

GOVERNMENT OF INDIA



DETAILED PROJECT REPORT

ON

BUGI MICRO WATERSHED

UNDER

INTEGRATED WATERSHED MANAGEMENT PROGRAMME (IWMP-I)

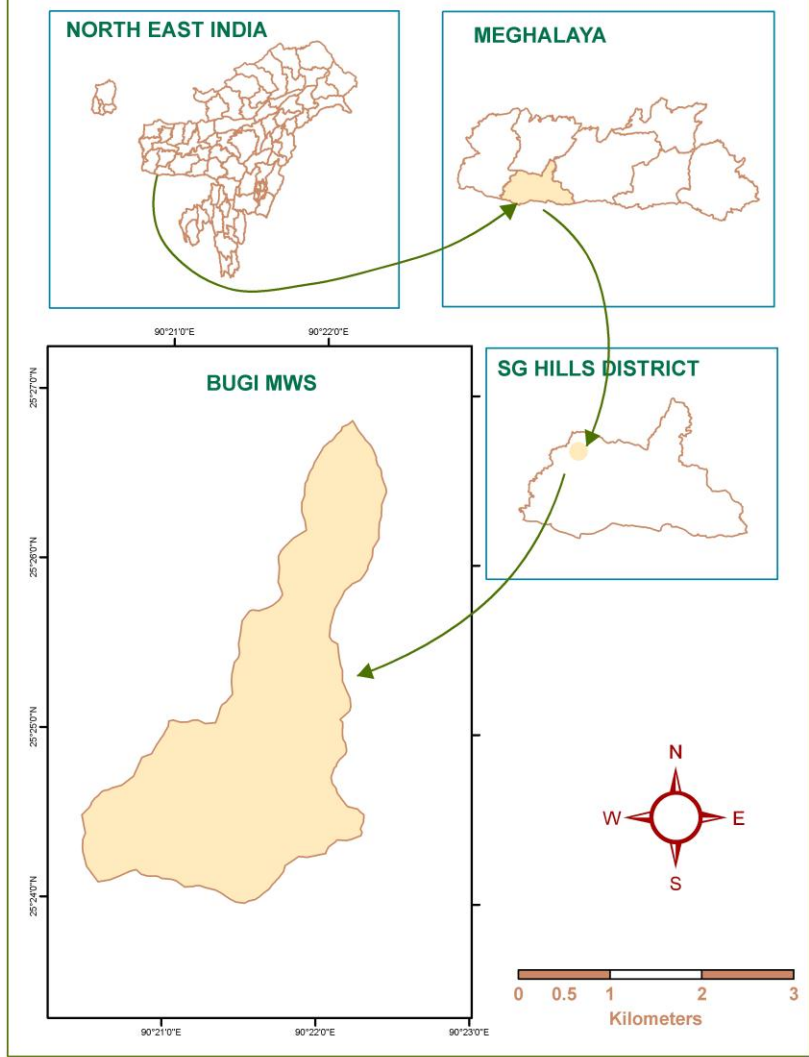
2009-2010

BAGHMARA SOIL & WATER CONSERVATION (CC) DIVISION.

SOUTH GARO HILLS

MEGHALAYA

**MAP - A : LOCATION OF BUGI MWS UNDER IWMP-I
SOUTH GARO HILLS DISTRICT**



SUMMARY

Name of the State	:	Meghalaya
Name of the District	:	South Garo Hills District
Name of the C&RD Block	:	Chokpot
Name of the Villages	:	Bugigre
Name of the Project	:	South Garo Hills – IWMP – I
Total Geographical Area	:	724.59 Ha
Total Treatment Area	:	500 Ha
Total Project Cost	:	75 lakh
Project Duration	:	5 Years
Project Implementing Agency	:	Soil & Water Conservation (Cash Crop) Division, Baghmara .

TABLE OF CONTENTS

CHAPTER I INTRODUCTION AND BACKGROUND	4
CHAPTER II BASIC INFORMATION OF THE PROJECT AREA	7
CHAPTER I PROJECT PLANNING & INSTITUTION BUILDING	17
CHAPTER IV PROJECT ACTIVITIES	23
CHAPTER V PROJECT PHASING & BUDGETING	39
CHAPTER VI CAPACITY BUILDING	49
CHAPTER VII EXPECTED OUTCOME	53
ANNEXURE I MAPS	71
ANNEXURE II SOCIO-ECONOMIC SURVEY DETAILS.....	87
ANNEXURE I COST ESTIMATES	90
ANNEXURE IV MoA, SUB COMMITTEE DETAILS ETC.....	102



CHAPTER I
INTRODUCTION AND BACKGROUND

CHAPTER I

INTRODUCTION AND BACKGROUND

1.1 Project Background:

The Bugi Micro (IWMP-I) project is located in Chokpot C&RD Block, South Garo Hills District of Meghalaya. Consisting of a single micro-watershed, the project area is drained by the Bugi River and its tributaries flowing in a north to south direction. The total area is 724.59 Ha. with 500 to be treated under the Integrated Watershed Management Programme (IWMP).

The Project area is located at a distance of about 20 km from Chokpot C&RD Block . A total of one village are covered under the project and that is– Bugigre

1.2 Micro-watershed Information:

The Bugi micro-watershed code is yet to be codified by the North East Space Application Centre (NESAC). The total area of the micro-watershed is 724.59 Ha., with 500 hectares to be treated under the Integrated Watershed Management Programme (IWMP-I).

1.3 Need and Scope for Watershed Development:

The Bugi micro-watershed 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 24 households are present with 132 population . Jhum cultivation is practiced by most of the inhabitants of these villages on the slopes.

Even though the area receives ample rainfall during the monsoons, there is acute shortage of water during the dry seasons and the villagers have to travel long distances for fetching water even for domestic use.

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

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

- i. MGNREGS

CHAPTER II
BASIC INFORMATION OF THE PROJECT AREA

CHAPTER II

BASIC INFORMATION OF THE PROJECT AREA

2.1 Location: The Project area is located within the area of Chokpot under the Chokpot C&RD Block , South Garo Hills District. It is situated at a distance of about 20 km from Chokpot . The geographical location is between 90⁰ 20'30'' to 90⁰ 22' 24''E Longitude and 25⁰ 24' 00'' to 25⁰ 26'59''N Latitude. There is only one village within the Watershed which is as follows –

1. Bugigre.

At present, these villages are connected to kuccha road.

2.2 Physiography:

The topography of the micro-watershed is highly undulating highly undulating table land tracts with gentle to moderate slopes. The slopes vary from 5% to 50 %. The lower reaches of the Watershed is relatively flat and suitable for agriculture. The altitude ranges from a minimum of 220m a high of 980 m above mean sea level.

Table 2.1: Physiographic details

Elevation (metres)	Slope Range (%)	Order of watershed Sub/Micro-watershed	Major streams	Topography
220 m to 980 m	5 % to 50 %	Micro Watershed	Bugi Stream	Moderately Sloping

2.3 Drainage: The major stream draining the micro-watershed is the Bugi River which is a 3th order stream flowing in a north-south direction. The slopes of the micro-watershed are dissected by numerous small tributaries flowing to the Bugi.

2.4 Soil: Soil Texture is loamy type with pH value varying from 4.6 to 6.1 .The soil have been found to be acidic in nature, mostly high in organic carbon except in jhum cultivated areas, where it is low or high in available phosphorous or high or low in available potash. Owing to highly undulating land form and absence of good vegetation cover, the area is exposed to erosion hazards.

Table 2.2: Details of soil erosion in the project areas:

1	2	3	4	5	6	7	8	9	
Sl. No.	Names of State	Names of District	Names of Projects	Cause	Types of erosion	Area affected (ha)	Run-off (mm/ year)	Average soil loss (Tonnes/ ha/ year)	
1	Meghalaya	South Garo Hills	South Garo Hills – IWMP I	Water erosion:			500	2500-4000	10-15
				a	Sheet	500			
				b	Rill				
				c	Gully				
				Sub total		500			
Wind erosion		Nil							

2.5 Climate: The area in the foothills or low lying areas and mid-slopes are hot in summer and remain cold throughout the winter. The area on the higher reaches is warm during summer and cold during winter. The average annual rainfall is 4400mm.

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 Hyper Thermic plateau	724.59Ha	South Garo Hills	South Garo Hills – IWMP – I	Fine Loamy very severe erosion hazard	162 Ha	2000-4000	Paddy	6.2
						Coarse loamy soils moderate erosion hazards			Chilli	12.7
									Ginger	12.7
									Maize	12.7
									Colocasia	12.7
									Brinjal	12.7
									Pumpkin	12.7
								Total	41 Ha	

2.6 Agriculture: Agriculture is the primary occupation of the people of the area. The people mostly practice jhum. The jhum plots vary from 0.5 to 1.0 Ha, and are cultivated for 3-4 years. The principal agricultural crops grown of the jhum fields are rice ,cow pea, pumpkin , cucumber, potato,tapioca, millet, maize, yam and vegetables. Fruit crops are well suited in the lower reaches which include *Mangifera indica*, orange, jackfruit, litchi etc. The slopes of the Bugigre are also very suitable for betel nut, betel leaf, black pepper, broomstick, which contribute to the income of the people.

Table 2.4: Crop yield and production

Crops	Area (ha)	Average Yield (Qtl) per ha.	Total Production (Qtl.)
Rice	6.2	15	93
Maize	12.7	6	76
Ginger	12.7	25	318
Turmeric	12.7	30	381
Chilli	12.7	4	51
Tapioca	12.7	30	381
Brinjal	12.7	20	254
Cowpea	12.7	15	191
Pumpkin	12.7	50	635
Colocassia	12.7	35	445
Cucumber	12.7	35	445
Total	133.2	265	3268

2.7 Natural Vegetation: The tree species common to the watershed area includes – Cassia fistula, Dalbergia sissoo, Sizzygium cumini, Albizzia procera, Hollarteuna antidysentrica, Macaranga denticulate, Aparosa roxburghii, Bombax cieba, Michelia champaca, Mangifera indica, Delonix regia, Bamboo spp, Emblica officinalis, Grewea spp etc. However, due to jhum cultivation the forest cover of the area has reduced considerably.

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

Demographic Status: The total households in the watershed project is 24 with a total population of 124, of which 77 are male and 55 are female. The detail of the household in each of the villages in the watershed project is as follows:

Name of Village	No. of Households	No. of Male (Population)	No. of Female (Population)	Total (Population)	Average No.per family
Bugigre	24	77	55	124	5-6
Total	24	77	55	124	5-6

Infrastructure facilities :

- 2.1.1 *Roads:* The village within the Project Area is not connected by all weathered condition (Pucca) road. The Project area depends entirely on the kutchra road connected to Chokpot .
- 2.1.2 *School:* There is only 1 L.P School within the Project Area run by the Government.
- 2.1.3 *Electricity :* The project area is connected with electricity.
- 2.1.4 *Health :* There is no Community Health Centre in the village and the local population have to either depends on facilities available at Chokpot .
- 2.1.5 *Water Supply :* Drinking water supply have been provided to 15 households only by the PHE Deptt and the remaining household has to depend either on the springs or wells available in the locality . However, during lean season the entire population have to depend on springs available in the area as the supply is not sufficient to meet the daily requirement.
- 2.1.6 *Market :* There is a weekly market held once in a week at Chokpot where the people sell their produce.

Table 2.5: Infrastructure Status: Bugi

1	2	3		4			
Name of District	Name of Project	Parameters:		Status			
South Garo Hills	South Garo Hills- IWMP I	(i)	No. of villages connected to the main road by an all-weather road.	Nil			
		(ii)	No. of village provided with electricity	1 no.			
		(I)	No. of households without access to drinking water	24 nos.			
		(iv)	No. of educational institutions: Primary (P)/ Secondary (S)/ Higher Secondary (HS)/ Vocational institution (VI)	(P)	(S)	(HS)	(VI)
				1		-	-
		(v)	No. of village with access to Primary Health Centre	Nil			
		(vi)	No. of village with access Veterinary Dispensary	Nil			
		(vii)	No. of village with access Post Office	Nil			
		(vI)	No. of village with access Banks	Nil			
		(ix)	No. of village with access Markets/ mandis	Nil			
		(x)	No. of village with access Agro-Industries	Nil			
		(xi)	Total quantity of surplus milk	Nil			
		(xii)	No. of milk collection centres (e.g. Union (U)/ Society (S)/ Private agency (PA)/ Others (O))	(U)	(S)	(PA)	(O)
				Nil	Nil	Nil	Nil
(xI)	No. of villages with access to Aganwadi Centres	Nil					
(xiv)	Any other facilities with no. of villages (please specify)	Nil					

2.9 Livestock: There are only 2 kinds of livestock farming being farmed in the area viz. Piggery, Poultry.

Table 2.6: Existing livestock population

Type of Animal	Population
Piggery	47
Poultry	204
Cattle	34
Total	285

2.10 Land ownership: There are primarily two types of land holding system, namely Community and Private lands.

2.11 Table 2.7: Land Holding:Bugi

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
South Garo Hills	South Garo Hills – IWMP I	(i) Large	Nil	Nil	Nil	Nil	Nil
		(ii) Small	9	9	Nil	68.16	68.16
		(I) Marginal	15	15	Nil	92.24	92.24
		(iv) Landless	Nil	Nil	Nil	Nil	Nil
		Sub - Total	24	24	Nil	160.4 Ha	160.4 Ha

Table 2.5: Common Property Resources in the Project Area: Bugi

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)
South Garo Hills	South Garo Hills – IWMP I	(i) Wasteland/ degraded land	Nil	Nil	Nil	230	Nil	Nil	Nil	230
		(ii) Pastures	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
		(I) Private Agriculture land	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
		(iv) Village woodlot	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
		(v) Forest	Nil	Nil	Nil	180	Nil	Nil	Nil	50
		(vi) Village Ponds/ Tanks	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
		(vii) Community Buildings	Nil	Nil	Nil	1(one)	Nil	Nil	Nil	
		(vI) Weekly Markets	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
		(ix) Permanent Markets	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
		(x) Temples/ Places of worship	Nil	Nil	Nil	2 Nos.(Church)	Nil	Nil	Nil	Nil
		(xi) Others (Pl. specify)	Nil	Nil	Nil	315	Nil	Nil	Nil	220
	Total	Nil	Nil	Nil	725	Nil	Nil	Nil	500	

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

a) Built-up Area	=	5.0 Ha
b) Forest area	=	180 Ha
c) Other-Shifting Cultivation Area (Current)	=	140 Ha
d) Other-Shifting Cultivation Area (Abandoned)	=	170 Ha
e) Wasteland	=	<u>230 Ha</u>
Total	=	725 Ha

Note : The area shown in the Map is different from the actual field area, the reason being the Satellite Image (LULC Map) was taken during 2005-06 (LISS-I, Image), which has been verified by actual field survey and taken into account.

2.13 Problems of the Area : The primary problems of the area is jhumming. Majority of the population depends on Jhum Cultivation for their livelihood. Vast tracks of abandoned Jhum areas are converted to vegetable and seasonal crops cultivation areas which has further degraded the capability of the land. In other words, unscientific method of cultivation has not only reduced the Jhum cycle, low crop yield but had adversely affected the ecological balance within the area. Road communication is another infrastructural problems that the area is facing where large volume crops like tamarind , 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 I

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 I images (2006). The activities were located on the field by using GPS and accordingly transferred to the maps on GIS platform.

