GOVERNMENT OF MEGHALAYA

Soil &Water Conservation Department

West Khasi Hills District

Integrated Wasteland Management Programme (IWMP IV)

2010-11 to 2014-15

RONGBENG-DAGAL

Summary

1.	Name of the State	:	Meghalaya.
2.	Name of District	:	West Khasi Hills.

3.	Name of C&RD Block	:	Mawshynrut C&RD.
4.	Nos. of Village	:	6 (six) Nos.
5.	Name of Villages	:	a). Dalbot A. b). Dalbott B. c). Nongshram Rongbeng. d). Nongshram Bolking. e). Nongshram Wahkatak. f). Nongshram Mongchung.
6.	Name of Project	:	West Khasi Hills IWMP IV.
7.	Total Geographical Area	:	2387 Ha.
8.	Total Treatable Area	:	1200 Ha.
9.	Total Project	:	180.00 Lakhs.
10.	Project Duration	:	5 (Five) Years:- 2010-11 to 2014-15.
11.	Project Implementing Agency	:	Soil & Water Conservation Division, Nongstoiñ.

Middle of Rongbeng-Dagal IWMP IV

TABLE OF CONTENTS

CHAPTER 1.

INTRODUCTION AND BACKGROUND

1.1 Project Background:

The Rongbeng-Dagal (IWMP-IV) project is located in Mawshynrut C&RD Block, West Khasi Hills District of Meghalaya. Consisting of a double micro-watershed, the project area is drained by the Rongbeng-Dagal River and its tributaries flowing from a west to south direction. The total area is 2387 Ha. with 1200 Ha to be treated under the Integrated Watershed Management Programme (IWMP).

The Project area is located at a distance of about 93 km from Nongstoin Head Quarter and about 48 km from Mawshynrut. A total of 6 villages are covered under the project. These are –

1. Dalbot A.
2. Dalbot B.
3. Nongshram Rongbeng.
4. Nongshram Bolking.
5. Nongshram Wahkatak.
6. Nongshram Mongchung.

1.2 Micro-watershed Information:

The Project area falls under three numbers of micro watershed in which code are 3CIA5b2c, 3CIA5b3c, 3CIA5b2d as codified by the North Eastern Space Application Centre (NESAC). The total area of the micro-watershed is 2387 Ha., with 1200 hectares to be treated under the Integrated Watershed Management Programme (IWMP).

1.3 Need and Scope for Watershed Development:

The micro-watershed Rongbeng-Dagal falls under the High Priority category as per the prioritization of watersheds by the North Eastern Space Application Centre (NESAC). Located on the gently slopes, out of six, two villages do not have any road connectivity. The farmers are all marginal and small households are below the poverty line, which are 241 of the total households. Jhum cultivation is practiced by most of the inhabitants of these villages on the Areas.

Even though the area receives rainfall during the monsoons, there is acute shortage of water during the dry seasons and the villagers have to pump water from down deep 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 2

BASIC INFORMATION OF THE PROJECT AREA

2.1: Location and Accessibility:- The area is located between 90° - 48’ – 2” to 90° - 52’ – 5” East longitude and 25° - 33’ – 3” to 25° - 36’ – 00” North latitude. It is situated at a distance of 93 km away from Nongstoin the Headquarter of West Khasi Hills District and falls under Mawshynrut C&RD Block and distance of 48 km from the Block Headquarter, with in the Mawshynrut Administrative units, jurisdiction. The Project areas are connected by road which is running just by the side of the watershed from the beginning and enter inside the watershed in the last end. There are 6(six) villages falling within the watershed namely;

1. Dalbot ‘A’.
2. Dalbot ‘B’.
3. Nongshram Rongbeng.
4. Nongshram Bolking.
5. Nongshram Wahkatak.
6. Nongshram Mongchung.
7.

2.2: Physiographic:- The Total Geographical Area (TGA) of the project is 2387 Ha out of which treatable area is 1200 Ha which has been proposed for treatment under different Soil & Water Conservation Activities. The altitude range from 370m to 700m above mean sea level and physiographic is sloppy and undertaking to gentle slope.

Table 2.1: Physiographic details

Elevation (metres)	Slope Range (%)	Order of watershed Sub/Micro-watershed	Major streams	Topography
370 m to 700 m	15% to 20 %	Micro Watershed	Rongbeng-Dagal	Gentle Slope

2.3: Drainage:- The watershed is drained by Rongbeng-Dagal to Rongdi River as the main drainage flowing along the Eastern and Western direction with the net works out of tributaries and streamlets. The drained density calculated is 4.02 km/km² and the average bifurcation ratio worked out is 1:2.814 The total length of all streams/rivers is 59500.16 (1^{st} order to 5^{th} order) There are 75 first order, 17 second order, 3 third order, 1 fourth order and 1 fifth order.

Drained Density = Total length of stream/river in km 14.77
Area of watershed in km² 4.02

Bifurcation Ratio = Previous stream order (Nos. of stream) 1:2.814
Next order Nos. of segments.

2.4: Soil:- The soil are generally shallow in the hills tops and medium to deep along the slope in the lowlands. Soil texture is generally loam in the upper horizons and silt to silt clay lower which can be easily drained with fast and to moderate persimibility. Soil sample collected and tested are decide in nature where the average PH value range from 4.04 to 4.53 which may be due to high rainfall, undulating topography vegetative cover. Soil nutrient list indicates N' 183.3 to 1600, P' 2.4 to 2.4, K' 212.8 to 560.0 highly acidic in nature lead to very low in phosphorus exposure to erosion hazard is somewhat severe in the area due to less vegetative cover.

