GOVERNMENT OF MEGHALAYA DEPARTMENT

OF

SOIL & WATER CONSERVATION WEST GARO HILLS

DETAILED PROJECT REPORT

JEMBRA NOMIL ASI INTEGRATED WATERSHED

MANAGEMENT PROGRAMME

IWMP – IV 2009 – 2010

GAMBEGRE C&RD BLOCK

WEST GARO HILLS

MEGHALAYA

SUMMARY

Name of the Sate	:	Meghalaya
Name of the District	:	West Garo Hills
Name of the C&RD Block	:	Selsella
Name of the Village	:	Okkapara
Name of the Project	:	IWMP-IV
Total Geographical Area	:	842.80 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

1.1 Project Background:

The Jembra Nomil Asi (IWMP) Project is located in Gambegre C&RD Block, West Garo Hills District of Meghalaya. Consisting of a single micro-watershed, the project area is drained by the Mellim river and its tributaries flowing in a south to west direction. The total area is 842.80 Ha. with 500 Ha to be treated under the Integrated Watershed Management Programme (IWMP).

The Project area is located at a distance of about 45 km from Tura the District Headquarter . There is only one village which is covered under the project.i.e.-

i) Okkapara

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

1.3 Need and Scope for Watershed Development:

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

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

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

1. NREGS

CHAPTER II

BASIC INFORMATION OF THE PROJECT AREA

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BASIC INFORMATION OF THE PROJECT AREA

2.1 Location:

The Project area is located at West Garo Hills. It is situated at a distance of about 45 km from Tura the District Headquarter . The geographical location is between 90˚05’00” to 90˚08’00”E Longitude and25˚25’00”N to 25˚28’00”N Latitude. There is only one village within the Watershed which is as follows –

i) Okkapara

2.2 Physiography:

The physiography of the micro-watershed is highly undulating. The altitude ranges from a minimum of 80 m to a high of 220 m above mean sea level. About 45% (371.85 Ha) falls under 80-108 m elevation. The watershed shows flat gentle slopes with 43% of the geographical area having 15-45% slope.

Table 2.1: Physiographic details

Elevation (metres)	Slope Range (%)	Order of watershed Sub/Micro-watershed	Major streams	Topography
80 – 220 m	1 – 50%	3 Order of Mellim River Micro W/S	i)Jembra Nomil Asi Stream ii)Bokma Stream iii)Songtar Stream iv)Boldak Stream v)Ringbil Stream vi)Chigitcha k Stream	Flat and gentle slopes

2.3 Drainage:

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

2.4 Soil:

Soil in general is moderately deep with clay to loamy clay in surface structure. They are moderately acidic in nature.The soil depth is deep to moderately deep.Due to uniform slopes and presence of many water courses, no drainage problem exists.The water shed area does not have major erosion problem with 520.20 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-IV	Water erosion:				
				a	Sheet	500		
				b	Rill		NA	NA
				c	Gully			
				Sub total		500		
				Wind erosion		Nil	Nil	Nil

2.5 Climate:

The watershed lies under Central Hyper-thermic Agro-climatic plateau. The average annual rainfall is about 3600 mm. Monsoon normally starts in the middle of May and last till middle of October. About 80% of the total annual rainfall is received from June to September. May and June are the hottest month recording average maximum temperature of 32C. December and January accounts for lowest temperature of 10 to 12 C

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

1	2	3	4	5	6	7		8	9	
Sl. No.	Name of State	Name of the Agro-climatic zone	Area (in ha)	Names of the districts	Names of the Projects	Major soil types		Average annual rainfall in mm (preceding 5 years' average)	Major crops	
						a) Type	b) Area (ha)		a) Name	b) Area (ha)
1	Meghalaya	Central Hypert hermic Plateau 50-150 m	500	West Garo Hills	WGH IWMP-IV	Clayey Loamy Clayey	500	3600mm	Paddy	56.90
									Arecanut	50.00
									Cashew	58.20
									Maize	10.00
								Total		**175.10**

2.5 Agriculture:

The Project village has about 56.90 Ha of land under Permanent cultivation system. Crops are cultivated under rain fed condition and thus offer only single cropping. Thus the village hardly produce market surplus of agricultural crops though market is available. The major crop includes paddy with total production of about 682.80 quintals per annum. Maize is cultivated in about 10 Ha of agriculture land with total production of 240 Quintals annually.

Table 2.4: Crop yield and production

Crops	Area (ha)	Average Yield (Qtl) per ha.	Total Production (Qtl.)
Paddy	56.90	682.80	-
Arecanut	50.00	-	-
Cashew	58.20	-	-
Maize	10.00	240	

2.6 Natural Vegetation:

The project area has about 270.50 Ha of degraded forest which comprises 33.33% of the total geographical area. Various biotic factors i.e. deforestation for Commercial use and horticultural activities have destroyed the rich biodiversity and left scrub vegetation in most of the area. The dominant species in the area includes Albizzia spp, Schima wallichii, Emblica officianalis, Bombax cieba and bamboo spp namely, Dendrocalamus and Melocana baccifera.

2.7 Socio-Economic Profile:

The Socio-economic condition of the people is poor. The per capita holding of agricultural land is 3.44 Ha. The entire population depends upon agriculture and horticulture for sustenance. There are about 110 small farmers with average agricultural land holding 3-5 Ha.

Demographic Status: There are total number of 110 households in the village The total population of watershed area is 658.

Infrastructure facilities **:**

2.1.1 *Roads:* The Project area is about 4 km from the main road and is connected by an all weather road.

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

2.1.3 *Electricity :* Only 44% of the village household are electrified.

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

2.1.5 *Water Supply:Dikimpara village has PHE water supply but there is no proper drinking water connectivity at Jebalgre village and thus need to depends on springs available in the area to meet the daily requirement. About 30 households do not have access to drinking water system and depend on natural streams.*

2.1.6 *Market :* There is no any market under this project area

Table 2.5: Infrastructure Status.

1	2	3		4			
Name of District	Name of Project	Parameters:		Status			
WGH	WGH-IWMP-IV	(i)	Whether connected to the main road by an all weather road	YES			
		(ii)	No. of households without electricity	Okkapara(70 Households)			
		(iii)	No. of households without access to drinking water	30			
		(iv)	No. of educational institutions: Primary (P)/ Secondary (S)/ Higher Secondary (HS)/ Vocational institution (VI)	(P)	(S)	(HS)	(VI)
				2	NIL	NIL	NIL
		(v)	Distance of project village from nearest Primary Health Centre	Mellim 5 Km			
		(vi)	Distance of project village from nearest Veterinary Dispensary	Mellim 5 Km			
		(vii)	Distance of project village from nearest Post Office	Mellim 5 Km			
		(viii)	Distance of project village from nearest Banks	Garobadha 25 Km			
		(ix)	Distance of project village from nearest Markets/ mandis	Mellim 5 km			
		(x)	Distance of project village from nearest Agro-Industries	NIL			
		(xi)	Total quantity of surplus milk	NIL			
		(xii)	No. of milk collection centres (e.g. Union (U)/ Society (S)/ Private agency (PA)/ Others (O))	(U)	(S)	(PA)	(O)
				NIL	NIL	NIL	NIL
		(xiii)	No. of villages with access to Aganwadi Centres	1			
		(xiv)	No. of worship place	1			
		(xv)	No. of Community Hall	NIL			
		(xvi)	No. of water tanks/Ringwell/Spring chamber	3			

2.8 Livestock:

There are only 7 kinds of livestock farming being farmed in the area viz. Piggery, Poultry,Cattle and Goatery .

Table 2.6: Existing livestock population

Type of Animal	Population
Piggery	81140
Poultry	707927
Goatery	120311
Cattle	220562
Buffaloes	8223
Horse & Ponies	18
Sheep	6228
Total	1,144,409

2.9 Land ownership:

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

Table 2.7: Land Holding:

1	2	3	4	5	6		
Name of District	Name of the Project	Types of Farmer	No. of households	No. of BPL households	Land holding (ha)		
					Irrigated	Rainfed	Total
West Garo Hills	IWMP-IV	(i) Large(>5 Ha)	-	-	-	-	-
		(ii) Small(1-5 Ha)	-	-	-	-	-
		(iii) Marginal(<1 Ha)	110	-	-	165.1	165.1
		(iv) Landless	-	-	-	-	-
		Sub – Total	110	-	-	165.1	165.1

Table 2.5: Common Property Resources in the Project Area

1	2	3	4				5			
Name of District	Name of the Projects	CPR Particulars	Total Area (ha) Area owned/ In possession of				Area available for treatment (ha)			
			Pvt. Person	Govt. (specify deptt.)	PRI	Any other (Community)	Pvt. Person	Govt. (specify deptt.)	PRI	Any other (Community)
West Garo Hills	WGH IWMP-IX	(i) Wasteland/ degraded land	-	-	-	110.9		-	-	110.9
		(ii) Pastures	-	-	-	-		-	-	
		(iii) Orchards	273.1	-	-	100	30.4	-	-	
		(iv) Village woodlot	-	-	-	-		-	-	
		(v) Forest	-	-	-	270.5		-	-	270.5
		(vi) Village Ponds/ Tanks	-	-	-	-		-	-	
		(vii) Community Buildings	-	-	-	-		-	-	
		(viii) Weekly Markets	-	-	-			-	-	
		(ix) Permanent Markets	-	-	-			-	-	
		(x) Temples/ Places of worship	-	-	-	-		-	-	
		(xi) Jhum Cultivation		-	-	31.3		-	-	31.3
		(xii)Permanent Cultivation	56.9	-	-	-	56.9	-	-	
		(xiii) Habitation including streams	-	-	-	-	-	-	-	
	Total		**330.10**	**-**	**-**	**512.70**	**87.30**	**-**	**-**	**412.70**

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

2.10 Problems of the Area :

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

CHAPTER III

PROJECT PLANNING & INSTITUTION BUILDING

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3.1 Scientific Planning

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

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

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

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

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

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

3.2 Project Implementing Agency:

The PIA is the Soil & Water Conservation Territorial Division, Tura West Garo HillsDistrict of Meghalaya. The Project Manager will be the Divisional Soil and Water Conservation Officer and will be assisted by an Asst. Soil & Water Conservation Officer along with WDT members in which expertise is drawn from the relevant fields for achieving smooth and successful implementation of the project.

1	2	3	
Names of Districts	Names of projects	Details of PIA	
West Garo Hills	W.G.H. IWMP-IV	(i) Type of organization#	Government
		(ii) Name of organization	Soil & Water Conservation (T) Division,
		(iii) Designation & Address	Divisional Officer, Tura Soil & Water Cons.(T) Division, W.G.H, Tura Meghalaya.
		(iv) Telephone	03651-222354
		(v) Fax	03651-222354
		(vi) E-mail	turadivsoil@gmail.com

3.3 Institution Building

i) Watershed Committee (WC)

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

Table 3.2: Details of Watershed Committees (WC):

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Names of the Districts	Names of projects	Names of WCs	Date of Registration as a Society (dd/mm/ yyyy)	Designa tion	M/F	SC	ST	SF	MF	LF	Land-less	UG	SHG	GP	Any other	Educa-tional ualify-cation	Function/s assigned#
W.G.H	W.G.H-IWMP-IV	Jembra Nomil Asi	Under progress	President	M		ST									Class XII	A to I
				Secretary	M		ST									P.U (Arts)	A to I
				Member	5 M		ST									Class III-VII	A to I
				Member	3 F		ST										A to I
				Member													

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

ii) Self Help Group

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

Table 3.3: Details of Self Help Groups (SHGs) in the project areas:

1	2	3				4				5			6		
Names of the Districts	Names of projects	Total no. of registered SHGs				No. of members				No. of SC/ST in each category			No. of BPL in each category		
		With only Men	With only Women	With both	Total	Categories	M	F	Total	M	F	Total	M	F	Total
W.G.H	W.G.H-IWMP-IV	1No	1 Nos	1 Nos	3 Nos	(i) Landless									
						(ii) SF									
						(iii) MF	15	15	30	15	15	30	NA	NA	NA
						(iv) LF									

iii) User Group

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

Table 3.4: User Group Details

1	2	3				4				5			6		
Names of Districts	Names of Projects	Total no. of Ugs				No. of members				No. of SC/ST in each category			No. of BPL in each category		
		Men	Women	Both	Total	Categories	M	F	Total	M	F	Total	M	F	Total
W.G.H	W.G.H. IWMP-IV					(i)Landless									
						(ii) SF									
						(iii) MF									
						(iv) LF									
Total					NIL				NIL			NIL			NIL

CHAPTER IV

PROJECT ACTIVITIES

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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-IV	3.00 Lakh	Construction of Spring Chamber/Ringwell	3.00 Lakh	-	-	-	Increase in availability of drinking water

ii) Other activities of Preparatory Phase:

