GOVERNMENT OF MEGHALAYA

DEPARTMENT OF SOIL & WATER CONSERVATION

WEST GARO HILLS

DETAILED PROJECT REPORT

OF

DABONG INTEGRATED WATERSHED MANAGEMENT PROGRAMME

IWMP – II 2009 – 2010

DADENGGRE 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	:	Dadenggre
Name of the Villages	:	Dolwakgre
Name of the Project	:	IWMP-II
Total Geographical Area	:	849 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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CHAPTER I
INTRODUCTION AND BACKGROUND

CHAPTER I

INTRODUCTION AND BACKGROUND

1.1 Project Background:

The Dabong (IWMP) Project is located in Dadenggre C&RD Block, West Garo Hills District of Meghalaya. Consisting of a single micro-watershed, the project area is drained by the Dabong Stream flowing in a north to south direction and then eventually joins Ditti river at ronipara village.The total area is 848 Ha. with 500 Ha to be treated under the Integrated Watershed Management Programme (IWMP).The Project area is located at a distance of about 147Km from Tura, the District Headquater. The area comprises of single village namely- Dolwakgre.

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

1.3 Need and Scope for Watershed Development:

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 147 km from Tura the District Headquarter . The geographical location is between 90˚13'42"E to 90˚15'30" Longitude and 25˚50'00"N to 25˚53'00"N Latitude. There is only one village within the Watershed – Dolwakgre.

2.2 Physiography:

The physiography of the micro-watershed is highly undulating. The altitude ranges from a minimum of 60 m to a high of 220 m above mean sea level. In the lower reaches (valley lands) the slope ranges from 1% to 5% however, in the middle and upper reaches it is greater than 25%, and can reach up to 50%

Table 2.1: Physiographic details

Elevation (metres)	Slope Range (%)	Order of watershed Sub/Micro-watershed	Major streams	Topography
60 - 220	1 – 50%	2nd Order Micro W/S	Rudrang dabong Roni Dalbeng Balading Singgura Chisiri	Flat and Gentle Slopes

2.3 Drainage:

The major stream draining the micro-watershed is the Dabong which is a 2nd order stream flowing in a north-south direction.

2.4 Soil:

Soil in general is moderately deep with 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 exists. The watershed area faced erosion problem with 35.3 Ha area facing moderate erosion problem.

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

2.5 Climate:

The Watershed lies under Central Hyper-thermic Agro-climatic zone. The average annual rainfall is about 3300mm. 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 2.3 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 Hyperthermic Plateau 60-220m	500	West Garo Hills	WGH IWMP-II	Loamy Clayey	849	3300mm	Paddy	49.50Ha
									Maize	10Ha
									Arecanut & Black pepper	142.10

2.5 Agriculture:

The Project village has about 49.50Ha 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 agriculture crops though market is available. The major crop includes paddy with total production of about 890 quintals per annum. Maize is cultivated in about 10Ha of agriculture land with total production of 120 quintals annually. Jhum occupies 4.89% of the total geographic area.

Table 2.4: Crop yield and production

Crops	**Area (ha)**	**Average Yield (Qtl) per ha.**	**Total Production (Qtl.)**
Paddy	49.50	17.97	890.00
Maize	10.00	15	120.00

2.6 Natural Vegetation:

The project area has about 473.4Ha of degraded forest which comprises only 55.78% of the total geographical area. Various biotic factors i.e. deforestation for commercial use and horticulture 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, Alstonia scholaris, Sterospurlmum chelanoides, Vitux pedancularis, and bamboo spp.

2.7 Socio-Economic Profile:

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

Demographic Status: The total households in the watershed project is 85 with a total population of 510 out of which 233 are male and 277is female .

1. Dolwakgre 85 Nos

Infrastructure facilities **:**

2.1.1 *Roads:* There is no all weather road but the village within the Project Area is connected by the kutcha constructed under NREGS

2.1.2 *School:* there are only one L.P Schools and one U.P.School;s within the Project Area run either by the Mission or by the Government.

2.1.3 *Electricity :* There is no electricity under this Project Area

2.1.4 *Health :* There is no Community Health Centre or sub-cencentre and the local population have to either depends on facilities available at Rondupara at a distance of 4 km. .

2.1.5 *Water Supply :There is no drinking water supply from P.H.E but there are three open ringwells provided by C & RD Block*. However, during lean season the entire population have to depend on springs available in the area as the water from ringwell is not sufficient to meet the daily requirement.

2.1.6 *Market :* There is no any market under this project area but the people of this area sell their products at Tikkrikilla weekly market which is 17 km away from the watershed area.

Table 2.5: Infrastructure Status.

1	2	3		4			
Name of District	Name of Project	Parameters:		Status			
WGH	IWMP-II	(i)	Whether connected to the main road by an all weather road	NIL			
		(ii)	No. of households without electricity	85			
		(iii)	No. of households without access to drinking water	27			
		(iv)	No. of educational institutions: Primary (P)/ Secondary (S)/ Higher Secondary (HS)/ Vocational institution (VI)	(P)	(S)	(HS)	(VI)
				1	NIL	NIL	NIL
		(v)	Distance of project village from nearest Primary Health Centre	17 km			
		(vi)	Distance of project village from nearest Veterinary Dispensary	17 km			
		(vii)	Distance of project village from nearest Post Office	17 km			
		(viii)	Distance of project village from nearest Banks	17 km			
		(ix)	Distance of project village from nearest Markets/ mandis	17 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	NIL			
		(xiv)	No. of worship place	NIL			
		(xv)	No. of Community Hall	NIL			
		(xvi)	No. of Ringwell	3			

2.8 Livestock:

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

Table 2.6: Existing livestock population

Type of Animal	Population
Piggery	72
Poultry	633
Cattle	218
Goattery	17

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
WGH	IWMP-II	(i) Large(>5 Ha)	-	-	-	-	-
		(ii) Small(1-5 Ha)	15	-	-	28.5	28.5
		(iii) Marginal(<1 Ha)	70	-	-	21	21
		(iv) Landless	-	-	-	-	-
		Sub - Total	85	-	-	49.5	49.5

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-II	(i) Wasteland/ degraded land	25	-	-	117.50	-	-	-	45
		(ii) Pastures	-	-	-	-	-	-	-	-
		(iii) Orchards	142.10	-	-	-	-	-	-	-
		(iv) Village woodlot	-	-	-	-	-	-	-	-
		(v) Forest	-	-	-	473.4	-	-	-	-
		(vi) Village Ponds/ Tanks	-	-	-	-	104	-	-	-
		(vii) Community Buildings	-	-	-	-	-	-	-	-
		(viii) Weekly Markets	-	-	-	Tikkrikilla	-	-	-	-
		(ix) Horticulture	-	-		-	-	-	-	150
		(x) Temples/ Places of worship	-	-	-	-	-	-	-	-
		(xi) Jhum Cultivation	41.5	-	-	-	-	-	-	-
		(xii)Permanent Cultivation	49.5	-	-	-	16	-	-	185
		(xiii) Habitation	-	-	-	-	-	-	-	-
	Total		**258.10**	**-**	**-**	**590.9**	**120**	-	-	**380**

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

a) Permanent Cultivation = 49.50 Ha
b) Orchards = 142.10 Ha
c) Forest = 473.40 Ha
d) Wasteland/ degradedland = 142.50 Ha

e) Jhum Cultivation = 41.50 Ha

Total = 849Ha

2.11 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 are converted to Broomstick cultivation areas which has further degraded the capability of the land. Mention may also be made here that the land use categorized as Tree-clad Area-open in the land used land cover map generated using Satellite Images of 2005 – 2006 are actually Broom-stick cultivation areas. In other words, unscientific method of cultivation has not only reduced the Jhum cycle, low crop yield but had adversely affected the ecological balance within the area. Road communication is another infrastructural problems that the area is facing where large volume crops like pineapple, jackfruits etc do not find their way into the market which has resulted in poor socio-economic status of the people. However, to control or to overcome the said problems an innovative approach has been formulated and documented in the Action Plan or the Treatment Plan the Detailed Project Report. The method of identification of the problems is through the Participatory Rural Appraisal Exercises conducted in all the villages within the Watershed.

CHAPTER III

PROJECT PLANNING & INSTITUTION BUILDING

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3.1 Scientific Planning

i) Base Line Survey: To establish a benchmark for assessing the impact of any intervention (pre-project & post project) a baseline survey is essential. The baseline survey included household census & socio-economic survey by using structured and semi –structured questionnaires, bio-physical survey to identify and assess the status of natural resources in the project area.

ii) Participatory Rural Appraisal: To further obtain information on the project area, the people, resources, various PRA techniques like resource mapping, social mapping, seasonal calendars, matrix ranking, Venn diagrams were used.

iii) GIS & Remote Sensing: To facilitate the process of prioritization and planning Geographic Information System was use. The land use and land cover (LULC) maps were prepared by the North Eastern Space Application Centre (NESAC) using the LISS III images (2006). The activities were located on the field by using GPS and accordingly transferred to the maps on GIS platform.

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

1	2	2
Sl.No.	**Scientific criteria/ inputs used**	**No. of projects in which scientific criteria were used**
A.	**Planning**	
	Cluster approach	3
	Whether technical back-stopping for the project has been arranged? If yes, mention the name of the Institute.	Yes, i)NESAC, Nongsder ii)SLNA GIS Lab, Shillong
	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 Hills District of Meghalaya. The Project Manager will be the Divisional Soil and Water Conservation Officer and will be assisted by an Asst. Soil & Water Conservation Officer along with WDT members in which expertise is drawn from the relevant fields for achieving smooth and successful implementation of the project.

1	2	3	
Names of Districts	Names of projects	Details of PIA	
West Garo Hills	W.G.H. IWMP-II	(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

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3.3 Institution Building

i) Watershed Committee (WC)

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

Table 3.2: Details of Watershed Committees (WC):

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Names of the Districts	Names of projects	Names of WCs	Date of Registration as a Society (dd/mm/ yyyy)	Designation	M/F	SC	ST	SF	MF	LF	Land-less	UG	SHG	GP	Any other	Educational ualify-cation	Function/s assigned#
W.G.H	W.G.H-IWMP-II	Dabong	Under process.	President	M		ST									Class I X	A to I
				Secretary	M		ST									P.U (Arts)	A to I
				Member	4 M		ST									Class III – VIII	A to I
				Member	4 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.H-IWMP-II	1	1		2	(i) Landless	-	-	-	-	-	-	-	-	-
						(ii) SF	14	10	24	14	10	24	NA	NA	NA
						(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-II					(i)Landless									
						(ii) SF									
						(iii) MF									
						(iv) LF									
Total					NIL				NIL			NIL			NIL

CHAPTER IV

PROJECT ACTIVITIES

CHAPTER IV
PROJECT ACTIVITIES

4.1 Preparatory Phase:

i) Entry Point Activities (EPA)

(Financial – Rs. in lakh)

1	2	3	4	5	6	7	8	9	10	11
Sl. No.	State	District	Names of Project	Amount earmarked for EPA	Entry Point Activities planned	Estimated cost	Expenditure incurred	Balance	Expected outcome	Actual outcome
1	Meghalaya	W.G.H	W.G.H IWMP-II	3.00 Lakh	i)Construction of Spring Chamber. ii)Submersible causeweay/culvert. iii)Link road.	0.60 1.75 0.65	-	-	NA	Na

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-II	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 es-tablishing /maintaing forest reserves. c) Agreement for convergence of NREGS scheme with IWMP with VEC.	a)Resource inventory works	Done	EPA	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											
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-II	Dug out Pond	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				C.C Check cum Irrigation Dam	-	-	-	-	-	-	-	5	86	957	5.00	5	86	957	5.00
				Water harvesting farm pond	-	-	-	-	-	-	-	2	84	976	2.00	2	84	976	2.00
				Earthen Irrigation Channel	-	-	-	-	-	-	-	1360.4 rmt	24	-	0.68	1360.4 rmt	24	-	0.68
				Stone masonery protection wall	-	-	-	-	-	-	-	3	75	992	3.60	3	75	992	3.60
			Total										**269**	**2925**	**11.28**		**269**	**2925**	**11.28**

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

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

1	2	3	4	5	6		7								8								9
S. No.	Names of States	Names of Districts	Names of project	Type of structures	Pre-project		Proposed target								Achievement due to project								
							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		Change in irrigated area (Col. 8-6) (ha)
					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-II	(i)Dug out Pond	0	NIL		NIL	0	9	20	3.60	20	3.60									
				Total for the project							**20**	**3.60**											

4.2.3 Activities executed by User Groups in the Project Areas.

	2	3						
Names of Districts	Names of Projects	Major activities of the UGs –Targets				No. of UGs involved	Estimated Cost	Amount of WDF to be collected (Rs.)
		Structure/ activity proposed						
		Sl. No.	Type	No.#	Treatment (ha)			
W.G.H	W.G.H IWMP-II	1.	C.C Check-cum irrigation dam	5 Nos	86 Ha	2	5.00	0.25
		2	Stone masonry Protection Wall	3Nos	75 Ha	2	1.50	0.075
		3	Earthen Irrigation Channel	1360.4 rmt	24 Ha	1	0.68	0.034
			Total		**185 Ha**	**5**	**6.18**	**0.359**

4.2.4 Activities executed by User Groups in the Project Areas:

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

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

1	2	3		
Names of the Districts	Names of projects	Major activities of the SHGs		
		Name of activity	No. of SHGs involved	Average annual income from activity per SHG
West Garo Hills	W.G.H IWMP-II	Piggery	5	0.65
		Poultry	3	0.40
	Total		**4**	**1.05**

