
E
S
25°38'0"N
25°37'0"N
25°36'0"N
536.4 Ha.
65.5 Ha.
Legend
Soil_Erosion
Moderate
Slight
0 0.1 0.2 0.4 0.6 0.8 1
Kilometers
90°3'0"E
90°4'0"E


Map-10: SOIL TYPES
BALAL MWS IWMP-III, WEST GARO HILLS DISTRICT
N
W
E
S
25°38'0"N
25°37'0"N
25°36'0"N
485.9 Ha.
113.3 Ha.
0 170 340 680 1,020 1,360
Meters
SOIL TYPES
Deep,somewhat excessively drained,fine soils on gently sloping side-slopes of hills having loamy surface with moderate erosion hazard
Deep,very poorly drained,fine soils on nearly level valleyhaving clayey surface with very slight erosion ground water table between one to 2 metres of the surface and moderate flood hazards
90°3'0"E
90°4'0"E


MAP- 9: SOIL DEPTH REGION
BALAL MWS UNDER IWMP-III, WGH DISTRICT
N
W
E
S
345.32 Ha.
256.51 Ha.
25°38'0"N
25°37'0"N
25°36'0"N
90°3'0"E
90°4'0"E
0
0.5
1
Kilometers
Soil Depth
Deep
Deep - Mod. Deep


MAP- 8: TEXTURAL REGION
BALAL MWS UNDER IWMP-III, WGH DISTRICT
N
W
E
S
479.79 Ha.
122.05 Ha.
25°38'0"N
25°37'0"N
25°36'0"N
90°3'0"E
90°4'0"E
0
0.5
1
Kilometers
Soil Texture
Clayey
Loamy Clayey


MAP-12 :LULC
BALAL MWS IWMP -III ,WGH DISTRICT
90°3'0"E
90°4'0"E
25°38'0"N
25°37'0"N
25°36'0"N
N
W
E
S
Legend
Drainage
Lulc Class
Agricultural Land-Crop Land-Kharif Crop
Agricultural Land-Plantation-Horticulture Plant
Others-Shifting cultivation-Current
Tree Clad Area - Close
Tree Clad Area - Open
Wastelands-Scrub land-Open scrub
Kms
0
0.5
1


MAP-13 : LOCATION OF PLANNED ACTIVITIES
BALAL MWS UNDER IWMP-III, WEST GARO HILLS DISTRICT
N
W
E
S
Balal Adugre
25°38'0"N
25°37'0"N
25°36'0"N
90°3'0"E
90°4'0"E
Legend
Settlement
Drainage
Road
Activities
C.C.Protection Wall
Water Tank
Check dam
Bench Terrace
Conservation Pond
Dugout Pond
Ringwell
Spring Chamber
Afforestation
Arecanut Plantation
Rubber Plantation
0
0.5
1
Kilometers

ANNEXURE II

Socio-Economic-Survey

SOCIO-ECONOMIC SURVEY OF BALAL MiCRO-WATERSHED (IWMP)

SL NO.	NAME OF THE VILLAGES	NO OF HOUSEHOLDS	MALE	FEMALE	TOTAL	LITERATE	ILLITERATE	TOTAL	Occupation	AGRICULTURE			HORTICULTURE (In Ha)	LIVESTOCK				INFRASTRUCTURE
										SETTLED (In Ha)	JHUM AREA (In Ha)	ABONDONED JHUM		CATTLE	POULTRY	PIGGERY	GOATERY	
1	2	3	4	5	6	7	7	9	10	11	12	13	14	15	16	17	18	19
1	Balal Adugre	35	97	93	**190**	130	60	**190**	farmers	4.00	35.00	61.00	93.00	27	174	21	-	1 LP School 1 Anganwandi centre
2	Goeragre	44	121	112	**233**	193	40	**233**	farmers	3.20	44.50	75.00	23.00	20	155	15	-	1 LP School 1 Anganwandi centre
	Total	**79**	**218**	**205**	**423**	**323**	**100**	**423**		**7.20**	**79.50**	**136**	**116**	**47**	**329**	**36**		