1	2	3	4	5	6	7	8	9	10	11	12	13
District	Name of Projects	Initiation of village level institution	Capacity building	IEC activities	Baseline survey	Hydro-geological survey	Identifying technical support agencies	Resource agree-ments	Preparation of DPR	Evaluation of DPR	Any other (please specify)	Cost incurred (Rs. In lakh)
W.G.H	W.G.H IWMP-IX	a) Rapport Building b) Community meeting c)Formation of	a) Project concept/roles and responsibility of W.C b) Concept/roles and responsibility of SHG and UG c) Concept/roles and responsibility of of WDT members d) Off-campus exposure trip to research Institutes/Established farms etc.	a)Pamplets b)Banners c)Posters	a)Participatory Rural Appraisals b)Socio Economic Survey	a)GPS survey b)Engi-neering Survey	a) NIRD b)SIRD c)ICAR d)NEHU	a) NOC with village headman for under-taking develop-mental works b) Agreement for convergence of NREGS scheme with IWMP with VEC.	a)Resource inventory works	Done		1.5

4.2 Watershed Works Phase:

4.2.1 Activities related to surface water resources in the project areas:

1	2	3	4	5	6			7										
Sl. No	Name of States	Name of Districts	Name of Projects	Type of structures	Pre Project			Proposed Project										
								Augmentation/ repair of existing structures				Construction of new structures				Total target			
					No	Area irrigated (ha)	Storage capacity	No	Area to be treated (ha)	Storage capacity	Estimated cost (in lakhs)	No/RM	Area to be treated (ha)	Storage capacity (per unit)	Estimated cost (in lakhs)	No	Area to be treated (ha)	Storage capacity (m^3)	Estimated cost
1	Meghalaya	W.G.H	W.G.H IWMP-IV	Dug out Pond	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				C.C Check cum Irrigation Dam	-	-	-	-	-	-	-	1	86	774	1.00	1	86	774	1.00
				Conservation Pond	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Earthen Irrigation Channel	-	-	-	-	-	-	-	1480.rmt	24	-	0.74	1480.rmt	24	-	0.74
				Water harvesting farm pond	-	-	-	-	-	-	-	4	81	1215	4.00	4	81	1215	4.00
			Total										**191**	**1989**	**5.74**		**191**	**1989**	**5.74**

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

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

1	2	3	4	5	6		7								8								9
S. No.	Names of States	Names of Districts	Names of projects	Type of structures	Pre-project		Proposed target								Achievement due to project								Change in irrigated area (Col. 8-6) (ha)
							Augmentation/ repair of existing recharging structures			Construction of new recharging structures			Total target		Augmentation/ repair of existing recharging structures			Construction of new recharging structures			Total achievement		
					No.	Area irrigated (ha)	No.	Area to be irrigated (ha)	Estimated cost	No.	Area to be irrigated (ha)	Estimated cost	Area to be irrigated (ha)	Estimated cost	No.	Area irrigated (ha)	Expenditure incurred	No	Area irrigated (ha)	Expenditure incurred	Area irrigated (ha)	Expenditure incurred	
1	Meghalaya	West Garo Hills	WGH IWMP-IV	(i)Dug out Pond	0	NIL		NIL	0	19	20	7.6	20	7.6	0	NIL	0	0	NIL	0	0	0	0
				Total for the project							**20**	**7.6**											

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-IV	1.	C.C Check-cum irrigation dam	1 Nos	86 Ha	2	1.00	0.05
		2	Stone masonry Protection Wall	2Nos	39 Ha	2	1.00	0.05
		3	Earthen Irrigation Channel	1480 rmt	24 Ha	1	0.74	0.037
			Total		**149 Ha**	**5**	**2.74**	**0.137**

4.2.4 Activities executed by User Groups in the Project Areas:

4									
Major activities of the UGs – Achievements									
Structure/ activity				No. of UGs involved	Expenditure incurred (Rs.)	No. of mandays			Amount of WDF collected (Rs.)
Sl. No.	Type	No.#	Treated Area (ha.)			SC	ST	F	
1.	C.C Check-cum irrigation dam	1 Nos	86 Ha	2	1.00		240	160	0.05
2	Stone masonry Protection Wall	2Nos	39 Ha	2	1.00		240	160	0.05
3	Earthen Irrigation Channel	1480 rmt	24 Ha	1	0.74		444	296	0.037
	Total		**149 Ha**	**5**	**2.74**		**924**	**616**	**0.71**

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-IV	Piggery	7	2.80
		Poultry	5	1.75
	Total		**12**	**4.55**

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		
8 nos				Tailoring	0.72	0.20	1.92					1
	NIL	1.90	NIL	Piggery	2.80	0.40						
				Poultry	1.75	0.50						
				Weaving	0.88	0.50						

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-IV	i)Improvement of degraded forest(40 Ha)	1.44	i)check dam. ii)protection wall. iii)farm pond. iv)dug out pond. v)Channel. vi)Earthen embankment	1.00 1.00 4.00 7.6 0.74 2.10			i)Wet Terrace(40Ha)	6.00	-	-	i)Rubber plantation(100 Ha) ii)Arecanut plantation (30 Ha)	15.00 3.42	i)piggery ii)poultry	2.80 1.75	Supply of fingerlings (40unit)	0.40	-	-	i)Kitchen Garden (36 unit) ii)Tailoring(11 unit) iii)Weaving(6 unit) iv)Carpentry(10 unit)	5.4 0.88 0.72 0.5	
	Total		**1.44**		**16.44**				**6.00**				**18.42**		**4.55**		**0.40**				**7.5**	**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-IV																						
		Dug out Pond		√		√			UG/WC	19 Nos		7.6		7.6	31/3/2012								
		Check Dam		√			√		UG/WC	1 Nos	0.4	0.6		1.00	31/3/2012								
		Wet Terrace			√	√			UG/WC	40 Nos		6.00		6.00	31/3/2012								
		Stone masonry Protection Wall		√			√		UG/WC	2 Nos	0.4	0.6		1.00	31/3/2012								
		Earthen irrigation Channel		√			√		UG/WC	1480 Rmt		0.74		0.20	31/3/2012								
		Water Harvesting farm pond		√		√			UG/WC	4 Nos	1.6	2.4		4.00	31/3/2012								
		Earthen Embankment		√			√		UG/WC	300 rmt		2.10		2.10	31/3/2012								
		Total									**2.40**	**20.04**		**22.44**									

4.2.9 Details of engineering structures in watershed works.

9																			
Outcomes																			
Reduction in run off (cu.m)	Area treated# (ha)	Water level (m)		Production (quintal)		Income (Rs.)		Mandays generated					No. of beneficiaries						
		Pre-project	Post project	Pre-project	Post project	Pre-Project	Post project	SC	ST	Others (Men)	Women	Total	SC	ST	Others	Women	Total		
NA	262	NA	NA	Paddy (15 Qtls)	Paddy (30 Qtls)	20,000	30,000		11448		7632	19080		79		31	110		
				Maize (42 Qlts)	Maize (53 Qlts)	30,000	50,000												

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

1	2	3	4			5			6	7				8			
			Type of treatment			Type of land			Executing agency	Target				Achievement			
District	Project	Name of structure/ work	(i) Ridge area (R)	(ii) Drainage line (D)	(iii) Land dev. (L)	(i) Private	(ii) Community	(iii) Others (pl. specify)	(i) UG (ii)SHG (iii) Others (pl. specify)	Area (ha)	No. of plants	Estimated cost (Rs. in lakh)	Expected month & year of comple-tion (mm/ yyyy)	Area (ha)	No. of plants	Expendi-ture incurred (Rs. in lakh)	Actual month & year of comple-tion (mm/ yyyy)
WGH	IWMP-IV	Improvement of degraded	R		C				WC	40 Ha	1000	1.44	31/3/2013				
		Rubber Plantation	R			P			Farmers	100 Ha	45,000	15.0	31/3/2013				
		Arecanut		D		P			Farmers	30 Ha	36,000	3.42	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					346		230	576		0		0	0	
Rubber Plantation	NA	0	300	0	3000000		3600		2400	6000		0		0	0	
Arecanut	NA	1623	2073	1298400	1658400		821		547	1368		0		0	0	
Total		**1623**	**2373**	**1298400**	**4658400**		**4767**		**3177**	**7944**		**0**		**0**	**0**	

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-IV	Kitchen gardening	√		Individual	Private	5.40	31/3/2012		
		Piggery			SHG	SHG/UG	2.80	31/3/2012		
		Poultry			SHG	SHG/UG	1.75	31/3/2012		
		Tailoring			SHG	SHG/UG	0.88	31/3/2012		
		Carpentry	√				0.5	31/3/2012		
		Fingerlings	√			Private	0.40	31/3/2012		
		Weaving				Private	0.72	31/3/2012		
		Dug out pond	√		Individual	Private	4.80	31/3/2012		
		Total					**17.25**			

(Contd.)* from column no. 2, no. of States; from column no. 3, no. of Districts; from column no. 4, total no. of Projects; from column no. 5, activity-wise totals, from column no. 6, type-wise totals, from coulmn no. 7, agency-wise totals, from column no. 8, total estimated cost, from column no. 9, total expenditure incurred, structure-wise no. of completed works, from column no. 10, item-wise totals, for the entire country may be indicated at the end of the table

@The activities given in this column are merely indicative and States are free to choose any other activity suited to the project area.

4.2.13 Details of allied / other activities:

	8											
	Outcomes											
	Income (Rs.)		Mandays generated					No. of beneficiaries				
Name of activities	Pre-project	Post project	SC	ST	Others	Women	Total	SC	ST	Others	Women	Total
Kitchen gardening	5000-6000	20,000-25,000		1296		864	2142		36	NIL		36
Piggery	1,000-2,000	20,000-30,000		672		448	1120			NIL	20	20
Poultry	2,000-3,000	15,000-20,000		420		280	700			NIL	20	20
Tailoring	NIL	20,000-30,000		211		141	352			NIL	10	10
Carpentry	NIL	10,000-15,000		NIL		NIL	0		10	NIL		10
Fingerlings	NIL	50,000-80,000		NIL		NIL	0		5			5
Weaving	NIL	20,000-30,000		173		115	288				5	5
	Total			**2772**		**1848**	**4620**		**51**		**55**	**106**

14.3 Consolidation and withdrawal phase:

Details of activities in the CPRs in the project areas:

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

CHAPTER V

PROJECT PHASING & BUDGETING

CHAPTER V

PROJECT PHASING & BUDGETING

ACTION PLAN OF JEMBRA NOMIL ASI WATERSHED UNDER IWMP TERRITORIAL DIVISION: TURA

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

Name of C&RD Block:-Gambegre — 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 causeweay/culvert @Rs.175000/-	1Nos	1.75									1Nos	1.75
	Link road @ Rs. 130000/- per km	0.50 km	0.65									0.50 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/-40 Ha			3.5	0.525	30	4.50	6.5	0.975			40	6.00
ii	Rubber plantation (100 ha) pre-work@6,000/ha					90	5.40	10	0.60			100	6.000
	1st yr. planting @Rs.9,000/ha						8.1		0.9				9.000
iii	Arecanut plantation(50 Ha) pre-works @Rs.4,200/ ha					20	0.84	10	0.42			30	1.260
	1st yr. planting@ 7,200/ha						1.44		0.72				2.16
	TOTAL OF – A				**0.525**		**20.28**		**3.62**				**24.420**
B	**Non-Arable Land treatment:**												
	Improvement of degraded forest @3600/40 ha					20	0.72	20	0.72			40	1.44
	Total of B:						**0.72**		**0.72**				**1.44**

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			**1**	1.00							1	1.00
ii	Stone masonry protection wall @50,000/each - 39 ha			1	0.50	1	0.5					2	1.00
iii	Dug-out pond @40,000/-each -20ha			4	1.6	2	0.8	1	0.4			7	2.80
iv	Water harvesting farm pond @1,00,000/- each -81 ha			2	2.00	2	2.00					4	4.00
v	Earthern irrigation channel @Rs. 50 /- Rm. 24 ha					1100	0.55	380	0.19			1480	0.74
Vi	Earthen embankment@Rs.700/-per rmt-40					200	1.40	100	0.70			300	2.10
	TOTAL-C				**5.10**		**5.2500**		**1.29**				**11.64**
	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 @15000/unit			5	0.75	12	1.8	19	2.85			36	5.40
ii	Tailoring @Rs.8000/-per unit					5	0.4	6	0.48			11	0.88
iii	Carpentry@Rs.5000/-per unit					1	0.05	9	0.45			10	0.50
Iv	Weaving@Rs.12000/-per unit							6	0.72			6	0.72
	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	4	1.6			7	2.80
ii	Poultry unit @Rs.35,000 /- per unit			1	0.35	1	0.35	3	1.05			5	1.75
iii	Dug-out pond @40,000/-each					6	2.4	6	2.4			12	4.80
iv	Supply of fingerlings @Rs.1000/-per unit					20	0.2	20	0.2			40	0.40
	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		32.25		15.375		3.75		58.500
	Grand Total (I+II)	**6%**	**4.50**	**14%**	**10.50**	**50%**	**37.50**	**25%**	**18.75**	**5%**	**3.75**	**100%**	**75.00**

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

1	2	3	4	5	6		7	8	9	10				11				
SL No	Name of State	Name of Districts	Names of Projects	Year of sanction	Project duration (dd/mm/yyyy)		Area of the projects	Project cost (Rs. In lakh)	Names of Micro watersheds & Code nos. (as per DoLR's unique codification)	Area (ha) of the projects				Area details (ha) (falling within the projects)				
					From	To				Cultivated rainfed area	Cultivated irrigated area	Uncultivated wasteland		Agri. Land	Forest land (open)	Comm unity land	Others (pl. specify)	Total area (ha)
												a) Temporary fallow	b) Permanent				Horti.	
1	Meghalaya	West Garo Hills	W.G.H IWMP-IV	2009	2009	31/3/2014	500	7.5	Jembra Nomil Asi	87.3	0	301.8	110.9	87.3	270.5	142.2	Nil	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-IV	67.50	7.50	NREGS	36.04	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	111.04

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

1	2	3	4	5				6				
Sl. No.	Names of States	Name of Districts	Names of Projects	Distt. Agency's Project Account details				Watershed Committee (WC) account details:				
				Name of the Bank and Branch where project account has been opened	Account Number (to be obtained confiden-tially)	Account type (Savings/ Current/ Others)	Name & Designation of authorized persons who operate the account.	Name of Watershed Committee	Name of the Bank and Branch where project account has been opened	Account number (to be obtained confiden-tially	Account type (Savings/ current others)	Name & Designation of authorized persons who operate the account.
1	Megha laya	W.G.H	W.G.H IWMP-IV	-	-	-	-	Jembra Nomil Asi Micro Watershed	S.B.I Chandmary	31048482068	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				
WGH	IWMP-IV										
			NIL								

***** from Column no. 2, total no. of States implementing the programme, from Column no. 3, total no. of Districts; from Column no. 4, total no. of projects under PPP; from Column no. 5, total no. of private companies/ agencies, from column no. 7, total amounts may be mentioned at the end of the table for the entire country.