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

1	2	3	4	5	6	7	8	9
Sl. No.	Name of States	Name of District	Name of Projects	Cause	Types of erosion	Area affected (Ha)	Run-off (mm/year)	Average soil loss (Tonnes/ha/year)
1.	Meghalaya	West Khasi Hills	WKH-IWMP IV	Water	Erosion			
				(a)	Sheet		2700-3200	
				(b)	Rile	2387		
				(c)	Gully			NA
				Sub Total				
					Wind Erosion	Nil	Nil	Nil

2.5: Climate :- The climate is humid sub-tropical. The area experience hot summer and moderate warm winter. Average rainfall is 6000mm during June to September.

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)	Name of the Districts	Name of the Projects	Major soil types		Average rainfall in mm (proceeding 5 years average)	Major crops	
						a. Type	b. Area (Ha)		a). Name	b). Area (Ha)
1.	Meghalaya	Mild, Moisture, 584-368	1200	West Khasi Hills	WKH-IWMP IV	Soil is moderating shallow and well drain. Texture is loamy at the upper horizon clay loam in the middle and silty clay in the lower horizon. Expose to horizon hazard is moderate severe.	2387	-	Paddy. Ginger. Other seasonal crops, cereal crop.	81 15 42 132

2.6: Agriculture:- Agriculture is the main salary of the people of the area. A principal agriculture crop of the area is paddy, ginger, millets and other seasonal vegetable crops. Important Horticulture crops are betel vine, pineapple, jack fruit, banana, etc.

Table 2.4: Crop yield and production

Crops	Area (Ha)	Average Yield (Qtl/Ha)	Total Production (Qtl)
Paddy	81	17.00-19.67	1377
Ginger	15	75.00-87.34	1125
Other seasonal crops	42	10.00-12.00	504

2.7: Natural Vegetation:- The natural vegetation of the area is fairly poor due to jhuming, fire hazard and over exploitation of timber falling, which has spelt a bone to the farmers of the areas. The occurrence of fire hazard of the area blended sharps out crops where soil depth is decorated to low with sandy soil texture bear testimony to the effects, as a result of these factors, shrubs, creeping; bamboo has been donenuli species across the land scope. The primary vegetation of the area can be seen only (Sema wallichili)(diengngan) castanopsis (diengstap, diengsohot) and some parts by shorea robesta (diengsal), Terminalia species.

2.8: Socio Economic Profile:- Socio Economically the people of the area are very poor owing primarily to low agricultural productivity where people have to explore other means of livelihood to carve with the media. Although, agriculture is the primary occupation of the people, this sector could barely meet their livelihood requirements as it is largely mono-agriculture (single crop) though their land has the potentiality of mixed cropping and high productivity, people need training, etc. The average annual income of the people is only about Rs. 30,000/- (Rupees Thirty thousand) only, per family.

Demographic:- The total population of the watershed area is 1286 Number of which 709 are male and 577 are female and the total number of household is 241.

The demographic details of village-wise falling within the Project Area are as below;

Sl. No.	Village	No. of household	Male	Female	Total
1.	Dalbot 'A'	46	131	115	246
2.	Dalbot 'B'	39	106	108	214
3.	Nongshram Bolking	31	97	79	126
4.	Nongshram Rongbeng	43	117	79	196
5.	Nongshram Mongchung	57	190	138	328
6.	Nongshram Wahkatak	25	68	58	126
	Grant Total	**241**	**709**	**577**	**1286**

Infrastructure facilities;

1. Road.
2. School.
3. Electricity.
4. Health.
5. Water Supply.
6. Marketing Facilities.

Table 2.5; Infrastructure in the project areas:

1	2	3		4
Name of District	Name of Project	Parameters		Status
West Khasi Hills	WKH-IWMP IV	1.	Nos. of villages connected to the main road by all weather road.	3 Nos village are connected by main road 3 of them e.g. Wahkatak, Dalbot A & Dalbot B which connected only by kutcha road and foothpath.
		2.	No. of village provided with electricity.	All 6 villages have been no electricity.
		3.	No. of households with accesste drawing water.	156
		4.	No. of educational institution, Primary(P) Secondary(S) Higher Secondary(HS) Vocational Institute(VI)	(P) – (S) – (HS) – (VI) 7
		5.	No. of village with access to PHC	Nil
		6.	No. of village with access vetinary Department.	Nil
		7.	No. of village with access Bank.	6
		8.	No. of village with access marketing/mendis.	Nil
		9.	No. of village with access Agro Industries.	Nil
		10.	No. of village with access to Akanwadi.	Nil
		11.	No. of village with access Post Office	Nil

2.9: <u>Live Stock:-</u> The important live stock of the areas including cattle (cows, goats, piggery, poultry, etc.) and these are also taking up as part time occupation.

Table 2.6: Existing livestock population

Type of Animal	Population
Piggery	241
Poultry	2410
Pisciculture	50
Total	2701

2.10: Land use:- The strategy for land use planning and proposed land use is as per (proposed land used map) map no. Where attempts have been made to reclaim the waste land. Where ever possible with the prescribed intervention and as per the capacity of the land, such as land under agriculture use would be increased by undertaking land development and other agricultural activities there by converting the shrub land (wasteland) to agri-land.