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

1	2	3
Sl.No.	Scientific criteria/ inputs used	No. of projects in which scientific criteria were used
A.	Planning	
	Cluster approach	Yes
	Whether technical back-stopping for the project has been arranged? If yes, mention the name of the Institute.	2 NESAC,NIRD, SIRD
	Baseline survey	Yes
	Hydro-geological survey	No
	Contour mapping	No
	Participatory Net Planning (PNP)	Yes

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

3.2 Project Implementing Agency:

The PIA is the Soil & Water Conservation (C.C) Division Baghmara District of Meghalaya. The Project Manager will be the Divisional Soil and Water Conservation Officer and will be assisted by an Asst. Soil & Water Conservation Officer along with WDT members in which expertise is drawn from the relevant fields for achieving smooth and successful implementation of the project.

1	2	3	
Names of Districts	Names of projects	Details of PIA	
South Garo Hills	South Garo Hills– IWMP I	(i) Type of organization#	Government of Meghalaya
		(ii) Name of organization	Soil & Water Conservation (C.C) Division, Baghmara
		(iii) Designation & Address	Divisional Soil & Water Conservation Officer, (C.C)Division Baghmara
		(iv) Telephone	03639-222139
		(v) Fax	03639-222139
		(vi) E-mail	baghmarasoil@gmail.com

3.3 Institution Building

i) Watershed Committee (WC) Bugi

The Watershed Committee of the Bugi Micro, IWMP I was constituted with the active involvement of the villagers with strong support of the Traditional Institutions (Village Durbar/Council). The Bugi Micro Watershed Committee has been registered under the Society Registration Act 1860.

Table 3.2: Details of Watershed Committees (WC):Bugi

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18		
Names of the Districts	Names of projects	Names of WCs	Date of Registration as a Society (dd/mm/yyyy)	Designation	M/F	SC	ST	SF	MF	LF	Land-less	UG	SHG	GP	Any other	Educational qualification	Function/s assigned#		
SGH	SGH-IWMP-I	Bugi Micro Watershed Committee		Chairman	M	-	ST									Matriculate	A,B,C,D,E,F,G,H		
				Secretary	M	-	ST										Matriculate	A,B,C,D,E,F,G,H	
				Member	5M	-	ST											Class V to VIII	A,B,E,,G
				Member	3F	-	ST											Class V to VIII	A,B,E,G

- | | |
|---|---|
| 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 (ST)	F (ST)	Total	M	F	Total	
South Garo Hills	SGH. IWMP I	2	2	-	4	(i) Landless	-	-	-	-	-	-	-	-	-	-
						(ii) SF	-	-	-	-	-	-	-	-	-	-
						(I) MF	20	20	40	20	20	40	20	20	40	
						(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
South Garo Hills	South Garo Hills- IWMP -I	5	5	26	36	(i) Landless	-	-	-	-	-	-	-	-	-
						(ii) SF	2	-	2	2	-	2	2	-	2
						(I) MF	20	14	34	20	14	34	20	14	34
						(iv) LF	-	-	-	-	-	-	-	-	-
Total		5	5	26	36		22	14	36	22	14	36	22	14	36

CHAPTER IV
PROJECT ACTIVITIES

CHAPTER IV PROJECT ACTIVITIES

4.1 Preparatory Phase:

i) Entry Point Activities (EPA)

(Financial – Rs. in lakh)

1	2	3	4	5	6	7	8	9	10	11
Sl. No.	State	District	Names of Project	Amount earmarked for EPA	Entry Point Activities planned	Estimated cost	Expenditure incurred	Balance	Expected outcome	Actual outcome
1	Meghalaya	South Garo Hills	SGH – IWMP I	Rs 3.0 Lakh	Repairing of community hall	1.05	1.05	Nil	NA	NA
					Repairing of link road	1.50	1.50	Nil	NA	NA
					Construction of Foot path	0.45	0.45	Nil	NA	NA
					Total	Rs 3.0	Rs. 3.0			

ii) Other activities of Preparatory Phase:Bugi

1	2	3	4	5	6	7	8	9	10	11	12	13
District	Name of Projects	Initiation of village level institution	Capacity building	IEC activities	Baseline survey	Hydro-geological survey	Identifying technical support agencies	Resource agreements	Preparation of DPR	Evaluation of DPR	Any other (please specify)	Cost incurred (Rs. In lakh)
South Garo Hills	South Garo Hills – IWMP I	Community Organisation	<ol style="list-style-type: none"> 1. For WDT Members 2. For WC 3. For SHCs 4. For Farmers 5. For UGs 	-	Done	Done	Done	Done	Done	Done	-	1.5

Watershed Works Phase:

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

S I. N o	2 Name of States	3 Name of Districts	4 Name of Projects	5 Type of structures	6 Pre Project			7 Proposed Project													
					No	Area irrigated (ha)	Storage capacity	Augmentation/ repair of existing structures				Construction of new structures				Total target					
								No	Area to be treated (ha)	Storage capacity	Estimated cost (in lakhs)	No	Area to be treated (ha)	Storage capacity (per unit)	Estimated cost (in lakhs)	No	Area to be treated (ha)	Storage capacity (m ³)	Estimated cost		
1	Meghalaya	South Garo Hills	South Garo Hills – IWMP - I	(i) Tank	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
				(ii) Pond	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
				(iii) Lake	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				(iv) Check Dam	-	-	-	-	-	-	-	9 Nos.	72	1300	10.80	9 Nos.	72	11700	10.80	-	
				(v) Percolation Tank	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				(vi) Channel	-	-	-	-	-	-	-	550 Rm	7.5	-	1.125	550 Rm	7.5	-	1.125	-	
				(vii) Any others (please specify)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				1 Protection Wall	-	-	-	-	-	-	-	9 Nos	48	-	7.20	9 Nos	48	-	7.20	-	
2 Water Harvesting	-	-	-	-	-	-	-	9 Nos	45	1236	6.75	9 Nos	25	11124 m ³	6.75	-					
Total									27 Nos & 550 Rm	172.5 Ha	2536 m³	25.875	27 Nos & 550 Rm	172.5 Ha	22824 m³	25.875					

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

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		-
Nil	Nil	Nil	Nil	9 Nos.	72	11700	10.80	-	-	-	-	-
				-	-	-	-					
				550 Rm	7.5	-	1.125					
				9 Nos	48	-	7.20					
				9 Nos	25	11124m ³	6.75					

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

1	2	3	4	5	6		7						8						9			
					Pre-project		Proposed target						Achievement due to project									
					No.	Area irrigated (ha)	Augmentation/ repair of existing recharging structures			Construction of new recharging structures			Total target		Augmentation/ repair of existing recharging structures			Construction of new recharging structures			Total achievement	
No.	Area to be irrigated (ha)	Estimated cost	No.	Area to be irrigated (ha)			Estimated cost	Area to be irrigated (ha)	Estimated cost	No.	Area irrigated (ha)	Expenditure incurred	No.	Area irrigated (ha)	Expenditure incurred	Area irrigated (ha)	Expenditure incurred					
	Meghalaya	South Garo Hills	South Garo Hills - IWMP-I	(i)Open wells																		
				(ii)Bore wells				Nil														
				(iii)Any others (Pl. specify)		Nil	Nil			Nil						Nil			Nil			
				1 CC Check Dam 2 Water Harvesting				9	-	10.80												
				Total for the project				18		17.55												

4.2.3 Activities executed by User Groups in the Project Areas: Bugi

		3						
Names of Districts	Names of Projects	Major activities of the UGs –Targets						Amount of WDF to be collected (Rs.)
		Structure/ activity proposed				No. of UGs involved	Estimated Cost	
		Sl. No.	Type	No.#	Treatment (ha)			
South Garo Hills	Hills – IWMP I	1	Protection wall	5	26.66	5	Rs 4.0 Lakhs	Rs 0.2 Lakhs
		2	Water harvesting	5	25	5	Rs 3.75 Lakhs	Rs 0.1875 Lakhs
		3	CC Check dam	5	40	5	Rs 6.0Lakhs	Rs 0.3 Lakhs
		4	Run –off Disposal channel	275 RM	3.75	1	Rs 0.5625 Lakhs	Rs 0.28125 Lakhs

4.2.4 Activities executed by User Groups in the Project Areas: Bugi

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	Protection Wall	5	26.66	5	Rs 4.0 Lakhs	Nil	1440	960	Rs 0.2 Lakhs
2	Water Harvesting	5	25	5	Rs 3.75 Lakhs	Nil	1350	900	Rs 0.1875 Lakhs
3	CC Check Dam	5	40	5	Rs 6.0 Lakhs	Nil	2160	1440	Rs 0.3 Lakhs
4	Run-off Disposal Channel	275 RM	15	1	Rs 0.5625 Lakhs	Nil	202	135	Rs 0.28125 Lakhs
TOTAL			106.66						

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

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
South Garo Hills	South Garo Hills – IWMP I	1. Pisciculture	2	Rs 0.75 Lakh (Approx)
		2. Carpentry	3	Rs 0.85 Lakh (Approx)
		3. Kitchen Gardening	5	Rs 0.25 Lakhs (Approx)

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

4	5				6	7	8			9	10
No. of SHGs given training	Total assistance received by the SHG (Amount in Rs.)				Total annual Income generated (Rs.)	Total annual Savings (Rs.)	No. of SHGs Graded as			Total Amount of loan sanctioned by the bank(s)	No. of SHGs federated
	Loan from revolving fund	Training	Material	Others (pl. specify)			I	II	I		
5	-	3.75	-	-	5.3	-	-	-	-	-	-

4.2.7 Other activities of watershed works phase: Bugi

1	2	3		4		5		6		7		8		9		10		11		12		13
District	Names of projects	Ridge area treatment		Drainage line treatment		Nursery raising		Land development		Crop demonstrations		Pasture development		Veterinary services		Fishery development		Non-conventional energy		Any other (please specify)		Total cost incurred (Rs. In lakhs)
		(a)	(b)	(a)	(b)	(a)	(b)	(a)	(b)	(a)	(b)	(a)	(b)	(a)	(b)	(a)	(b)	(a)	(b)			
SGH	SGH IWMP -I	55 Ha	6.171 lakh	192.5 Ha	25.875 lakh	90,000 Nos	5.454 lakh	-	-	-	-	-	-	-	-	-	-	-	-	-	20.25	57.75

4.2.8 Details of engineering structures in watershed works: Bugi

1	2	3	4			5			6	7				8										
			Type of treatment			Type of land				Executing agency	Target				Achievement									
			(i) Ridge area (R)	(ii) Drainage line (D)	(iii) Land Dev. (L)	(i) Private	(ii) Community	(iii) Others (pl. specify)			(i) UG (ii) SHG (iii) Others (pl. specify)	No. of units (No./cum./rmt)	Estimated cost (Rs. in lakh)				Expected month & year of completion (mm/yyyy)	No. of units (No./cu.m./rmt)	Expenditure incurred (Rs. in lakh)				Status of completion	Actual month & year of completion (mm/yyyy)
M	W	O	T	M	W	O	T																	
South Garo Hills	South Garo Hills-IWMP-I	Staggered trenching																						
		Loose boulder																						
		Contour bund																						
		Graded bunding																						
		Protection wall			L	P	C		Beneficiary/UG	9	1.6	2.40	4.0	2012-13	9	1.6	2.40	4.0	2012-13					
		Earthen checks dams																						
		Masonry stop Dams																						
		Gully plug																						
		Gabion structures																						
		Underground dykes																						
		Field bunds																						
		Any others (pl. specify)																						
		1.CC Check Dam	R	D		P	C		UG Beneficiary	9	4.32	6.48	10.8	2012-13	9	4.32	6.48	10.8	2012-13					
		2.Water Harvesting								9	2.7	4.05	6.75	2012-13	9	2.7	4.05	6.75	2012-13					

Contd.

4.2.9 Details of engineering structures in watershed works: Bugi

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	
2000	172.5	1.5	1.3	905	1810	12 Lakhs	25 Lakhs	-	6280	3480	2800	6280	Nil	24	Nil	Nil	24	

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

1	2	3	4			5			6	7				8				
District	Project	Name of structure/ work	Type of treatment			Type of land			Executing agency	Target				Achievement				
			(i) Ridge area (R)	(ii) Drainage line (D)	(iii) Land dev. (L)	(i) Private	(ii) Community	(iii) Others (pl. specify)	(i) UG (ii) SHG (iii) Others (pl. specify)	Area (ha)	No. of plants	Estimated cost (Rs. in lakh)	Expected month & year of completion (mm/yyyy)	Area (ha)	No. of plants	Expenditure incurred (Rs. in lakh)	Actual month & year of completion (mm/yyyy)	
South Garo Hills	South Garo Hills IWM P-I	Afforestation	✓				✓		UG & SHG	55	5,500	6.171	2012-13	-	-	-	-	
		Regeneration												-	-	-	-	
		Agro-forestry												-	-	-	-	
		Fuel wood																
		Fodder																
		Agro-Horticulture													-	-	-	-
		Pasture dev.																
		Nursery raising						✓			75 Ha	90,000	5.454	2012-13				
		Others (Coffee)													-	-	-	-

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.): Bugi

9														
Outcomes														
Reduction in run off (cu.m)	Production (quintal)		Income (Rs.)		Mandays generated					No. of beneficiaries				
	Pre-project	Post project	Pre-project	Post project	SC	S T	Others	Women	Total	SC	ST	Others	Women	Total
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	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	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

4.2.12 Details of allied / other activities: Bugi

1	2	3	4			5	6		7	
District	Project	Name of activity@	Type of land			Executing agency	Target		Achievement	
			(i) Private	(ii) Community	(I) Others (landless)	(i) UG (ii)SHG (I) Others (pl. specify)	Estimated cost (Rs. in lakh)	Expected month & year of completion (mm/yyyy)	Expenditure incurred (Rs. in lakh)	Actual month & year of completion (mm/yyyy)
South Garo Hills	South Garo Hills-IWMP I	Crop demonstration			3 units	Individual	0.24	2012-13	0.24	2012-13
		Carpentry			Nil	Nil	Nil	Nil	Nil	Nil
		Bee Keeping			Nil	Nil	Nil	Nil	Nil	Nil
		Backyard Poultry			Nil	Nil	Nil	Nil	Nil	Nil
		Small Ruminants			Nil	Nil	Nil	Nil	Nil	Nil
		Other Livestocks			Nil	WC	Nil	Nil	Nil	Nil
		Fisheries(Pisciculture)	10	Nil	Nil	UG,SHGs, WC	1.58	2012-13	1.58	2012-13
		Non Conventional energy Saving devices (bio fuel)	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
		Energy conservation measures	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
		Others (Pl. specify) Kitchen Gardening	10 units	Nil	Nil	SHG/UG	0.5	2012-13	0.5	2012-13

(Contd.)