CHAPTER VI
CAPACITY BUILDING

CHAPTER VI
CAPACITY BUILDING

Capacity Building is a process to systematically upgrade the skill of individuals or groups for achieving a specific target. Capacity building in the project has been planned for all the stake holders involved i.e. State Level, District Level, Project Level and Village Level. The relevant details pertaining to Capacity Building has been shown below.

Table 6.1: List of approved Training Institutes for Capacity Building:

1	2	3	4	5	6	7	8	9				
S. No	State	Name of the Training Institute	Full Address with contact no., website & e-mail	Name & Designation of the Head of Institute	Type of Institute[#]	Area(s) of specialization[$]	Accre-ditation details	Performance				
								Refer-ence Year	No. of trainings assigned	No. of trainees to be trained	No. of trainings conducted	No. of trainees trained
1	Meghalaya	NIRD (NER)	Guwahati	Director	Central Govt.	Remote Sensing, Rural Devt.	NA	-	-	-	-	-
2		SIRD	Nongsder	Director	State Govt.	Capacity Building	NA	-	-	-	-	-
3		RRTC	Umran Meghalaya	Director	Don-Bosco	Agri-Horti, Animal Husbandry, Entrepreneurship	NA	-	-	-	-	-
4		ICAR/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 2009 – 10 as on 31/03/2009 (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	4	NIL	4	NIL				
UGs	40	NIL	40	NIL				
SHGs	50	NIL	50	NIL				
WCs	10	NIL	10	NIL				
GPs	NIL	NIL	NIL	NIL				
Community		NIL		NIL				
Others Pl. specify)								
TOTAL	114	0	114	0	3.75	0	2.25	0

Table 6.3: Information, Education & Communication (IEC) activities for the year 2009-10 as on 31/03/09 (dd/mm/yyy)*

	1	2	3	4	5
	Activity	**Executing agency**	**Estimated expenditure (Rs.)**	**Expenditure incurred (Rs.)**	**Outcome (may quantity, wherever possible)**
1.	Awareness	S&WC (T) Division	0.25	-	-
2.	Exposure Visits	S&WC (T) Division	0.25	-	-
3.	Capacity Building	S&WC (T) Division	0.15	-	-
		Total	0.65	-	-

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.	Okkapara		20868	-	14088	34956	-	195	-	128	323	-	25	-	20	45
				-			-		-			-		-		

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)**
14088	9.8616	160	1.6	40	6.1	17.5616

* 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-IV	Okkapara	Reserved forest	FW/MFP/ T	Unspecified		110		110	NIL
			Spring Chamber	Wd	Unspecified		35		35	NIL
			Check dam	Wi	Unspecified		20		20	NIL
			Irrigation Channel	Wi	Unspecified		35		35	NIL

* From column no. 2, no. of States; from column no. 3, no. of Districts; from column no. 4, no. of projects; from column no. 5, no. of villages; from column nos. 9 & 10, particular-wise totals for the entire country may be given at the end of the table.
@ In column no. 6, the categories given in table no. M(SP) 10, column 5 may be filled as required.
# In column no. 7, only the letter assigned to each type, as given below, needs to be typed.

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

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

Table 7.5 Water related outcomes:

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

1	2	3	4	5	6	7	8
Names of Districts	**Names of Projects**	**Sources**	**Pre-Project level**	**Mid-term project level**	**Post-Project level**	**Increase/decrease (Col. 8 – Col. 6)**	**Remarks**
Meghalaya	W.G.H IWMP-IV	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-IV	10 months	12 months	2 months	Unsafe	Potable	Improved	Better drinking water supply

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

Table 7.5.3 Water Use efficiency:

1	2	3	4			
District	**Name of the project**	**Name of major crop**	**Water savings in cum.**			
			through water saving devices[$]	**through water conserving agronomic practices[#]**	**Any other (pl specify)**	**Total**
W.G.H	WGH IWMP-IV	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-IV	Paddy		56.9		12		682.8	76.9	0	15	15	1153.5	0	96.9	0	15	15	1453.5	0
		Maize		10		24		240	0	10	0	24	0	240	0	10	0	24	0	240
		Vegetable		5		30		150	6	5	36	30	216	150	6	5	36	30	216	150
		Total		**71.9**		**66**		**1072.8**	**82.9**	**15**	**51**	**69**	**1369.5**	**390**	**102.9**	**15**	**51**	**69**	**1669.5**	**390**

* 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 the4e 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-IV	Paddy	-	-	-	-	-	-	76.9	-	15	-	1153.5	-	96.9	-	15	-	1453.5	-
				Vegetables	-	-	-	-	-	-	6	-	36	-	216	-	6	-	36	-	216	-
				Total	**-**	**-**	**-**	**-**	**-**	**-**	**82.9**	**-**	**51**	**-**	**1369.5**	**-**	**102.9**	**-**	**51**	**-**	**1669.5**	

* 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-IV		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-IV	5 yrs	NA	NA	NA	NIL	NIL	NIL

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

Table 7.6.5 Increase/ Decrease in Forest/vegetation cover:

1	2	3	4			5		
District	Name of project	Duration of Project	Existing area tree cover (ha)			Achievement (ha)		
			Source/Name of report	Year of reference	Area already under forest/vegetative cover	Forest/vegetative cover area proposed to be covered under IWMP	Forest/vegetative cover area actually covered under IWMP	Change in forest/vegetative cover area
W.G.H	W.G.H IWMP-IV	5 yrs	Land use survey conducted by the Department	2009	270.50	310.50	310.50	40

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

Table 7.6.6 Increase/ Decrease in area under horticulture:

1	2	3	4			5		
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-IV	5 yrs	Land use survey conducted by the Department	2009	373.20	503.20	503.20	130

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

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

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

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

Table 7.7 Livelihood related outcomes:

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

1	2	3	4			5			6			7
Names of the Districts	**Name of Projects**	**Type of Animal**	**Pre-project**			**Mid-term**			**Post-project**			**Remarks**
			No.	**Yield**	**Income**	**No.**	**Yield**	**Income**	**No.**	**Yield**	**Income**	
West Garo Hills	W.G.H IWMP-IV	Cattle	300		24	300		24	-	-	-	Use for ploughing & local consumption self production earning.
		Piggery	40		2.8	45		3.60	60		4.80	
		Poultry	1221		3.05	1321		3.96	1500		4.50	
		Goatery	107		1.60	107		1.60	-	-	-	
	Total for all projects		**1668**		**31.45**	**1773**		**33.16**	**1560**	**-**	**9.30**	

* From column no. 2, total number of States; from column no. 3, total no. of Districts; from column no. 4, total no. of projects, from column nos. 5 to 8, the total nos. of animals and the average yield and incomes, category-wise, for the entire country may be given at the end of the Table.

Table 7.7.2 Details of other livelihoods created for landless people:

1	2	3	4	5				6	7					8					
District	Project	Name of activity	Fund required for the activity (Rs.)	Sources of funding (Rs.)				Actual Expenditure incurred on activity (Rs.)	No. of beneficiaries trained					No. of beneficiaries taking up activity				
				Project Fund	Benefi-ciary	Others (pl. specify)	Total		SC	ST	Others	Women	Total	SC	ST	Others	Women	Total
		Tailoring	-	0.88	-	-	0.88	-	-	-	-	20	20	-	-	-	20	20
		Weaving	-	0.72	-	-	0.72	-	-	-	-	20	20	-	-	-	20	20
		Carpentry	-	0.5	-	-	0.5	-	-	10	-	-	10	-	10	-	-	10

(Contd.)

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

Table 7.7.3 Details of other livelihoods created for landless people:

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

Table 7.7.4 Details of other livelihoods created for farmers:

1	2	3	4	5				6	7				8			
District	Project	Name of activity	Fund required for the activity (Rs.) in lakhs	Sources of funding (Rs.) in Lakhs				Actual Expenditure incurred on activity (Rs.)	No. of farmers trained				No. of farmers taking up activity			
				Project Fund	Benefi -ciary	Others (pl. specify)	Total		SF	MF	LF	Total	SF	MF	LF	Total
West Garo Hills	WGH IWMP-IV															
					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 activities; from column no. 6, total funds required for the activity, from column no. 7 to 12, category-wise totals, from column no. 13, category-wise totals, for the entire country may be given at the end of the Table.

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

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

Table 7.8 Marketing related outcomes:

Backward-Forward linkages *

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

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

Table 7.9 Abstract of outcomes:

1	2	3	4	5	6	7
Sl. No.	**State**	**Item**	**Unit**	**Pre-project Status**	**Post-project Status**	**Remarks**
	Meghalaya	Status of water table		Lack of management	Improved	
		Ground water structures repaired/ rejuvenated	Nil	Nil	Nil	
		Quality of drinking water	5 nos	Unsafe	Better quality	
		Availability of drinking water		10 months in a year	12 months availability	
		Increase in irrigation potential	11 nos	100% rainfed		
		Change in cropping/ land use pattern		Single croping	Double cropping	
		Area under agricultural crop				
		i Area under single crop	Ha	56.90	Nil	
		ii Area under double crop	Ha	Nil	96.90	
		iii Area under multiple crop				
		Net increase in crop production area		56.90	96.90	24% increase in cropping area
		Increase in area under vegetation	Ha	270.50	370.50	23% increase in vegetative cover
		Increase in area under horticulture	Ha	373.2	503.2	120% increase in horticulture and cash crop plantation
		Increase in area under fuel & fodder	Ha	270.50	370.50	23% increase in vegetative cover
		Increase in milk production		NA	NA	
		No. of SHGs	No.	1	8	
		Increase in no. of livelihoods	Activities	a) Agriculture b) Horticulture	a) Agriculture b) Horticulture c) Farm Pond d) Rubber Plantation e) Piggery Poultry	
		Increase in income	Rs.	200000-300000	500000-600000	
		Migration	Nos	Nil	Nil	
		No. of school going children	Nos.			
		SHG Federations formed	Nos	Nil	1	
		Credit linkage with banks	Nos	Nil	8	
		Resource use agreements	Nos			

		WDF collection & management		None	a) Total WDF to be collected=Rs.5% b) WC shall formulate guidelines for utilization of WDF	
		Summary of lessons learnt	Nil			