ANNEXTURE-III

Cost Estimates

MODEL NORMS PER HACTARE FOR TERRACING (IWMP)								
(Rate as per Schedule of NABARD - ANNEXURE - I - A)								
A.	***Technical Parameters .***					***Slope Group (8-10%)***		
	i) Average terrace width recommended (m)						*12.00*	
	ii) Vertical Interval (VI) = W x S/100 - S						*1.04*	
	iii) Terrace Length (m) = A/W + VI						*767.00*	
	iv) Earthwork = 12.50 x W x S m^3						*1200.00*	
	v) Shoulder Bund Length						*779.00*	
	vi) Shoulder Bund Length x-section (m^2)						*0.08*	
	vii) Earthwork for shoulder Bund (m^3)						*62.32*	
	viii)Area available for cultivation (Ha.)						*0.87*	
B.	***Cost estimate .***						***Amount.***	
	i) Jungle clearance including uprooting of stumps (L/s)						*1364.00*	
	ii) Cost of terracing @ Rs. 10/- m^3						*12000.00*	
	iii) Cost of shoulder Bund @ Rs. 7/- m^3						*436.00*	
	iv) Dressing, shaping and grading of terrace						*350.00*	
	v) Water Disposal structure (L/s)						*850.00*	
						G. Total	***15000.00***	
			(Rupees fifteen thousand) only .					

ESTIMATE FOR THE CONSTRUCTION OF STONE MASONRY PROTECTION WALL.

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

1/134. Excavation for structures.
(I) Ordinary soil.
(A) Manual Means.
(i) Upto 3m depth.

1 x 10.00 x 1.35 x ½ (1.10 + 0.60) = 11.48m^3

1 x 10.00 x ½ x 1.35 x 0.38 = 2.57m^3

= 14.05m^3

@ Rs. 47/- m^3 ……. Rs. 660.35

2/137. P.C.C 1:3:6 in foundation…..etc.

1 x 10.00 x 1.35 x 0.10 = 1.35m^3

@ Rs. 3571/- m^3 ……. Rs. 4820.85

3/140(b). Stone masonry works in cement mortar 1:3 etc.