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

4	5					6	7	8			9	10
No. of SHGs given training	Total assistance received by the SHG (Amount in Rs.)					Total annual Income generated (Rs.)	Total annual Savings (Rs.)	No. of SHGs Graded as			Total Amount of loan sanctioned by the bank(s)	No. of SHGs federated
	Loan from revolving fund	Training	Material	Income generating activities	Amount			I	II	III		
	NIL	1.60	NIL	Piggery	2.00	1.30	0.60					
				Poultry	1.05	0.80	0.40					

4.2.7 Other activities of watershed works phase:

1	2	3		4		5		6		7		8		9		10		11		12		13
District	Names of projects	Ridge area treatment		Drainage line treatment		Nursery raising		Land development		Crop demonstrations		Horticulture & Cash Crop Development		Veterinary services		Fishery development		Non-conventional energy		Any other (please specify)		Total cost incurred (Rs. In lakhs)
		(a)	(b) (Rs)	(a)	(b) (Rs)	(a)	(b) (Rs)	(a)	(b) (Rs)	(a)	(b)	(a)	(b)	(a)	(b) (Rs)	(a)	(b) (Rs)	(a)	(b)	(a)	(b)	
W G H	W.G.H IWMP-II	i)Improvement of degraded forest(45 Ha)	1.62	i)check dam. ii)protection wall. iii)farm pond. iv)dug out pond. v)Channel.	5.00 1.50 2.00 10.00 0.68	-	-	i)Wet Terrace(16Ha)	2.40	-	-	i)Rubber plantation(100 Ha) ii)Arecanut plantation (50 Ha)	15.00 5.70	i)piggery ii)poultry	2.00 1.05	Fishery-cum-piggery(30unit)	0.30	-	-	i)Kitchen Garden (40unit) ii)Tailoring iii)Carpentry	6.00 0.80 0.70	
	Total		**1.62**		**19.18**				**2.40**				**20.70**		**3.05**		**0.30**				**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-II																						
		Dug out Pond		√		√			UG/WC	25 Nos		10.00		10.00	March2014								
		Check Dam		√			√		UG/WC	5 Nos	3.00	2.00		5.00	march 2013								
		Wet Terrace			√	√			UG/WC	16 Nos		2.40		2.40	March2014								
		Stone masonry Protection Wall		√			√		UG/WC	3 Nos	0.90	0.60		1.50	March2012								
		Earthen irrigation Channel		√			√		UG/WC	1360.4 rmt		0.68		0.68	March2013								
		Water Harvesting farm pond		√		√			UG/WC	2 Nos	1.20	0.80		2.00	March2012								
		Total									**5.10**	**16.48**		**21.58**									

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	420	NA	NA	Paddy (36 Qtls)	Paddy (36 Qtls)	20-,000	30,000		10560		7040	17600		32		4	36		
				Maize (17 Qlts)	Maize (17 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-II	Improvement of degraded	R		C				WC	45 Ha	4500	1.62	31/3/2013				
		Rubber Plantation	R			P			Farmers	100 Ha	45,000	4.40	31/3/2013				
		Arecanut	R			P			Farmers	50 Ha	60,000	5.7	31/3/2013				

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					648		432	1080		56		4	60	
Rubber Plantation	NA	0	300	0	3000000		5400		3600	9000		56		36	92	
Arecanut	NA	1993.5	2731.5	1594800	2185200		2052		1368	3420		56		14	70	
Total				**1594800**	**5185200**		**8100**		**5400**	**13500**		**168**		**54**	**222**	

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-II	Kitchen gardening	√		Individual	Private	3.50	31/3/2014		
		Tailoring			SHG	SHG/UG	0.80	31/3/2014		
		Piggery			Individual	SHG/UG	1.50	31/3/2012		
		Carpentry	√		SHG	SHG/UG	0.70	31/3/2014		
		Poultry			SHG	SHG/UG	1.50	31/3/2013		
		Fingerlings			SHG	Private	1.50	31/3/2013		
		Total					9.50			

(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	2000-3000	15000-20000		2160		1440	3600	nil	40	nil		40
Tailoring	Nil	20000-25000		360		240	600	nil	nil	nil	20	10
Piggery	Nil	20000-30000		720		480	1200	nil	nil	nil	20	20
Carpentry	Nil	15000-20000		300		nil	300	nil	10	nil		10
Poultry	Nil	10000-20000		540		360	900	nil	nil	nil	10	10
Fingerlings	Nil	10000-20000		nil		nil	nil	nil	25	nil		25
	Total			**4080**		**2520**	**6600**		**75**		**50**	**90**

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	WGH IWMP-II	Dolwakgre	-	Reparing maintenance of CPRs	-	-	-	-	-	-	-	-	-	-	-
					-	-	-	-	-	-	-	-	-	-	-
					-	1.75	-	0.0875	-	-	-	-	-	-	0.0875
					-	-	-	-	-	-	-	-	-	-	-
					-	-	-	-	-	-	-	-	-	-	-
		Total			-	**1.75**	-	**0.0875**	-	-	-	-	-	-	**0.0875**

CHAPTER V

PROJECT PHASING & BUDGETING

CHAPTER V

PROJECT PHASING & BUDGETING

ACTION PLAN OF DABONG 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		0.60		0.20				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				0.10		0.60		0.20				0.990
viii	Office expenses, POL, Stationeries, Printing of SHG's books, pamphlets, tea, snacks ets, cost of camera.				0.174		1.044		0.528				1.746
	TOTAL OF A:			**2%**	**1.50**	**5%**	**3.75**	**3%**	**0.528**			**10%**	**7.50**
	PREPARATORY PHASE: 4%												
B	**Entry Point Activities:**	4%											
i	Construction of Spring Chamber/Ringwell @Rs60,000/- each	1Nos.	0.6									1Nos.	0.6
	Submersible causeway/culvert @Rs.175000/-	1Nos	1.75									1Nos	1.75
	Link road @ Rs. 130000/- per km	0.501 km	0.65									0.501 km	0.65
	TOTAL OF B:		**3.00**										**3.00**

C	**Institution & Capacity Building : - 5%**	**1%**		**2%**		**1%**		**1%**				**5%**	
i	Awareness Campaign & Capacity building of farmer	1	0.20	1	0.20	1	0.20	1	0.35			4	0.80
ii	Exposure visits - Off Campus			1	0.30			1	0.20			2	0.65
iii	Capacity building of SHG's/UG's.	1	0.20	3	0.60	1	0.20	1	0.20			6	1.20
iv	Capacity building of WC Members.	1	0.35	1	0.20	1	0.35					3	0.90
v	Capacity building of WDT/WV			1	0.20							1	0.20
	Total of C:		**0.75**		**1.50**		**0.75**		**0.75**				**3.75**
D	**Detailed Project Report: 1%**		1%										
i	Cost of Resources Inventories works		0.25										0.25
ii	Cost of PRA Exercises		0.10										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 & Evaluatio: 2%**												
i	Cost of Monitoring			0.2%	0.15	0.5%	0.375	0.3%	0.225			1%	0.75
ii	Cost of Evaluation			0.3%	0.225	0.5%	0.375	0.2%	0.15			1%	0.75
	Total of E:				**0.375**		**5.25**		**0.375**				**1.50**
	TOTAL OF I (A - E)		**4.50**		**3.375**		**5.25**		**3.375**				**16.50**
II	PROJECT COST WATERSHED WORKS PHASE: 50%												
A	**Arable Land Treatment:**												
i	Wet terrace@15000/-16 Ha					11	1.65	5	0.75			16	2.400
ii	Rubber plantation (100 ha) pre-work@6,000/ha					80	4.80	20	1.20			100	6.000
	1st yr. planting @Rs.9,000/ha						7.2		1.8				9.000
iii	Arecanut plantation(50 Ha) pre-works @Rs.4,200/ ha					50	2.1					50	2.100
	1st yr. planting@ 7,200/ha						3.6						3.60
	TOTAL OF - A						**19.35**		**3.75**				**23.100**
B	**Non-Arable Land treatment:**												
	Improvement of degraded forest @3600/45 ha			0.70	0.0252	24.30	0.8748	20	0.72			45	1.62
	Total of B:				**0.0252**		**0.8748**		**0.72**				**1.62**

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 @1,00,000/ each -86 Ha			**2**	2.00	2	2.00	1	1.00			5	5.00
ii	Stone masonry protection wall @50,000/each - 75 ha			2	1.00	1	0.5					3	1.50
iii	Dug-out pond @40,000/-each -20ha			4	1.6	5	2					9	3.60
iv	Water harvesting farm pond @1,00,000/- each -84 ha			1	1.00	1	1.00					2	2.00
v	Earthern irrigation channel @Rs. 50 /- Rm. 24 ha					1050.4	0.5252	310	0.155			1360.4	0.68
	TOTAL-C				**5.60**		**6.0252**		**1.16**				**12.78**
	TOTAL OF A+B+C			**7.5%**	**5.625**	**35%**	**26.25**	**7.5%**	**5.625**			**5%**	
D	**Livelihood Activities for landless person: 10%**												
i	Kitchen garden @1,500/unit			5	0.75	11	1.65	24	3.6			40	6.000
ii	Tailoring @Rs.8000/-per unit					5	0.4	5	0.4			10	0.800
iii	Carpentry@Rs.5000/-per unit					4	0.2	10	0.5			14	0.700
	Total of D:			**1%**	**0.75**	**3%**	**2.25**	**6%**	**4.50**			**10%**	**7.50**
E	**Production system and Micro Enterprises (SHG's) - 13%**												
i	Piggery unit @Rs.40,000 /- per unit			1	0.4	2	0.80	2	0.80			5	2.00
ii	Poultry unit @Rs.35,000 /- per unit			1	0.35	1	0.35	1	0.35			3	1.05
iii	Dug-out pond @40,000/-each					6	2.4	10	4			16	6.40
iv	Supply of fingerlings @Rs.1000/-per unit					20	0.2	10	0.1			30	0.30
	Total of E:			**1%**	**0.75**	**5%**	**3.75**	**7%**	**5.25**			**13%**	**9.75**

1	2	3	4	5	6	7	8	9	10	11	12	13	14
F	**Consolidation & Exit Phase:**												
i	Repairing maintanance of CPR's										1.75		1.75
ii	Improving the sustainability of various intervention										1.00		1.00
iii	Documentation of successful experience and preparation of complation report										1.00		1.00
	Total of F:										**3.75**		**3.75**
	Total of II (A+B+C+D+E+F)				7.125		31.25		15.375		3.75		57.500
	Grand Total (I+II)	**6%**	**4.50**	**14%**	**10.50**	**50%**	**37.50**	**25%**	**18.75**	**5%**	**3.75**	**100%**	**75.00**

Details of the types of areas covered under the IWMP Programm

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)	Total area (ha)
												a) Temporary fallow	b) Permanent				Jhum	
1	Meghalaya	West Garo Hills	W.G.H IWMP-II	2010	2010	31/3/2015	500	75	Dabong	186.91	0	434.06	-	49.5	267	142	41.5	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-II	67.50	7.50	NREGS	13.31	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	88.31

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-II	Dabong Micro Watershed	31077686307	Saving	Chairman W.C Secretary W.C Project Leader/ WDT	Dabong Micro Watershed	S.B.I Lower Chandmary	31077686307	Saving	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				
			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 Dept.	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/ KVIC	Umiam/Tura Meghalaya	Director	Central Govt.	Do	NA	-	-	-	-	-
5		MRDS	Shillong Meghalaya	Director	State Govt.	Animal Husbandry	NA	-	-	-	-	-
6		NEHU	Shillong/Tura Meghalaya	Director	Central Govt.	Agri-Horti, Fruit Processing	NA	-	-	-	-	-

- From Column no. 2, total no. of States implementing the programme, from Column no. 3, no. of training institutes, from column No. 9, total no. of category-wise trainings and trainees may be given at the end of the table for the entire country
- # Central govt. Dept./ State govt. Dept./ Autonomous Body/ Research Institutes/ Universities/ Others (pl. specify)

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

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

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

Table 6.2: Capacity Building activities for the year 2010 – 11 as on 31/03/2010 (dd/mm/yyyy)*

1	2	3	4	5	6		7	
Project Stakeholders	**Total no. of persons**	**No. of persons trained so far**	**No. of persons to be trained during current financial year**	**No. of persons trained during current financial year**	**Sources of funding for training**		**Funds utilized (Lakhs)**	
					a) DoLR	**b) Any other (Pl. specify)**	**a) DoLR**	**b) Any other (Pl. specify)**
PIAs	10	NIL	10	NIL	3.75	NIL	2.25	NIL
WDTs	5	NIL	5	NIL				
Ugs	40	NIL	40	NIL				
SHGs	50	NIL	50	NIL				
WCs	11	NIL	11	NIL				
GPs	NIL	NIL	NIL	NIL				
Community	280	NIL	150	NIL				
Others Pl. specify)								
TOTAL	396	0	266	0	3.75	0	2.25	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	Institution and capacity building		3.75		
2	Cost of inventory works		.25		
3	Cost of land Use survey works		.25		
4	Cost of formulation		.15		
		Total	4.4		

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.	Dabong		39868		20158	60026		398		201	599		55		55	110
	Total		**39868**		**20158**	**60026**		**398**		**201**	**599**		**55**		**55**	**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)**
15765	11.0355	85	0.85	65	8.2518	20.1373

* 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-II	Dabong	Reserved forest	FW/MFP/ T	Unspecified		85		85	NIL
			Spring Chamber	Wd	Unspecified		12		12	NIL
			Check dam	Wi	Unspecified		36		36	NIL
			Irrigation Channel	Wi	Unspecified		85		85	NIL
		Total					218		218	

* 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-II	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-II	10 months	12 months	2 months	Unsafe	Potable	Better drinking water supply	

* From column no. 2, total number of States implementing the programme, from column no. 3, total no. of Districts; from column no. 4, category-wise no. of projects, from column no. 5, average no. of months may be given at the end of the table for the entire country.