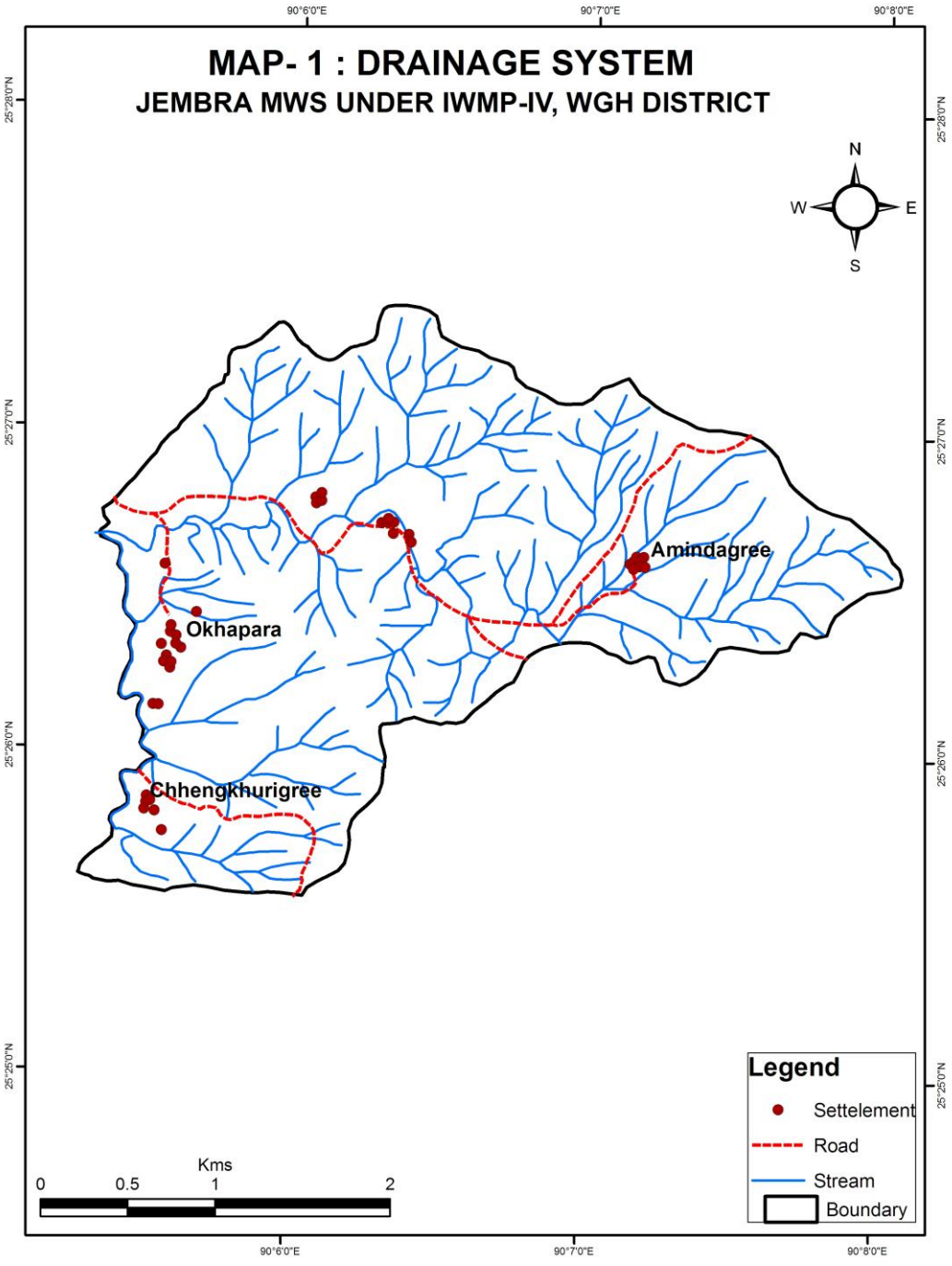
Table 7.10 Cost effectiveness of structures/ activities*

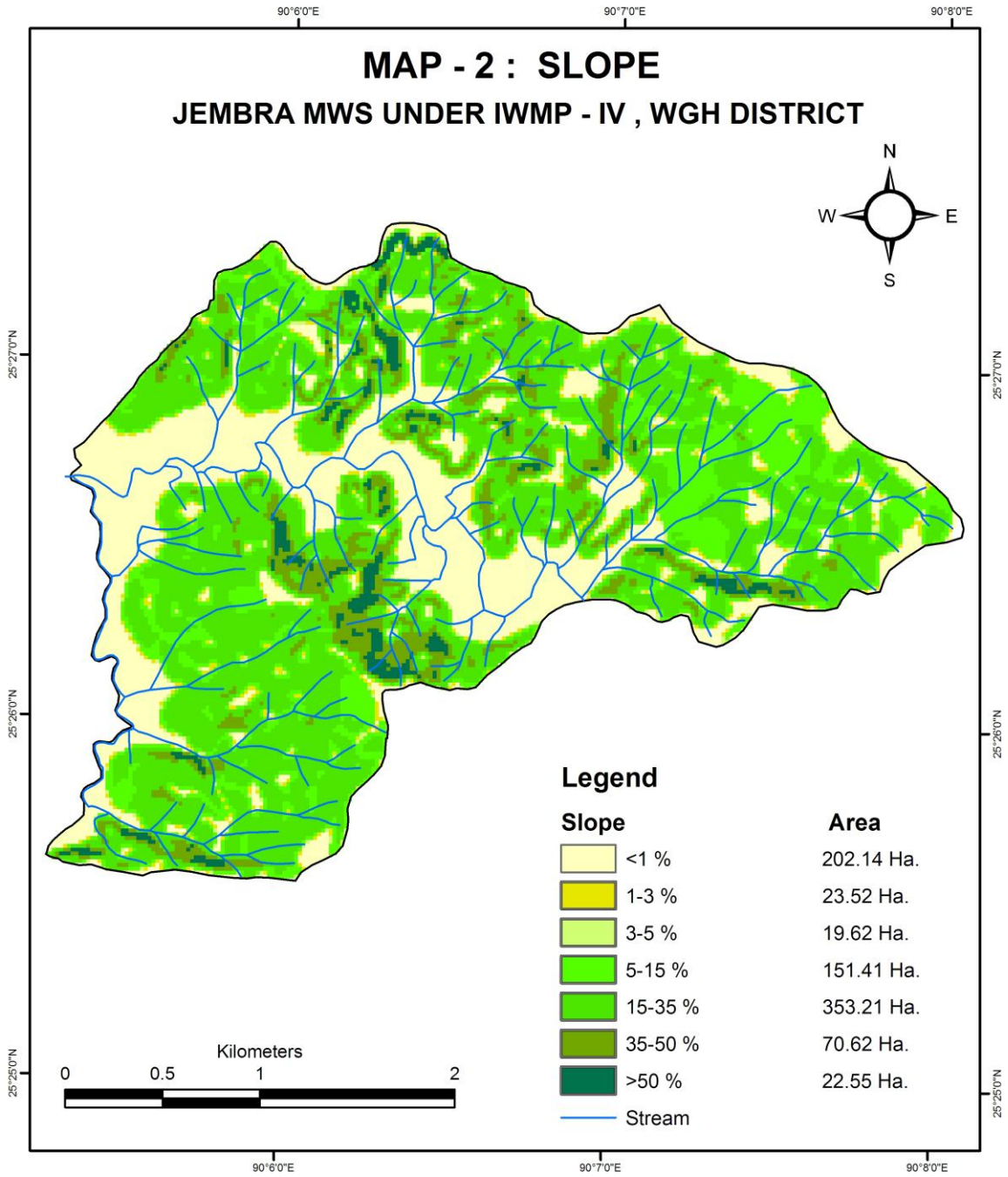
1	2	3	4	5	6	7	8	9
District	**Name of project**	**Name of WC**	**Name of structure/ activity**	**Estimated cost (Rs.)**	**Expected quantifiable benefits (Rs.)**	**Expenditure incurred (Rs.)**	**Actual quantifiable benefit (Rs.)**	**Benefit: Cost ratio#**
WGH	WGH IWMP_IV	Jembra Nomil Asi	As per action plan	5850000	-	-	-	-

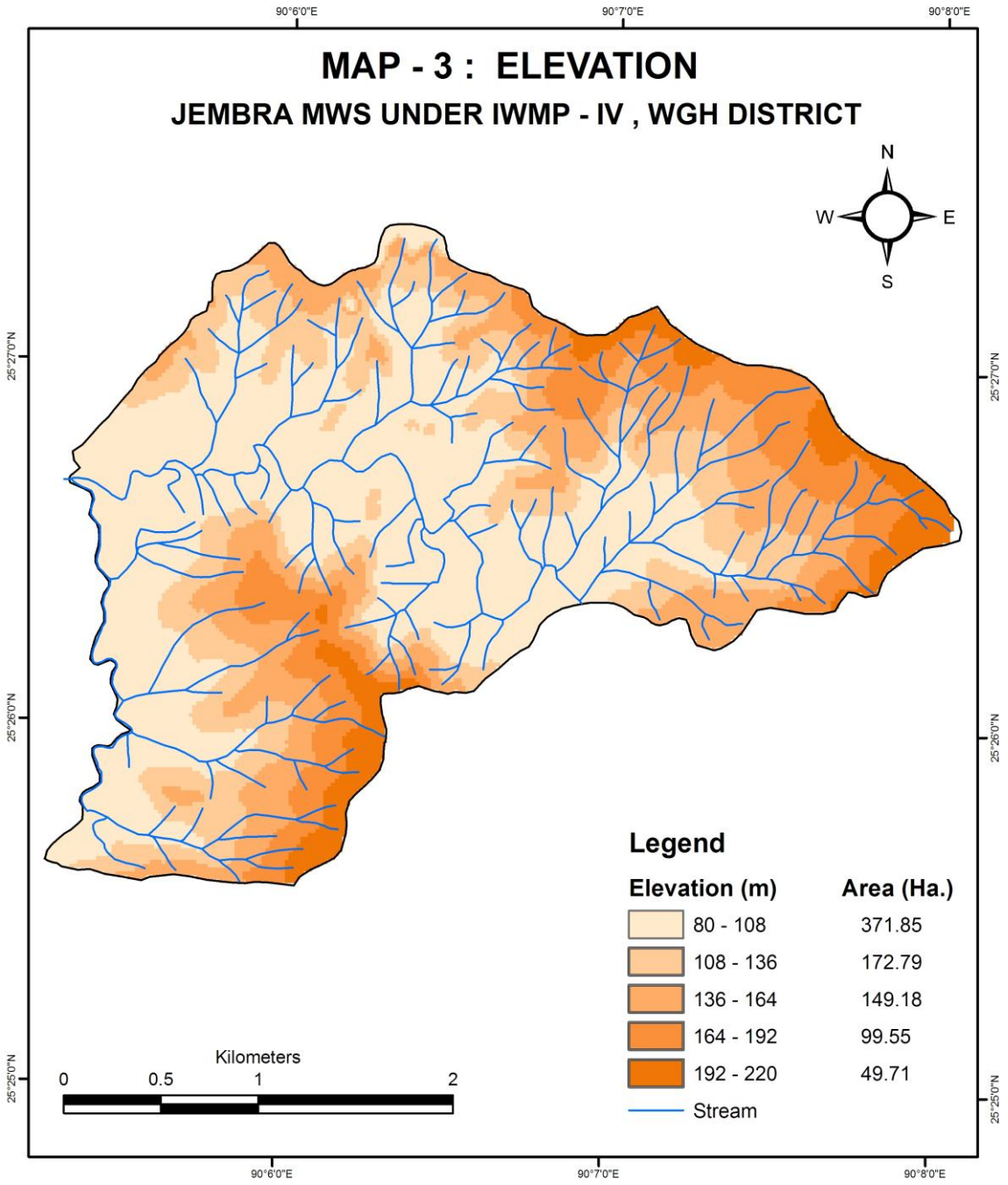
***** from column no. 2, total no. of States implementing the programme, from column no. 3, total no. of Districts; from Column no. 4, no. of projects, from column no. 5, no. of WCs, from column no. 6, no. of structures/ activities, from column no. 7 to 10, category-wise# totals, may be mentioned at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

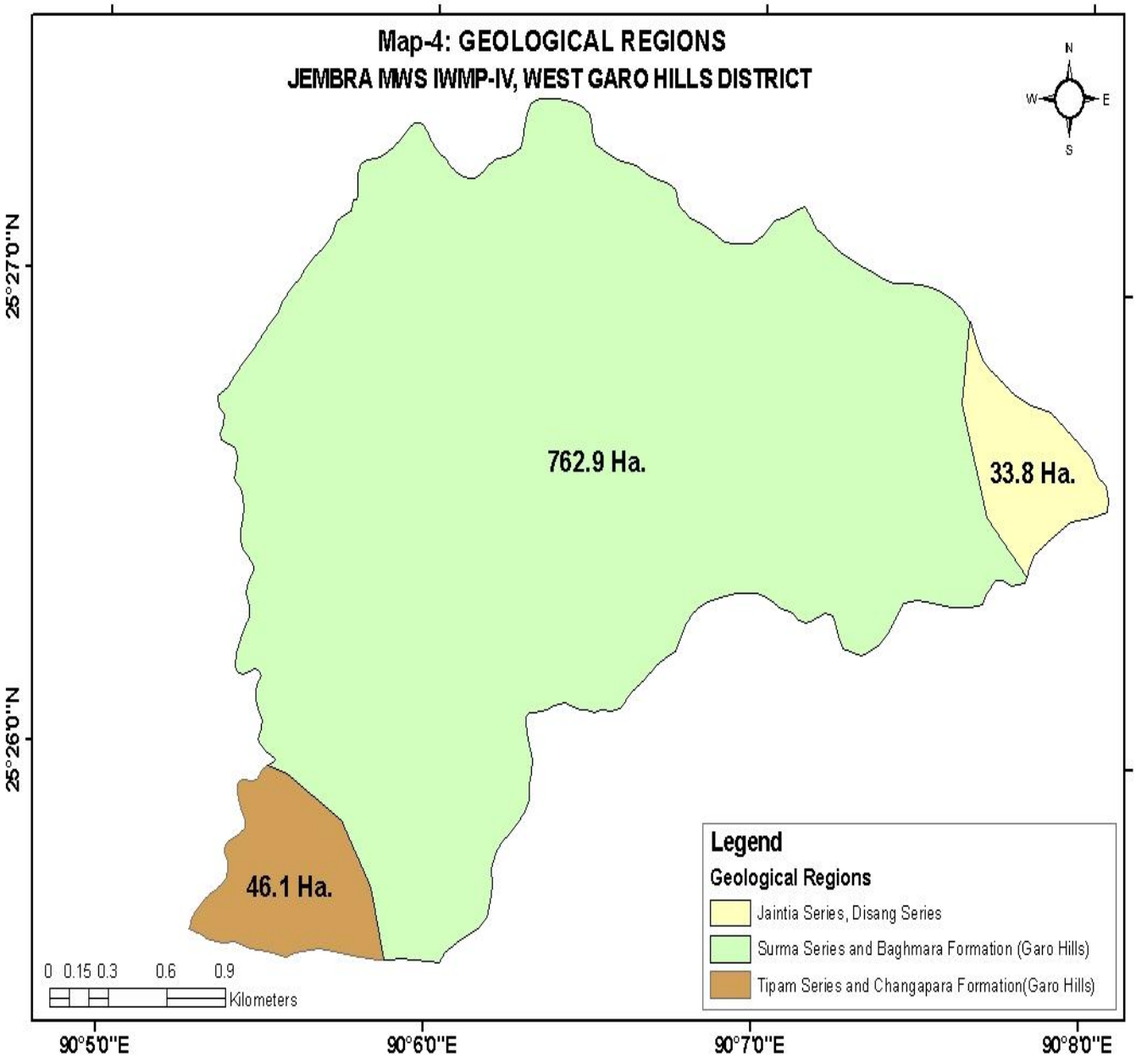
#B:C ratio more than 1 – cost effectivess than 1– Not cost effecti