1 x 10.00 x $\frac{0.60 + 1.10}{2}$ x 1.75 = 14.88m^3

1 x 10.00 x ½ x 1.10 x 0.28 = 1.54m^3

= 16.42m^3

@ Rs. 2714/- m^3 ……. Rs. 44563.88

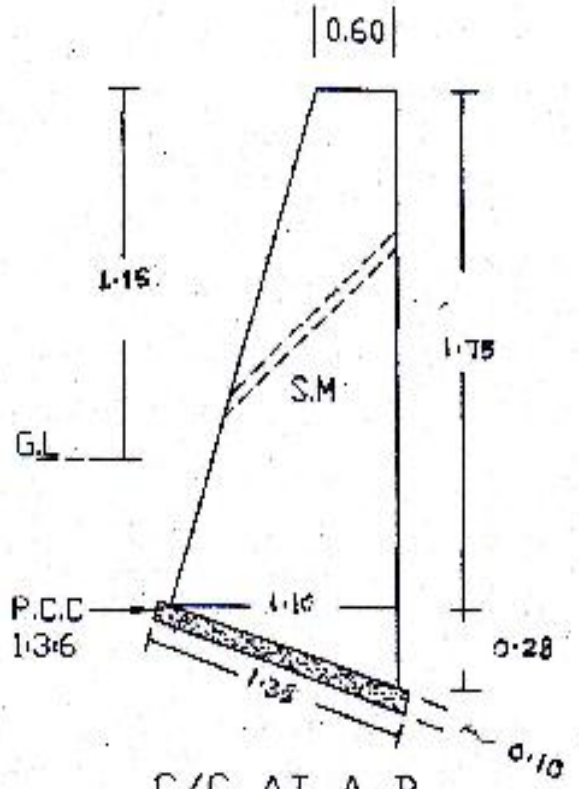
GRAND TOTAL = Rs. 50045.08

Say, Rs. 50,000.00

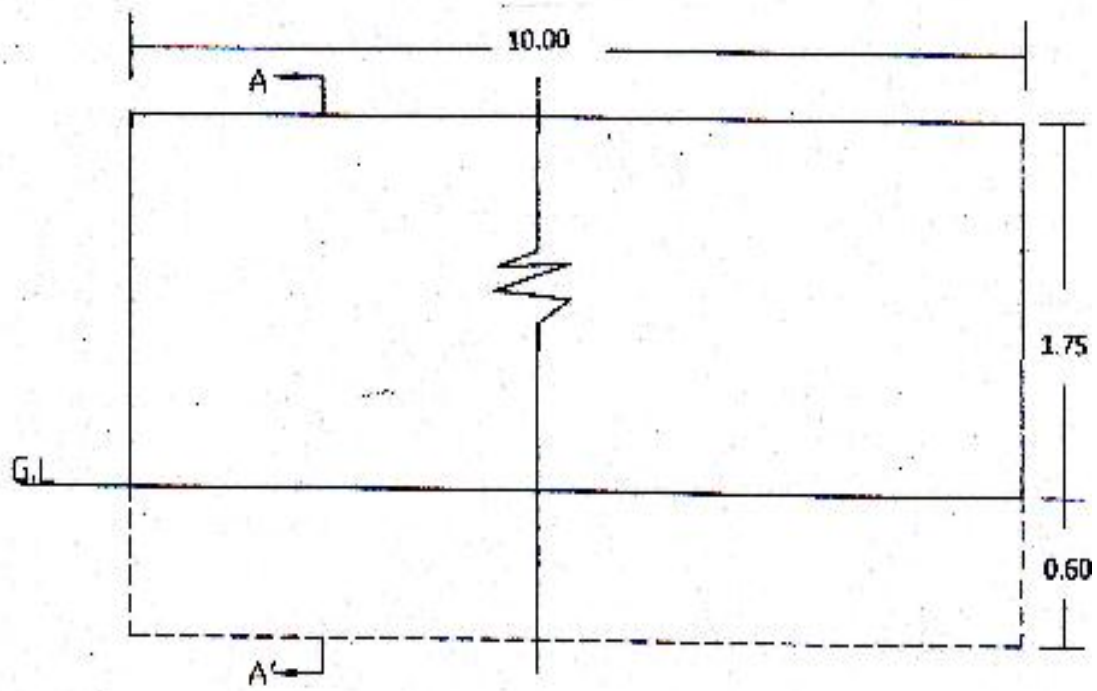
***(Rupees Fifty thousand) only*.**

STONE MASONRY PROTECTION WALL

Not to Scale



C/C AT A-B



ELEVATION

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**	

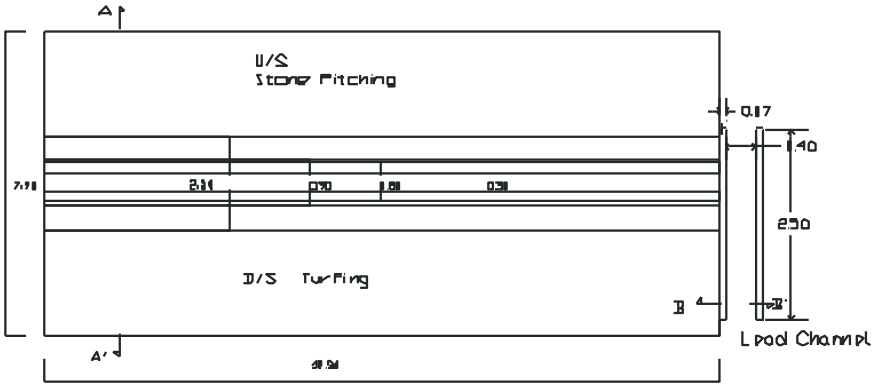
5/78. Plastering with cement mortar (1:4) 15mm thick

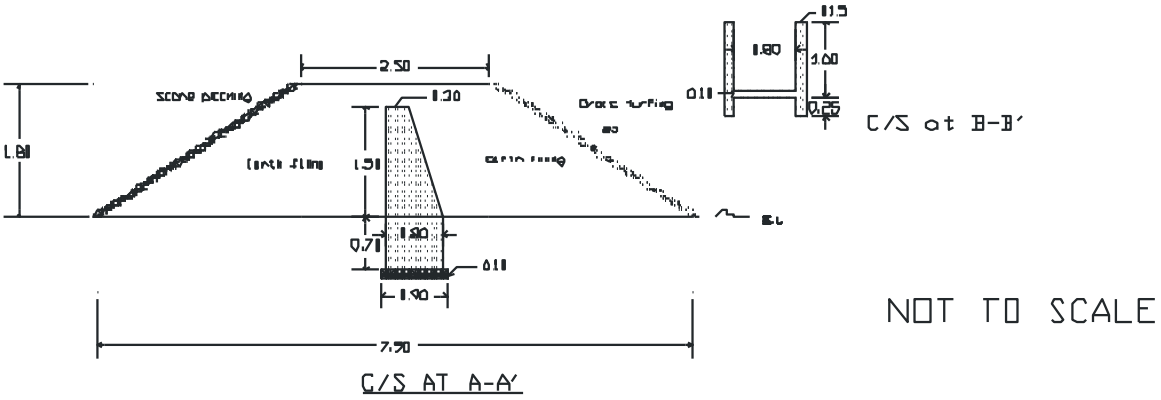
L/channel	2	x	5.00	x	0.90			**9.00**	m^2
	2	x	5.00	x	0.15			**1.50**	m^2
	1	x	5.00	x	0.8			**4.00**	m^2
								14.50	m^2
.@ Rs.75/- per sq.m							Rs.	**1087.50**	
						C.O.	Rs.	**94834.70**	

							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.