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

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

4.2.13 Details of allied / other activities:

8											
Outcomes											
Income (Rs.)		Mandays generated					No. of beneficiaries				
Pre-project	Post project	SC	ST	Others	Women	Total	SC	ST	Others	Women	Total
Nil	12.0 Lakhs	Nil	4320	Nil	2880	7,200	Nil	24	Nil	Nil	24

4.3 Consolidation and withdrawal phase: Bugi

Details of activities in the CPRs in the project areas: Bugi

1 Names of the Districts	2 Names of projects	3 Name (s) of the villages	4 CPR particulars	5 Activity proposed	6 Target				7 Achievement						
					Target area under the activity (ha)	Estimated expenditure (Rs.)	Expected no. of beneficiaries	Estimated contribution to WDF (Rs.)	Area treated under the activity (ha)	Expenditure incurred (Rs.)	Actual no. of beneficiaries	No. of mandays			WDF collected (Rs.)
												S	ST	F	
South Garo Hills	South Garo Hills-IWMP-I	Bugire	1. Protection/ Retaining Wall	Repairing	7	1.05 lakhs	7	0.0525 lakhs	7	1.05	7		378	252	0.0525 lakhs
			2. Water Harvesting Structure	Repairing	8	1.2	8	0.06 Lakhs	8	1.2	8		432	288	0.06 Lakhs
			3. CC Check Dam	Repairing	6.66	1.0	5	0.05 Lakhs	6.66	1.0	5		360	240	0.05 Lakhs

CHAPTER V
PROJECT PHASING & BUDGETING

CHAPTER V PROJECT PHASING & BUDGETING

ACTION PLAN OF BUGI MICRO WATERSHED UNDER IWMP-I

Name of District:	South Garo Hills
Name of C&RD Block:	Chokpot

Rs. In Lakhs

Sl No.	Activities	1st Year		2nd Year		3rd Year		4th Year		5th Year		Total	
		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
I	MANAGEMENT COST 10 %	0.60 %		2 %		4.30%		3.10%				10 %	
A	Administration Cost												
i	Honourarium of WDT Members @ Rs. 5,000 Month: 1 No.	6 Mnths	0.30	4 Mnths	0.20	20 Mnths	1.00	18 Mnths	0.90			48 Mnths	2.40
ii	Honourarium of Watershed Volunteers @ Rs 1,000			10 Mnths	0.10	10 Mnths	0.20	4 Mnths	0.20			24 Mnths	0.50
iii	Honourarium WCO's @ Rs. 750 Month				-	14 Mnths	0.11	10 Mnths	0.0750			24 Mnths	0.18
iv	Honourarium Chartered Accountant						0.15		0.15				0.30
v	TA/DA of Field Asstt. @ Rs. 5000Month	3 Mnths	0.15	6 Mnths	0.30	10 Mnths	0.50	5 Mnths	0.25			24 Mnths	1.2
vi	Hiring charges of office building @ Rs 2000				-	16 Mnths	0.32	8 Mnths	0.16			24 Mnths	0.48
vii	Hiring charges of vehicle @ Rs. 2000				-	6 Mnths	0.12	6 Mnths	0.12			12 Mnths	0.24
viii	Office expenses, PQL, Stationeries, printing of SHG's books, pamphlets, tea, snacks etc.				0.90		0.831		0.469				2.20
	Total of A	9 Mnths	0.45	20 Mnth	1.50	76 Mnth	3.226	51 Mnth	2.3236			156 Mnth	7.5
	PREPARATORY PHASE 4 %	4 %										4 %	
B	Entry Point Activites:												
i	Renovation/ Repairing of Community Hall	1 No.	1.05									1 No.	1.05
ii	Foot Path	1 Km.	0.45									1 Km.	0.45
iii	Repairing of Link Road 1 Km @ Rs. 1.5 Lakhs	1 Km.	1.5									1 Km.	1.5
	Total of B	1 No. 2 Km.	3.00									1 No. 2 Km.	3.00

C	Training	5 %	0.40 %	2.00 %	2.6 %					5 %		
i	Community Organization		1 No.	0.15	1 No.	0.30	2 Nos.	0.60		4 Nos.	1.05	
ii	Training of WDT at NIRD/ Guwahati				1 No.	0.20	2 Nos.	0.40		3 Nos.	0.60	
iii	Taining for W.C		1 No.	0.15	1 No.	0.20	1 No.	0.30		3 Nos.	0.65	
iv	Taining for SHGs				1 No.	0.25	1 Nos.	0.25		2 Nos.	0.50	
v	Taining for Farmers				1 No.	0.20	2 Nos.	0.40		3 Nos.	0.60	
vi	Training for Ugs				1 No.	0.35				1 Nos.	0.35	
	Total of C		2 Nos	0.30	6 Nos	1.50	8 Nos	1.95		16 Nos.	3.75	
D	Detailed Project Report	1 %	1 %							1 %		
i	1 No. of vehicle hiring charge		30 Days	0.50						30 Days	0.50	
ii	Detail Base Line Survey, Identification of Enggineering Structures, PRA Exercise, Making Estimate & Project Report etc.			0.25							0.25	
	Total of D		30 Days	0.75						30 Days	0.75	
E	Monitoring & Evaluation	2 %		0.5 %	0.8333 %	0.667 %				2 %		
i	Monitoring				1 No.	0.15	1 No.	0.3125	1 No.	0.25	3 Nos	0.71
ii	Evaluation				1 No.	0.225	1 No.	0.3125	1 No.	0.25	3 Nos	0.79
	Total of E				2 Nos.	0.375	2 Nos	0.63	2 Nos.	0.50	6 Nos	1.500
	Total of I (A to E)		9 Mnths 3 Nos 30 Days	4.50	20 Mnths 8 Nos.	3.38	76 Mnths 10 Nos.	5.801	51 Mnths 2 Nos.	2.8236	156 Mnths 23 Nos. 30 Days	16.50
II	PROJECT COST/ WATERSHED WORKS PHASE			3.168 %	2.2 %	10.132 %				15.5 %		
A.	Non-Arable Land Treatment	15.50 %										
i	Nursery Establishment-Arecanut, 90,900 Nos. 75 Ha @ Rs. 6 / No.							90,900	5.454		90,900	5.454
ii	Afforestation (Non Pine) 55 Ha @ Rs. 11,220/-											
	a) Preliminary Year @ Rs. 4,320 /- per Ha				55 Ha.	2.376					55 Ha.	2.376
	b) 1st Year Planting @ Rs. 3,000 /- per Ha						Mntce	1.65				1.65
	c) 2nd Year Planting @ Rs. 3,900 /- per Ha								Mntce	2.145		2.145
	Total of A				55 Ha.	2.376		1.65	7.599		55 Ha. 90,900 Nos.	11.625
B	Drainage Line Treatment	34.50 %		0 %	28.767 %	5.73333 %				34.50 %		
ii	Protect/ Retaining Wal @ Rs. 80,000						7 Nos.	5.60	2 Nos.	1.60	9 Nos.	7.20
iii	Water Harvesting Structure @ Rs. 75,000						7 Nos.	5.25	2 Nos.	1.50	9 Nos.	6.75
iv	C.C Check Dam @ Rs. 120,000						8 Nos.	9.60	1 No.	1.20	9 Nos.	10.80
v	Run-off Disposal/ Diversion Channel as per Estimate						550 Rm.	1.125			550 Rm.	1.125
	Total of B						22 Nos. 550 Rm.	21.575	5 Nos.	4.30	27 Nos 550 Rm.	25.875
	Total of A+ B	50 %			55 Ha.	2.376	550 Rm. 22 Nos.	23.225	11.899 90,905 Nos.		550 Rm. 55 Ha. 90,927 Nos.	37.50

C	Livelihood Activities & Production System and Micro Enterprises	23 % (10+13)			6.332%		11.298%		5.36987%				23 %
i	Rubber Plantation 42 Ha. @ Rs. 28,935												
	a) Pre-Work @ Rs. 7750/- per Ha.			51.6 Ha	3.999							51.6 Ha	3.9990
	b) 1st Year Planting including cost of Rubber Stump @ Rs. 14,600 /- per Ha.					Mntce	7.534						7.5336
	c) 2nd Year Planting @ Rs. 6,585 /- per Ha.							Mntce	3.39787				3.39787
ii	Pisciculture @ Rs. 3 /-			25,000	0.75	15,000	0.45000	12,651	0.37953			52,651	1.58
ii	Carpentry 4 Units @ Rs. 8,000					3 Units	0.240					3 Units	0.240
iii	Kitchen Gardening @ Rs. 5,000 /- per unit					5 Units	0.25	5 Units	0.25			10 Units	0.50
	Total of D			51.6 Ha 25,000Nos.	4.749	8 Units 15,000Nos.	8.474	5 Units 50,000 Nos.	4.027			13 Units 52,651Nos. 52 Ha.	17.25
D	Consolidation & Exit Phase	5 %										5 %	5 %
ii	Repairing of Protection/ Retaining Wall											7 Nos.	1.05
iii	Repairing of Water Harvesting Structure											6 Nos.	1.20
iv	Repairing of C.C Check Dam											5 Nos.	1.00
v	Preparation of Project Completion Report											1 No.	0.25
vi	Documentation of the Project											1 No.	0.25
	Total of E											20 Nos.	3.75
	Total of II (A+B+C+D)				7		32		16			3.75	58.50
	Grand Total				4.50		10.50		37.50			18.75	75.00
		100 %		6 %		14 %		50 %		25 %		5 %	100 %

Remark(if any)

Approved by :-

(Signature)
(Smt. H. H. K. Marak)
The Chair Person of D.M.D.C.
& The Deputy Commissioner
South Garo Hills, Bagmara.
Deputy Commissioner,
South Garo Hills,
Bagmara.

Signed by (Name, Designation Office)

(Signature)
(L. J. Marak)
Divisional Soil & Water Conservation Officer
Bagmara Soil Conservation Cash Crop Division
South Garo Hills::: Meghalaya.

**ABSTRACT OF PERSPECTIVE PLAN FOR CONVERGENCE OF NREGS WITH IWMP 2009-10
AT BUGIGRE VILLAGE UNDER BUGI MICRO WATERSHED,SGH - IWMP-I**

Name of Village : Bugigre

Total No. of Job Card Holder : 24 Households

Total Wage Component @ Rs 117/- per annum in the 1st year	Rs. 2,06,739
Total Wage Component @ Rs 117/- per annum in the 2nd year	Rs. 6,08,739
Total Wage Component @ Rs 117/- per annum in the 3rd year	Rs. 247656
Total Wage Component @ Rs 117/- per annum in the 4th year	Rs.
Total Wage Component	= Rs. 10,63,134

SI No	Activities	Units	PROJECT PERIOD												Total			Mandays to be Generated	
			2011-12			2012-13			2013-14			2014-15			Phy	Financial			Total
			Phy	Financial		Phy	Financial		Phy	Financial		Phy	Financial						
				Wages	Material		Wages	Material		Wages	Material		Wages	Material					
1	Afforestation @ Rs. 11,220	Nos.	7.5	50,490	33,660	7.5	50,490	33,660	7.5	50,490	33,660				22.5	1,51,470	1,00,980	2,52,450	1295
2	Rubber Plantation @ Rs. 28935 per Ha.	Ha.	9	1,56,249	1,04,166	9	1,56,249	1,04,166	6	1,04,166	69,444				24	4,16,664	2,77,776	694440	3561
3	Protection Wall/Retaining Wall @ Rs. 80,000/-	Nos.				2	96,000	64,000	1	48,000	32,000				3	1,44,000	96000	240000	1231
4	Water Harvesting @ Rs. 75,000/-	Nos.				2	90,000	60,000	1	45,000	30,000				3	135000	90000	225000	1154
5	CC Check Dam @ Rs. 1,20,000/-	Nos.				3	2,16,000	1,44,000							3	216000	144000	3,60,000	1846
	Total			2,06,739	1,37,826	7	6,08,739	4,05,826	2	2,47,656	1,65,104				9	10,63,134	7,08,756	17,71,890	9087
			16.5	Ha		17	Ha		14	Ha.					46.5	Ha.			

Amount Allocated for Covergence for the period 2011-12 to 2014-15

1. Wage Component Rs 10,63,134

2. Material Component Rs. 7,08,756

Grand Total Rs. 17,71,890

Grand Total (Seventeen lakhs seventy one thousand eight hundred eighty eight) only

Alphon M Sangma
President
Bugigre VEC
Chokpot C&RD Block
South Garo Hills

Prakash
Deputy Commissioner
South Garo Hills,
Baghmara.

Barua Bashi Ch. Mar
Barua
NREGS South Garo Hills
Secretary
Bugigre VEC
Chokpot C&RD Block
South Garo Hills

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

1	2	3	4	5	6		7	8	9	10				11				
					From	To				Cultivated rainfed area	Cultivated irrigated area	Uncultivated wasteland		Pvt. Agri. Land	Forest land	Comm unity land	Othe rs (pl. speci fy)	Total area (ha)
SL No	Name of State	Name of Distric ts	Names of Projects	Year of sanct ion	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)					
1	Meghalaya	South Garo Hills	South Garo Hills – IWMP I	2009 -10	2009- 10	2013 -14	724.59 Ha	75 Lakhs	Bugi Micro W/shed NA	160.4	Nil	339.6	Nil	34	180	90	196	500

Fund provision for the IWMP projects from all sources: Bugi

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 contribution	Name	Financial contribution	Name	Financial contribution	Name	Financial contribution	
South Garo Hills	South Garo Hills – IWMP I	67.5 lakhs	7.5 lakhs	NREGS	10.63134	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	85.63134 Lakhs

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

1	2	3	4	5				6				
Sl. No.	Names of States	Name of Districts	Names of Projects	Distt. Agency's Project Account details				Watershed Committee (WC) account details:				
				Name of the Bank and Branch where project account has been opened	Account Number (to be obtained confidentially)	Account type (Savings/ Current/ Others)	Name & Designation of authorized persons who operate the account.	Name of Watershed Committee	Name of the Bank and Branch where project account has been opened	Account number (to be obtained confidentially)	Account type (Savings/ current others)	Name & Designation of authorized persons who operate the account.
1	Meghalaya	South Garo Hills	South Garo Hills – IWMP I	State Bank of India, Baghmara Branch	30979504014	Zero Balance Account	Shri L.N Marak , DS&WCO	Bugi Micro Watershed Committee	SBI, Baghmara	31513165585	Saving	Shri Alep M Sangma (Chairman of Bugi Micro Watershed) & Abel Sangma (Secy)

Details of Convergence of IWMP with other Schemes: Bugi

	1	2	3	4	5	6	7
Sl. No.	District	Names of projects	Names of Departments with Schemes converging with IWMP	Fund made available to IWMP due to convergence (Rs. in lakh)	Name of activity/task/structure undertaken with converged funds	Reference no. of activity/ task/ structure in DPR [@]	Level at which decision for convergence was taken ^{\$}
					(a) Structures (b) livelihoods (c) Any other (pl. specify) [#]		
1	South Garo Hills	South Garo Hills – IWMP I	* Community Rural Development Department NREGS	10.63134	a) Afforestation 22.5 Ha. b) Rubber Plantation 24 Ha. c) Protection Wall/Retaining Wall 3 nos. d) Water Harvesting 3 nos. e) CC Check Dam 3 nos.	-	Block Level & District Level

Note: Bugigre village

(a)Afforestation 22.5 ha.

(b)Rubber Plantation 24 ha.