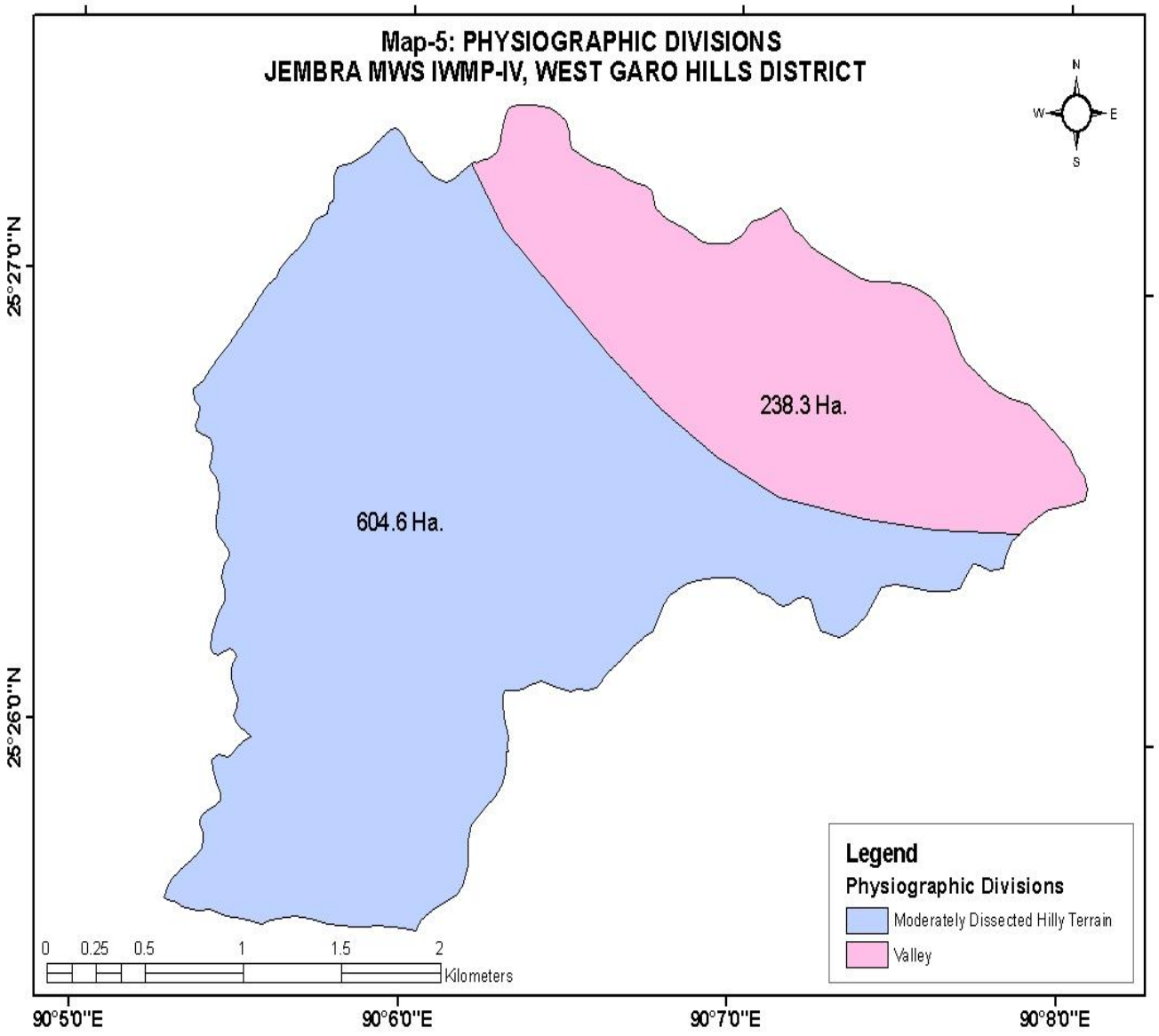
ANNEXTURE I
MAPS

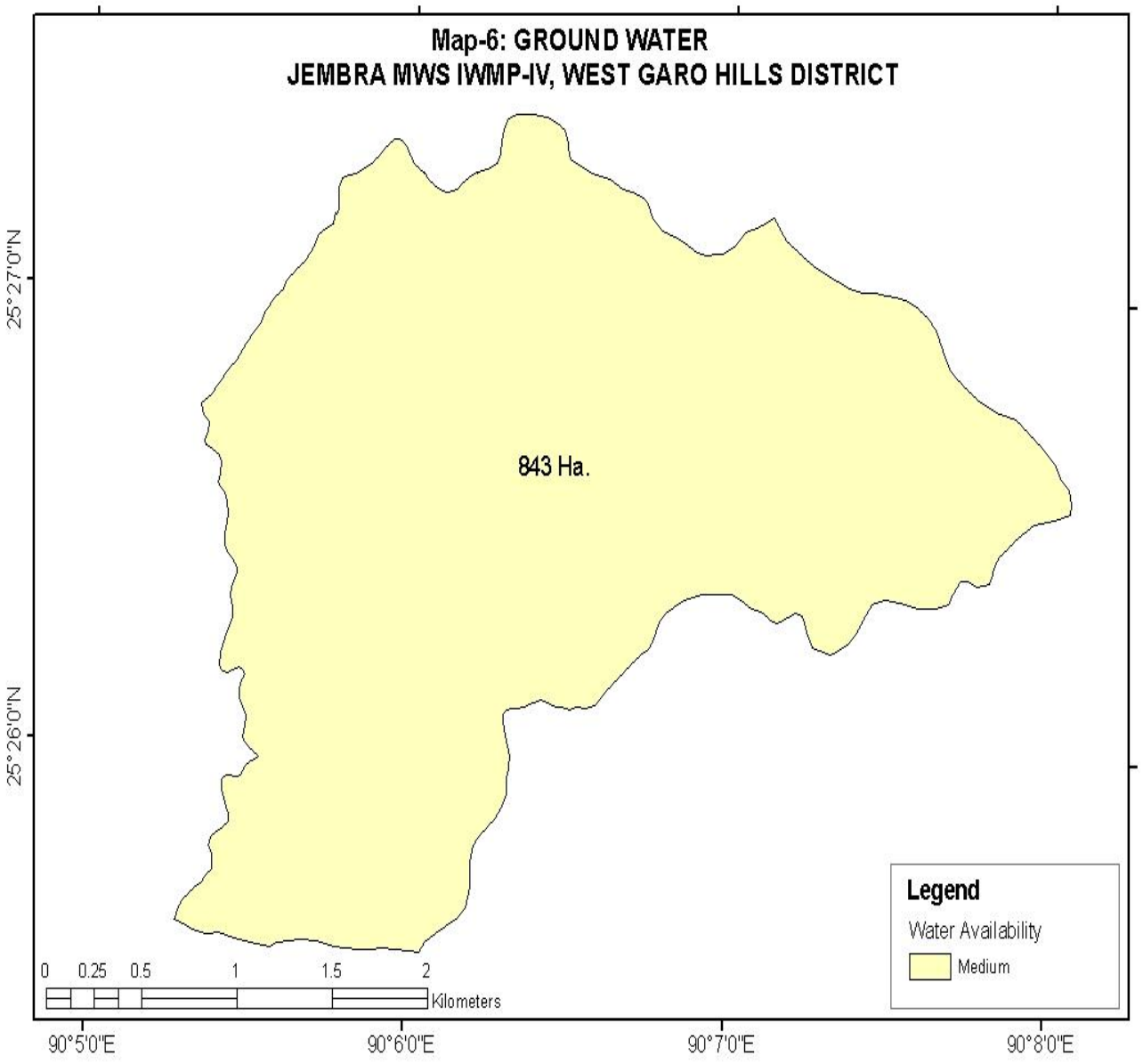

MAP- 1 : DRAINAGE SYSTEM
JEMBRA MWS UNDER IWMP-IV, WGH DISTRICT
90°6'0"E
90°7'0"E
90°8'0"E
25°28'0"N
25°27'0"N
25°26'0"N
25°25'0"N
N
W
E
S
Amindagree
Okhapara
Chhengkhurigree
Legend
Settelement
Road
Stream
Boundary
Kms
0
0.5
1
2

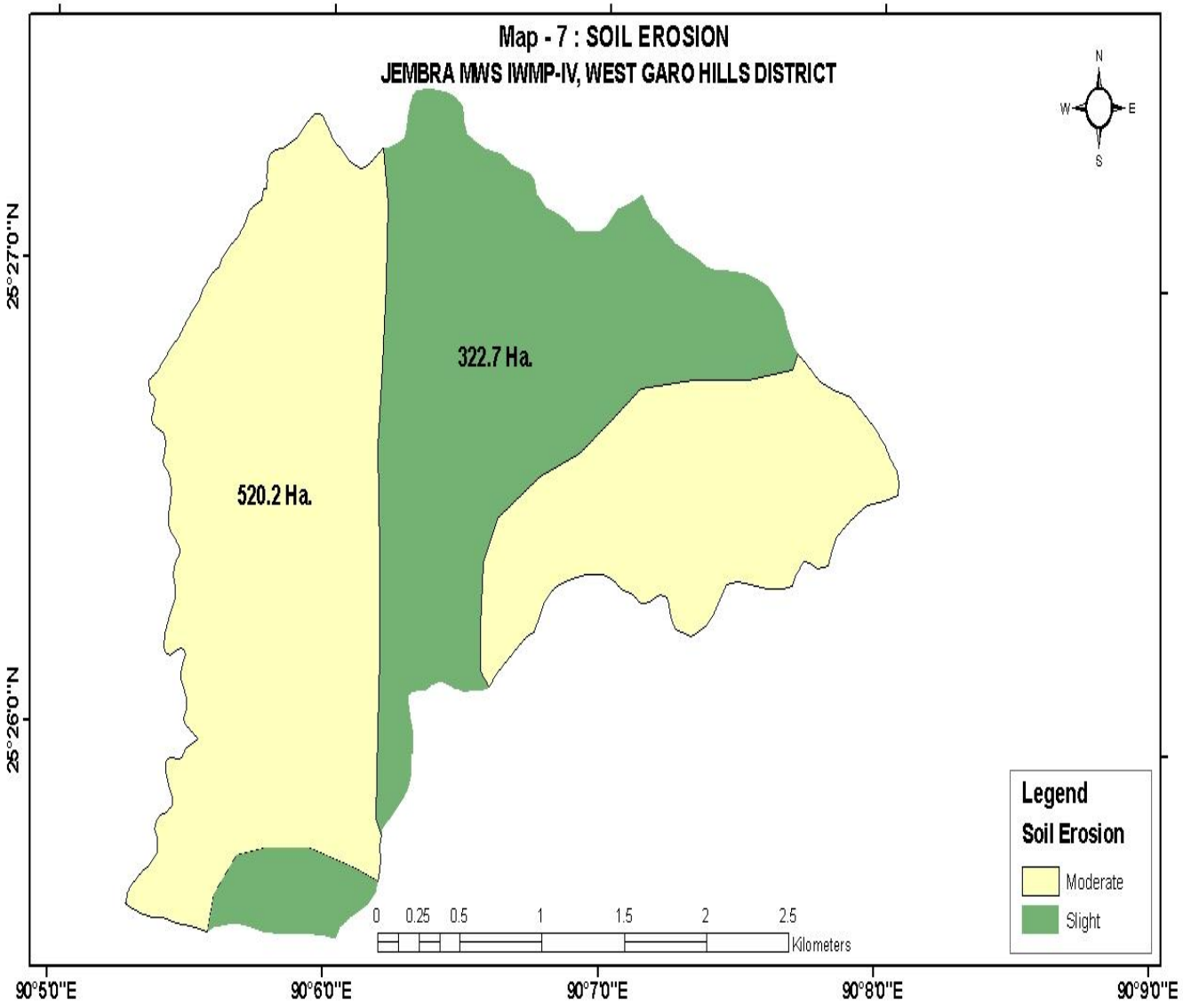

90°6'0"E
90°7'0"E
90°8'0"E
MAP - 2 : SLOPE
JEMBRA MWS UNDER IWMP - IV , WGH DISTRICT
N
W
E
S
25°27'0"N
25°26'0"N
25°25'0"N
Legend
Slope
Area
<1 %
202.14 Ha.
1-3 %
23.52 Ha.
3-5 %
19.62 Ha.
5-15 %
151.41 Ha.
15-35 %
353.21 Ha.
35-50 %
70.62 Ha.
>50 %
22.55 Ha.
Stream
Kilometers
0
0.5
1
2