Table 7.5.3 Water Use efficiency:

1	2	3	4			
District	**Name of the project**	**Name of major crop**	**Water savings in cu.m.**			
			through water saving devices[$]	**through water conserving agronomic practices[#]**	**Any other (pl specify)**	**Total**
W.G.H	WGH IWMP-II	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-II	Paddy		31.6		17		537.2	35.6	6	45	17	1602	102	41.6		45		1872	
		Maize		15		11		165		15		11		165		15		11		165
		Vegetable		5		25		125	4	5	32	25	128	125	9.4	5	32	25	300.8	125
		Total		**51.6**		**53**		**827.2**	**39.6**	**26**	**77**	**53**	**1730**	**392**	**51**	**20**	**77**	**36**	**2172.8**	**290**

* 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-II	Paddy	-	-	-	-	-	-	35.6	6	45	17	1602	102	41.6		45		1872	
				Vegetables	-	-	-	-	-	-	4	5	32	25	128	125	9.4	5	32	25	300.8	125
				Total	-	-	-	-	-	-	39.6	11	77	42	1730	227	51	5	77	25	2172.8	125

* 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-II		nil	nil	nil	nil	nil	nil	nil	nil	nil	nil	nil	nil	nil	nil	nil	nil	nil	Nil
					nil	nil	nil	nil	nil	nil	nil	nil	nil	nil	nil	nil	nil	nil	nil	nil	nil	Nil
					nil	nil	nil	nil	nil	nil	nil	nil	nil	nil	nil	nil	nil	nil	nil	nil	nil	Nil
				Total	nil	nil	nil	nil	nil	nil	nil	nil	nil	nil	nil	nil	nil	nil	nil	nil	nil	Nil

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

Irri. – Irrigated Rf – Rainfed

Table 7.6.4 Increase/ Decrease in area under fodder:

1	2	3	4			5		
			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-II	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-II	5 yrs	Land use survey conducted by the Department			45	45	45

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

Table 7.6.6 Increase/ Decrease in area under horticulture:

1	2	3	4			5		
District	Name of project	Duration of Project	Existing area under horticulture (ha)			Achievement (ha)		
			Source/Name of report	Year of reference	Area already under horticulture	Area under horticulture proposed to be covered through IWMP	Area under horticulture actually covered through IWMP	Change in area under horticulture
W.G.H	W.G.H IWMP-II	5 yrs	Land use survey conducted by the Department		68.99	150	-	218.99

* 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-II	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-II	Cattle	210		16.80	210		16.80	270		21.60	Use for ploughing & local consumption self production earning.
		Piggery	35		2.45	45		3.60	60		4.80	
		Poultry	1221		3.05	1321		3.96	1500		4.50	
		Goatery	107		1.60	107		1.60	130		2.60	
	Total for all projects		**1573**		**23.90**	**1683**		**25.96**	**1960**		**33.50**	
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
West Garo Hills	WGH IWMP-II	Kitchen garden	-	6.00	-	-	6.00	-	-	-	-	-	-	-	-	-	-	-
		Tailoring	-	0.80	-	-	0.80	-	-	-	-	-	-	-	-	-	-	-
		Carpentry	-	0.70	-	-	0.70	-	-	-	-	-	-	-	-	-	-	-
		Total	**-**	**7.50**	**-**	**-**	**7.50**	-	-	-	-	-	-	-	-	-	-	-
								-	-	-	-	-	-	-	-	-	-	-

(Contd.)

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

Table 7.7.3 Details of other livelihoods created for landless people:

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

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-II	Wet terrace	2.40	2.40	NIL	NIL	2.40		10			10	10			10
		Dug-out pond	6.40	6.40	NIL	NIL	6.40		18			18	18			18
		Rubber Plantation	15.00	15.00	NIL	NIL	15.00		40			40	40			40
		Arecanut Plantation	5.70	5.70	NIL	NIL	5.70		30			30	30			30
		Tailoring	0.80	0.80	NIL	NIL	0.80		10			10	10			10
		Carpentry	0.70	0.70	NIL	NIL	0.70		10			10	10			10
		Total	**31.00**	**31.00**	**0**	**0**	**31.00**		**118**			**118**	**118**			**118**

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

Table 7.7.5 Details of other livelihoods created for farmers * (contd.)

9		10	11				12
No. of persons employed indirectly in the activity		**Annual increase in income due to activity (Rs.)**	**Impact of livelihoods programme**				**Any other information (pl. Specify)**
			Migration (No. of beneficiaries)		**Development of backward-forward linkages**		
Total	**Grand Total (8+9)**		**Pre-project**	**Post-project**	**Pre-project**	**Post-project**	
10	20	10,000-12,000	NIL	NIL	NIL	NIL	-
18	36	30,000-35,000	NIL	NIL	NIL	NIL	-
40	80	25,000-30,000	NIL	NIL	NIL	NIL	-
30	60	35,000-40,000	NIL	NIL	NIL	NIL	-

Table 7.8 Marketing related outcomes:

Backward-Forward linkages *

1	2	3	4	5	6
District	**Project**	**Type of Marketing Facility**	**Pre-project (no.)**	**During the project (no.)**	**Post-project (no.)**
WGH	**WGH IWMP-II**	**(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	1	1
		(vi) Water supply	NIL	NIL	NIL
		(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	NIL	NIL	NIL
		(i) Harvesting/threshing machinery	NIL	NIL	NIL
		(ii) Storage (including cold storage)	NIL	NIL	NIL
		(iii) Road network	NIL	NIL	NIL
		(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)	-	-	-

* 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		Very Poor	Good	
		Ground water structures repaired/ rejuvenated		-	-	
		Quality of drinking water		Very Poor	Improved	
		Availability of drinking water		Very Poor	Sufficient	
		Increase in irrigation potential		Very Poor	4 nos	
		Change in cropping/ land use pattern		Very Poor	-	
		Area under agricultural crop		Very Poor	-	
		i Area under single crop		Very Poor	Improved	
		ii Area under double crop		NIL	NIL	
		iii Area under multiple crop		NIL	NIL	
		Net increase in crop production area		-		
		Increase in area under vegetation		-		
		Increase in area under horticulture		-	70 ha	
		Increase in area under fuel & fodder		-	-	
		Increase in milk production		-	-	
		No. of SHGs		3	5	
		Increase in no. of livelihoods		-	6	
		Increase in income		-	NA	
		Migration		-	-	
		No. of school going children		220	250	
		SHG Federations formed		-	-	
		Credit linkage with banks		-		
		Resource use agreements		-	-	
		WDF collection & management		-	1	
		Summary of lessons learnt				

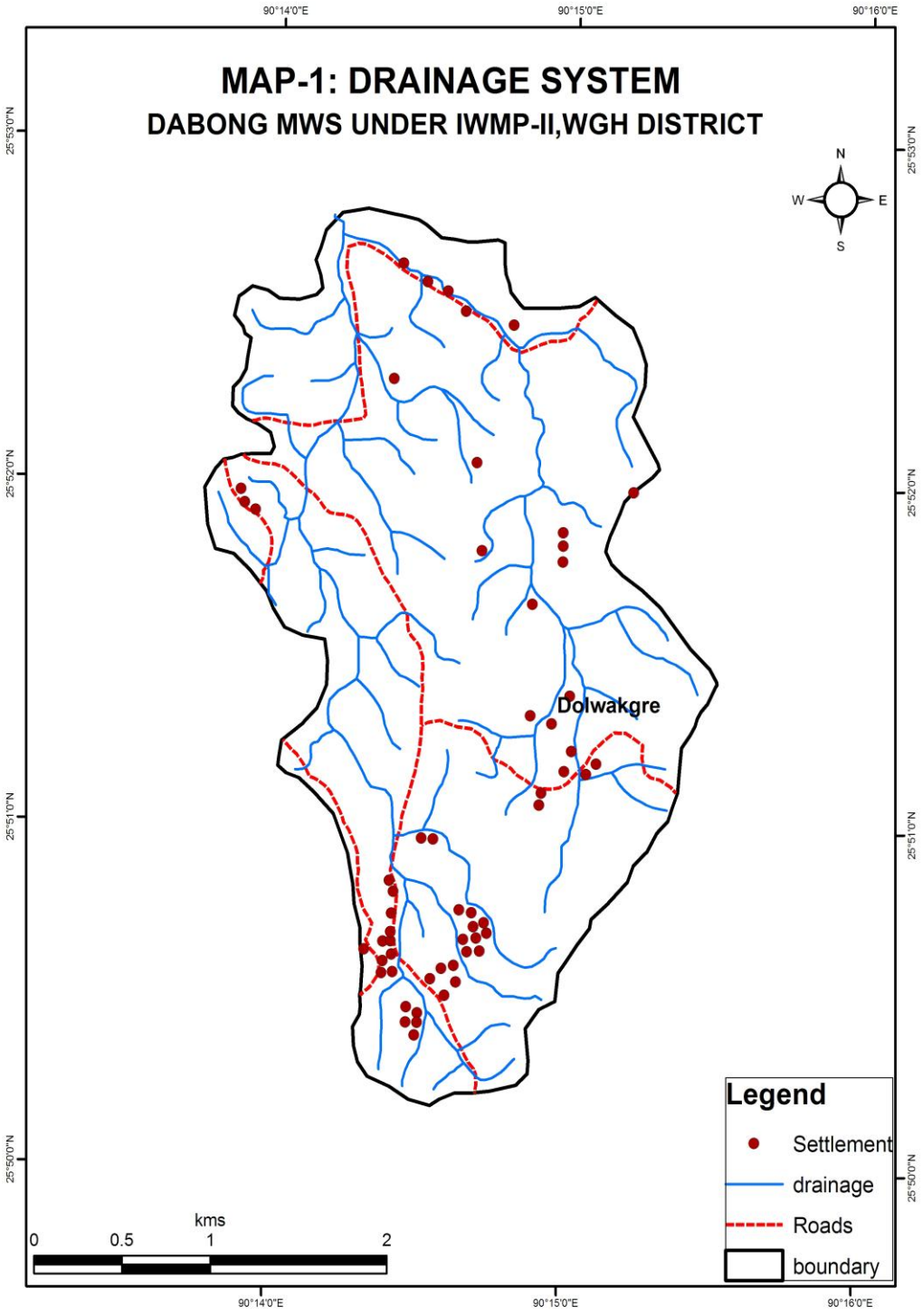
Table 7.10 Cost effectiveness of structures/ activities*

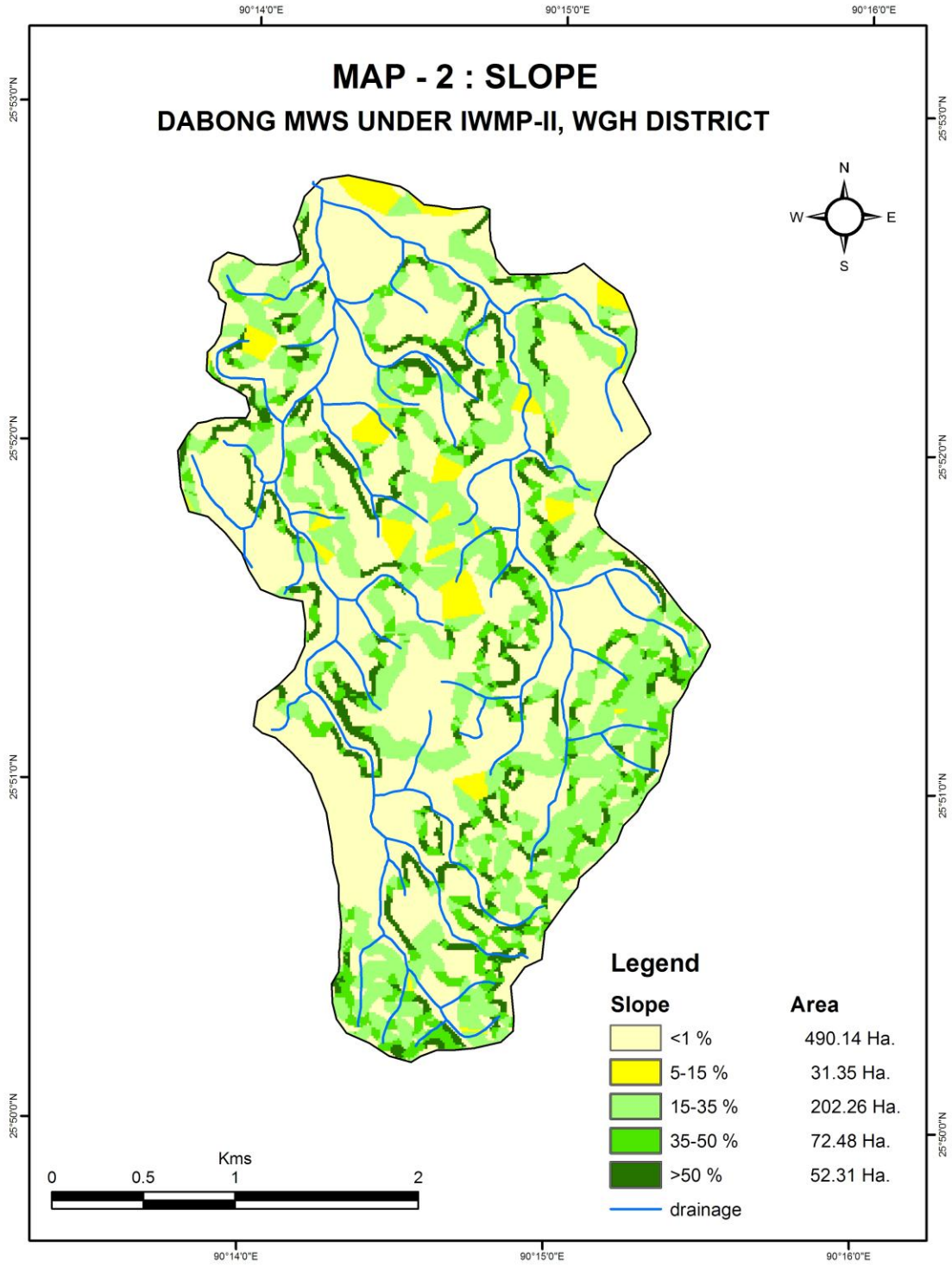
1	2	3	4	5	6	7	8	9	10
District	**Name of project**	**Name of WC**	**Name of structure/ activity**	**Estimated cost (Rs.)**	**Expected quantifiable benefits (Rs.)**	**Expenditure incurred (Rs.)**	**Actual quantifiable benefit (Rs.)**	**Benefit: Cost ratio#**	**IRR**
WGH	IWMP-II	Dabong	As per treatment plan	54.75	90.00	54.75	35.25	1.64	-