(c)Protection Wall/Retaining Wall 3 nos

(d)CC. Check Dam 3 nos

(e)Water Harvesting 3 nos

Wages-1.5147 Lakhs;

Wages-4.16664 Lakhs;

Wages-1.44 Lakhs;

Wages-2.16 Lakhs;

Wages-1.35 Lakhs;

Material- 1.0098 Lakhs;

Material-2.77776 Lakhs;

Material-0.90 Lakhs;

Material-1.44 Lakhs;

Material- 0.90 Lakhs;

Public-Private Partnership in the IWMP projects: Bugi

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				
South Garo Hills	South Garo Hills IWMP-I	Nil	Nil			Nil	Nil	Nil	Nil	Nil	Nil

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

CHAPTER VI
CAPACITY BUILDING

CHAPTER VI CAPACITY BUILDING

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

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

1 S. No	2 State	3 Name of the Training Institute	4 Full Address with contact no., website & e-mail	5 Name & Designation of the Head of Institute	6 Type of Institute [#]	7 Area(s) of specialization ^{\$}	8 Accreditation details	9 Performance				
								Refer-ence Year	No. of trainings assigned	No. of trainees to be trained	No. of trainings conducted	No. of trainees trained
1	Guwahati	NIRD (NER)	Khanapara, Guwahati	Director	Training Institute	Training e.t.c	-	2009-10	3	2	3	2
2	Meghalaya	SIRD	Nongster, Ri-Bhoi District	Director, Smt Lona R Sangma	Training Institute	Training e.t.c	-	2011	1	1	1	1
3	Meghalaya	RRTC	Umran, Ri-Bhoi District	Director	Production & Training	Trainig & Production	-	2010, 2011, 2012	3	4	3	4
4	Meghalaya	CTI	Byrrnihhat	Jt. Director K.S Kapley	Training	Training	-	-	-	-	-	-
5	Meghalaya	ICAR	Umium	Director Dr. S.V Ngachan	Research & Development	Research & Development	-	-	-	-	-	-
6	Meghalaya	NEHU	Tura Campus	S.S Khare Pro-vice Chancellor	Academic & Research	Academic & Research	-	-	-	-	-	-

- 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 31/01/2010 (dd/mm/yyyy)*Bugi

1 Project Stakeholders	2 Total no. of persons	3 No. of persons trained so far	4 No. of persons to be trained during current financial year	5 No. of persons trained during current financial year	6 Sources of funding for training		7 Funds utilized (Lakhs)	
					a) DoLR	b) Any other (Pl. specify)	a) DoLR	b) Any other (Pl. specify)
SLNA	-	-	-	-	3.75	-	1.50	-
DRDA/ZP cell	-	-	-	-				
PIAs	40	5	16	5				
WDTs	2	-	2	-				
UGs	65	-	65	Nil				
SHGs	40	-	40	-				
WCs	12	-	12	12				
GPs	-	-	-	-				
Community	372	-	65	65				
Others Pl. specify)	-	-	40 (Farmers)	-	-	-	-	-

Table 6.3: Information, Education & Communication (IEC) activities for the year 09-10 as on 31/01/10 (dd/mm/yyyy)*-Bugi

	1	2	3	4	5
	Activity	Executing agency	Estimated expenditure (Rs.)	Expenditure incurred (Rs.)	Outcome (may quantity, wherever possible)
1.	Awareness	S&WC (CC) Division	0.75	0.75	-
4.	Capacity Building	S&WC (CC) Division			

CHAPTER VII
EXPECTED OUTCOME

CHAPTER VII EXPECTED OUTCOME

Table 7.1 Employment related outcomes: Bugi

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.	Bugigre	-	100 %	11204	7469	18673		100 %	77	55	132		100 %	40	25	65

Table 7.2 Migration Details: Bugi

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
South Garo Hills	SGH-IWMP-I	Bugigre		N	I	L				

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

Table 7.3 Economic benefits accrued to women: Bugi

1		2		3		4
Wages		Training		Livelihoods		Total (Rs. in lakh)
Woman days	Amount (Rs. in lakh)	No. of women participants	Amount (Rs. in lakh)	No. of women beneficiaries	Value of assistance provided (Rs. in lakh)	
9600	16	52	1.5	40	3.45	20.95

* 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: Bugi

1 Names of the Districts	2 Names of the projects	3 Names of the villages	4 Particular of CPR	5 Nature of right	6 Period of right	7 Beneficiary details (no. of families)				8 User Charges (Rs.)
						SC	St	Others	Total	
South Garo Hills District	SGH-IWMP-I	Bugigre	Community Forest	Fw	6 months	-	24	-	24	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
O	for any right other than indicated above	(please specify)

Table 7.5 Water related outcomes: Bugi

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
South Garo Hills District	SGH-IWMP I	Open wells	1.5	1.4	1.3	0.2	-
		Bore wells	NA	NA	NA	NA	NA
		Others (specify) Springs	Very poor	Poor	Good	Increased	

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

Table 7.5.2 Status of Drinking water: Bugi

1	2	3			4			5
District	Name of the project	Availability of drinking water (no. of months in a year)			Quality of drinking water			Comments
		Pre-project	Post-project	Change in availability	Pre-project	Post-project	Change in quality	
South Garo Hills District	SGH-IWMP I	Insufficient	Sufficient	10-12 months	Moderate	Improved	Improved	Improved & Sufficient

* 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: Bugi

1	2	3	4			
District	Name of the project	Name of major crop	Water savings in cu.m.			
			through water saving devices [§]	through water conserving agronomic practices [#]	Any other (pl specify)	Total
South Garo Hills District	SGH-IWMP I					

* From column no. 2, total number of States implementing the programme, from column no. 3, total no. of Districts; from column no. 4, total no. of projects, from column no. 6, practice-wise totals may be mentioned at the end of the table for the entire country.

[§] Sprinkler, Drip, PVC pipe, etc.

[#] Vermi-compost, organic manuring, Mulching, Check basin, Alternate furrow, Ridges & furrow & other scientific practices.

Table 7.6: Vegetation/ crop related outcomes: Bugi

Table 7.6.1 Details of Karif crop area and yield in the project areas: Bugi

1	2	3	4						5						6					
			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.	Irri	Rf.	
South Garo Hills District	SGH-IWMP I	Rice	-	6.2	-	15	-	93	-	5	-	18	-	90	-	4	-	24	-	96
		Maize	-	12.7	-	6	-	76	-	5	-	8	-	40	-	4	-	8	-	32
		Ginger	-	12.7	-	25	-	318	-	5	-	28	-	140	-	4	-	29	-	116
		Turmeric	-	12.7	-	30	-	381	-	5	-	32	-	160	-	4	-	33	-	132
		Chilli	-	12.7	-	4	-	51	-	5	-	6	-	30	-	4	-	7	-	28
		Tapioca	-	12.7	-	30	-	381	-	5	-	32	-	160	-	4	-	33	-	132
		Brinjal	-	12.7	-	20	-	254	-	5	-	22	-	110	-	4	-	23	-	92
		Cowpea	-	12.7	-	15	-	191	-	5	-	17	-	85	-	4	-	18	-	72
		Pumpkin	-	12.7	-	50	-	635	-	5	-	53	-	265	-	4	-	54	-	216
		Colocassia	-	12.7	-	35	-	445	-	5	-	36	-	180	-	4	-	38	-	152
		Cucumber	-	12.7	-	35	-	445	-	5	-	36	-	180	-	4	-	38	-	152
		Total		133.2		265		3270		55		288		1440		44		305		1220

Note : The Area of Jhum crops decreases in the Mid- term and Post project because of converting it to Permanent Plantation (Rubber & arecanut).

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

Irri. – Irrigated Rf – Rainfed

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

1	2	3	4	5	6						7						8						
					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.	
SI No.	Names of States	Names of the Districts	Name of Projects	Name of crops	Cabbage	-	-	-	-	-	-	3	-	10	-	30	-	5	-	15	-	75	
					Knol khol	-	-	-	-	-	-	4	-	90	-	360	-	6	-	95	-	570	
					Mustard	-	-	-	-	-	-	3	-	8	-	24	-	5	-	10	-	50	
					Raddish	-	-	-	-	-	-	4	-	80	-	320	-	6	-	86	-	516	
					Cauliflower	-	-	-	-	-	-	5	-	10	-	50	-	7	-	57	-	399	
	Meghalay ^a	South Garo Hills.	Total for the District																				

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

Irri. – Irrigated Rf – Rainfed

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

1	2	3	4	5	6						7						8					
					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.	Irri	Rf.			
	Meghalaya	South Garo Hills District	SGH-IWMP I	Maize		12.7		6		76.2		3		7		21		3		8		24
			Total for the District																			

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

Irri. – Irrigated Rf – Rainfed

Table 7.6.4 Increase/ Decrease in area under fodder: Bugi

1	2	3	4			5		
District	Name of project	Duration of Project	Existing area under fodder (ha)			Achievement (ha)		
			Source/Name of report	Year of reference	Area already under fodder	Area under fodder proposed to be covered through IWMP	Area under fodder actually covered through IWMP	Change in area under fodder
South Garo Hills District	SGH-IWMP I	5yrs(2009-10 to 2013-14)	PIA, Soil & Water Conservation Department	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 7.6.5 Increase/ Decrease in Forest/vegetation cover: Bugi

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
South Garo Hills District	SGH-IWMP I	5yrs	LULC Map, NESAC, Umiam	2005-06	180	55	55	55

* 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: Bugi

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
South Garo Hills District	SGH-IWMP I	5yrs	LULC Map, NESAC, Umiam	2005-06	Nil	126.6	126.6	126.6

* 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: Bugi

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
South Garo Hills District	SGH-IWMP I	-	-	-	-	-	-	-

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

Table 7.7 Livelihood related outcomes: Bugi

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	
South Garo Hills District	SGH-IWMP I	Cattle	34	1632 Kg	2.44 lakh	38	1824 kg	2.736 lakh	45	2160	3.24	
		Poultry	204	183.6 kg	0.23868 lakh	215	193.5 kg	0.2515 lakh	260	234	0.342	
		Piggery	47	1128 kg	1.8048 lakh	51	1224 kg	1.95 lakh	60	1440	2.304	
	Total for all projects											
Total for all Districts												

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

Table 7.7.2 Details of other livelihoods created for landless people: Bugi

1	2	3	4	5				6	7					8				
District	Project	Name of activity	Fund required for the activity (Rs.)	Sources of funding (Rs.)				Actual Expenditure incurred on activity (Rs.)	No. of beneficiaries trained					No. of beneficiaries taking up activity				
				Project Fund	Beneficiary	Others (pl. specify)	Total		SC	ST	Others	Women	Total	SC	ST	Others	Women	Total
South Garo Hills District	SGH-IWMP I	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil

(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: Bugi

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

Table 7.7.4 Details of other livelihoods created for farmers: Bugi

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	Beneficiary	Others (pl. specify)	Total		S F	MF	LF	Total	S F	MF	LF	Total
South Garo Hills District	SGH-IWMP -I	1.Pisciculture	1.659	1.58	0.079	-	1.659	1.58	-	60	-	60	-	10	-	10
		2.Rubber	15.6805	14.9305	0.75		15.6805	14.9305		80		80		80		80
		3.Carpentry	0.240	0.240	-	-	0.240	0.240	-	25	-	25	-	5	-	5
		4.Kitchen Gardening	0.525	0.5	0.025	-	0.525	0.5	-	60	-	60	-	25	-	25

* 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	
(i) 20	30	35,000	-	-	-	-	-
(ii) 70	150	60,000	-	-	-	-	-
(iii) 10	15	35,000	-	-	-	-	-
(iv) 20	45	25,000	-	-	-	-	-

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.)
South Garo Hills District	SGH-IWMP I	(A) Backward linkages			
		(i) Seed certification	-	-	-
		(ii) Seed supply system	-	-	-
		(iii) Fertilizer supply system	-	-	-
		(iv) Pesticide supply system	-	-	-
		(v) Credit institutions	-	1	2
		(vi) Water supply	-	-	-
		(vii) Extension services	-	2	5
		(viii) Nurseries	-	1	2
		(ix) Tools/machinery suppliers	-	-	-
		(x) Price Support system	-	-	-
		(xi) Labour	-	-	-
		(xii) Any other (please specify)	-	-	-
		(A) Forward linkages			
		(i) Harvesting/threshing machinery	-	-	-
		(ii) Storage (including cold storage)	-	-	-
		(iii) Road network	-	-	-
		(iv) Transport facilities	-	-	-
		(v) Markets / Mandis	-	-	-
		(vi) Agro and other Industries	-	-	-
		(vii) Milk and other collection centres	-	-	-
		(vI) Labour	-	-	-
		(ix) Any other (please specify)	-	-	-

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

Table 7.9 Abstract of outcomes: Bugi

1	2	3	4	5	6	7
Sl. No.	State	Item	Unit	Pre-project Status	Post-project Status	Remarks
		Status of water table	Nil	Very poor - poor	Good	
		Ground water structures repaired/ rejuvenated		-	13 nos.	
		Quality of drinking water		Moderate potable	Improved	
		Availability of drinking water		Insufficient	Sufficient	
		Increase in irrigation potential		-	-	
		Change in cropping/ land use pattern		-	-	
		Area under agricultural crop				
		i Area under single crop	Ha.	40	50	
		ii Area under double crop		-	-	
		I Area under multiple crop		310	100	
		Net increase in crop production area	Ha.		50	
		Increase in area under vegetation	Ha.	180	235	
		Increase in area under horticulture	Ha.	-	126.6	
		Increase in area under fuel & fodder	Ha.	-	-	
		Increase in milk production	Litres	-	-	-
		No. of SHGs	Nos.	-	10	
		Increase in no. of livelihoods		-	24	
		Increase in income	Rs in lakhs	0.25 - 0.35	0.35 – 0.45	
		Migration	Nos.	-	-	
		No. of school going children	Nos.	20	40	
		SHG Federations formed	Nos.	-	-	
		Credit linkage with banks	Nos.	-	5	
		Resource use agreements	Nos.	Nil	2	
		WDF collection & management		Nil	1.875 Lakhs	Used for repairing works
		Summary of lessons learnt	May be attached as a separate file			

Table 7.10 Cost effectiveness of structures/ activities*

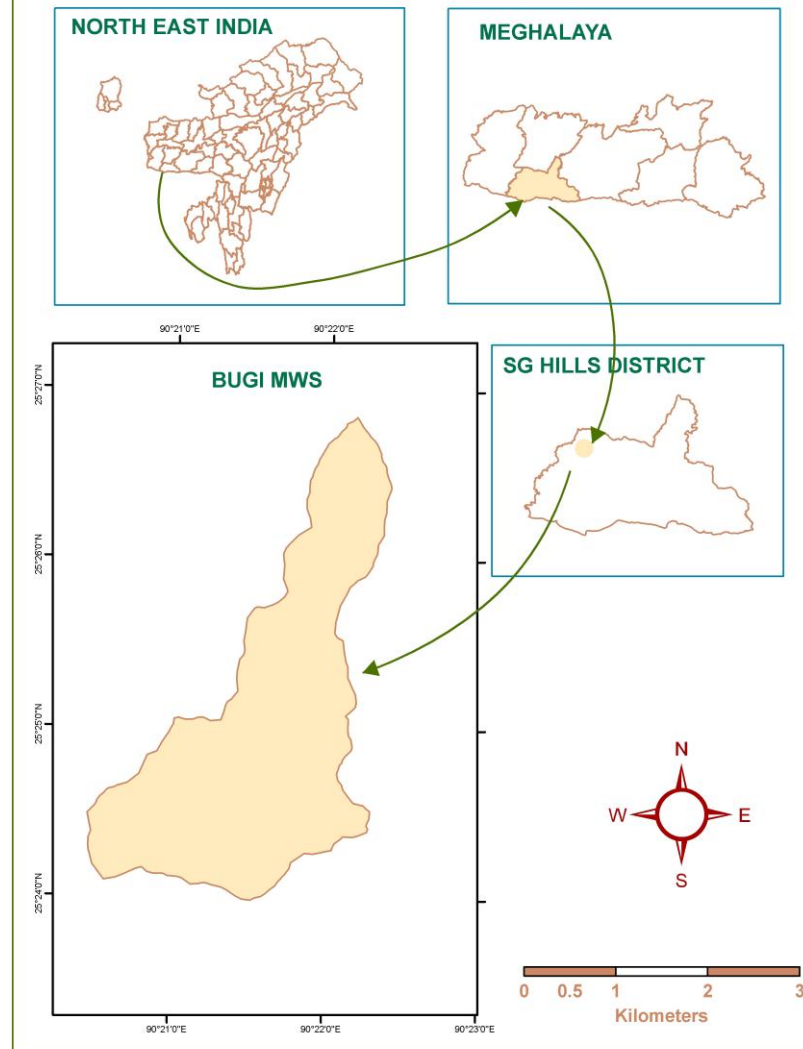
1	2	3	4	5	6	7	8	9	10
District	Name of project	Name of WC	Name of structure/ activity	Estimated cost (Rs.)	Expected quantifiable benefits (Rs.)	Expenditure incurred (Rs.)	Actual quantifiable benefit (Rs.)	Benefit: Cost ratio [#]	IRR
South Garo Hills District	SGH-IWMP I	Bugi (IWMP-I)	As per Treatment Plan	58.5 lakhs	87.75 lakhs	58.5 lakhs	-	1 : 1.5	-