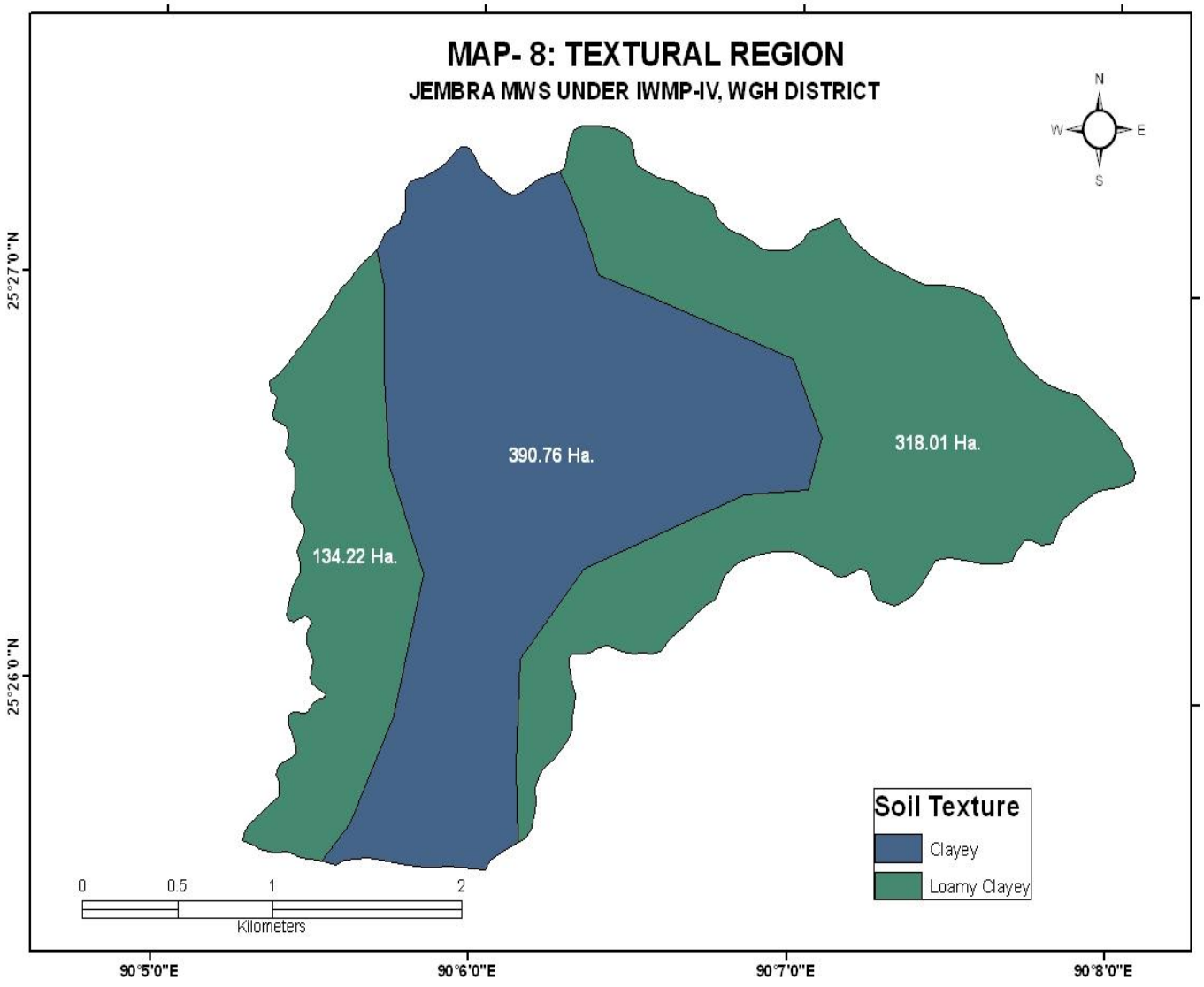

90°6'0"E
90°7'0"E
90°8'0"E
MAP - 3 : ELEVATION
JEMBRA MWS UNDER IWMP - IV , WGH DISTRICT
N
W
E
S
25°27'0"N
25°26'0"N
25°25'0"N
Legend
Elevation (m)
Area (Ha.)
80 - 108
371.85
108 - 136
172.79
136 - 164
149.18
164 - 192
99.55
192 - 220
49.71
Stream
Kilometers
0
0.5
1
2

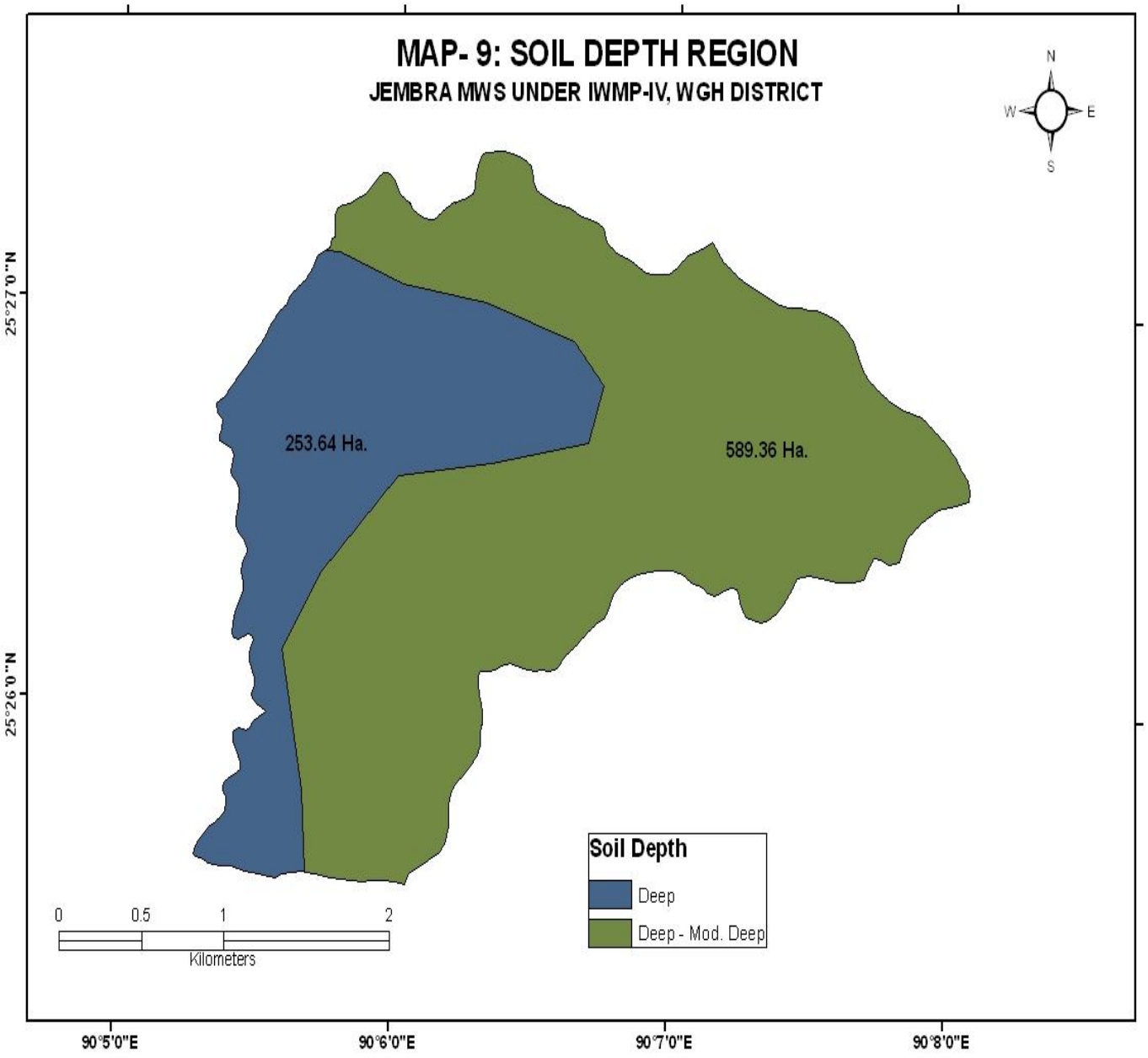

Map-4: GEOLOGICAL REGIONS
JEMBRA MWS IWMP-IV, WEST GARO HILLS DISTRICT
N
W
E
S
25°27'0"N
25°26'0"N
762.9 Ha.
33.8 Ha.
46.1 Ha.
Legend
Geological Regions
Jaintia Series, Disang Series
Surma Series and Baghmara Formation (Garo Hills)
Tipam Series and Changapara Formation(Garo Hills)
0 0.15 0.3 0.6 0.9
Kilometers
90°5'0"E
90°6'0"E
90°7'0"E
90°8'0"E

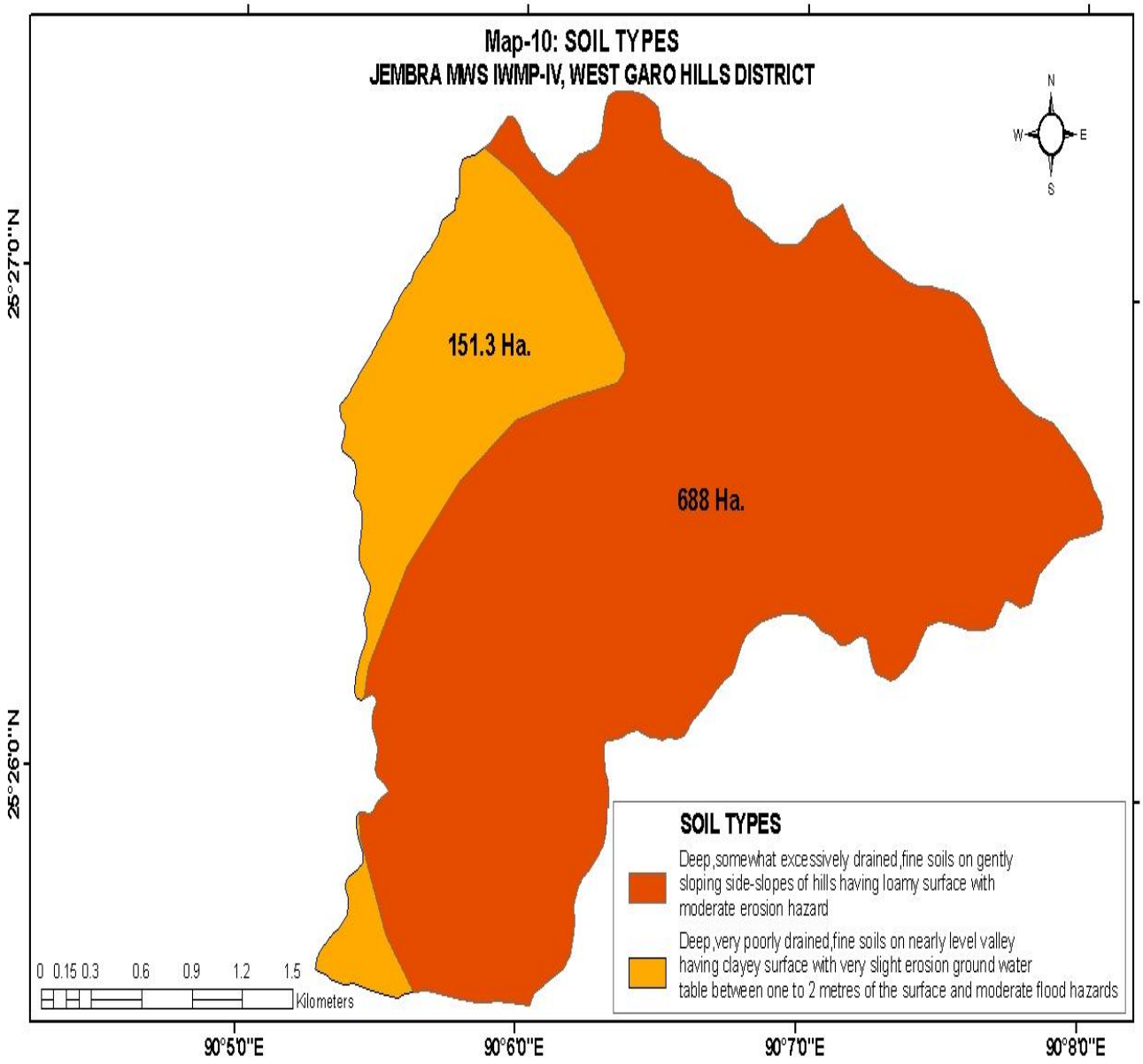

Map-5: PHYSIOGRAPHIC DIVISIONS
JEMBRA MWS IWMP-IV, WEST GARO HILLS DISTRICT
N
W
E
S
238.3 Ha.
604.6 Ha.
25°27'0"N
25°26'0"N
90°5'0"E
90°6'0"E
90°7'0"E
90°8'0"E
0 0.25 0.5 1 1.5 2
Kilometers
Legend
Physiographic Divisions
Moderately Dissected Hilly Terrain
Valley