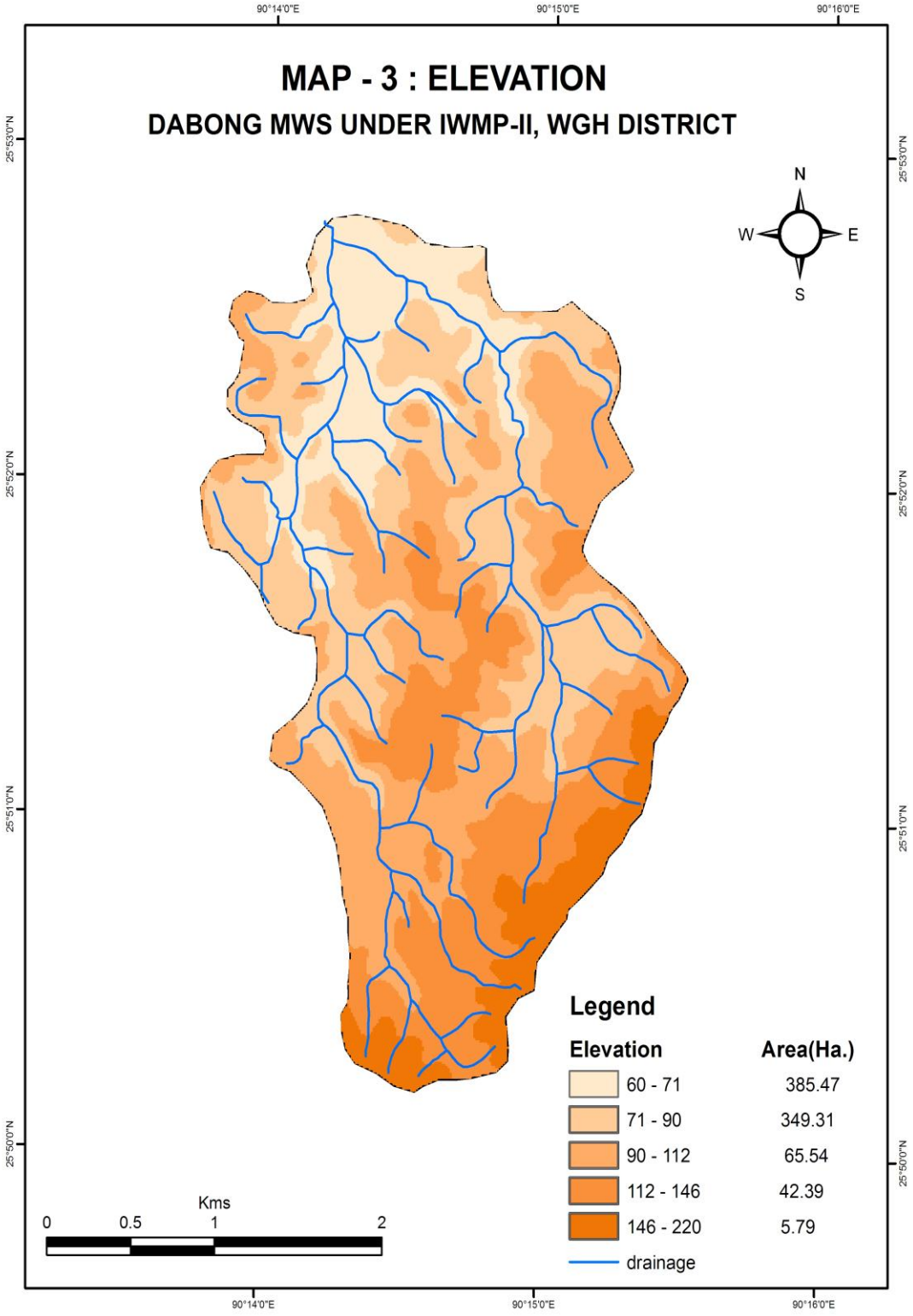
***** from column no. 2, total no. of States implementing the programme, from column no. 3, total no. of Districts; from Column no. 4, no. of projects, from column no. 5, no. of WCs, from column no. 6, no. of structures/ activities, from column no. 7 to 10, category-wise# totals, may be mentioned at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

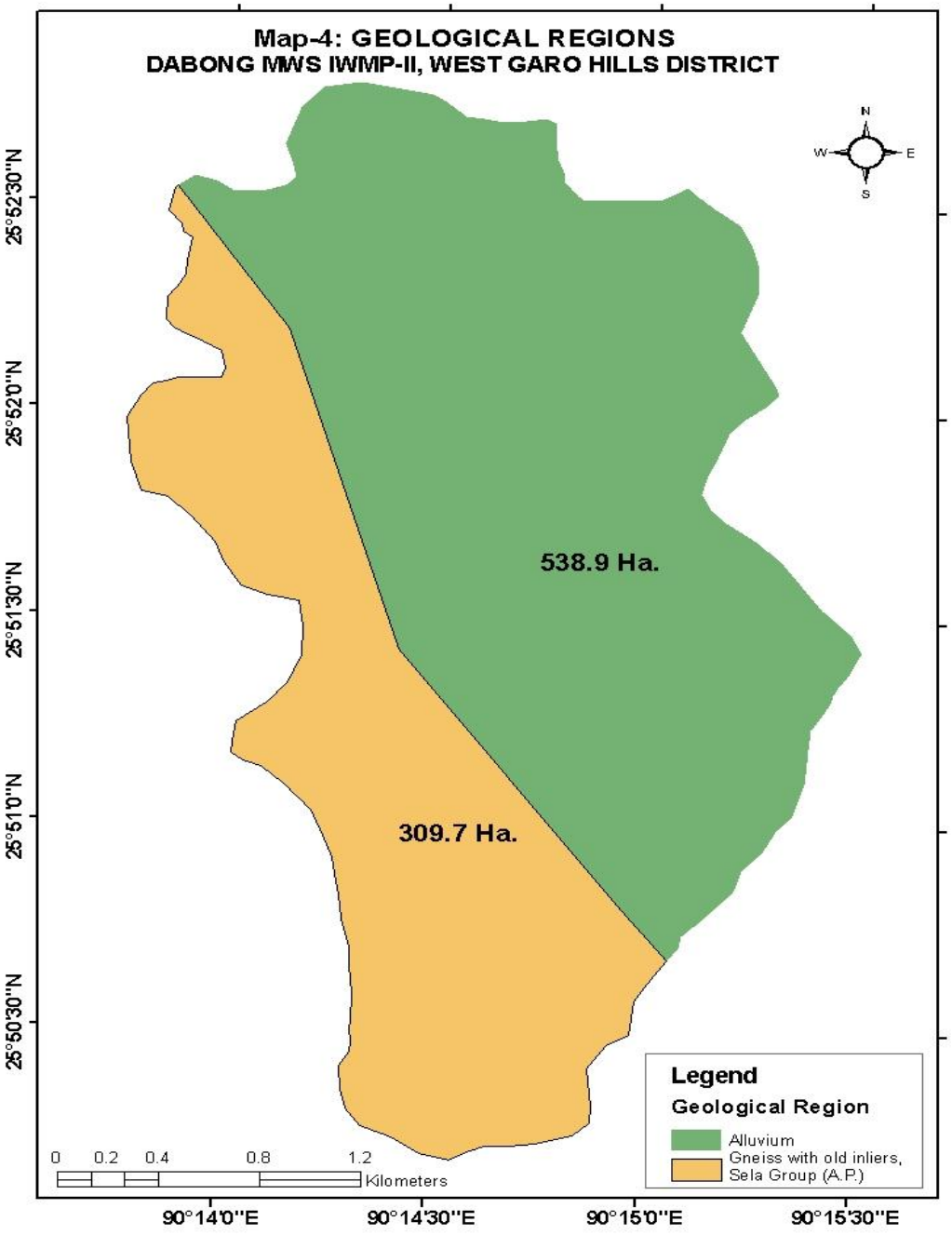
B:C ratio more than 1 – cost effective less than 1 – Not cost effectiv