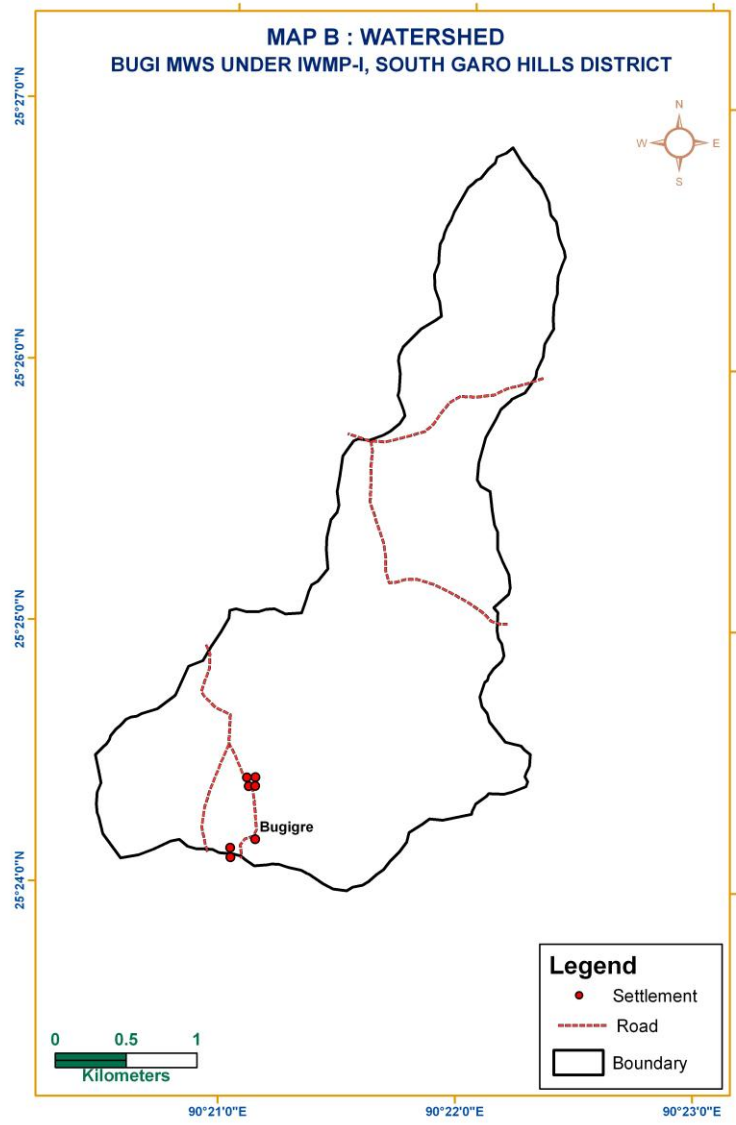
* from column no. 2, total no. of States implementing the programme, from column no. 3, total no. of Districts; from Column no. 4, no. of projects, from column no. 5, no. of WCs, from column no. 6, no. of structures/ activities, from column no. 7 to 10, category-wise# totals, may be mentioned at the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

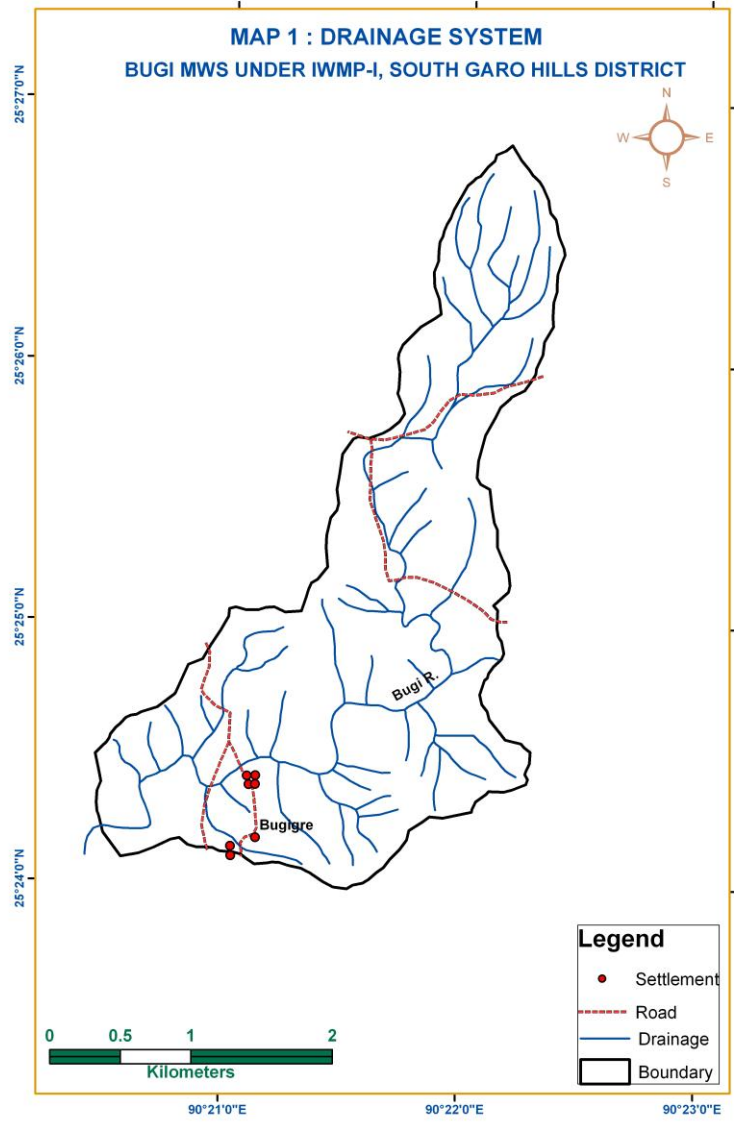
[#] B:C ratio more than 1 – cost effective
less than 1 – Not cost effective