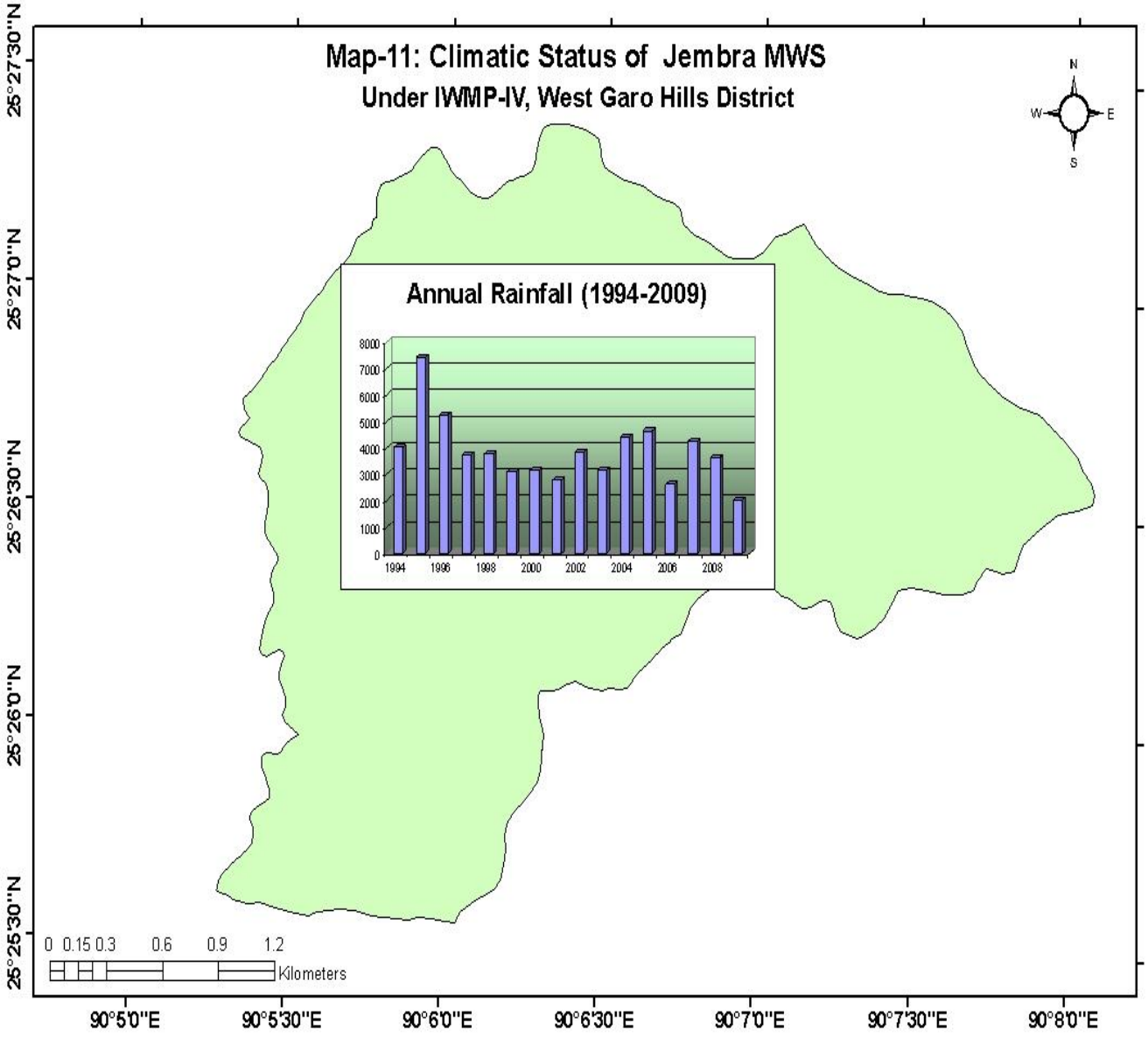

Map-6: GROUND WATER
JEMBRA MWS IWMP-IV, WEST GARO HILLS DISTRICT
843 Ha.
25°27'0"N
25°26'0"N
90°5'0"E
90°6'0"E
90°7'0"E
90°8'0"E
0 0.25 0.5 1 1.5 2
Kilometers
Legend
Water Availability
Medium

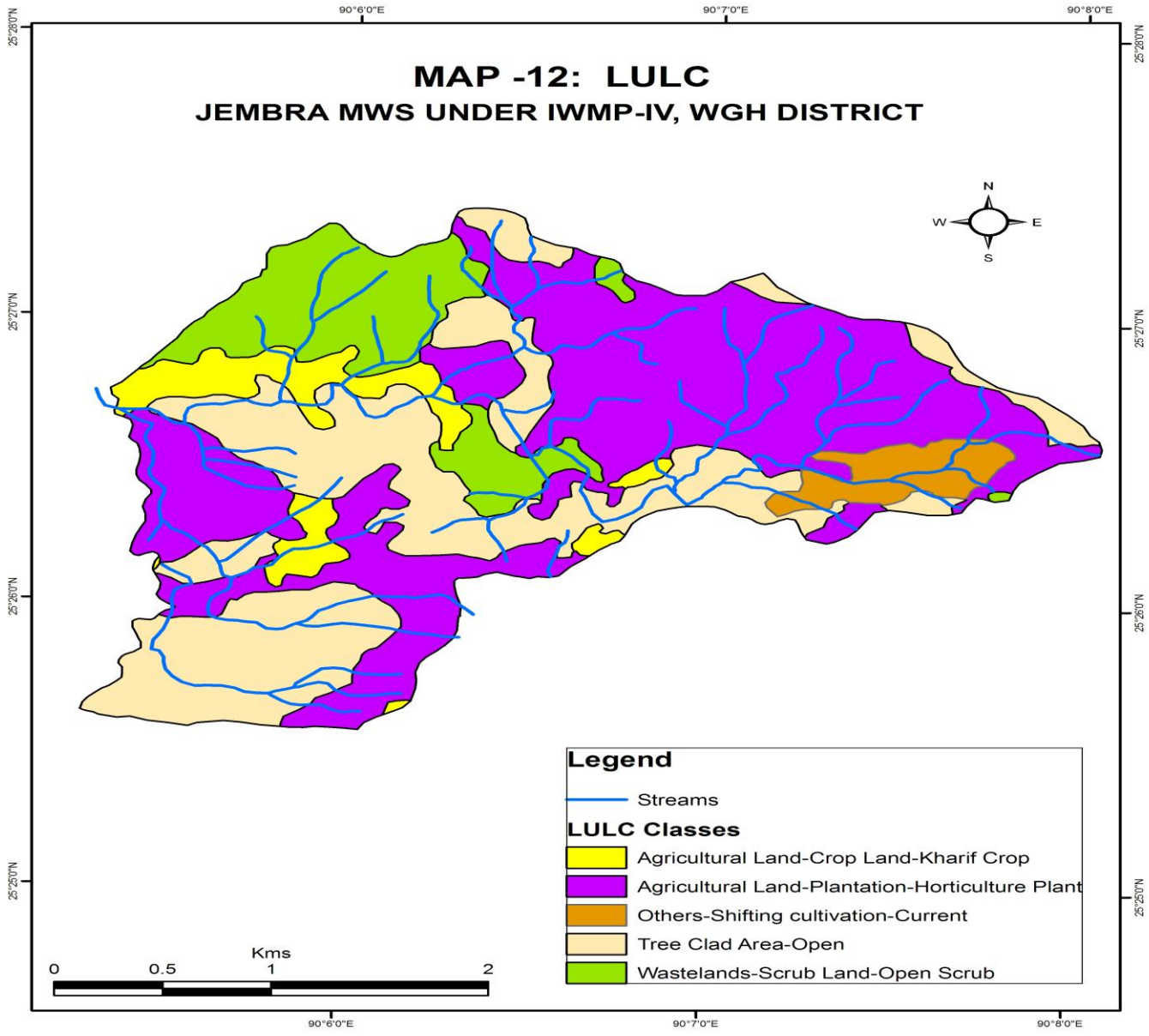

Map - 7 : SOIL EROSION
JEMBRA MWS IWMP-IV, WEST GARO HILLS DISTRICT
N
W
E
S
322.7 Ha.
520.2 Ha.
25°27'0"N
25°26'0"N
90°5'0"E
90°6'0"E
90°7'0"E
90°8'0"E
90°9'0"E
0 0.25 0.5 1 1.5 2 2.5
Kilometers
Legend
Soil Erosion
Moderate
Slight

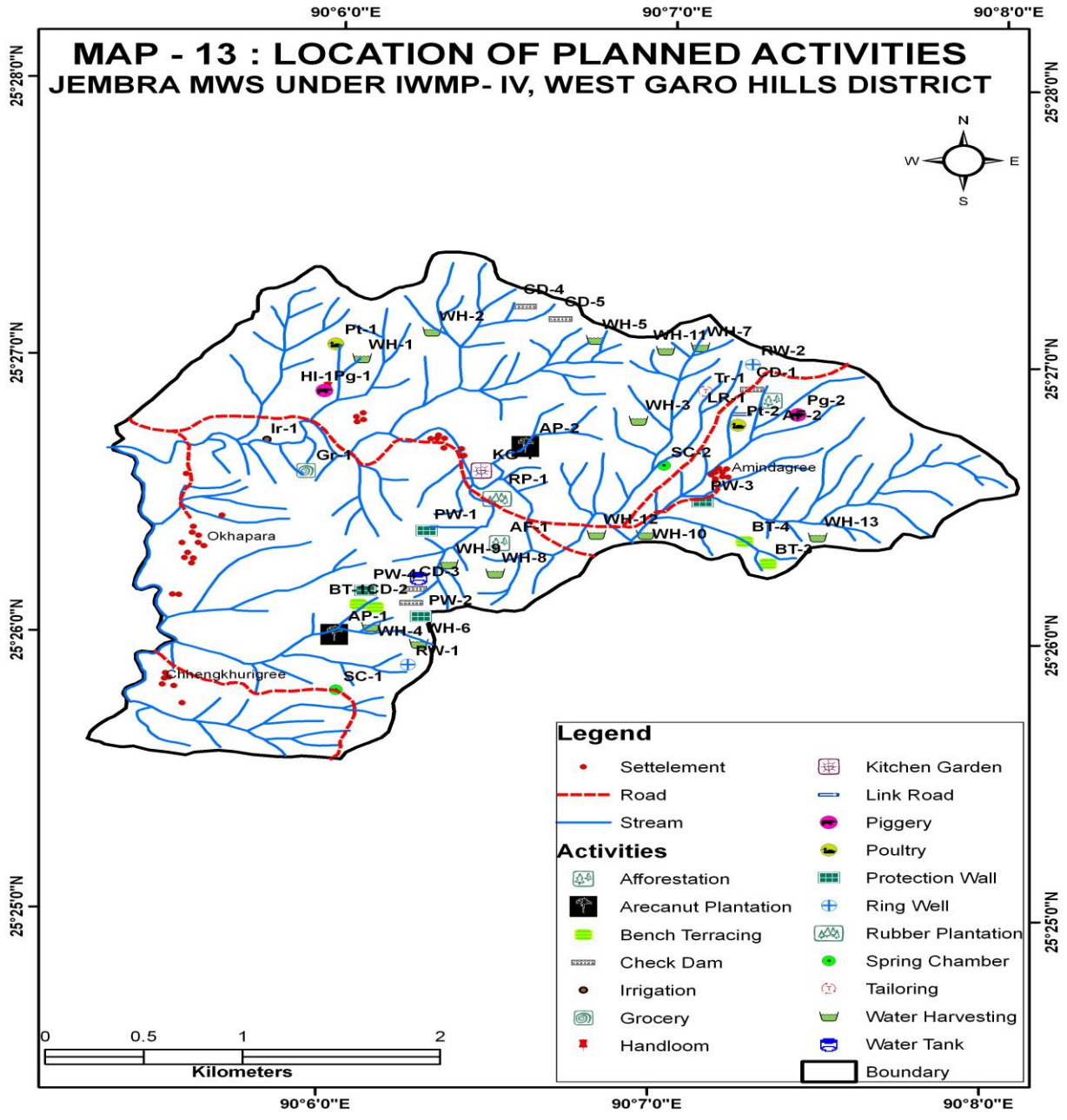

MAP- 8: TEXTURAL REGION
JEMBRA MWS UNDER IWMP-IV, WGH DISTRICT
N
W
E
S
390.76 Ha.
318.01 Ha.
134.22 Ha.
Soil Texture
Clayey
Loamy Clayey
0
0.5
1
2
Kilometers
25°27'0"N
25°26'0"N
90°5'0"E
90°6'0"E
90°7'0"E
90°8'0"E