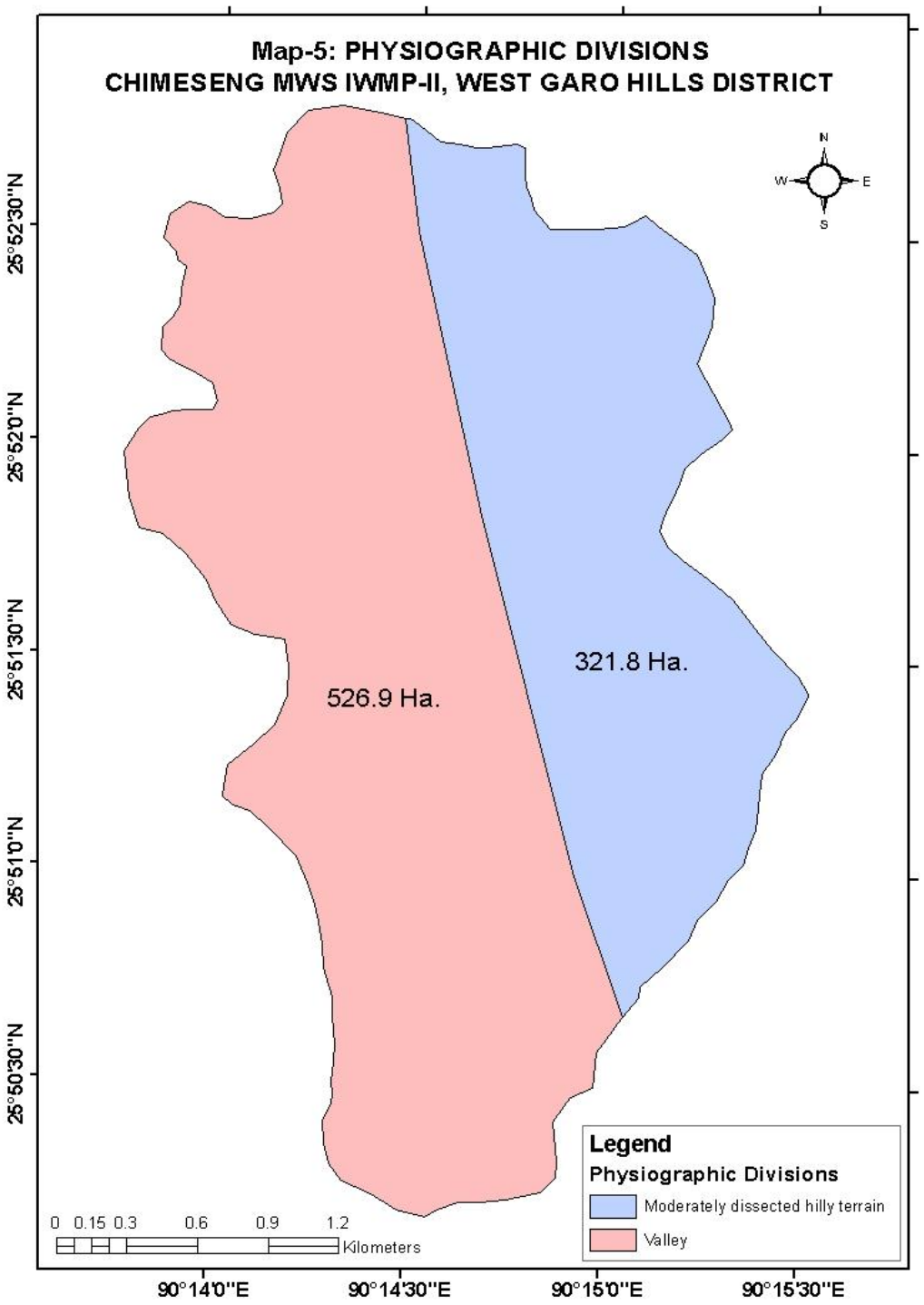
ANNEXTURE I
MAPS

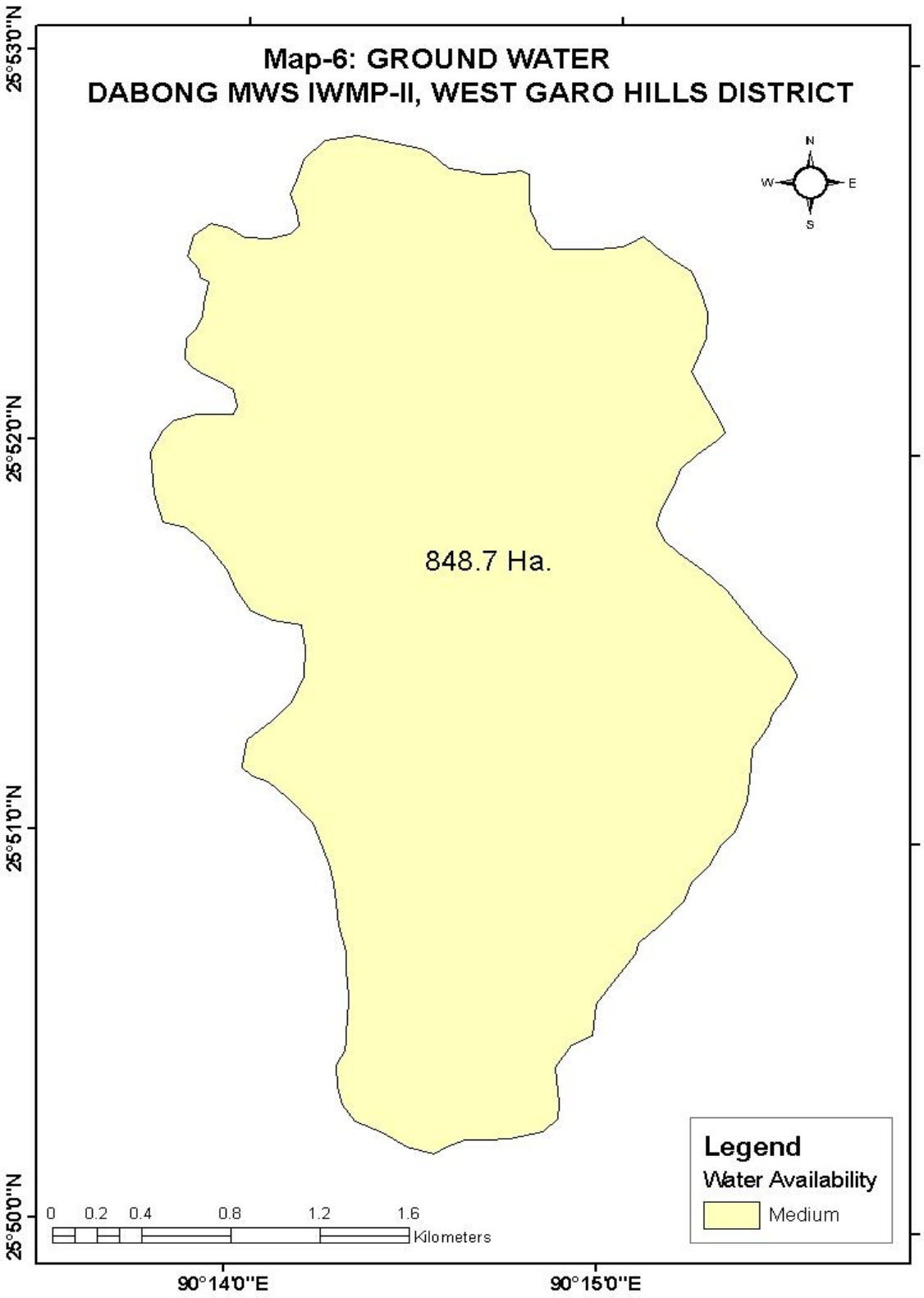

MAP-1: DRAINAGE SYSTEM
DABONG MWS UNDER IWMP-II,WGH DISTRICT
90°14'0"E
90°15'0"E
90°16'0"E
25°53'0"N
25°52'0"N
25°51'0"N
25°50'0"N
N
W
E
S
Dolwakgre
Legend
Settlement
drainage
Roads
boundary
kms
0
0.5
1
2

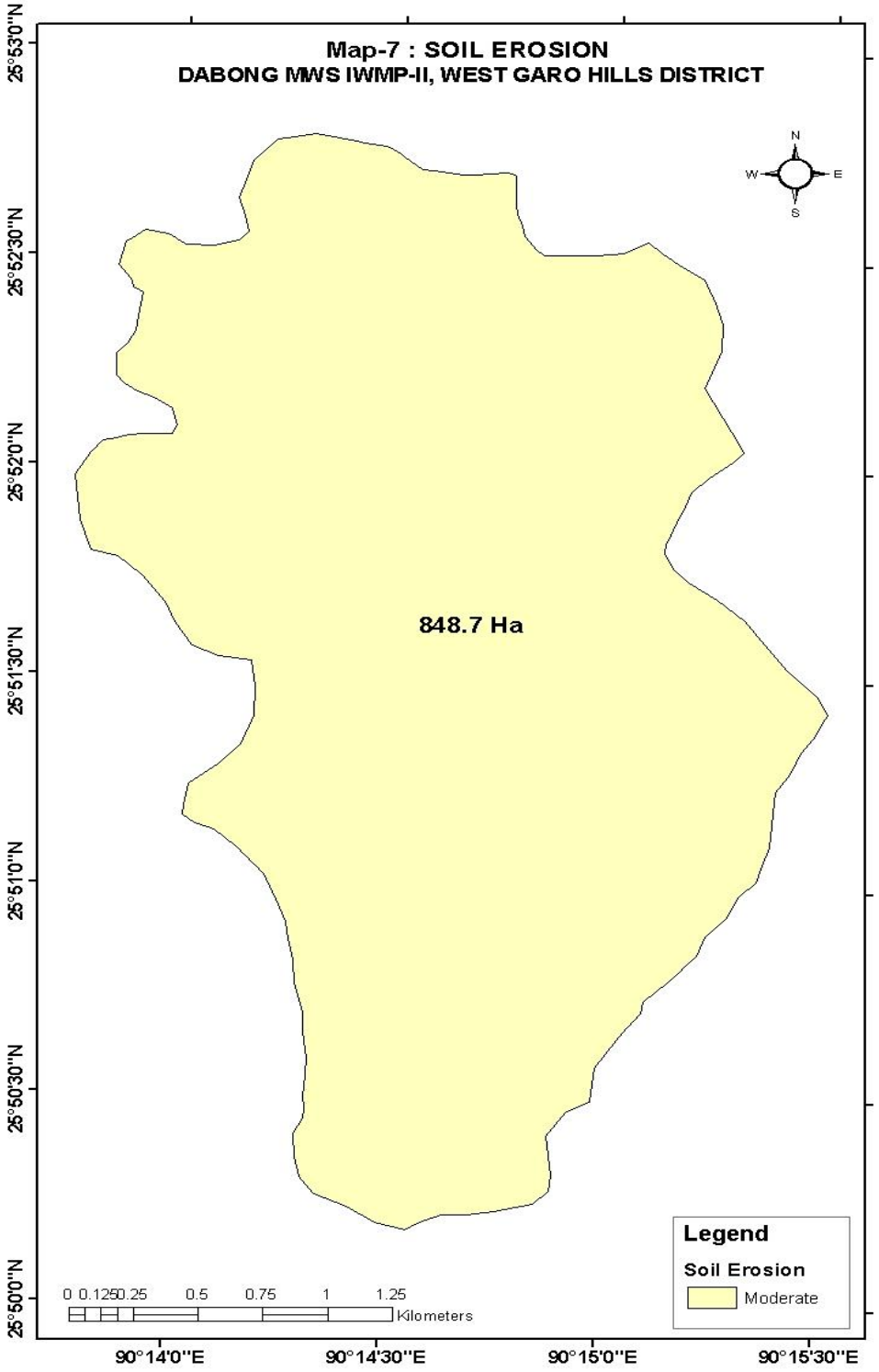

MAP - 2 : SLOPE
DABONG MWS UNDER IWMP-II, WGH DISTRICT
90°14'0"E
90°15'0"E
90°16'0"E
25°53'0"N
25°52'0"N
25°51'0"N
25°50'0"N
N
W
E
S
Legend
Slope
Area
<1 %
490.14 Ha.
5-15 %
31.35 Ha.
15-35 %
202.26 Ha.
35-50 %
72.48 Ha.
>50 %
52.31 Ha.
drainage
Kms
0
0.5
1
2


MAP - 3 : ELEVATION
DABONG MWS UNDER IWMP-II, WGH DISTRICT
90°14'0"E
90°15'0"E
90°16'0"E
25°53'0"N
25°52'0"N
25°51'0"N
25°50'0"N
N
W
E
S
Legend
Elevation
Area(Ha.)
60 - 71
385.47
71 - 90
349.31
90 - 112
65.54
112 - 146
42.39
146 - 220
5.79
drainage
Kms
0
0.5
1
2

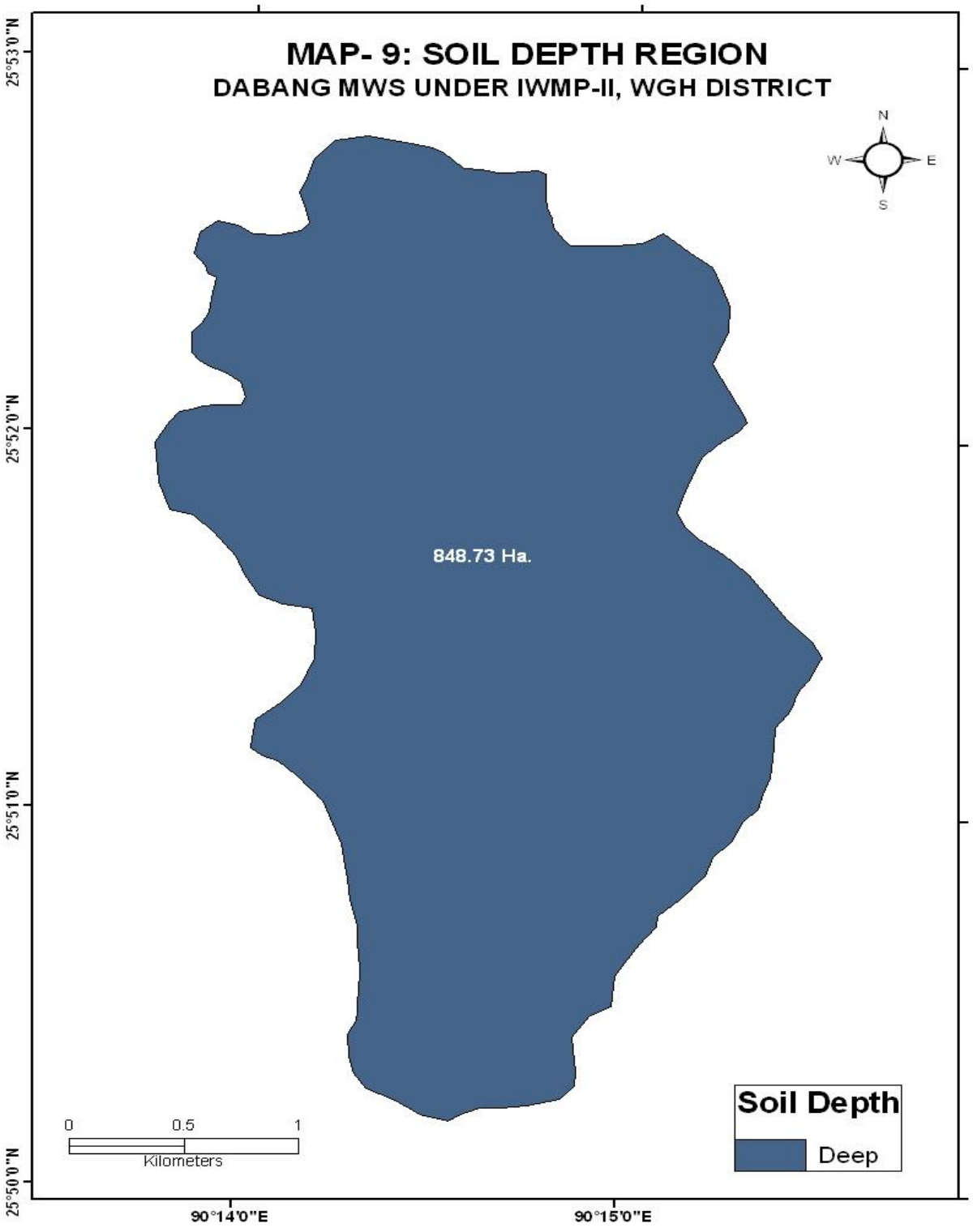

Map-4: GEOLOGICAL REGIONS
DABONG MWS IWMP-II, WEST GARO HILLS DISTRICT
N
W
E
S
538.9 Ha.
309.7 Ha.
25°52'30"N
25°52'0"N
25°51'30"N
25°51'0"N
25°50'30"N
90°14'0"E
90°14'30"E
90°15'0"E
90°15'30"E
0 0.2 0.4 0.8 1.2
Kilometers
Legend
Geological Region
Alluvium
Gneiss with old inliers, Sela Group (A.P.)