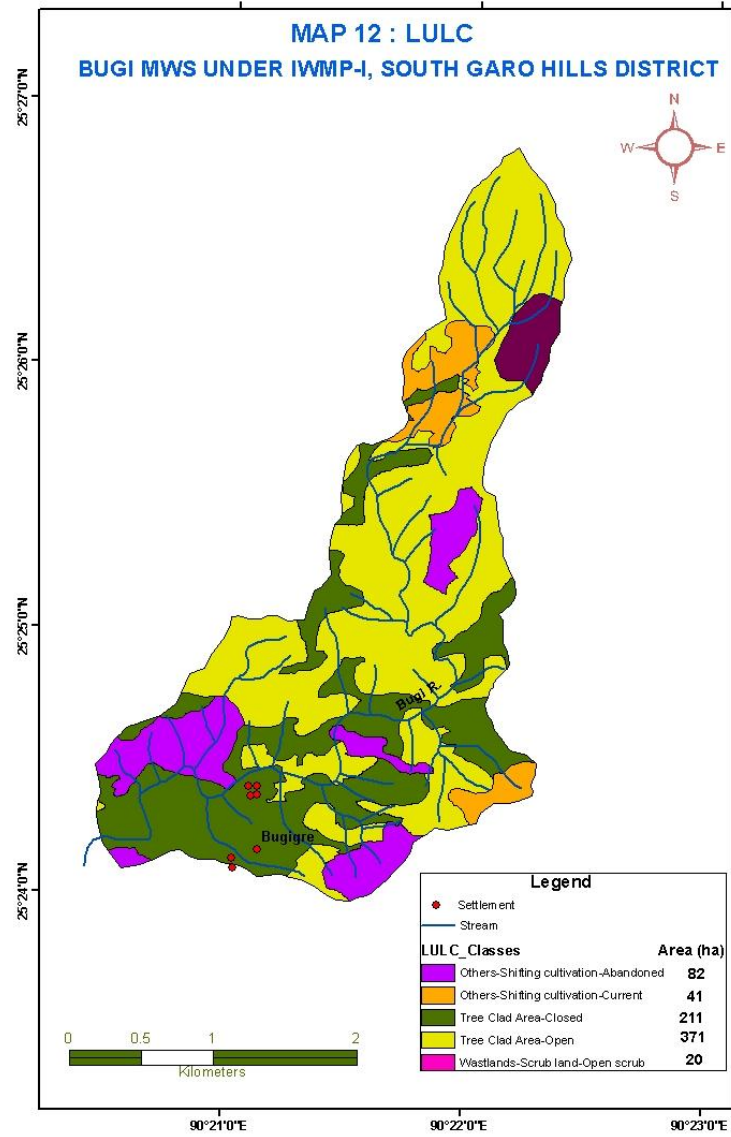
ANNEXURE I
MAPS

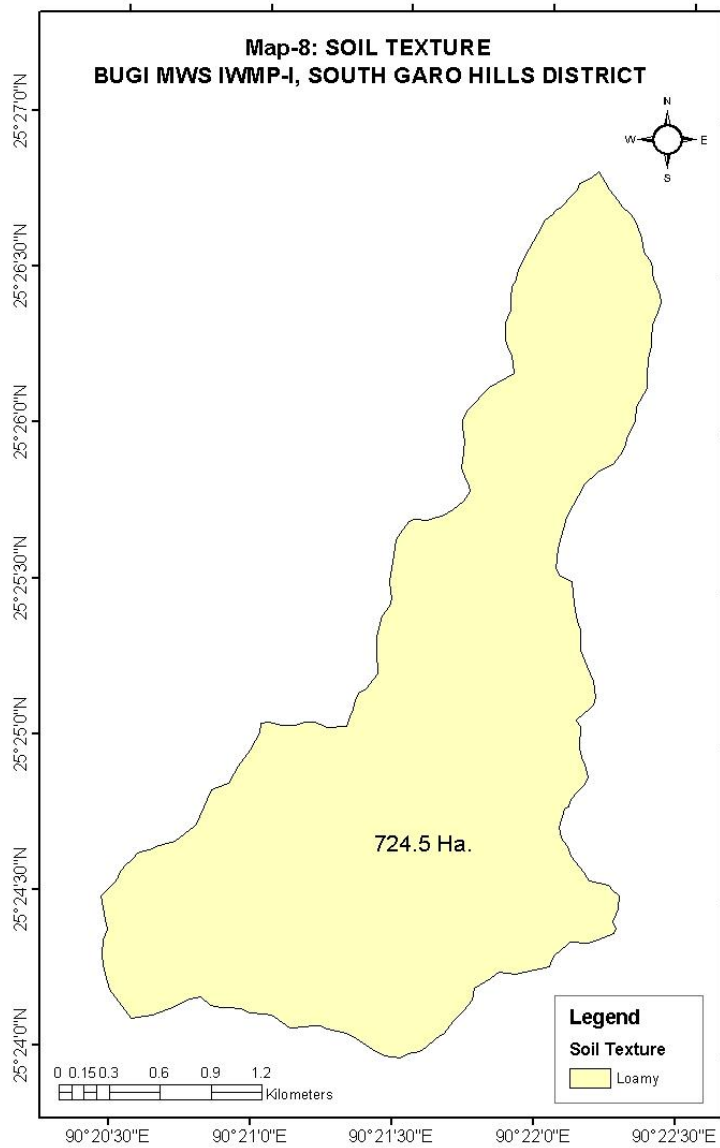
**MAP - A : LOCATION OF BUGI MWS UNDER IWMP-I
SOUTH GARO HILLS DISTRICT**



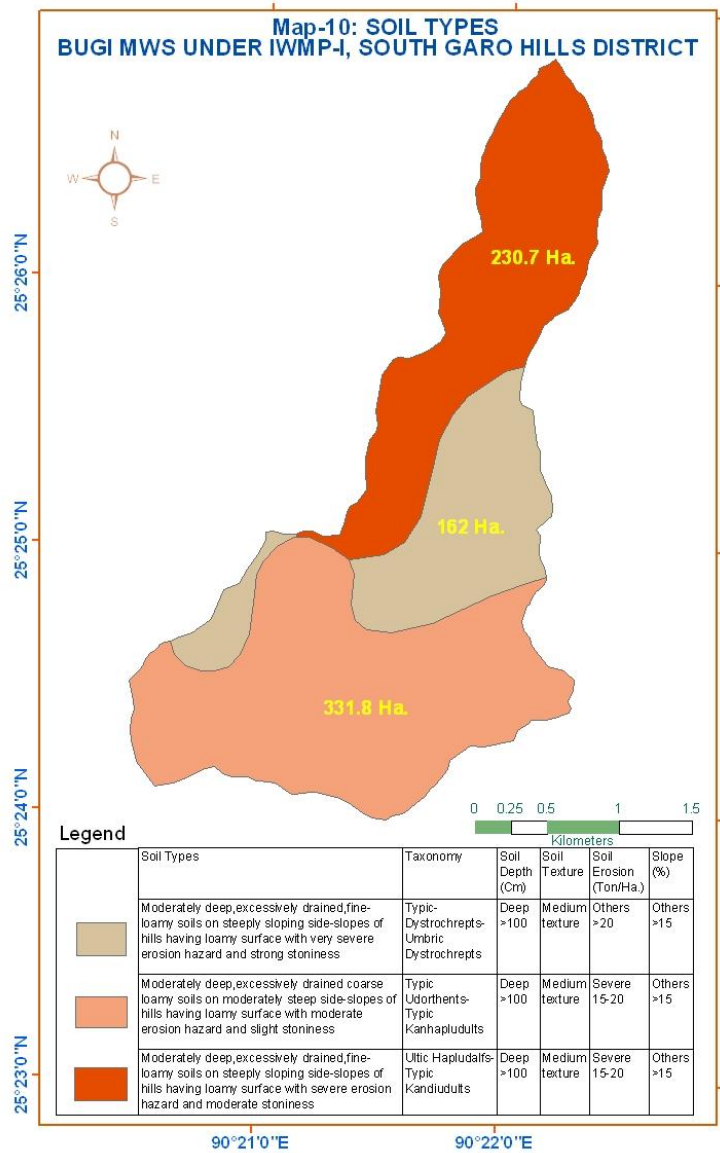


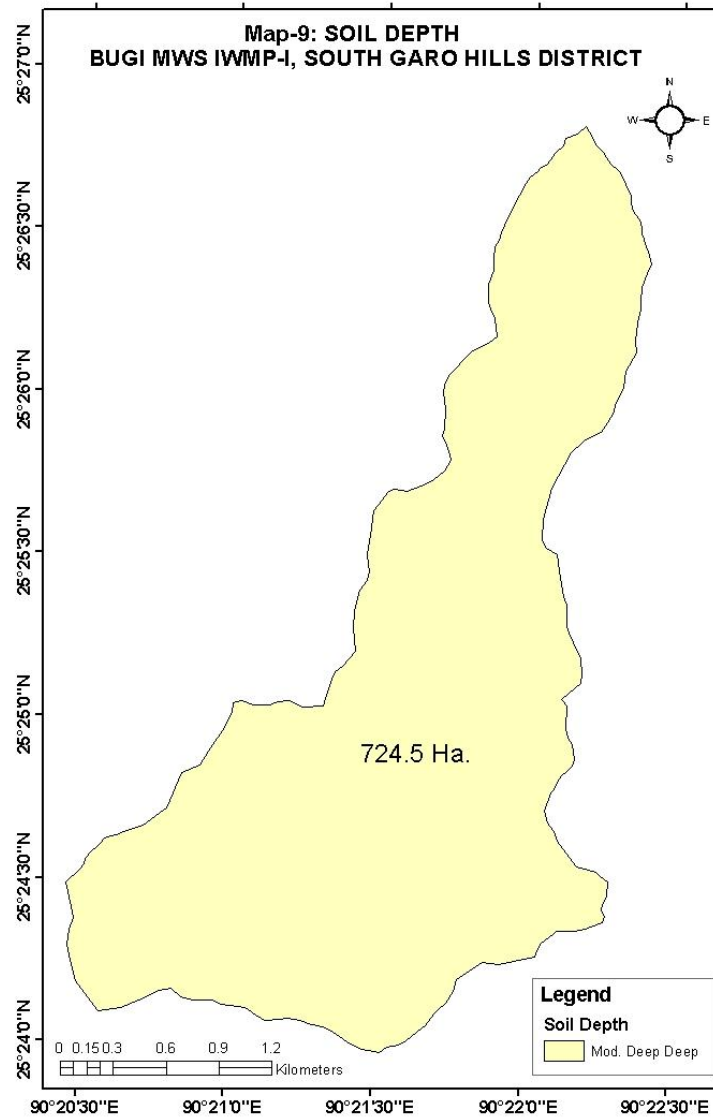


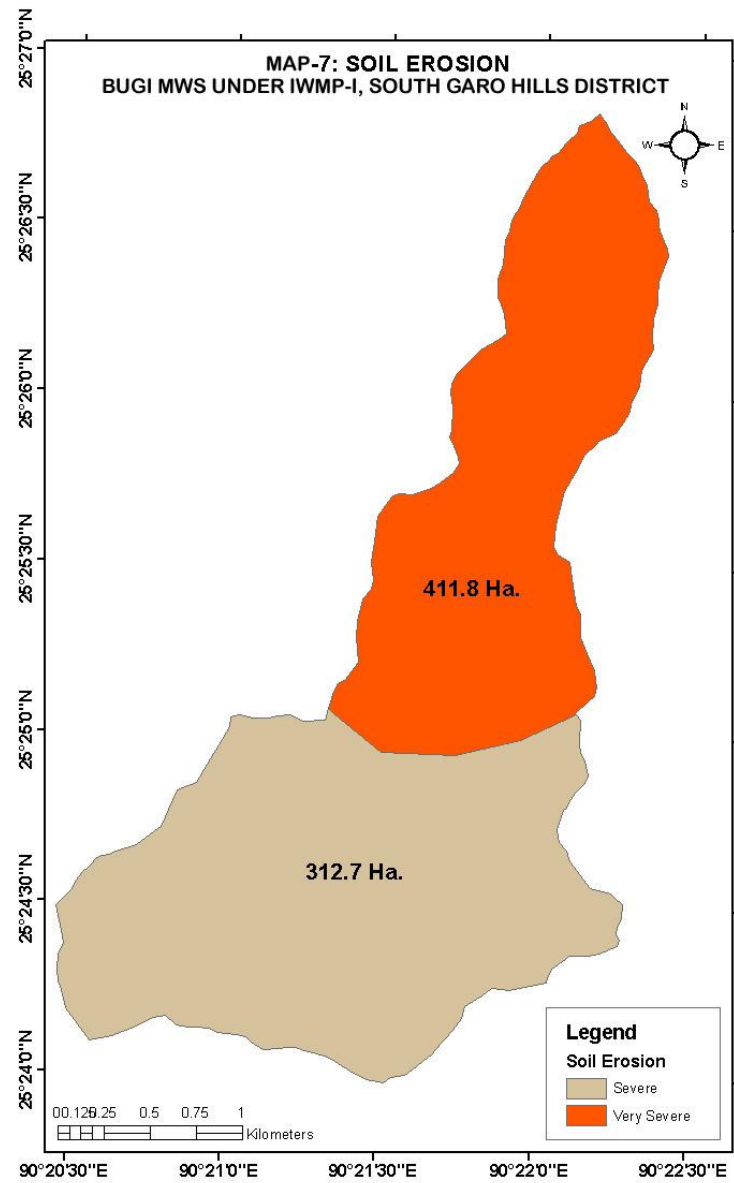


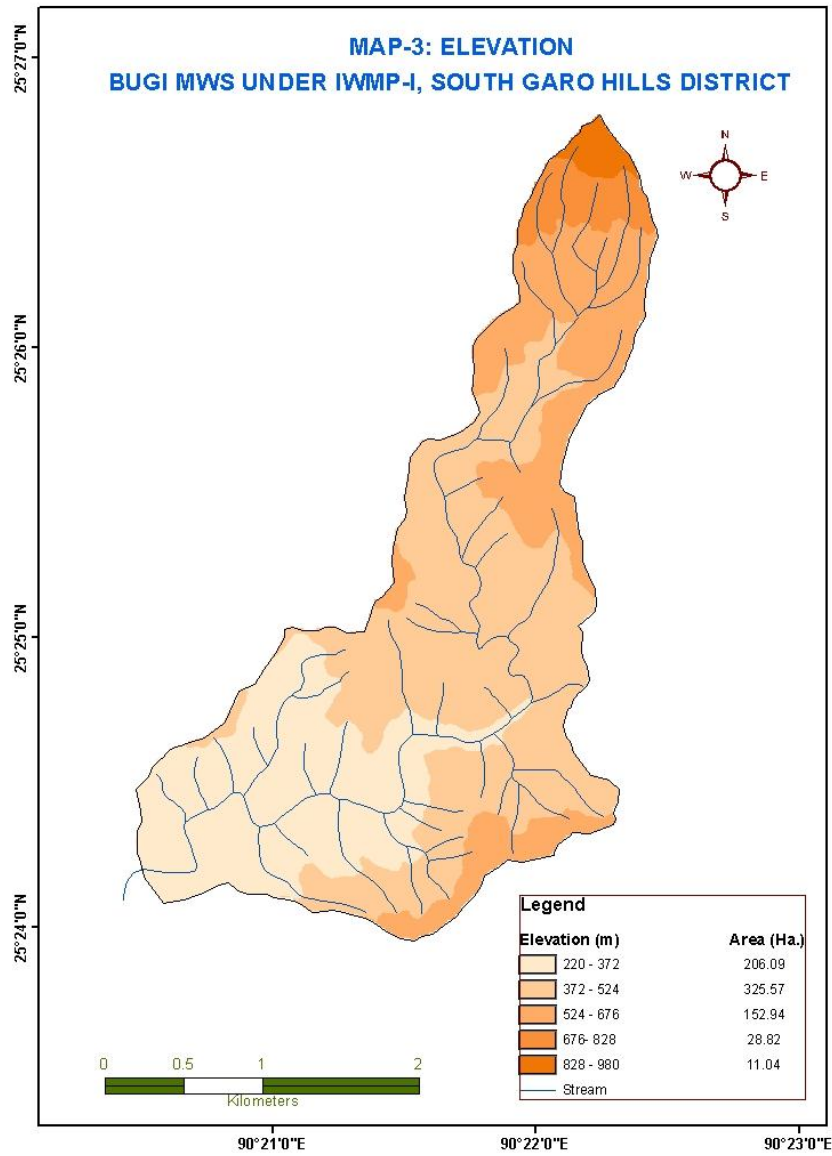


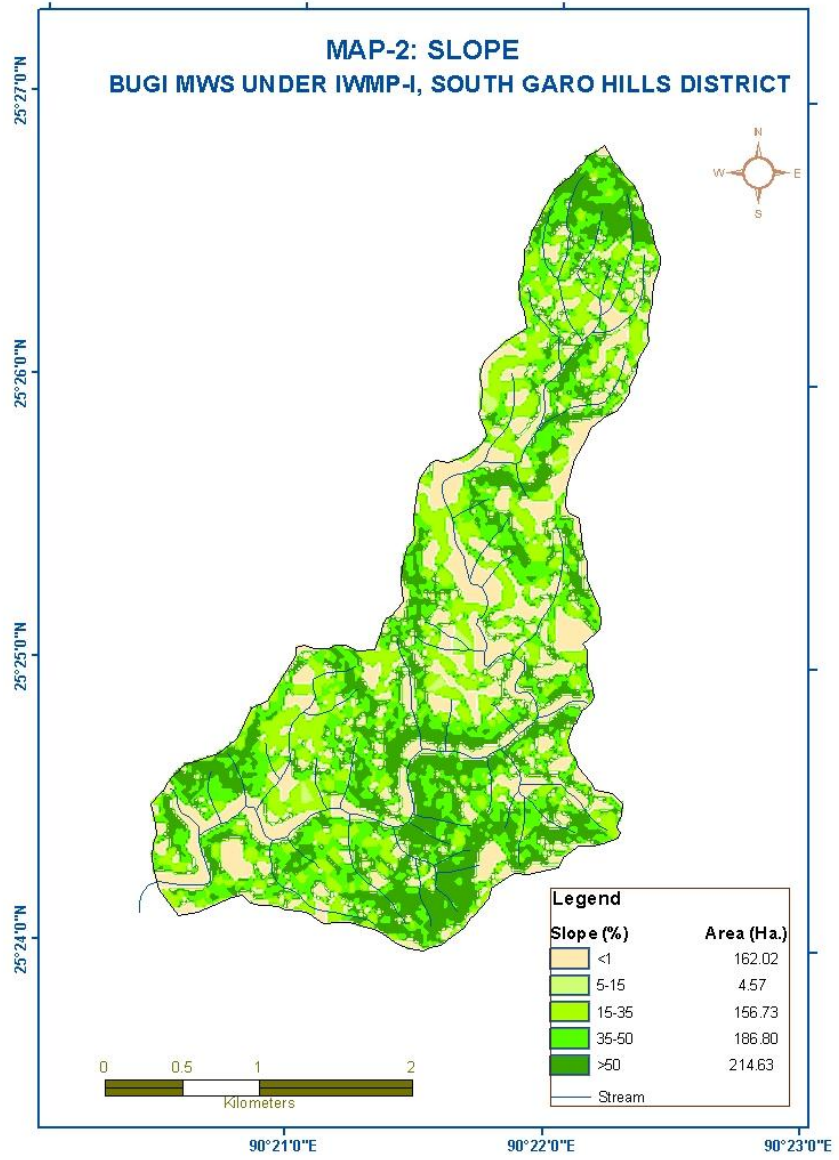
**Map-10: SOIL TYPES
BUGI MWS UNDER IWMP-I, SOUTH GARO HILLS DISTRICT**