PLAN FOR CC CORE WALL WITH EARTHEN DAM





C/S AT A-A'

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

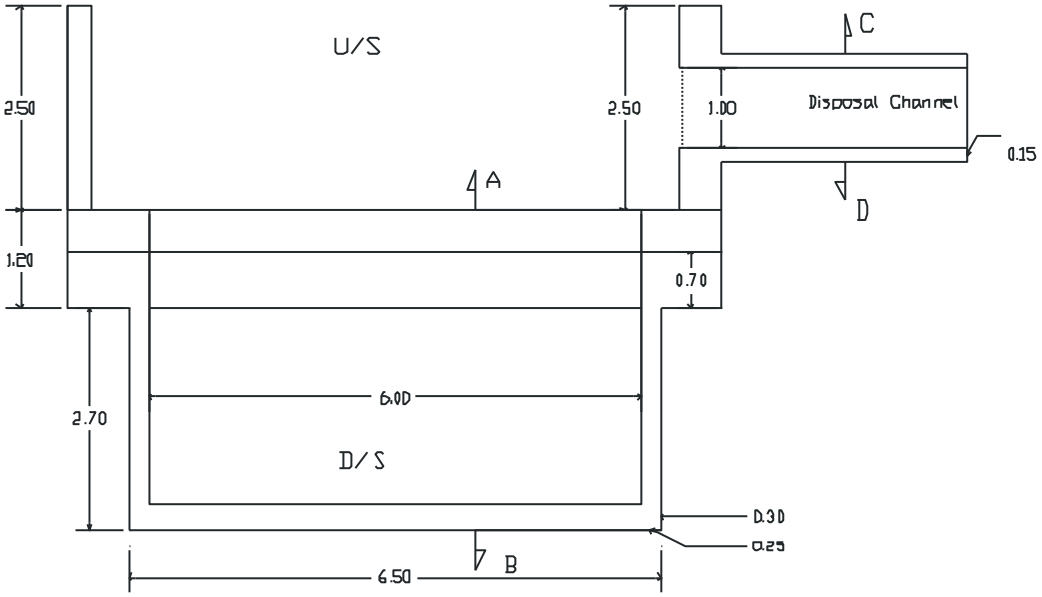
4/141 . Plain cement concrete in open foundation complete as per drawing and technical specifications.
A. P.C.C. Grade M15 :

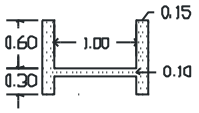
M/Dam :	1 x 8.00 x 1.20 x 0.80	= 7.68m^3		
	1 x 8.00 x $\frac{0.50 + 1.20}{2}$ x 1.05	= 7.14m^3		
	2 x 1.00 x 0.50 x 0.50	= 0.50m^3		
W/wall :	2 x 2.50 x 0.30 x 2.05	= 3.08m^3		
Deduct :	1 x 1.00 x 0.30 x 0.60	= (-)0.18m^3		
G/wall :	2 x 3.00 x 0.25 x 0.95	= 1.43m^3		
T/wall :	1 x 6.00 x 0.30 x 0.70	= 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

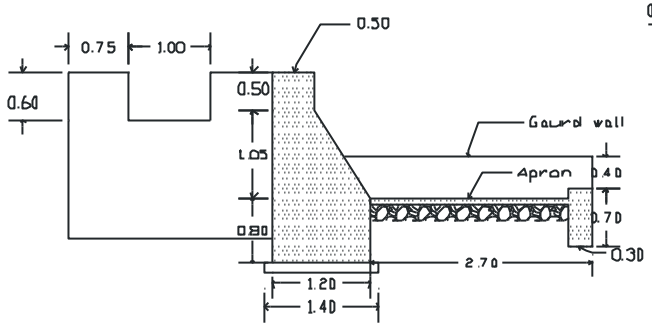
(Rupees One lakh) only.

PLAN FOR CC IRRIGATION DAM WITH DISPOSAL CHANNEL





C/S AT C-D



NOT TO SCALE

C/S AT A-B

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^2
10 x 4 x 0.15 x 0.15 = 0.90 m^2
= 62.46 m^2

@ 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^3 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.