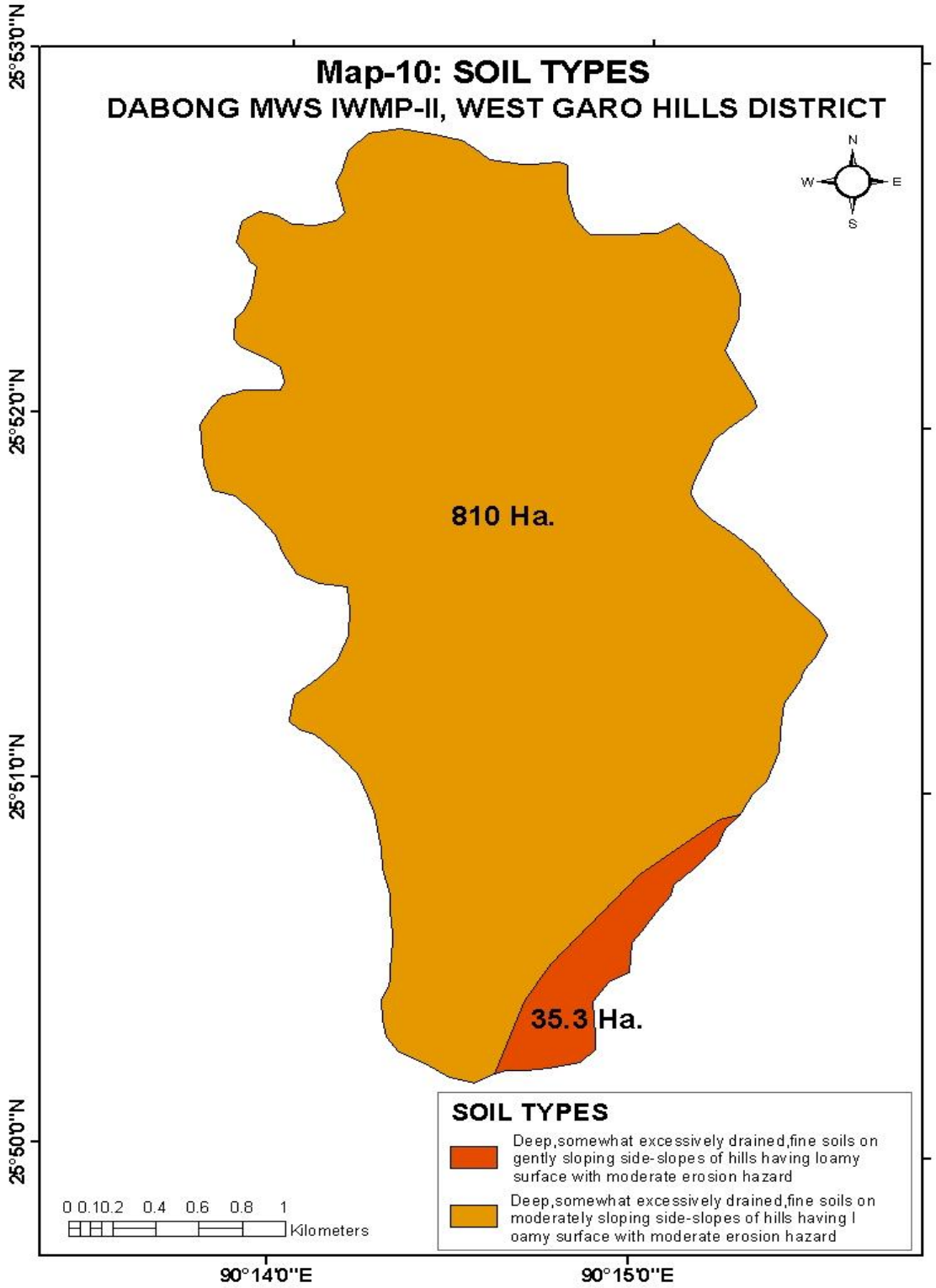

Map-5: PHYSIOGRAPHIC DIVISIONS
CHIMESENG MWS IWMP-II, WEST GARO HILLS DISTRICT
N
W
E
S
321.8 Ha.
526.9 Ha.
25°52'30"N
25°52'0"N
25°51'30"N
25°51'0"N
25°50'30"N
90°14'0"E
90°14'30"E
90°15'0"E
90°15'30"E
0 0.15 0.3 0.6 0.9 1.2
Kilometers
Legend
Physiographic Divisions
Moderately dissected hilly terrain
Valley

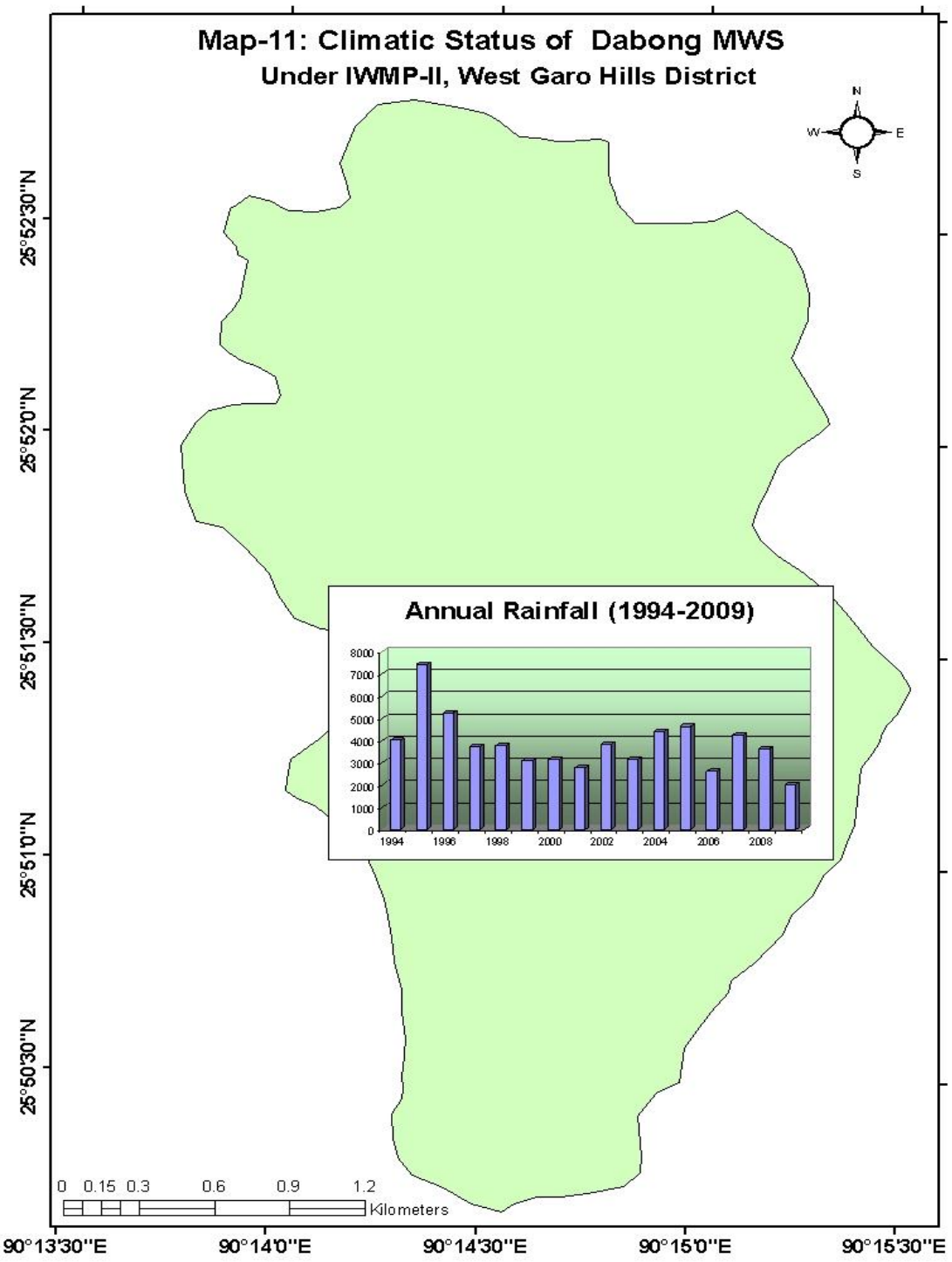

Map-6: GROUND WATER
DABONG MWS IWMP-II, WEST GARO HILLS DISTRICT
N
W
E
S
848.7 Ha.
25°53'0"N
25°52'0"N
25°51'0"N
25°50'0"N
90°14'0"E
90°15'0"E
0 0.2 0.4 0.8 1.2 1.6
Kilometers
Legend
Water Availability
Medium

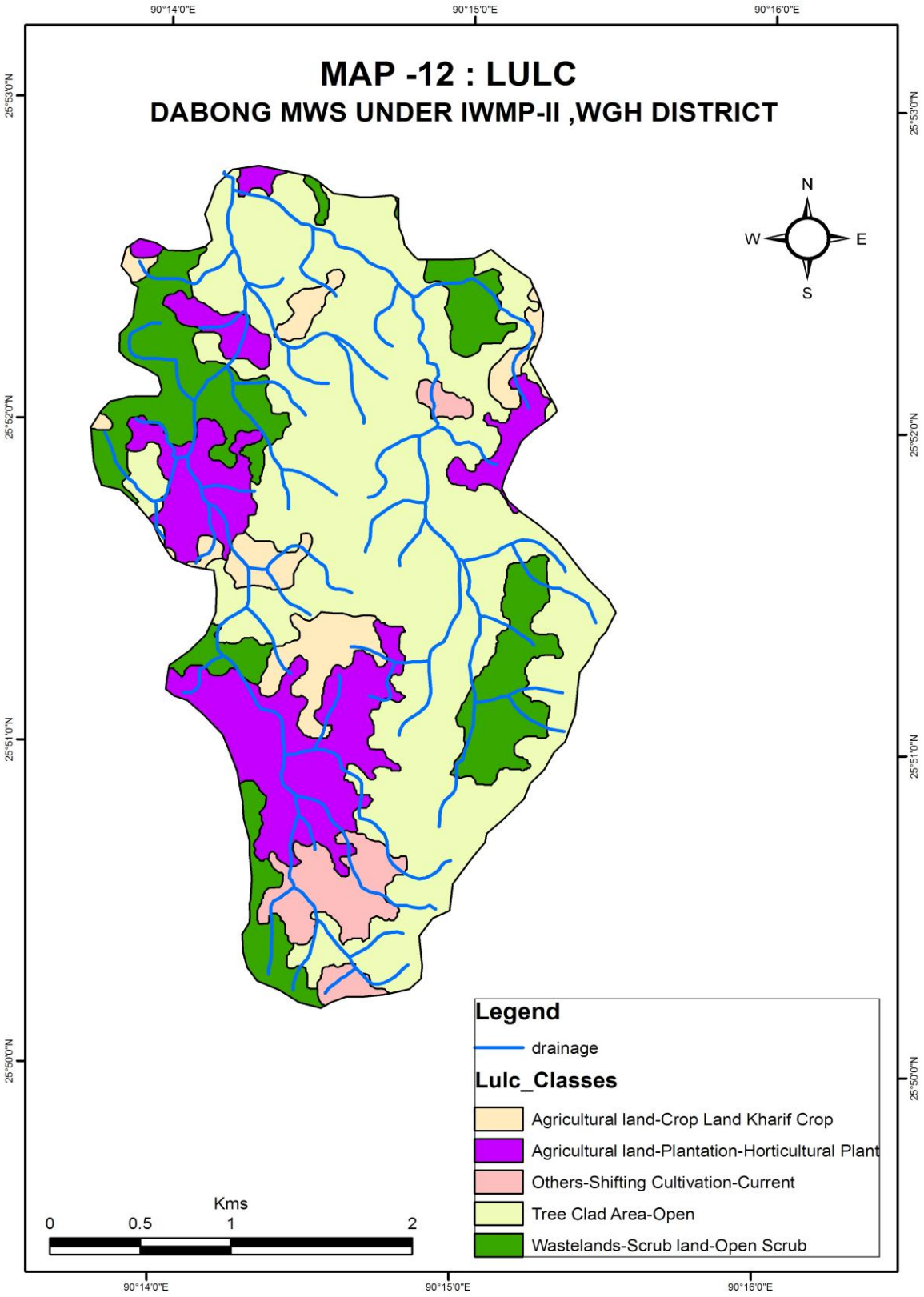

Map-7 : SOIL EROSION
DABONG MWS IWMP-II, WEST GARO HILLS DISTRICT
N
W
E
S
848.7 Ha
25°53'0"N
25°52'30"N
25°52'0"N
25°51'30"N
25°51'0"N
25°50'30"N
25°50'0"N
90°14'0"E
90°14'30"E
90°15'0"E
90°15'30"E
0 0.125 0.25 0.5 0.75 1 1.25
Kilometers
Legend
Soil Erosion
Moderate