A significant area would be brought under agro-horticulture and agro-forestry land use which was almost non-existent and for the remaining/balance scrub/wasteland maximum effort would be made to bring these under different forestry activities such as afforestation, improvement of degraded forest, strip plantation, etc. in the built up area 124.00 which may be presumed to remain more or less the same. The most important activity is only livelihood and production system and micro enterprises component which is concentrated around the village settlements.

Table 2.7: Land holding pattern in the project area:

1	2	3	4	5	6		
Name of District	Name of Project	Types of Farmer	No. of households	No. of BPL households	Land holding (Ha)		
					Irrigated	Rainfed	Total
West Khasi Hills	WKH-IWMP IV						
		1. Large. 2. Small. 3. Marginal. 4. Landless.	61 100 60	20		2387	2387
			Total 221	20			

Table 2.8: Common property resources of the project areas:

1	2	3	4				5			
Name of District	Name of Project	CPR Particulars	Total Area (Ha) Area owned/In possession of				Area available for treatment (Ha)			
			Pvt. Person	Govt. (specify Deptt.)	PRI	Any other (PI. Specify) Village community	Pvt. Person	Govt. (specify Deptt.)	PRI	Any other (PI. Specify) Village community
West Khasi Hills	WKH-IWMP IV									
		1.Wasteland degraded land. 2.Pasture. 3.Ordind. 4.Village woodlot. 5.Forest degraded. 6.Village pond/tank. 7.Community 8.Weekly market. 9.Parmanent market. 10.Temple(place worship) 11.Any others.	21 1972 5 167 227			9 Shahlang Nongshram 7	135 371.256 693.744			
			2387				1200			

2.11: Land Use and Land Cover :- As per land use and land cover map generated by the North Eastern Space Application Centre (NESAC). From satellite image taken during 2005-2006 (liss-3 image) the watershed is broadly classified in to the following;

a.	Built up area	-	124.00
b.	Agriculture land-crop land-kharif crops	-	22.00
c.	Tree clad area close	-	205.00
d.	Tree clad area open	-	1972.00
e.	Rivers/Streams	-	43.00
f.	Dense shrub	-	21.00
	Total		**2387.00ha.**

2.12: Problems of the Area :- Baseline Survey and P.R.A. Exercise carried out indicates the major problems of the watershed area as per the village surveyed are as listed below;

1. Very low agricultural productivity.
2. Less geographical area under forest cover.
3. Seamy vegetation covers due to recurring fire hazards.
4. Lack of modern technological inputs farming.
5. Water scarcity.
6. Lack of awareness and knowledge on improved agricultural practices.
7. Low marketing facility.
8. Inadequate primary infrastructure.
9. Unutilized waste land.
10. Very poor sanitation.
11. Inadequate health care.

These problems have been identified through Participatory Rural Appraisal (PRA). Exercises conducted in all the villages within the watershed. Measurable attempts and approaches have been formulated in the watershed treatment plan of the detailed Project Report, So to mitigate and overcome them.

CHAPTER – 3
PROJECT PLANNING & INSTITUTION BUILDING

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, and Venn diagrams were used.

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

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

1	2	3
Total no. of Project sanctioned	**Scientific criteria/input used**	**No. of Project 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	
	Base line survey	Yes
	Hydrology – Geological Survey	GPS Engineering Survey
	Contour Mapping	Topo sheet
	Participatory Net Planning (P.N.P.)	PRA Exercise
	Remote sensing data – especially soil/Crop/Run off cover	Yes
	Ridge to very treatment	Yes
	Online it connectivity between:	
	i. Project and DRDA cell/ZP	
	ii. DRDA and SNLA	
	iii. SNLA and DoLR	Yes

1	2	3
	Availability of GIS layer:	
	1. Cadastral Map	NA
	2. Village Boundary	NA
	3. Drainage	Yes
	4. Soil (soil nutrition status)	Yes
	5. Land Use	Yes
	6. Ground Water Status	Yes
	7. Watershed Boundary	Yes
	8. Activity	Yes
	Crop simulation modle	NA
	Integrated coupled analyzer /near infrared visible spectroscopy/medium spectroscopy for high speed soil nutrient analysis	NA
	Normalized difference vegetation index (NDVI)	NA
	Water Station	
	B. Inputs	
	1. Bio Pesticide	No
	2. Organic Manner	Yes
	3. Vermin compose	Yes
	4. Bio fertility	Yes
	5. Water saving device	Yes
	6. Mechanical tools/implant	Yes
	7. Bio fencing	Yes
	8. Nutrient budget	No
	9. Automatic water level recorder and sediment	
	Sample	NA
	Others	

3.2 Project Implementing Agency:

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

1	2	3	
Names of Districts	Names of projects	Details of PIA	
West Khasi Hills	West Khasi Hills – IWMP IV	(i) Type of organization#	Government
		(ii) Name of organization	Soil & Water Conservation Department
		(iii) Designation & Address	Project Team Leader
		(iv) Telephone	036954280336
		(v) Fax	036954280336
		(vi) E-mail	

3.3 Institution Building

i) Watershed Committee (WC)

The Watershed Committee of the Rongbeng Dagal was constituted with the active involvement of the villagers with strong support of the Traditional Institutions (Village Nokma/Council). The Watershed Committee has been registered under the Society Registration Act 1983.