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 m^3

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

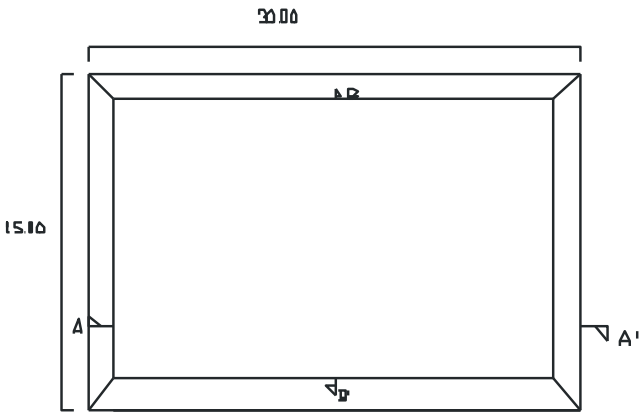
6/37. Furnishing and laying of the live sods of perrennial turf forming grass on embankment slope,verges or other locations shown on the drawing including preparation of ground, fetching of sods and watering as per technical specification

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

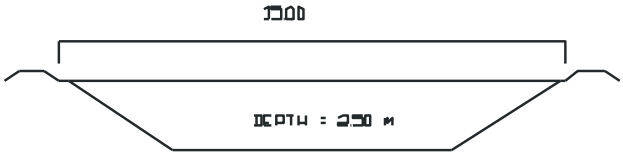
Grand Total	**Say**	**Rs.**	**40,000.00**

(Rupees Forty thousand)only.

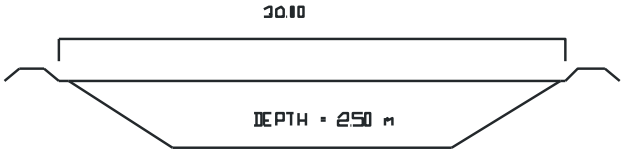
PLAN FOR CONSTRUCTION OF DUGOUT POND



NOT TO SCALE



C/S AT A-A'



C/S AT B-B'

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

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

I.A(i) Ordinary soil								
Earthen Channel	1	x	1.00	x	1.10	x	1.35	**1.49** m^3
.@Rs.34/- cum							Rs.	**50.49**
							Rs.	**50.49**
Grand Total					**Say**		**Rs.**	**50.00**

Cost per Running metre=(Rupees Fifty)only.

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.		

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.

ANNEXURE IV

MoA, Sub Committee Details

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

Name of Villages: a) Balal Adugre b) Goeragre

1	2	3	4	5			6	7
District	Names of projects	Names of Departments with Schemes converging with IWMP	Fund made available to IWMP due to convergence (Rs. in lakh)	Name of activity/task/structure undertaken with converged funds (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)	**2332666**	a) Dugout Pond	9 nos	270000		District Level
				b) Bench Terrace	8 Ha	120000		
				c) Water harvesting	4 nos	600000		
				d) CC Irrigation dam	2 nos	300000		
				e) Earthen Irri channel	0.8 km	141666		
				f) Spring chamber	4 nos	240000		
				f) Arecanut Plantation	45 Ha	389000		
				g) Rubber Plantation	40 Ha	272000		
Grand Total						**2332666**		

Grand Total: Twenty-Three Lakhs Thirty Two Thousand Six Hundred Sixty Six) only.

AGREEMENT FOR CONVERGENCE OF SCHEME

The village Employment Council of (VEC) and the communities of Balal Adugre village, Selsella Block, West Garo Hills, Meghalaya has no objection to the convergence og NREGS with Integrated Management Project(IWMP) at Balal Adugre village under Balal Microwatershed, WGH-IWMP-III being implemented by Tura Soil & Water Conservation(T)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 (2009-10 to 2013-14). The wage and material component under NREGS shall be utilized for following works:

a) Dugout Pond

b) Bench Terrace

c) Water harvesting farm pond

d) CC Irrigation dam

e) Earthen Irri channel

f) Spring chamber

g) Arecanut Plantation

h) Rubber Plantation

Sd/-
(President)
Village employment Council
Balal Adugre
Selsella Block, WGH

Sd/-
(Secretary)
Village Employment Coucil
Balal Adugre
Selsella Block, WGH

NO OBJECTION CERTIFICATE OF THE AKING NOKMA FOR BALAL MICROWATERSHED DEVELOPMENT PROJECT TO BE TAKEN UP UNDER IWMP-III BY TURA SOIL&WATER CONSERVATION(T) DIVISION

The Aking Nokma of Balal Adugre village under Balal Microwatershed Project, WGH-IWMP-III has No Objection to the developmental activities to be undertaken in my aking land by soil & water consevration Department.

The villagers of Balal Adugre Aking 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.

Sd/-
Aking Nokma
Balal Adugre
West Garo Hills, Meghalaya