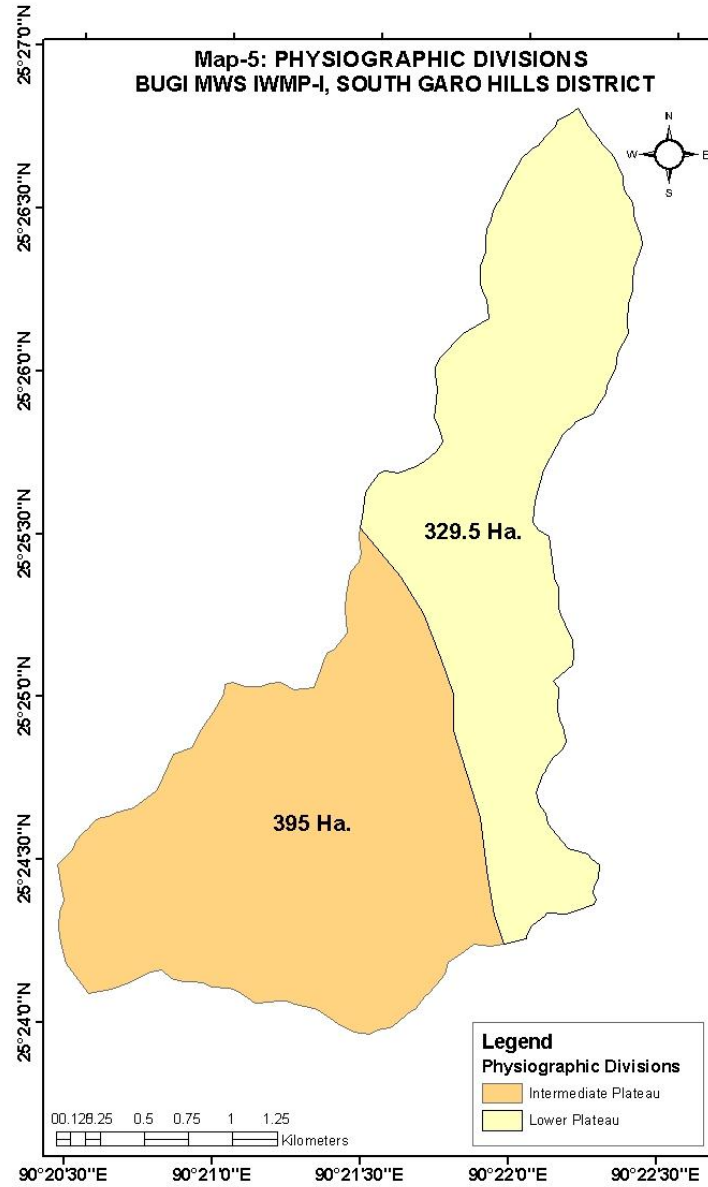


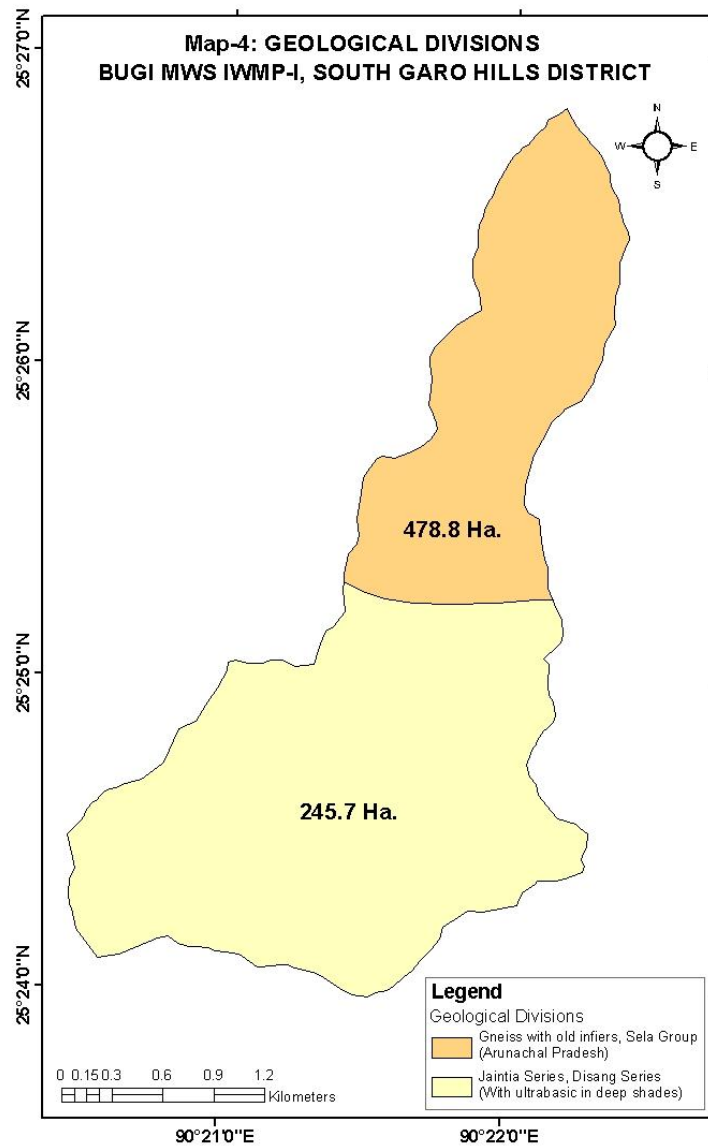


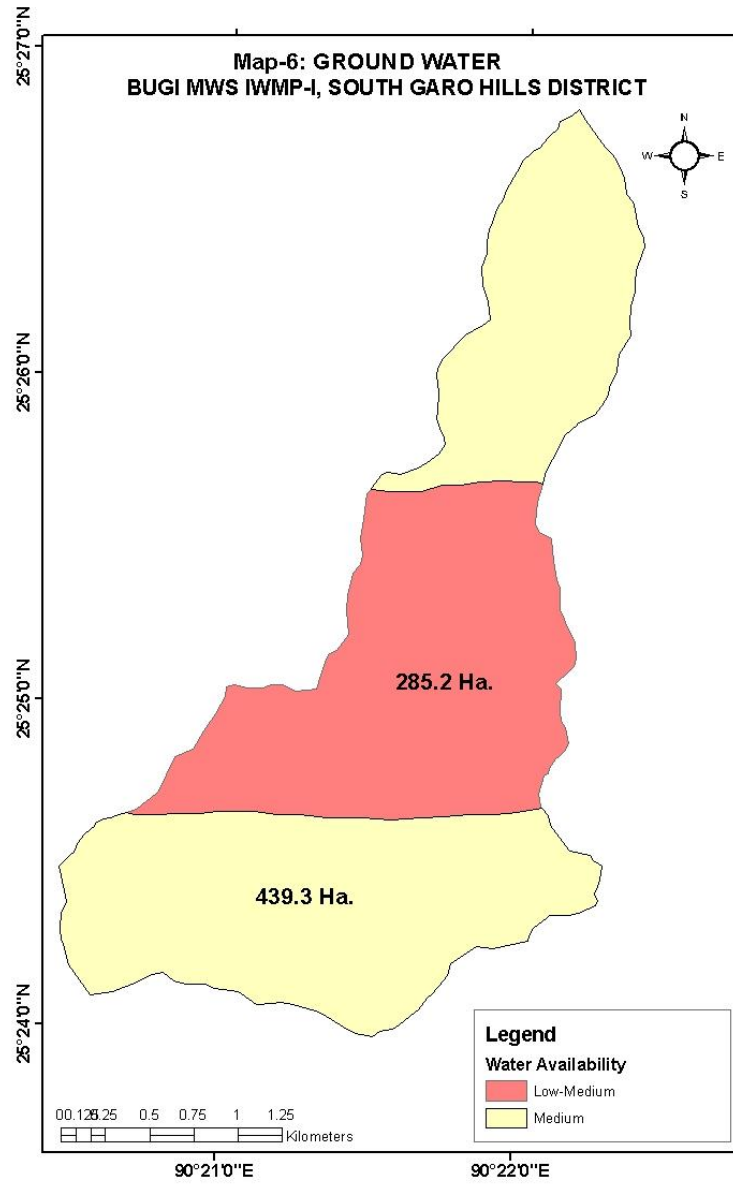


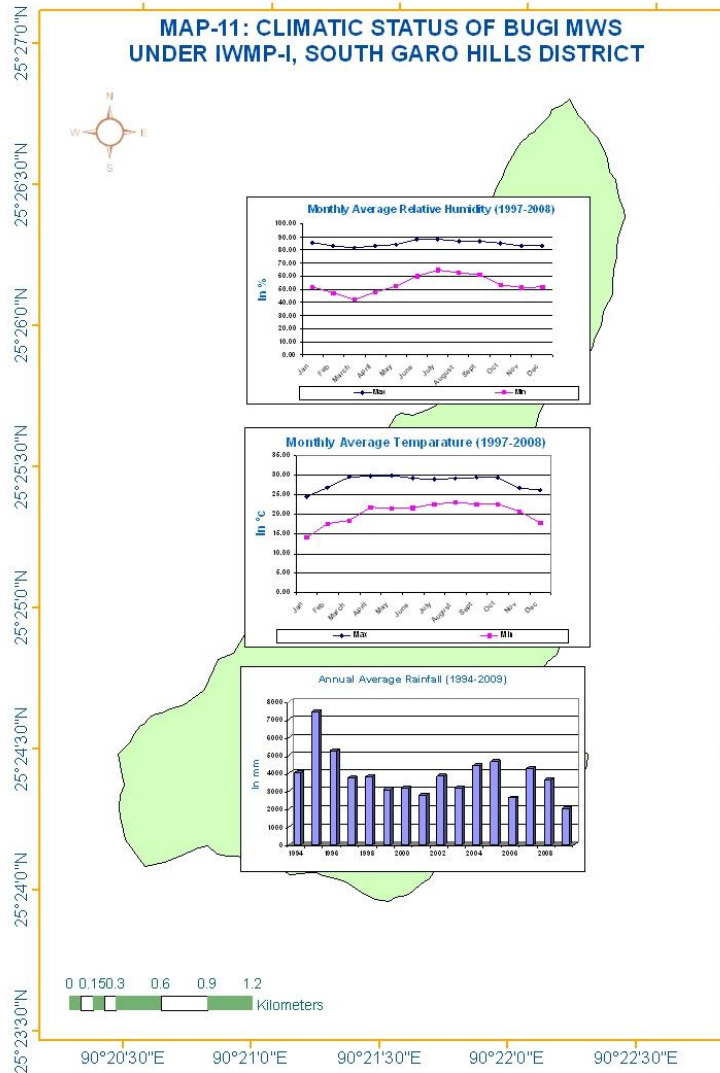


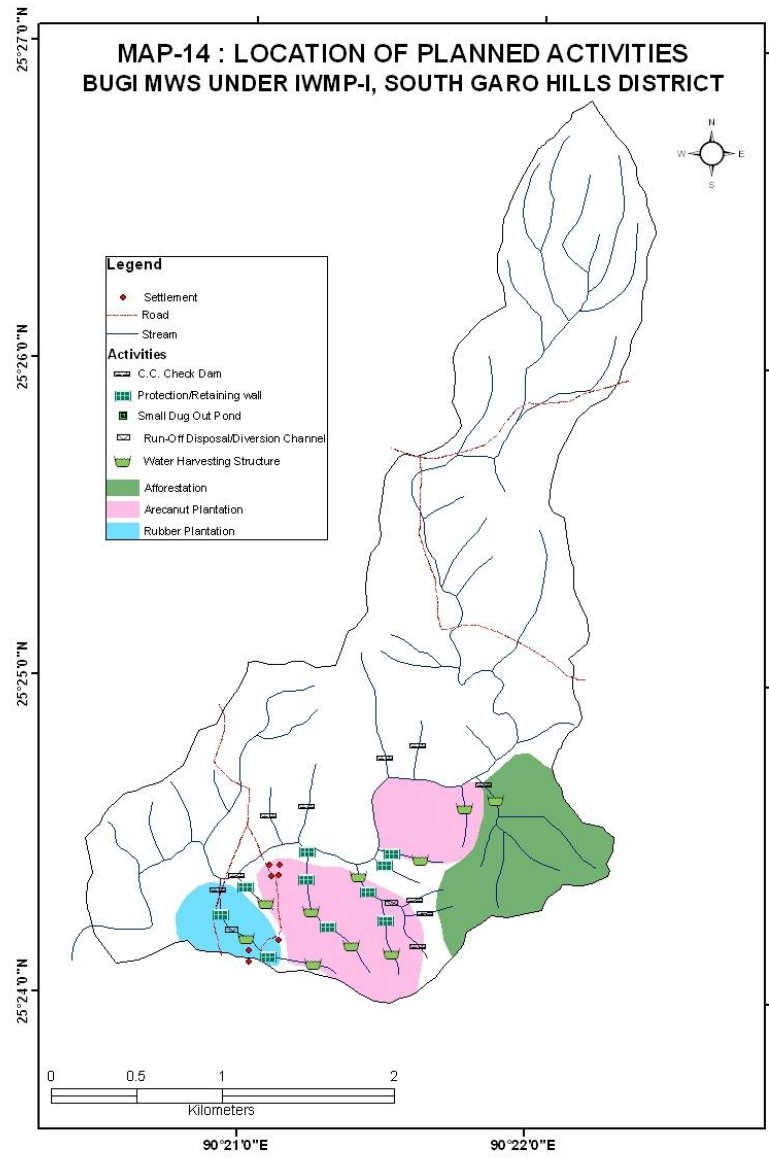












ANNEXURE II

SOCIO-ECONOMIC SURVEY DETAILS

SOCIO ECONOMIC SURVEY UNDER I.W.M.P – I, SOUTH GARO HILLS, DISTRICT.

NAME OF VILLAGE : BUGI GRE

NAME OF C & RD BLOCK: CHOKPOT C & RD BLOCK.

Sl. No.	Name of the Head of the family	Male	Female	Total	Occupation	Land holding per family (Area in Ha.)	Crops Grows	Live stock				Annual income
								Cow	Pig	Goatry	Poultry	
1	2	3	4	5	6	7	8	9	10	11	12	13
1	Shri. Alep M Sangma	3	2	5	Farmer	2.00 ha.	Arecanut	6	8	-	20	90,000
2	Shri. Willingston M. Sangma	5	1	6	“	1.50 ha.	“	-	1	-	9	60,000
3	Shri. Dinen T Sangma	4	3	7	“	0.90 ha.	“	1	2	-	10	20,000
4	Shri. Tobias M. Sangma	1	2	3	“	1.00 ha.	“	-	-	-	9	40,000
5	Shri. Nasen Ch. Marak	4	2	6	“	0.60 ha.	“	-	1	-	2	20,000
6	Shri. Nanggan Ch. Marak	3	2	5	“	0.80 ha.	“	-	5	-	8	19,000
7	Shri. Pitor Ch. Marak	1	1	2	“	1.00 ha.	“	1	-	-	10	25,000
8	Shri. Rantos Ch. Marak	4	2	6	“	1.00 ha.	“	2	1	-	7	24,000
9	Shri. Disin M. Sangma	2	2	4	“	1.50 ha.	“	1	2	-	10	25,000
10	Shri. Juges M. Sangma	6	4	10	“	0.90 ha.	“	-	2	-	4	20,000
11	Shri. Malen ch. Marak	7	2	9	“	0.70 ha.	“	3	2	-	15	17,000
12	Shri. Brithson M. Sangma	2	1	3	“	0.50 ha.	“	6	8	-	20	20,000
13	Shri. Gunang Ch. Marak	3	2	5	“	1.00 ha.	“	-	1	-	9	30,000
14	Shri. Wilnan Ch Marak	3	3	6	“	1.00 ha.	“	1	2	-	10	25,000
15	Shri. Barnabas Ch. Marak	1	3	4	“	1.50 ha.	“	-	-	-	9	25,000
16	Shri. Walson T. Sangma	3	2	5	“	0.60 ha.	“	-	1	-	2	15,000
17	Shri. Spin D. Sangma	1	3	4	“	0.90 ha.	“	-	5	-	8	14,000
18	Shri. Junen T. Sangma	4	2	6	“	0.80 ha.	“	1	-	-	10	15,000
19	Shri. Anton Ch. Marak	2	2	4	“	1.00 ha.	“	2	1	-	7	20,000
20	Shri. Jusen D. Sangma	5	4	9	“	1.00 ha.	“	1	2	-	10	25,000
21	Shri. Janen Ch. Marak	3	4	7	“	1.00 ha.	“	-	2	-	4	26,000
22	Shri. Insparens Ch. Marak	4	2	6	“	0.90 ha.	“	1	-	-	3	24,000
23	Shri. Wisin R. Marak	2	2	4	“	0.80 ha.	“	3	1	-	1	18,000

24	Shri. Pilip M. Sangma	4	2	6	“	0.60 ha.	“	5	-	-	7	15,000
	TOTAL:	77	55	132				34	47		204	

ANNEXURE I
COST ESTIMATES

ESTIMATE FOR THE CONSTRUCTION OF CEMENT CONCRETE RETAINING WALL
AS PER SCHEDULED OF RATES FOR ROADS AND BRIDGES AND E&D WORKS FOR THE YEAR
2007-2008 IN TURA AND WILLIAMNAGAR CIRCLE

1/134 Excavation of structures (earthwork in excavation of foundation of Structures as per drawing and technical specification including setting out etc

$$1 \times 17 \times 0.5 \times 1.25 = 10.625 \text{ m}^3$$

$$@ 34 /\text{m}^3 = \text{Rs } 361.25$$

2/137 Plain Cement Concrete 1:3:6 nominal mixed in foundation with crushed stone aggregates 40 mm nominal size mechanically mixed etc including curing for 14 days

$$1 \times 17 \times 0.5 \times 1.25 = 10.625 \text{ m}^3$$

$$1 \times 17 \times \frac{0.5+0.30}{2} \times 2.061 = \underline{14.015} \text{ m}^3$$

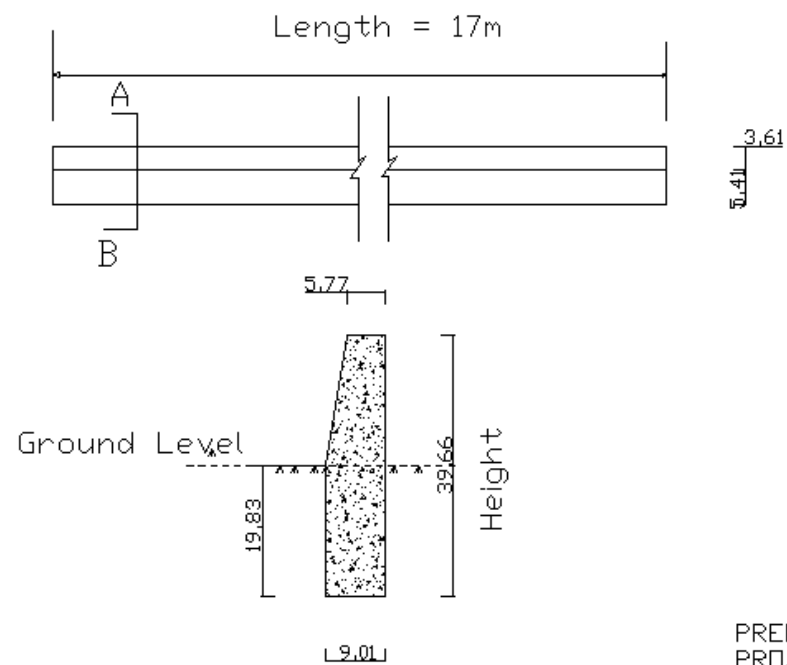
$$\text{Total} = 24.64 \text{ m}^3$$

$$@ 3232 /\text{m}^3 = \text{Rs } 79,636.48$$

Grand total	=	Rs	79,997.73
	Say	Rs	80,000

(Rupees Eighty Thousand thousand only)

PLAN & SECTION OF C.C RETAINING WALL



Section on A-B

PREPARED BY
PROJECT FORMULATION CELL SHILLONG
PLAN & SECTION OF C.C RETAINING WALL
SCALE: NOT TO SCALE
DIMENSION IN METRE

ESTIMATE FOR THE CONSTRUCTION OF CEMENT CONCRETE CHECK DAM
AS PER SCHEDULED OF RATES FOR ROADS AND BRIDGES AND E&D WORKS FOR THE YEAR
2007-08 IN TURA AND WILLIAMNAGAR CIRCLE

1/62(i) Earthwork in excavation for structures (construction of retaining walls in cement concrete 1:5 as per drawing and technical specifications).