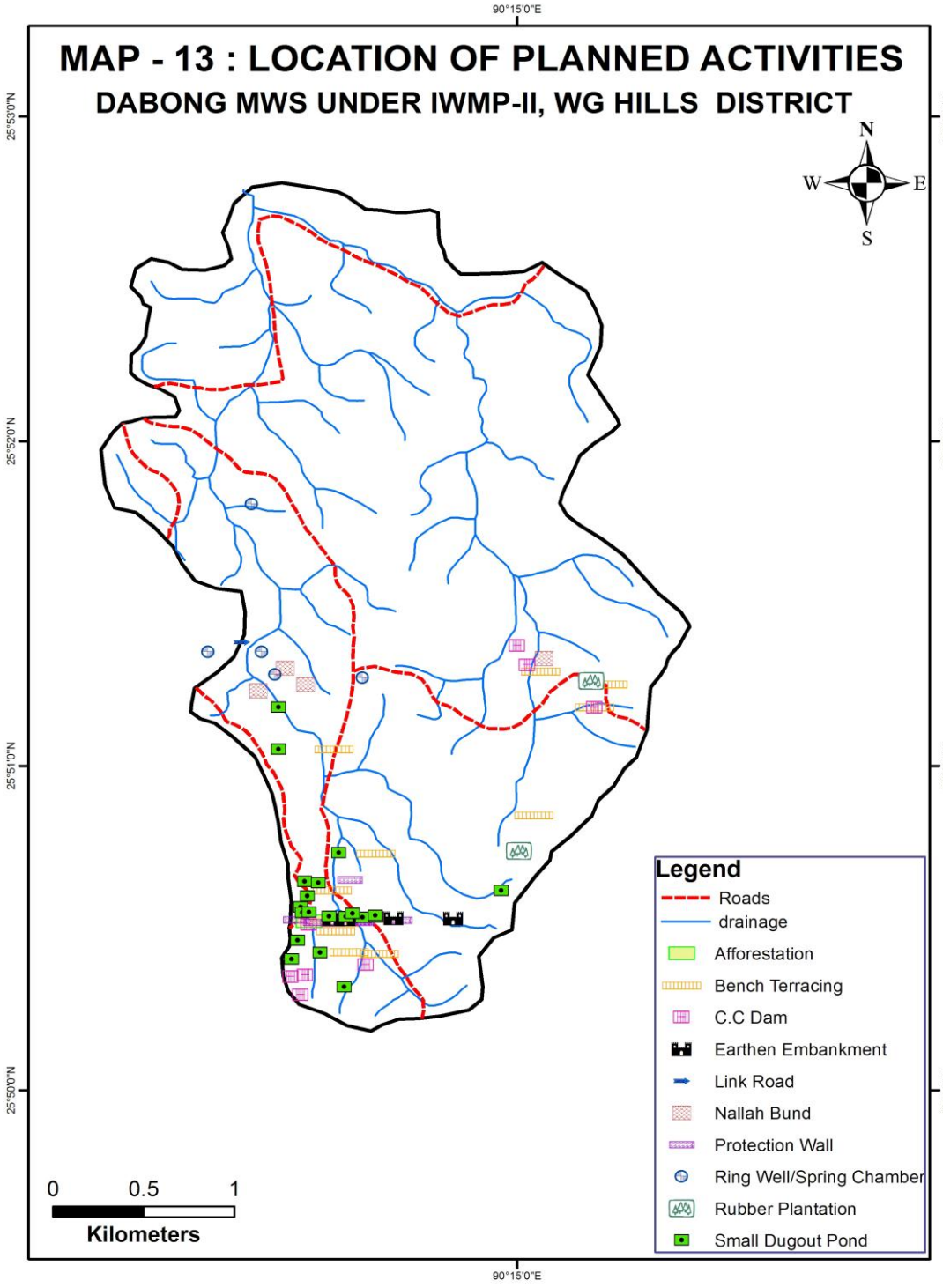

MAP- 8: TEXTURAL REGION
DABANG MWS UNDER IWMP-II, WGH DISTRICT
N
W
E
S
848.73 Ha.
25°53'0"N
25°52'0"N
25°51'0"N
25°50'0"N
90°14'0"E
90°15'0"E
0
0.5
1
Kilometers
Soil Texture
Loamy Clayey


MAP- 9: SOIL DEPTH REGION
DABANG MWS UNDER IWMP-II, WGH DISTRICT
N
W
E
S
848.73 Ha.
25°53'0"N
25°52'0"N
25°51'0"N
25°50'0"N
90°14'0"E
90°15'0"E
0
0.5
1
Kilometers
Soil Depth
Deep


Map-10: SOIL TYPES
DABONG MWS IWMP-II, WEST GARO HILLS DISTRICT
N
W
E
S
810 Ha.
35.3 Ha.
SOIL TYPES
Deep,somewhat excessively drained,fine soils on gently sloping side-slopes of hills having loamy surface with moderate erosion hazard
Deep,somewhat excessively drained,fine soils on moderately sloping side-slopes of hills having l oamy surface with moderate erosion hazard
0 0.10.2 0.4 0.6 0.8 1
Kilometers
25°53'0"N
25°52'0"N
25°51'0"N
25°50'0"N
90°14'0"E
90°15'0"E


Map-11: Climatic Status of Dabong MWS
Under IWMP-II, West Garo Hills District
N
W
E
S
25°52'30"N
25°52'0"N
25°51'30"N
25°51'0"N
25°50'30"N
90°13'30"E
90°14'0"E
90°14'30"E
90°15'0"E
90°15'30"E
Annual Rainfall (1994-2009)
8000
7000
6000
5000
4000
3000
2000
1000
0
1994
1996
1998
2000
2002
2004
2006
2008
0 0.15 0.3 0.6 0.9 1.2
Kilometers


MAP -12 : LULC
DABONG MWS UNDER IWMP-II ,WGH DISTRICT
90°14'0"E
90°15'0"E
90°16'0"E
25°53'0"N
25°52'0"N
25°51'0"N
25°50'0"N
N
W
E
S
Legend
drainage
Lulc_Classes
Agricultural land-Crop Land Kharif Crop
Agricultural land-Plantation-Horticultural Plant
Others-Shifting Cultivation-Current
Tree Clad Area-Open
Wastelands-Scrub land-Open Scrub
Kms
0
0.5
1
2


90°15'0"E
MAP - 13 : LOCATION OF PLANNED ACTIVITIES
DABONG MWS UNDER IWMP-II, WG HILLS DISTRICT
N
W
E
S
25°53'0"N
25°52'0"N
25°51'0"N
25°50'0"N
Legend
Roads
drainage
Afforestation
Bench Terracing
C.C Dam
Earthen Embankment
Link Road
Nallah Bund
Protection Wall
Ring Well/Spring Chamber
Rubber Plantation
Small Dugout Pond
0
0.5
1
Kilometers

ANNEXTURE II
SOCIO ECONOMIC SURVEY DETAILS

SOCIO ECONOMIC SURVEY FOR DABANG WATERSHED PROJECT (I.W.M.P.)

SL No	Name of Head of the Family & Village.	Population			Literacy				Occupation			Present		Livestock				Total Annual		
		Male	F.	Total	Illeterate	L.P.	M.E	H.E	Farmer	Serves	Business	Existing Paddy field	Jhum Area	Arecanut	Rubber	Cow	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 DODINPARA																			
1.	Shri Ringjan Marak	1	2	3	2	1	-	-	2	-	-	0.85	-	.30	-	5	1	-	8	35,000.00
2.	Shri Diman Sangma	1	1	2	1	1	-	-	2	-	-	.30	-	1.00	-	1	-	-	10	24,000.00
3	Shri Sakman Sangma	3	7	10	7	1	2	-	2	-	-	.45	-	1.50	.50	1	1	-	11	45,000.00
4	Shri Lukash Marak	1	2	3	1	-	1	1	2	-	-	-	-	.80	-	1	1	2	9	60,000.00
5	Shri Rongmansing Sangma	2	3	5	-	1	3	1	2	-	-	.60	-	.90	.30	10	2	-	15	70,000.00
6	Shri Jamen Marak	3	2	5	1	2	2	-	2	-	-	.40	-	2.0	.50	3	-	-	7	25,000.00
7	Shri Dingseng Marak	1	1	2	1	1	-	-	2	-	-	.05	-	1.50	-	3	1	2	8	24,000.00
8	Shri Raman Sangma	4	7	11	2	8	1	-	2	-	-	.65	-	2.00	-	4	2	-	7	30,000.00
9	Shri Jonning Marak	4	2	6	1	2	2	1	2	-	-	.35	-	1.30	-	1	1	-	6	18,000.00
10	Shri Cheran Marak	1	2	3	2	1	-	-	2	-	-	.45	-	1.20	-	4	1	-	5	26,000.00
11	Shri Salseng Marak	4	2	6	2	2	1	1	2	-	-	.30	-	1.00	-	4	-	-	10	16,000.00
12	Shri Kritish Sangma	2	6	8	-	2	1	5	2	-	-	.25	-	0.75	-	4	1	-	8	18,000.00
13	Shri Darban Tirim	2	2	4	-	2	-	2	2	-	-	1.75	-	0.60	-	2	-	-	5	25,000.00
14	Shri Rengchan Marak	3	3	6	4	1	1	-	2	-	-	.60	-	0.70	-	5	-	-	10	20,000.00
15	Shri Gosing Sangma	3	3	6	1	1	2	2	2	-	-	.80	-	0.70	-	1	1	-	7	27,000.00
16	Shri Rongman Sangma	1	3	4	1	1	1	1	2	-	-	.25	-	0.80	-	3	1	-	8	24,000.00
17	Shri Ranchi Marak	4	2	6	3	1	2	-	2	-	-	.50	-	1.20	-	3	1	3	9	21,000.00
18	Smt Ranchi Marak	2	2	4	2	2	-	-	2	-	-	.30	-	2.00	-	4	2	-	10	20,000.00
19	Shri Sunil Marak	3	2	5	2	2	1	-	2	-	-	.35	-	2.50	-	-	2	-	6	18,000.00
20	Shri Lippin Marak	2	2	4	2	2	1	-	2	-	-	.60	-	2.00	-	-	1	-	7	20,000.00
21	Shri Shri Ramding Marak	2	1	3	2	1	-	-	2	-	-	.35	-	1.00	-	-	1	-	5	22,000.00
22	Shri Singal Sangma	1	1	2	2	-	-	-	2	-	-	.45	-	1.20	-	2	-	-	6	17,000.00
23	Shri Mallang Marak	1	3	4	2	1	1	-	2			.65	-	1.50	-	2	-	-	5	18,000.00
24	Shri Mingwan Sangma	2	2	4	2	-	2	-	2	-	-	.30	-	1.00	-	2	-	-	5	20,000.00
25	Shri Dingman Marak	1	4	6	2	4	-	-	2	-	-	.30	-	0.85	-	2	-	-	10	17,000.00
26	Shri Dijing Sangma	2	4	6	4	2	-	-	2	-	-	.35	-	0.60	-	2	1	-	6	18,000.00
27	Shri Netseng Sangma	2	3	5	3	2	-	-	2	-	-	-	.10	1.10	-	1	-	-	7	15,000.00
28	Shri Riden Sangma	3	5	8	1	7	-	-	2	-	-	.40	-	1.20	-	3	2	-	6	17,000.00
29	Shri Kilseng Sangma	3	4	7	-	4	2	1	2	-	-	.45	.25	0.90	-	6	1	-	5	20,000.00
30	Shri Janang Marak	3	1	4	2	-	2	-	2	-	-	.60	.20	0.75	-	2	-	3	6	21,000.00

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
31	Smt Kallina Sangma	3	2	5	3	1	-	1	2	-	-	.40	.15	1.20	-	2	1	-	6	22,000.00
32	Shri Dinen Sangma	1	2	3	1	2	-	-	2	-	-	-	.25	1.00	-	2	1	-	10	25,000.00
33	Shri Rangban Marak	3	1	4	2	1	1	-	2	-	-	.80	-	1.15	-	4	-	-	8	24,000.00
34	Shri Halwin Sangma	3	3	6	3	-	2	1	2	-	-	.75	-	2.00	-	4	2	-	9	22,000.00
35	Shri Pidon Sangma	1	7	8	1	5	2	-	3	-	-	-	.20	2.50	-	5	-	2	7	16,000.00
36	Shri Nachon Marak	2	2	4	2	2	-	-	2	-	-	.45	-	.90	-	3	1	-	10	17,000.00
37	Shri Lientar Marak	3	3	6	3	3	-	-	2	-	-	-	-	.50	-	2	1	-	9	15,000.00
38	Shri Moniram Sangma	1	1	2	-	2	-	-	1	-	-	.40	.25	.85	-	4	1	-	10	20,000.00
39	Shri Rikjang Sangma	1	1	2	2	-	-	-	2	-	-	-	-	.60	-	-	1	-	9	12,000.00
40	Shri Chaseng Marak	2	2	4	2	2	-	-	2	-	-	.50	-	.35	-	-	2	-	8	15,000.00
41	Smt Trenilla Sangma	3	2	5	-	-	3	2	2	-	-	-	-	.45	-	2	5	-	10	17,000.00
42	Shri Rongneng Sangma	3	3	6	2	3	-	-	2	-	-	-	-	.60	-	2	1	-	7	14,000.00
43	Shri Diseng Marak	3	2	5	2	2	-	-	2	-	-	-	-	.90	-	3	1	-	6	18,000.00
44	Shri Paseng Sangma	4	4	8	3	2	3	-	3	-	-	-		.90	-	2	1	-	10	10,000.00
45	Shri Watjing Sangma	3	4	7	3	2	2	-	2	-	-	.60	.15	.80	-	4	-	-	8	12,000.00
46	Shri Willenson Marak	1	3	4	1	1	2	-	2	-	-	.20	-	.95	-	2	1	-	5	11,000.00
47	Shri Mingban Marak	3	3	6	4	-	2	-	2	-	-	.30	-	.95	-	1	1	-	6	13,000.00
48	Shri Welden Sangma	2	2	4	2	-	2	-	2	-	-	.10	-	.60	-	2	1	-	6	14,000.00
49	Shri Madison Marak	2	2	4	2	-	1	1	2	-	-	-	-	1.00	-	1	2	-	5	10,000.00
50	Shri Rakseng Marak	1	2	3	1	2	-	-	2	-	-	.25	.20	2.00	-	4	1	-	3	15,000.00
51	Shri Tarwan Marak	3	1	4	2	2	-	-	2	-	-	.80	-	2.50	-	2	-	-	10	11,000.00
52	Smt Bansi Marak	-	2	4	2	-	1	1	2	-	-	.65	-	4.00	-	1	1	-	5	9,000.00
53	Shri Maningston Marak	3	5	8	1	4	3	-	2	-	-	.35	-	0.90	-	5	-	-	6	12.000.00
54	Shri Siren Sangma	3	2	5	1	1	3	-	3	-	-	.25	-	.45	-	4	1	-	11	11,000.00
55	Shri Manisar Marak	2	2	4	2	1	1	-	2	-	-	-	-	.60	-	-	2	-	12	10,000.00
56	Shri Kinnan Marak	1	2	3	2	1	-	-	2	-	-	-	.10	1.50	-	2	1	-	8	8,000.00
57	Shri Ranman Marak	2	2	4	2	2	-	-	2	-	-	-	-	1.10	-	1	1	-	9	7,000.00
58	Shri Engesa Sangma	2	3	5	1	2	1	1	2	-	-	.60	-	1.25	-	6	1	-	8	25,000.00
59	Smi Harina Marak	1	2	3	2	-	1	-	2	-	-	.35	-	1.00	-	7	1	-	10	24,000.00
60	Smt Nengjak Marak	1	2	3	1	-	1	1	2	-	-	.60	-	.90	-	2	1	-	5	17,000.00
61	Shri Jansing Marak	4	4	8	1	3	4	-	2	-	-	.45	-	.80	-	3	1	-	11	18,000.00
62	Smt Jengchea Marak	2	2	4	2	2	-	-	2	-	-	.25	-	.75	-	3	1	-	8	20,000.00
63	Shri Nangsin Sangma	1	1	2	2	-	-	-	2	-	-	-	.15	1.20	-	-	1	-	7	11,000.00
64	Shri Galwang Marak	1	3	4	4	-	-	-	2	-	-	-	.20	1.00	-	2	1	-	6	10,000.00