Table 3.2: Details of Watershed Committee (WC) in the country:

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Sl. No.	Name of State	Name of District	Name of Project	Name of W/C		Designation	Name	M/F	SC	ST	SF	MF	LF	Land less	UG	SHG	GP	Any others	Educational Qualification	Function assign
1	M	West Khasi Hills District	IWMP IV	Rongbeng Dagal Watershed Committee	Yet to Register	Chairman	Shri. Paperson Sangma	M	-	ST	-	-	LF	-	-	-	-	-	HSLC	Chairman
2	E					Secretary	Shri. T. Lyngdoh	M	-	ST	-	-	-	-	-	-	-	-	HSLC	Secretary
3	G					Member	Shri. Nollin Sangma	M	-	ST	SF	-	-	-	-	-	-	-	V	Member
4	H					Member	Smt. Rudina Shira	F	-	ST	SF	-	-	-	-	-	-	-	IV	-do-
5	A					Member	Shri. Brenith Marak	M	-	ST	-	MF	-	-	-	-	-	-	III	-do-
6	L					Member	Shri. Elli Marak	M	-	ST	-	-	-	L	-	-	-	-	IV	-do-
7	A					Member	Smt. Pelliha Shira	F	-	ST	SF	-	-	-	-	-	-	-	V	-do-
8	Y					Member	Shri. Lewish Marak	M	-	ST	-	MF	-	-	-	-	-	-	V	-do-
9	A					Member	Shri. Chandalin Marak	M	-	ST	-	MF	-	-	-	-	-	-	BA III	-do-
10						Member	Smt. Aboin Sangma	F	-	ST	-	MF	-	-	-	-	-	-	III	-do-
11						Member	Shri. Marthin Sangma	M	-	ST	SF	-	-	-	-	-	-	-	VII	-do-
12						Member	Smt. Rabolin Marak	F	-	ST	-	MF	-	-	-	-	-	-	VIII	-do-
13						Member	Shri. Kingkong Momin	M	-	ST	-	MF	-	-	-	-	-	-	IV	-do-
14						Member	Shri. Alaudin Sangma	M	-	ST	-	MF	-	-	-	-	-	-	IX	-do-
15						Member	Smt. Boulina Marak	F	-	ST	-	MF	-	-	-	-	-	-	III	-do-
16						Member	Shri. Softer Sangma	M	-	ST	SF	-	-	-	-	-	-	-	-	-do-
17						Member	Shri. Hadian Momin	M	-	ST	SF	-	-	-	-	-	-	-	VII	-do-
18						Member	Shri. Goering D.Shira	M	-	ST	SF	-	-	-	-	-	-	-	IX	-do-
19						Member	Smt. Lovelina Marak	F	-	ST	SF	-	-	-	-	-	-	-	III	-do-

From column no.2 the total number of State; from column no.3 the total number of District; from column no.4 the total number of Project; from column no.5 the total number of Watershed committee; from column no.6 the total number of registered watershed committee; from column no.7 the total number of members & WCs without a present or without a secretary, may be mentioned at the end of the table.

In column 20 only the letter assigned as below needs to be typed, except 'J', where the type may be specially mentioned.

(a). PNP and PRA. (b). Planning. (c). Maintenance of Accounts.

(d). Signing of cheque and making payments. (e). Supervision of construction activities. (f). Cost Estimation.

(g). Verification and measurement. (h). Record of labor 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: Detail of Self Help Groups (SHGs) in the Project Areas:

1	2	3				4				5			6		
Name of District	Name of Project	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
West Khasi Hills	IWMP IV	2	3		5										
							20	35	55						

(M- Male, F- Female)

***From column no.2, 3 and 4 total numbers of State, District and Project respectively. From column no.5 to 8, category – wise grand totals may be for the entire country may be given at the end of the table.**

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: Details of UGs in the Project Areas:

1	2	3				4				5			6		
Name of District	**Name of Project**	**Total no. of UGs**				**No. of Members**				**No. of SC/ST in each category**			**No. of BPL in each category**		
		M	**Women**	**Both**	**Total**	**Categories**	**M**	**F**	**Total**	**M**	**F**	**Total**	**M**	**F**	**Total**
West Khasi Hills	IWMP IV	482	241	723	723										
							482	241	723	482	241	723			
Total					**723**										

(M- Male, F- Female)

***From column no.2, 3 and 4 total numbers of State, District and Project respectively. From column no.5 to 8, category – wise grand totals may be for the entire country may be given at the end of the table.**

CHAPTER – 4

PROJECT ACTIVITIES

4.1: Preparatory Phase:

i). Chart for Entry Point Activities:

Sl. No.	Name of Villages	Items of Works	Measurement	Cost (Rs in lakhs)	Location	Remarks
1.	Dalbot A	IEC (HUB) Furniture	As per Estimate	1.29	At Dalbot A	
2.	Dalbot B	Footbridge & washing place	-do-	1.0625	At Dalbot B	
3.	Nongshram Rongbeng	Footbridge & foot path	-do-	1.0625	Rongbeng	
4.	Nongshram Bolking	IEC (HUB) Furniture	-do-	1.29	Bolking	
5.	Nongshram Wahkatak	IEC (HUB) Furniture	-do-	1.29	Wahkatak	
6.	Nongshram Mongchung	Public latrine	-do-	1.205	Mongchung	

ii). Entry Point Activities (EPA): (All financial figures in Lakhs Rs.)