Dam	7	x	0.9	x	1	=		6.3	m ³
Curtain	7	x	0.15	x	0.4	=		0.42	m ³
Wall									
Apron	7	x	3	x	0.4	=		8.4	m ³
Wing wall	2	x	3.5	x	0.9	x	1.1	=	<u>6.93</u> m ³
								22.05	m ³
	@		72	/m ³		=		Rs	1587.6

2/97. Providing and laying of boulder Apron for bed protection with stone boulder of size 15cm size and 6cm wide as per drawing and technical specifications .

Apron	7	x	3	x	0.25	=		5.25	m ³
	@		884	/m ³		=		Rs	4641

3/137 Plain Cement Concrete in proportion 1:3:6 nominal mixed in foundation with crushed stone aggregates 40mm mechanically mixed etc.

Wing Wall	2	x	3.5	x	0.9	x	0.1	=	0.63	m ³
Dam	1	x	7	x	1.1	x	0.1	=	0.77	m ³
	1	x	7	x	1.1	x	1	=	7.7	m ³
	7	x	<u>0.4 + 0.9</u>	x	<u>1.7</u>			=	7.73	m ³
			2							

	2	x	4	x	0.6	x	0.3	=	1.44	m ³
Apron	7	x	3	x	0.15			=	3.15	m ³
Curtain Wall	7	x	0.15	x	0.55			=	0.5775	m ³
C.C Channel	1	x	8.48	x	0.8	x	0.1	=	0.6784	m ³
	2	x	8.48	x	0.8	x	0.1	=	<u>1.3568</u>	m ³
									24.0327	m ³
@			3232	m ³				=	Rs	77673.6864

4/62(iii) Construction of retaining walls /breast walls in cement mortar 1:5 as per drawing and technical specifications.

Wing Wall	2	x	3.5	x	0.9	x	1	=	6.3	m ³
	2	x	3.5	x	<u>0.4 +</u>	x	1.7	=	<u>7.74</u>	m ³
					<u>0.9</u>					
					2				14.04	m ³
@	2263	m ³						=	Rs	31772.52

5/176 Plastering with cement mortar 1:3 on brick work in sub structure as per technical specification.

Dam	2	x	7	x	1.7			=	23.8	m ³
	7	x	4	x	0.3			=	8.4	m ³
	2	x	0.6	x	0.3			=	0.36	m ³
	1	x	5	x	0.6			=	3	m ³
C.C	2	x	8.48	x	0.8			=	13.568	m ³

Channel

$$1 \times 8.48 \times 0.8 = \frac{6.784}{55.912} \text{ m}^3$$

$$@ 74 \text{ m}^3 = \text{Rs } 4137.488$$

6/134 Excavation of structures (earthwork in excavation of foundation of structures as per drawing and technical specification including setting out and construction of shoring etc.

$$8.48 \times 0.8 \times 0.8 = 5.4272 \text{ m}^3$$

$$@ 34 \text{ m}^3 = \text{Rs } 185$$

$$\text{Total} = \text{Rs } 1,19,996.82$$

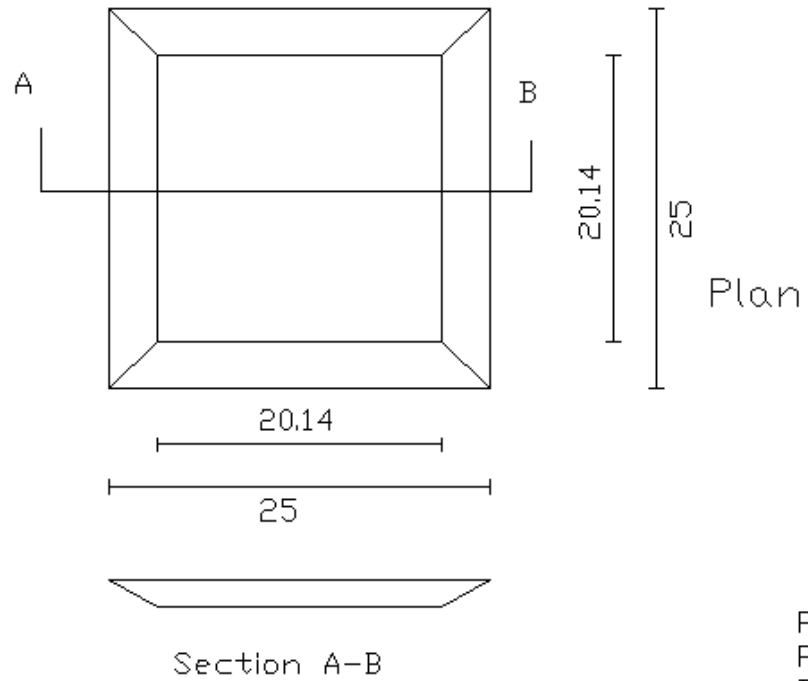
$$\text{say} \quad \text{Rs } 1,20,000$$

(Rupees one lakh twenty thousand) only

ESTIMATE FOR THE CONSTRUCTION OF WATER HARVESTING STRUCTURE
RATES ARE AS PER P.W.D SCHEDULED OF RATES FOR ROADS BRIDGES AND E & D WORKS
FOR THE YEAR 2007-08 FOR TURA AND WILLIAMNAGAR CIRCLE

1/3.	Cleaning and removal of rubbish upto a distance of 30 m outside the periphery of the area	
	Area = 0.0813 Ha	
	@ 3600 /Ha	= Rs 292.68
2/3(a)	Eatrhworke in excavation to the proper grade including light, dressing providing cambering and super elevation as directed and removal of spoils upto 30m lead and all lift	
	1no $\frac{(25 \times 25) \times (20.14 \times 20.14)}{2} \times 2$	= 1030.619 /m ³
	@ 72 /m ³	= Rs 74204.57 /m ³
	Total =	Rs 74497.248
	Say	Rs 75,000/-
	(Rupees Seventy five thousand) Only	

PLAN AND SECTION FOR WATER HARVESTING STRUCTURE



PREPARED BY
PROJECT FORMULATION CELL SHILLONG
DIMENSION IN METRE
SCALE : NOT TO SCALE

ESTIMATE FOR THE CONSTRUCTION OF CEMENT CONCRETE DIVERSION CHANNEL AS PER
SCHEDULED OF RATES FOR ROADS , BRIDGES E & D WORKS FOR THE YEAR 2007-08
IN TURA AND WILLIAMNAGAR CIRCLE

1/134. Excavation for structures (earthwork in excavation of foundation of structures as per drawing and technical specifications, including setting out etc.

$$1 \times 48.24 \times \frac{1.50 + 1.00}{2} \times 1.2 = 72.36 \text{ m}^3$$

Rs. 34 /m³ Rs. 2,460.24

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

$$1 \times 48.24 \times 1 = 48.24 \text{ m}^3$$

Rs. 852 /m³ Rs. 41,100.48

3/141 Plain /reinforced cement concrete in open foundation as per drawing and technical specifications

$$1 \times 48.24 \times 1 \times 0.1 = 4.824 \text{ m}^3$$

$$2 \times 48.24 \times 1.22 \times 0.1 = \frac{11.77 \text{ m}^3}{16.59 \text{ m}^3}$$

Rs. 3630 /m³

Rs.

60,238.25

4/2.9(a) Plastering with cement mortar (1:3) on brick work in super structure as per drawing etc..

$$2 \times 48.24 \times 1.22 = 117.7$$

Rs. 74 /m³

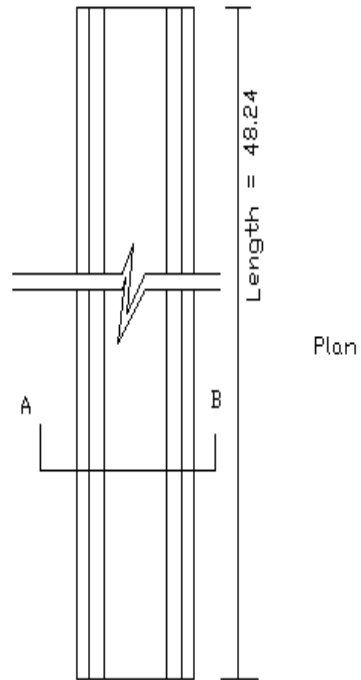
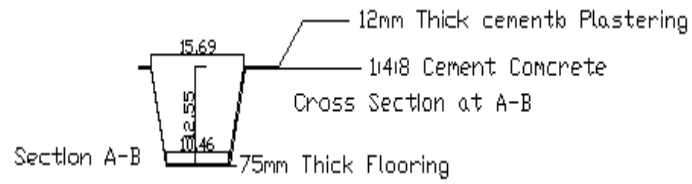
Rs. 8,710.21

Total = Rs. 1,12,509.19

Say Rs. 1,12,500.00

(Rupees one lakh twelve thousand and five hundred thousand) only.

PLAN AND SECTION OF CEMENT CONCRETE DIVERSION CHANNEL



PREPARED BY PROJECT FORMULATION CELL SHILLONG
SCALE : NOT TO SCALE
ALL DIMENSIONS ARE IN METRES

ANNEXURE IV

MoA, SUB COMMITTEE DETAILS ETC.

FORMATION OF WATERSHED DEVELOPMENT TEAM (WDT)

The P.I.A (Project Implementing Agency) Baghmara Soil & Water Conservation (C.C) Division, South Garo Hills has constituted 3(three) W.D.T Members (Watershed Development Team) for the smooth functioning of the project on 20/12/2009 as per the Common Guidelines for Watershed Development Projects.

Names of Districts	Names of projects	Names of WDT members	M/F	Age	Qualification / Experience	Description of professional training
South Garo Hills	SGH- IWMP-I	Shri. Kai Raksal M Sangma	Male	28 yrs	Bachelor of Computer Application	Bachelor of Computer Application(B.C.A)
		Miss Ponobi R Marak	Female	26 yrs	Bachelor of Science in Forestry	Bachelor of Science in Forestry
		Shri. Bilcheng K Marak	Male	23 yrs	Diploma in Civil Engineering	Diploma in Civil Engineering

FORMATION OF WATERSHED COMMITTEE AND THE REGISTRATION UNDER SOCIETY REGISTRATION ACT.

The Bugi Micro Watershed under Integrated Watershed Management Programme (IWMP- I) has constituted Watershed Committee (W.C) for smooth implementation of the Watershed Project with the Technical support of the Watershed Development Team (WDT) in the Village and it has been Registered under Society Registration Act, 1860 on 15/04/2010. The people of Bugigre Village unanimously selected the Chairman and the Members of the Watershed Committee in the meeting from the village itself and the Secretary from the Department of Soil & Water Conservation , Shri Abel Sangma (Beat Officer) Baghmara Soil & Water Conservation (C.C) Division . The Watershed Committee of Bugi Micro Watershed comprises of 11 members.

Names of the Districts	Names of projects	Names of Watershed Committee	Date of Registration as a Society (dd/mm/ yyyy)	Designation	M/F	ST	Educational qualification
South Garo Hills	SGH- IWMP-I	1. Shri Alep M Sangma	15-04-2010	Chairman	M	ST	Class VI
		2. Shri Abel Sangma		Secretary	M	ST	Matriculate
		3. Shri Kai Raksal Sangma		Member	M	ST	B.C.A
		4. Shri Ringnang Marak		Member	M	ST	Class VIII
		5. Shri Wesin Marak		Member	M	ST	Class VII
		6. Shri Wilnan Marak		Member	M	ST	Class VI
		7. Shri Alepson Sangma		Member	M	ST	Class VII
		8. Shri Malem Marak		Member	M	ST	Class V
		9. Shri Spinton Marak		Member	M	ST	Class VI
		10. Smti. Aribina Sangma		Member	F	ST	Class VII
		11. Smti. Sano Ch Marak		Member	F	ST	Class V



GOVERNMENT OF MEGHALAYA

**OFFICE OF THE REGISTRAR OF SOCIETIES
SOUTH GARO HILLS DISTRICT
MEGHALAYA**

Certificate for Registration of Societies

Regd No. SGH/SR/642 of 2010

I hereby certify that (Name of Society) BUGI MICRO WATERSHED COMMITTEE, BUGIGRE, CHOKPOT, SOUTH GARO HILLS has this day been Registered under the Meghalaya Societies Act, 1983 (Meghalaya Act XII of 1983).

Given under my hand and seal the FIFTEENTH day of APRIL (month) two thousand TEN.

Place: - BAGHMARA

Seal

Date: - 15.04.2010



(Shri. P. M. Singma) M.S.
Registrar of Societies
South Garo Hills District
Baghmara

39

104

AGREEMENT FOR CONVERGENCE OF SCHEME

The Village Employment Council (VEC) and the Communities of Bugigre Village, Chokpot Block, South Garo Hills, Meghalaya have no objection to the Convergence of NREGS with Intergrated Watershed Management Project (IWMP) at Bugigre village under Bugigre Micro- Watershed, SGH-IWMP-I being implemented by Baghmara Soil & Water Conservation (C.C) Division, South Garo Hills.

We have also agreed and committed to allocate the Funds for wages as well as material components 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. C.C Check Dam.
2. Link Road
3. Rubber Plantation.
4. Black Pepper.
5. Protection Wall.
6. Dug-Out Pond

47

Alexson M. Sangma.
President
Village Employment Council
Bugigre
Chokpot Block, SGH.

Basmalbasch Ch. Masak.
Secretary
Village Employment Council
Bugigre
Chokpot Block, SGH.

Countersigned.
Mud.
Deputy Commissioner,
South Garo Hills,
Baghmara.

107