MAP- 9: SOIL DEPTH REGION
JEMBRA MWS UNDER IWMP-IV, WGH DISTRICT
N
W
E
S
25°27'0"N
25°26'0"N
253.64 Ha.
589.36 Ha.
Soil Depth
Deep
Deep - Mod. Deep
0
0.5
1
2
Kilometers
90°5'0"E
90°6'0"E
90°7'0"E
90°8'0"E


Map-10: SOIL TYPES
JEMBRA MWS IWMP-IV, WEST GARO HILLS DISTRICT
N
W
E
S
151.3 Ha.
688 Ha.
25°27'0"N
25°26'0"N
90°5'0"E
90°6'0"E
90°7'0"E
90°8'0"E
0 0.15 0.3 0.6 0.9 1.2 1.5
Kilometers
SOIL TYPES
Deep,somewhat excessively drained,fine soils on gently sloping side-slopes of hills having loamy surface with moderate erosion hazard
Deep,very poorly drained,fine soils on nearly level valley having clayey surface with very slight erosion ground water table between one to 2 metres of the surface and moderate flood hazards


Map-11: Climatic Status of Jembra MWS
Under IWMP-IV, West Garo Hills District
N
W
E
S
Annual Rainfall (1994-2009)
8000
7000
6000
5000
4000
3000
2000
1000
0
1994
1996
1998
2000
2002
2004
2006
2008
0 0.15 0.3 0.6 0.9 1.2
Kilometers
25°27'30"N
25°27'0"N
25°26'30"N
25°26'0"N
25°25'30"N
90°5'0"E
90°5'30"E
90°6'0"E
90°6'30"E
90°7'0"E
90°7'30"E
90°8'0"E


MAP -12: LULC
JEMBRA MWS UNDER IWMP-IV, WGH DISTRICT
90°6'0"E
90°7'0"E
90°8'0"E
25°28'0"N
25°27'0"N
25°26'0"N
25°25'0"N
N
W
E
S
Legend
Streams
LULC Classes
Agricultural Land-Crop Land-Kharif Crop
Agricultural Land-Plantation-Horticulture Plant
Others-Shifting cultivation-Current
Tree Clad Area-Open
Wastelands-Scrub Land-Open Scrub
Kms
0
0.5
1
2


MAP - 13 : LOCATION OF PLANNED ACTIVITIES
JEMBRA MWS UNDER IWMP- IV, WEST GARO HILLS DISTRICT
90°6'0"E
90°7'0"E
90°8'0"E
25°28'0"N
25°27'0"N
25°26'0"N
25°25'0"N
N
W
E
S
CD-4
CD-5
WH-2
WH-5
WH-11
WH-7
RW-2
Pt-1
WH-1
HI-1
Pg-1
CD-1
Tr-1
LR-1
WH-3
Pt-2
Pg-2
AP-2
Ir-1
Gr-1
KG-1
SC-2
Amindagree
RP-1
PW-3
PW-1
AP-1
WH-12
WH-10
BT-4
WH-13
Okhapara
WH-9
WH-8
BT-3
PW-4
CD-3
BT-1
CD-2
PW-2
AP-1
WH-4
WH-6
RW-1
Chhengkhurigree
SC-1
0
0.5
1
2
Kilometers
Legend
Settelement
Road
Stream
Activities
Afforestation
Arecanut Plantation
Bench Terracing
Check Dam
Irrigation
Grocery
Handloom
Kitchen Garden
Link Road
Piggery
Poultry
Protection Wall
Ring Well
Rubber Plantation
Spring Chamber
Tailoring
Water Harvesting
Water Tank
Boundary

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	m³
.@Rs.34/- per cum							Rs.	287.64	

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

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

Rs. 50,112.15

Say, **Rs. 50,000.00**

Grand total(Rupees fifty thousand) only.

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

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

I.A(i) Ordinary soil

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

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

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

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

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

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

L/channel	2	x	5.00	x	0.90			**9.00**	m^2

		2	x	5.00	x	0.15		**1.50**	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

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

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

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

For Reservoir :

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

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

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

For Pipe Pedestals:

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

= 10.40 m^3

@ Rs. 2719/- m^3 Rs. 28,277.60

5/2.9(a) Providing shuttering including centering for flat surface such as slabs,shelves,chajja and for vertical faces such as column etc.

For spring chamber:

1 x 2 x 2.50 x 0.70 = 3.50 m^2

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

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

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

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

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

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

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

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

$2 \times 1 \times \frac{0.25+0.55}{} \times 1.60$ = 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^2 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 DETAILS ETC

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

Name of village: Okkapara Songgitcham/ Kosak Jembragre

1	2	3	4	5			6	7
District	Names of Project	Names of Departments with Schemes converging with IWMP	Fund made available in IWMP due to convergence (Rs. in lakh)	Name of activity/task/structure undertaken with converged funds (a) Structures (b) livelihoods (c) Any other (pl. specify)	Nos/Rmt/Ha	Amount (Rs)	Reference no. of activity/ task/ structure in DPR	Level at which decision for convergence was taken
West Garo Hills	WGH-IWMP-II	NREGS (DRDA, West Garo Hills, Meghalaya)	3604000	a) Dugout Pond	11 nos	330000	Enclosure of Abstract of Perspective Plan for Convergence of NREGS with IWMP in DPR	District Level
				b) Bench Terrace	18 Ha	270000		
				c) Nallah Bund	5 nos	650000		
				d) CC Irrigation dam	1 nos	150000		
				e) Link Road		216000		
				f) RCC Footbridge	1 nos	150000		
				g) Spring chamber	4 nos	360000		
				g) Rubber Plantation	70 Ha	686000		
				h) Arecanut Plantation	85 Ha	782000		
				e) Earthen Irri channel				
				f) Earthen Embankment				
				g) Rubber Plantation				
Grand Total						**3604000**		

Grand Total: Rupees Thirty-Six Lakhs four thousand only.

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

Divisional Officer
Tura Soil & Water Conservation(T) Division

Deputy Commissoner
West Garo Hills, meghalaya

ABSTRACT OF PERSPECTIVE PLAN FOR CONVERGENCE OF NREGs WITH IWMP AT OKKAPARA VILLAGE
JENGBRA NOMIL ASI MICRO-WATERSHED, WGH-IWMP-IV

Name of Village: Okkapara Songgitcham
Total No. of Job Card Holder: 80 Households

Total Wage Component(@Rs.../- per annum) Rs 560000
Amount earmarked for Convergence per annum Rs 560000

(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.300000/- per no)	Nos	2	60000		3	90000					5	150000		10	300000	0	4286
2	Bench Terrace(@Rs.15000/- per Ha)	Ha				4	60000		4	60000		4	60000		12	180000	0	2571
3	Nallah Bund(@Rs.200000/- per no)	Nos	1	90000	60000				1	120000	80000	1	90000	80000	3	300000	200000	4286
	CC irrigation dam(@Rs.150000/- per no)	Nos							1	90000	60000					90000	60000	1286
4	Link Road	km				1	90000					1	90000			180000	0	1000
	RCC Footbridge(@Rs.150000/- per Nos)	Nos							1	90000	60000					90000	60000	1286
5	Spring Chamber(@Rs.60000/- per no)	Nos				4	144000	96000								144000	96000	2057
6	Rubber Plantation	Ha													60			
	i) Planting(@Rs.1500/- per Ha)	Ha	30	90000												90000	0	1286
	ii) Weeding(@Rs.2000/- per Ha)	Ha	30	100000		50	100000		50	100000		50	100000			400000	0	5714
7	Arecanut Plantation	Ha																
	i) Planting(@Rs.2400/- per Ha)	Ha	50	120000												120000	0	1714
	ii) Weeding(@Rs.2000/- per Ha)	Ha	50	100000		50	100000		50	100000		50	100000			400000	0	5714
	GRAND TOTAL			560000	60000		560000	96000		560000	200000		560000	80000		2240000	416000	32000

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

1 Wage Component: Rs 2240000
2 Material Component: Rs 416000
Grand total 2656000

Grand Total(Rupees Twenty-two Lakhs twentyfour thousand) only.

Chairman
Okkapara Songgitcham VEC
Gambegre Block, WGH

President,
Village Employment Council
Okkapara Songgitcham
West Garo Hills

Secretary
Okkapara VEC
Gambegre Block,WGH

Secretary,
Village Employment Council
Okkapara Songgitcham
West Garo Hills.

ABSTRACT OF PERSPECTIVE PLAN FOR CONVERGENCE OF NREGs WITH IWMP AT KOSAK JEMBAGRE VILLAGE
JENGBRA NOMIL ASI MICRO-WATERSHED, WGH-IWMP-IV

Name of Village: Jengbragre
Total No. of Job Card Holder: 30 Households

Total Wage Component@Rs.70/ per annum) Rs 210000
Amount earmarked for Convergence per annum Rs 210000

(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										1	30000		1	30000	0	420
2	Bench Terrace(@Rs.15000/- per Ha)	Ha				2	30000		4	60000					6	90000	0	1200
3	Nalah Bund(@Rs.150000/- per no)	Nos							1	90000	60000				2	90000	60000	1286
4	Link Road	km										1	90000			90000	0	1286
5	Spring Chamber(@Rs.80000/- per no)	Nos				2	72000	48000								72000	48000	1029
6	Rubber Plantation	Ha													60			
	i) Planting(@Rs.1800/- per Ha)	Ha	20	36000												36000	0	514
	ii) Weeding(@Rs.2000/- per Ha)	Ha	20	40000		25	50000		15	30000		25	50000			170000	0	2429
7	Arecanut Plantation	Ha															0	0
	ii Planting(@Rs.2400/- per Ha)	Ha	35	84000												84000	0	1200
	iii) Weeding@Rs.2000/- per Ha)	Ha	25	50000		29	58000		15	30000		20	40000			178000	0	2543
	GRAND TOTAL			210000	0		210000	48000		210000	60000		210000	0		840000	108000	12000

Amount allocated for convergence for the period 2010-11 to 2013-14
1 Wage Component: Rs 840000
2 Material Component: Rs 108000
Grand total 948000
Grand Total(Rupees Nine Lakhs forty-eight thousand) only.

Chairman
Kosak Jembagre VEC
Gambegre Block, WGH
President
Kosak Jembagri V.E.C
West Garo Hills

Secretary
Kosak Jembagri VEC
Gambegre Block,WGH

Secretary
Kosak Jembagri V.E.C
West Garo Hills

AGREEMENT FOR CONVERGENCE OF SCHEME

The Village Employment Council (VEC) and the Communities of Okkapara Songgitcham Village, Gambegre Block, West Garo Hills, Meghalaya have no objection to the Convergence of NREGS with Integrated Watershed Management Project (IWMP) at Okkapara Songgitcham village under Jengbra Nomil Asi Micro-Watershed, WGH-IWMP-IV 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. Spring Chamber.
4. Link Road.
5. Nallah Bund.
6. Rubber Plantation.
7. Areeanut Plantation.

President,
Village Employment Council
Okkapara Songgitcham
West Garo Hills

Chairman,
Village Employment Council
Okkapara Songgitcham
Gambegre Block, WGH

Secretary,
Village Employment Council
Okkapara Songgitcham
West Garo Hills

Village Employment Council
Okkapara Songgitcham
Gambegre Block, WGH

AGREEMENT FOR CONVERGENCE OF SCHEME

The Village Employment Council (VEC) and the Communities of Kosak Jembagre Village, Gambegre Block, West Garo Hills, Meghalaya have no objection to the Convergence of NREGS with Integrated Watershed Management Project (IWMP) at Kosak Jembagre village under Jengbra Nomil Asi Micro-Watershed, WGH-IWMP-IV 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. Spring Chamber.
4. Link Road.
5. Nallah Bund.
6. Rubber Plantation.
7. Arecanut Plantation.

Chairman,
Village Employment Council
Kosak Jembagre
Gambegre Block, WGH

Tarsing M. Marak.
President
Kosak Jembagri V.E.C
West Garo Hills

Mingrin D. Shira
Secretary,
Village Employment Council
Kosak Jembagre
Gambegre Block, WGH

Secretary
Kosak Jembagri V.E.C
West Garo Hills

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

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

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

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

Name & Signature of A'king Nokma

[illegible]
Nokma 11-19 (30)
Okkapara [illegible]
West Garo Hills

Countersigned by

Divisional Officer,
Tura Soil & Water Conservation (T) Division,
West Garo Hills, Meghalaya.
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NO OBJECTION CERTIFICATE OF THE AKING NOKMA FOR UNDERTAKING ENTRY POINT ACTIVITY (EPA) AT JEMBRA NOMIL ASI MICRO WATERSHED, WGH-I.W.M.P -II BY TURA SOIL & WATER CONSERVATION (T) DIVISION.

The A'king Nokma of Okkapara village under Jembra Nomil Asi 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

Natjing Marak

Countersigned by

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

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