1	2	3	4	5	6	7	8	9	10	11
Sl. No.	State	District	Name of project	Amount earmarked for EPA	Entry Point Activities planned	Estimated cost	Expenditure incurred	Balance	Expected outcome	Actual outcome
1.	Meghalaya	West Khasi Hills	WKH- IWMP IV	7.20 lakhs	1.IEC (HUB) furniture. 2.Footbridges and washing place. 3.Footbridges & footpath. 4.IEC (HUB) & Furniture. 5.Public latrine & furniture. 6.IEC (HUB) furniture.	1.29 1.0625 1.0625 1.29 1.205 1.29 7.20	1.29 1.0625 1.0625 1.29 1.205 1.29 7.20		Improvement rural connectivity. Better infrastructure. Better civil scheme. Increase in sanitation.	

iii). 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	Hydrological survey	Identifying technical support agencies	Resource agreements	Preparation of DPR	Evaluation of DPR	Any other (please specify)	Cost incurred (Rs. In Lakhs)
West Khasi Hills	WKH-IWMP IV											
		Formation of 1 no. W/C and 6 no. of sub W/C each benefiting village, formation of 1 no. WDT, community organization, general meeting, general awareness, report & building. Research Training	Role & responsibility of W/C and sub W/C. Role & responsibility of WDT. Concept & responsibility of SHGs, UGs, of campus exposure trips to Research Training Institute Project concept Awareness about the project to people participates	Pamphlet Poster & banner	Socio economic survey & PRA exercise G.P.S. survey Baseline survey for identify-ing worksite intervis-ion area		MIRD,NER Guwahati SIRD, Nongstoiñ ICAR Umiam RRTC Umran VTC kyrdemkulai Fruit Grinders Shillong NEHU Shillong NESAC Umiam CTI Byrnihat MRDS Shillong SCETE, Shillong BRO Shillong RGIIM Shillong.	Resolution & agreement with village committee for taking the Development. Agreement for establishing and including community forest Agreement to protect fashioning of fish in river. Agreement for compassionate of IWMP with other project	-done-	-		3.6

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 State	Name of District	Name of project	Type of structures	Pre Project			Proposed Project										
					No.	Area irrigated (Ha)	Storage capacity (m^3)	Augmentation/repair of existing structure				Construction of new structures				Total target			
								No.	Area to be treated (ha)	Storage capacity (m^3)	Estimated cost	No.	Area to be treated (ha)	Storage capacity (m^3)	Estimates cost	No.	Area to be treated (ha)	Storage capacity (m^3)	Estimate cost
1.	Meghalaya	West Khasi Hills	IWMP IV	1.Pond 2. Lake 3. C .Dam 4. Channel 5. Wells 6. Water Harvesting Structure. 7.Parculation Tank	1 5 1 1		3000					5no. 1619.5 Rmt 16no 5no 1no		1500 200 2000 3000 2500	1.7104 .70 2.3665 4.75407 2.17392				

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	No.	Area irrigated (ha)	Storage capacity (m^3)	Expenditure incurred (Rs. In lakhs)	Area irrigated (ha)	Storage capacity (m^3)	Estimate incurred		
											6200m^3	21.00 Ha

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

1	2	3	4	5	6		7									8									9
Sl. No.	Name of State	Name of District	Name of Project	Type of structure	Pre- Project		Proposed Target									Achievement due to project									Change in irrigated area (Col 8-6) (ha)
					No	Area irrigated (ha)	Augmentation/ repair of existing recharging structures			Construction of new recharging structures			Total Target			Augmentation/ repair of existing recharging structures			Construction of new recharging structures			Total Achievement		
							No	Area to be irrigated (ha)	Estimated cost	No	Area to be irrigated (ha)	Estimated cost	Area to be irrigated (ha)	Estimated cost		No	Area irrigated (ha)	Expenditure incurred	No	Area irrigated (ha)	Expenditure incurred	Area irrigated (ha)	Expenditure incurred	
	Meghalaya	West Khasi Hills	WKH-IWMP IV	i). Open wells																					
				ii). Bore wells																					
				iii). Any other (Pl. specify)																31.73	20.75614	103.777	23.80314		
				Total of project																					

4.2.3 Activities executed by User Groups in the Project Areas:

1	2	3						
Name of District	Name of Project	Majors activities of the UGs – Targets Structure/Activity proposed				No. of UGs involved	Estimated cost	Amount of WDF to be collected (Rs. In lakhs))
		Sl. No.	Type	No. #	Treatment (ha)			
West Khasi Hills	WKH- IWMP IV	1 2 3 4 5 6	Footpath. Drinking well. Washing place. Footbridge. Public toilet. IEC (H.U.B.)	2 - 1 2 1 4	-	6 Nos.	7.20	.36

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) (Rupees in lakhs)
Sl. No.	Type	No.#	Treated Area (Ha)			SC	ST	F	
1 2 3 4 5 6	Footpath. Drinking well. Washing place. Footbridge. Public toilet. IEC (H.U.B.)	2 - 1 2 1 4	-	6 Nos.	7.20		2880	1440	0.36

4.2.5 Activities related to livelihood by Self Help Groups (SHGs) in the Project Areas:

1	2	3		
Name of the District	Name of the Project	Major activities of the SHGs		
		Name of activity	No. of SHGs involved	Average annual income from activity per SHG
West Khasi Hills	WKH- IWMP IV			
		Tailoring/Knitting – Kitchen gardening/compost pit Carpentry/Basketry – Vermi compose/weaving – Piggery/Poultry – Pisciculture –	.	5.90

4.2.6 Activities related to livelihood by Self Help Groups (SHGs) in the Project Areas:

4	5				6	7	8			9	10
No. of SHGs given training	Total assistant received by the SHG (Amount in Rs.)				Total annual income generated (Rs)	Total annual savings (Rs)	No. of SHGs Graded as			Total Amount of loan sanctioned by the Bank (s)	No. of SHGs federated
	Loan from revolving fund	Training	Material	Others (Pl. specify)			I	II	III		
8.00											