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
65	Shri Ringwan Marak	2	1	3	2	1	-	-	2	-	-	.25	.40	1.00	-	4	-	-	5	20,000.00
66	Shri Ronjeng Sangma	2	1	3	1	2	-	-	2	-	-	-	-	.30	-	4	2	-	4	9,000.00
67	Shri Silram Marak	1	1	2	-	1	-	1	2	-	-	.50	-	.40	-	4	-	-	10	10,000.00
68	Shri Pronat Marak	5	3	8	2	4	2	-	3	-	-	.30	.30	.90	-	8	-	-	15	10,000.00
69	Shri Robin Sangma	5	3	8	3	3	2	-	2	-	-	.15	-	1.50	-	3	-	-	8	15,000.00
70	Shri Balmit Marak	1	3	4	4	-	-	-	2	-	-	.90	.20	1.20	-	-	1	-	10	14,000.00
71	Shri Jengman Marak	1	1	2	2	-	-	-	2	-	-	.35	.20	.90	-	2	-	-	6	15,000.00
72	Shri Rengjing Marak	1	1	2	2	-	-	-	2	-	-	.45	-	.35	-	3	-	3	10	20,000.00
73	Shri Patta Marak	2	1	3	3	-	-	-	2	-	-	-	-	.50	-	1	1	-	5	11,000.00
74	Shri Sawen Sangma	3	2	5	3	1	1	-	2	-	-	-	.15	-	-	2	2	-	9	7,000.00
65	Smt Bithchilta Marak	1	2	3	2	1	-	-	2	-	-	-	-	1.20	-	2	-	-	4	11,000.00
76	Shri Nengjan Marak	1	1	2	-	2	-	-	2	-	-	.60	-	1.50	-	2	1	-	9	12,000.00
77	Smt Wanre Sangma	-	1	1	-	1	-	-	1	-	-	.15	-	1.10	-	2	-	-	6	10,000.00
78	Shri Sangan Sangma	1	2	3	1	2	-	-	2	-	-	.40	-	1.40	-	-	2	-	5	9,000.00
79	Shri Krinestone Sangma	2	2	4	2	-	1	1	2	-	-	.50	-	.50	-	4	1	-	6	12,000.00
80	Shri Willingston Marak	2	2	4	1	1	2	-	2	-	-	.25	-	.60	-	3	1	-	15	13,000.00
81	Smt Nachi Marak	1	1	2	2	-	-	-	2	-	-	.40	-	.95	-	2	-	-	6	14,000.00
82	Shri Dawan Sangma	2	1	3	8	-	-	-	2	-	-	.25	-	.90	-	2	-	2	5	15,000.00
	TOTAL :-	**171**	**197**	**368**	**154**	**124**	**71**	**25**	**167**	**-**	**-**	**27.60**	**3.45**	**87.6**	**1.3**	**218**	**72**	**17**	**633**	**15,03,000.00**

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: **(Rupees Fifteen thousand) only.**		**15000**

* 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.

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.

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 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.

ESTIMATE FOR CONSTRUCTION OF EARTHEN DISTRIBUTION CHANNEL

AS PER SCHEDULE OF RATES FOR

ROADS, BRIDGES AND E&D WORKS FOR THE YEAR 2007-2008

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

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

Cost per Running metre=(Rupees Fifty)only.

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

4/29.	Construction of embankment with approved material obtained from borrow pits with a lift upto 1.50 m transporting to site, spreading, grading to required slope and compacting to meet requirement with a lead upto 1000 m as per technical specification.								
	Dam	1	x	1.00	x	2.20	x	1.2	**2.64**	m^3
	.@Rs.247/- cum							Rs.	**652.08**	
6/37.	Furnishing and laying of the live sods of 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

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	m^3
	.@Rs.34/- per cum							Rs.	287.64	
3/137	PCC 1:3:6 in foundation(plain cement concrete 1:3:6 nominal mix in foundation etc)									

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.

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**	m³
		1	x	12.30	x	0.80	x	0.70	**6.89**	m³
		1	x	12.30	x	0.55	x	1.50	**10.15**	m³
	L/ channel	2	x	5.00	x	0.15	x	1.25	**1.88**	m³
		2	x	5.00	x	0.10	x	0.80	**0.80**	m³
									20.82	m³
	.@ 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**	m³
	Deduct	1	x	12.30	x	0.55	x	1.50	**10.15**	m³
									104.98	m³
	.@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**	m²
		2	x	5.00	x	0.15			**1.50**	m²
		1	x	5.00	x	0.8			**4.00**	m²
									14.50	m²
	.@ 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	m²
		1	x	12.30	x	2.5			30.75	m²
									55.473	m²
	.@ 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**	m³

.@ Rs.	884/- per cum			3278.27
			Rs.	100387.36
Grand Total		**Say**	**Rs.**	**1,00,000**

(Rupees One lakhs)only.

ESTIMATE FOR THE CONSTRUCTION OF SPRING CHAMBER WITH WATER RESERVOIR. UNDER IWMP.

(Rates as per P.W.D Schedule of rates for building works) 2007 – 2008

1/1.1 Earth work in excavation in foundation trenches, including dressing of sides and ramming of the bottom including stacking etc.

d) Soft laminated rock or medium shale.

For Spring Chamber:

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

1 x 2 x 2.00 x $\frac{0.25 + 0.26}{2}$ x 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/- $m^{\square}$ 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.

ANNEXTURE IV
MoA, SUB - COMMITTEE DET5AILS, ETC

ABSTRACT OF PERSPECTIVE PLAN FOR CONVERGENCE OF NREGs WITH IWMP AT DOLWAKGRE VILLAGE UNDER DABONG MICROWATERSHED

Name of Village: Dolwakgre
Total No. of Job Card Holder: 60 Households

Total Wage Component(@Rs.70/- per s/month) Rs 420000
Amount earmarked for Convergence per annum Rs 30000

(In Rupees)

SL.NO	ACTIVITIES	Units	PROJECT PERIOD												Total			Mandays to 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	2	60000		2	60000		1	30000		1	30000		6	180000	0	2571
2	Bench Terrace(@Rs.15000/- per Ha)	Ha				2	30000		4	60000					6	90000	0	1286
3	Earthen Embankment(@Rs.700/- per Rmt)	Rmt										70	49000		70	49000	0	700
4	Farthen Channel(Rs.50/- per Rmt)	Rmt	240	12000								220	11000		460	23000	0	329
5	CC Irrigation Dam(@ Rs.150000/- per no)	Nos				1	90000	60000							1	90000	60000	1286
6	Nallah Bund(@Rs.150000/- per no)	Nos							1	90000	60000	1	90000	60000	2	180000	120000	2571
7	Rubber Plantation	Ha													60		0	
	i) Planting(@Rs.1800/- per Ha)	Ha	60	108000												108000	0	1543
	ii) Weeding(@Rs.2000/- per Ha)	Ha	60	120000		60	120000		60	120000		60	120000			480000	0	6857
	GRAND TOTAL			300000	0		300000	60000		300000	60000		300000	60000		1200000	180000	17143

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

1 Wage Component: Rs 1200000
2 Material Component Rs 180000
Grand total 1380000

Grand Total(Rupees Thirteen Lakhs eighty thousand) only.

Chairman
Dolwakgre VEC
Dadenggre Block, WGH

Chairman,
Dolwakgre V. E. C
Dadenggre Dev. Block
West Garo Hills (M.)

Secretary
Dolwakgre VEC
Dadenggre Block WGH

Secretary,
Dolwakgre V. E. C
Dadenggre Dev. Block
West Garo Hills (Meg.)

ABSTRACT OF PERSPECTIVE PLAN FOR CONVERGENCE OF NREGs WITH IWMP AT DABANG-DODINPARA VILLAGE

UNDER LOWER DABANG MICRO WATERSHED, WGH-IWMP- IX

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

Total No. of Job Card Holder :68 Nos

Total Wages Component (@Rs. 117/- per m/days= Rs. 7,95,600/-)

Amount earmarked for Convergence per annum = Rs. 7,95,600/-)

(Rupees Seven lakh ninety five thousand six hundred) only

SL.No	ACTIVITY	UNIT	PROJECT PERIOD												Total			Mandays to be Generated
			2011-12			2012-13			2013-14			2014-15						
			PHY	FIN		PHY	FIN		PHY	FIN		PHY	FIN		PHY	FIN		
				Wages	material		Wages	Material		Wages	Material		Wages	Material		Wages	Material	
1	Dug out pond @50,000/- per Number	Nos	7	3,50,000	–	2	1,00,000	–	–	–	–	10	5,00,000	–	19	9,50,000	–	8120
2	Stone masonry Protection wall@ 50,000/- per number	Nos	6	1,80,000	1,20,000	1	30,000	20,000	–	–	–	5	1,50,000	1,00,000	12	3,60,000	2,40,000	3077
3	Water harvesting farm pond@2,50,000/- per number.	Nos	–	–	–	2	3,00,000	2,00,000	2	3,00,000	2,00,000	–	–	–	4	6,00,000	4,00,000	5128
4	C.C. check cum irrigation dam@ 2,50,000/- per number	Nos	1	1,50,000	1,00,000	1	1,50,000	1,00,000	2	3,00,000	2,00,000	–	–	–	4	6,00,000	4.00,000	5128
5	Earthern irrigation channel @ 50/-per Rmt.	Rmt	812	40,600	–	272	13,600	–	272	13,600	–	112	5,600	–	1468	73,400	–	628
6	Wet terrace @ 15,000/- per Ha	Ha	5	75,000	–			–			–	–	–	–	5	75,000	–	641
7	Rubber plantation: i)Planting @18,000/- per Ha	Ha	–	–	–	30	54,000	–	10	18,000	–	–	–	–	40	72,000	–	615
	ii)Weeding@2,000/-per Ha	Ha	–	–	–	30	60,000	–	40	80,000	–	40	80,000	–	40	2,20,000	–	1880
8	Arecanut plantation: i)Planting @2,400/- Ha		–	–	–	20	48,000	–	10	24,000	–	–	–	–	30	72,000	–	615
	ii)Weeding@2,000/-per Ha	Ha	–	–	–	20	40,000	–	30	60,000	–	30	60,000	–	30	1,60,000	–	1368
9																		
	GRAND TOTAL			7,95,600	2,20,000		7,95,600			7,95,600	4,00,000		7,95,600	1,00,000		31,82,400	10,40,000	27,200

Amount allocated for convergence for the period 2011-12 to 2014-15

1 Wages Component: = Rs. 31,82,400.00

2 Material Components: = Rs. 10,40,000.00

Grand Total = Rs. 42,22,400.00

Grand Total (Rupees Forty two lakhs twenty two thousand and four hundred only)

President

Village Dabanggre V.E.C.

West Garo Hills (Megh)

President

Dabang Dodinpara VEC

Tikrikilla Block, WGH

Secretary

Village- Dabanggre V

West Garo Hills (

Secretary

Dabang Dodinpara VEC

TikrikillaBlock, WGH

AGREEMENT FOR CONVERGENCE OF SCHEME

The Village Employment Council (VEC) and the Communities of Dolwakgre Village, Dadenggre Block; West Garo Hills, Meghalaya have no objection to the Convergence of NREGS with Integrated Watershed Management Project (IWMP) at Dolwakgre village under Dabong Micro-Watershed, WGH-IWMP-II 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 (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. Earthen Embankment
4. Earthen Irrigation Channel
5. CC Irrigation Dam
6. Nallah Bund
7. Rubber Plantation

Dtd. 13/01/15

Chairman,
Village Employment Council
Dolwagre
Dadenggre Block, WGH

Secretary
Village Employment Council
Dolwakgre
Dadenggre Block, WGH

Secretary
Dolwakgre V. E. C
Dadenggre Dev. Block
West Garo Hills. (M).

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

The A'king Nokma of Dolwakgre village under Dabong 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

R.J.S
of
Monjan Sangma

NOKMA
Dolwakgri A king Land.
Moja No. III 17
West Garo Hills (Megh.)
Date .....

Countersigned by

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

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