4.2.7 Other activities of watershed works phase:

1	2	3		4		5		6		7		8		9		10		11		12		13
District	Name of Project	Ridge area treatment		Drainage line treatment		Nursery raising		Land Development		Crop demonstration		Other arable land treatment measures		Veterinary services		Fishery development		Non-convectional energy		Any other (Pl. 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)	(A)	(B)	
		All M				All C						M										
West Khasi Hills	WKH- IWMP IV	Afforestation. 135 Strip plantation. 94.745 Improvement of degraded forest. 371.223	13.00 4.00 13.00	Head water dam. 7 Retaining wall. 2 C/Dam 5 Water harvesting farm pond 5 D/Dam 2 L/Channel 1619.5 D/channel 4242.2 Small dug out pond 13	4.46096 2.3665 1.7104 4.75407 1.2456 .70156 3.34313 2.17392		.635 .2551 .364	Contour bunding. Terracing. Box terracing. 125 Improvement of existing paddy field. 72.047	8.775 9.375 3.098	Kitchen Gardening 440	10.865	135 Agro Horti 194.217	16.74175	Piggery, & Poultry, 41uts Cattle rearing 18uts	4.8035 9.00	Pisiculture 22	3.40			Tailoring 14, Carpentry/ Hallow block making 25, Vermi compose & weaving 12, Betel nut 18	1.115 2.75 2.55 6.9165	
			30		20.75615		1.2541		21.248		10.865		16.74175		13.8035		3.40				13.3315	131.40

4.2.8 Details of engineering structures in watershed works:

1	2	3	4			5			6	7					8						
District	Project	Name of structure	Type of treatment			Type of land			Executing agency	Target					Achievement						
			(i). Ridge area (R)	(ii). Drainage line	(iii). Land dev.(L)	(i). Private	(ii). Community	(iii). Other please specify	(i). UG (ii). SHG (iii). Other please specify	No. of units (No./cu.m/ rmt)	Estimate Cost				No. of units (No./cu.m/ rmt)	Expenditure incurred (Rs in lakhs)		Status of completion		Actual month & Year of completion (mm/yyyy)	
											M	W	O	T		M	W	O	T		
		Afforestation. H/Dam, C/Dam, C of water harvesting pond, D/Dam, R/Wall, L/Channel, percolation tank.	R	D		Private			UGs, SHGs, W/C											2014	15
		Contour bunding		D	L																
		half moon terracing		D	L																
		improvement of existing paddy field.		D	L																

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 M	Others	Women	Total	SC	ST M	Others	Women	Total
									15562		7781	23343		482		241	723

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

1	2	3	4			5			6	7				8			
District	**Project**	**Name of structure/ work**	**Type of treatment**			**Type of land**			**Executing agency**	**Target**				**Achievement**			
			(i). Ridge area (R)	(ii). Drainage line	(iii). Land Dev.(L)	(i). Private	(ii). Community	(iii). Others (please specify)	(i). UG (ii). SHG (iii). Other please specify	Area (ha)	No. of plants	Estimated cost (Rs in lakhs)	Expected cost (Rs in lakhs)	Area# (ha)	No. of plants	Expenditure incurred (Rs in lakhs)	Actual month & year of completion (mm/yyyy)
West Khasi Hills	IWMP IV	Afforestation, Agro Horticulture, Half moon terracing, Contour bunding,	R - D L		L L	P P P			UGs SHGs W/C	135 194.217 125 -	13500 19421	13.635 16.7475 9.375 8.775					
Total												40.5325					

4.2.11 Details of Vegetative structure in watershed works: Phase – II (contd…):

9														
Outcomes														
Reduction in run off (cum)	**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**

4.2.12 Details of allied/other activities:

1	2	3	4			5	6		7	
District	**Project**	**Name of Activity @**	**Type of Land**			**Executing Agency**	**Target**		**Achievement**	
			(i). Private	(ii). Community	(iii). Others please specify	(i). UG (ii). SHG (iii). Others please specify	Estimated cost (Rs in lakhs)	Expected month & year of completion (mm/yyyy)	Expenditure incurred (Rs in lakhs)	Actual month & year of completion (mm/yyyy)
		Livelihood:								
		Tailoring/Knitting.				Private	1.115			
		Carpentry/Hallow block making.				-do-	0.95			
		Kitchen gardening & vermi compose.				-do-	10.865			
		Vermi compose & weaving.				-do-	0.75			
		Piggery/Poultry.				-do-	2.72			
		Pisciculture.				-do-	1.60			
		Production System & Micro Enterprise:								
		Farming				UG	2.0835			
		Pisciculture.				SHG	1.80			
		Mud brick making.				UG	1.80			
		Weaving & Handloom.				UG	1.80			
		Betelnut processing/Rice mill/Agro machinery.				SHG	6.9165			
		Cattle rearing.				SHG	9.00			
		Total					41.40			

From column No. 2 no. of state: from column no. 3 of District; from column no. 4 total no. of project; 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 @ 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: Cont…… 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

4.3 Consolidation and withdrawal phase;

Details of activities in the CPRs in the Project Areas:

1	2	3	4	5	6				7						
Name of the District	Name of Project	Name(s) of the villages	CPR particular	Activity proposed	Target				Achievement						
					Target area under the activity (ha)	Estimate expenditure	Expected no. of beneficiaries	Estimate contribution to WDF (Rs)	Area treated under the activity (ha)	Expenditure incurred (Rs)	Actual no. of beneficiaries	No. of Mandays			WDF collected (Rs)
												SC	ST	F	
West Khasi Hills	IWMP IV	Dalbot A Dalbot B N. Rongbeng N. Bolking N. Wahkatak N. Mongchung	Public land Stream Spring Stream Spring Community land	Washing place & drinking well. CC Dam/washing place. Well. Washing place. Well. Public dustbin.	2 nos. 2 nos. 3 nos. 5 nos. 4 nos. 8 nos.	1.71750 1.47750 1.68 1.455 1.1475 1.5225 9.00	80 50 150 180 80 160	0.285							0.285

WATERSHED TREATMENT PLAN OF PROJECT – IV IWMP
(DAONG DAGRIM, RONGBENG DAGAL AND UMWASOR WATERSHED) WEST KHASI HILLS

NAME OF DISTRICT: WEST KHASI HILLS TOTAL GEOGRAPHICAL AREA: 7643 Ha TOTAL PROJECT COST: Rs.630 LAKHS
NAME OF C&RD BLOCK: MAWSHYNRUT AREA PROPOSED FOR TREATMENT: 4200 Ha NOS. OF VILLAGES: 16 Nos

(Physical in Ha/Nos/Rm/Units) (Rupees in Lakhs)

Sl No	Particulars/Activities	Budget Head of Account	First Year		Second Year		Third Year		Fourth Year		Fifth Year		TOTAL	
			Physical	Financial	Physical	Financial	Physical	Financial	Physical	Financial	Physical	Financial	Physical	Financial
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
I	***ADMINISTRATION***													
A	**Administrative cost**	2402 S&WC 800- Other Expen ditures												
	i. Honorarium to WDT Members ii. Honorarium to Watershed Volunteers iii. Honorarium to Watershed Committee Organizers iv. Small Honorarium to Watershed Committee members v. Small Honorarium to Sub Watershed Committee members vi. Honorarium/Fees to Chartered Accountant. vii. Hiring Charge of Vehicles viii. Office expenses/overhead expenditure (stores & stationeries, POL, Printing of booklets, IWMP Guidelines, Signboard, Xerox, Typing and printing, Computer Set Purchase, etc.) ix. Documentation and Reporting (Cost of Cameras/Digital cameras, photography etc), Honorarium to office assistant, TA/DA of Staff, Hiring charge of Office Building.		-	-	2%	12.60	5%	31.50	3%	18.90	-	-	10%	63.00
	TOTAL OF (A) Administrative Cost		**-**	**-**	**-**	**12.60**	**-**	**31.50**	**-**	**18.90**	**-**	**-**	**-**	**63.00**
B	**Monitoring**	800- Other Expen ditures 02- Moni toring & Evaluation			0.2% (M)	1.26	0.5% (M)	3.15	0.3% (M)	1.89			1% (M)	6.30
C	**Evaluation**		-	-	0.3% (E)	1.89	0.5% (E)	3.15	0.2% (E)	1.26	-	-	1% (E)	6.30
	TOTAL OF I (A+B+C)					***15.75***		***37.80***		***22.05***				***75.60***

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
II	***PREPARATORY PHASE***													
A	**Entry Point Activities**	800- Other Expen ditures 27-Minor works	4%	25.20	-	-	-	-	-	-	-	-	4%	25.20
B	**Institutional, Capacity Building & Training, IEC activities**	800- Other Expen ditures 04-Insti tution & Capacity Building 20-Other Admini strative expenses												
	Awareness Campaign & capacity Building of Farmers, Capacity Building of SHGs, UGs, Capacity Building of WC Members, Capacity Building of WDT/WV, Capacity Building of PIA, Institutional Training, Exposure Visit – Off Campus (SHGs, UGs, WC, WDT,) etc.		1%	6.30	2%	12.60	1%	6.30	1%	6.30	-	-	5%	31.50
C.	**Preparation of Detailed Project Report**	800- Other Expen ditures 05-Prepa ration of DPR												
	i. Cost of Resources Inventory Works		-		-	-	-	-	-	-	-	-	-	
	ii. Cost of PRA Exercises		-		-	-	-	-	-	-	-	-	-	
	iii. Cost of land use survey works		-		-	-	-	-	-	-	-	-	-	
	iv. Cost of Formulating		-		-	-	-	-	-	-	-	-	-	
	TOTAL OF C		**1 %**	**6.30**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**1 %**	**6.30**
	TOTAL OF PREPARATORY PHASE II(A+B+C)		**6%**	**37.80**		**12.60**		**6.30**		**6.30**				**63.00**
III	***WATERSHED WORKS PHASE***													
A	***Watershed Treatment/Development works***	800- Other Expen ditures *06-WatershedTreatment/ Dev. works*												
i.	***Arable Land Treatment***													
1	Agro-Horticulture Devt. Rs. 8600/ Ha		-	-	243.217 Ha (C)	9.36164	(C)303.187 Ha (M)	35.05911	(M)	2.609	-	-	546.404 Ha	47.02975
2	Loose boulder Contour Bunds @ Rs. 7500/ Ha		-	-	7 Ha	0.525	122 Ha	17.925	8 Ha	0.60	-	-	137 Ha	19.05
3	Peripherial Bunding @ Rs 50/Rm		-	-	1102 Rm	0.551	4464 Rm	2.232	1260 Rm	0.630	-	-	6826 Rm	3.413
4	Improvement of Existing Paddy Fieldss 4300/Ha		-	-	63.20 Ha	2.7176	92.047 Ha	3.958	5 Ha	0.215	-	-	160.247 Ha	6.8906
5	Construction of Wet Terraces @ Rs 18692/Ha		-	-	8 Ha	1.495	40 Ha	7.477	6 Ha	1.121	-	-	54 Ha	10.093
6	Crop Demonstration @ Rs 5000/Unit		-	-	23 units	1.15	100 units	5.00	30 units	1.50	-	-	153 Units	7.65
7	Agro –Forestry Devt. works @ Rs 10100/Ha		-	-	45 Ha (c)	0.682	(M)	2.984	(M)	0.879	-	-	45 Ha	4.545
8	Half Moon Terracing @Rs. 7500/- Ha		-	-	-	-	197.88 Ha	14.841	-	-	-	-	197.88 Ha	14.841
	TOTAL OF (i)					**16.48224**		**89.47611**		**7.554**	**-**	**-**		**113.51235**

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
ii.	***Non Arable Land Treatment***	*-do-*												
1	Afforestation Devt. works @ Rs. 10,100/ ha		-	-	178 Ha (C)	9.519	(C) 135 Ha (M)	20.981	(M)	1.113	-	-	313 Ha	31.613
2	Strip Plantation @ Rs 4266/Ha		-	-	10 Ha	0.064	(C) 158.945 Ha (M)	7.06257	(M)	0.081	-	-	168.945 Ha	7.20757
3	Improvement of existing Degraded Forest @ Rs. 3600/ ha		-	-	58 Ha	0.313	(C) 42.223 Ha (M)	2.862	(C) 6.30 Ha (M)	23.677	-	-	730.223 Ha	26.252
	TOTAL OF (ii)				**246.00**	**9.896**	**336.168**	**30.90557**	**630**	**24.277**			**1230.168**	**65.07257**
iii.	***Drainage Line Treatment***	*-do-*												
1	Check Dam/Diversion Dam/Head Water Dam.		-	-	14 Nos	7.58936	17 Nos	172796	1 No	2.626	-	-	32 Nos	27.49496
2	Run off Disposal Channel/Diversion Channel.		-	-	2590 Rm	0.6614	16594.70 Rm	7.679	795.50 Rm	0.666	-	-	19980.20 Rm	9.0064
3	Protection Wall/Retaining Wall		-	-	2 Nos	0.961	33 Nos	7.69753	2 Nos	1.031	-	-	37 Nos	9.68953
4	Small Dug Out Pond/Farm Pond.		-	-	4 Nos	1.052	9 Nos	2.47893	11 Nos	1.62	-	-	24 Nos	5.15093
5	Water Harvesting Structures		-	-	11 Nos	10.608	60 Nos	63.25926	10 Nos	9.482	-	-	81 Nos	83.34926
6	C.C Dam Cum Washing Place.		-	-	-	-	2 Nos	1.365	-	-	-	-	2 Nos	1.365
7	Wells		-	-	-	-	1 No	0.359	-	-	-	-	1 No	0.359
	TOTAL OF (iii)					**20.87176**		**100.11832**		**15.425**				**136.41508**
	TOTAL OF A (i + ii + iii)					**47.285**		**220.50**		**47.25**				**315.00**
B	***Livelihood Activities***	800- Other Expen ditures *07-Live lihood activities*												
1	Carpentry/ Agri- Implements/ Basket Making/ Hollow Block making etc.		-	-	5 units	0.40	44 units	3.15	49 units	3.35	-	-	98 Units	6.90
2	Tailoring/Knitting		-	-	4 units	0.20	22 units	1.515	44 units	2.68	-	-	70 Units	4.395
3	Kitchen Gardening		-	-	148 units	3.70	133 units	3.325	515 units	12.87	-	-	796 Units	19.895
4	Vermi-Composting		-	-	4 units	0.50	14 units	1.75	35 units	4.375	-	-	53 Units	6.625
5	Piggery		-	-	5 units	0.40	47 units	3.76	82 units	6.425	-	-	134 Units	10.585
6	Poultry		-	-	5 units	0.40	15 units	1.20	30 units	2.40	-	-	50 Units	4.00
7	Apiculture		-	-	5 units	0.40	20 units	1.60	25 units	2.00	-	-	50 Units	4.00
8	Pisciculture				3 units	0.30	26 units	2.60	37 units	3.70			66 units	6.60
	TOTAL OF B					**6.30**		**18.90**		**37.80**				**63.00**

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
C	***Production System & Micro Enterprises***	800- Other Expen ditures *08-Production System & Micro Enter prises*												
1	Poultry @Rs. 30000/ Unit		-	-	2 units	0.60	10 units	3.00	10 unit	3.00	-	-	22 Units	6.60
2	Pisciculture @Rs. 30000/ Unit		-	-	2 units	0.60	21units	6.30	18 units	5.40	-	-	41 Units	12.30
3	Rice Mill/ Battle nut Processing @Rs. 50000/ Unit		-	-	-	-	19 units	8.9165	5 units	2.20	-	-	24 Units	11.1165
4	Piggery @Rs. 30000/ Unit		-	-	13 units	3.90	14 units	4.1835	14 units	4.20	-	-	41 Units	12.2835
5	Mud Block Making @Rs. 30000/ Unit		-	-	1 units	0.30	4 units	1.20	17 units	5.10	-	-	22 Units	6.60
6	Weaving & Handloom @Rs. 30000/ Unit		-	-	2 units	0.60	17 units	5.10	24 units	7.20	-	-	43 Units	12.90
7	Duckery @Rs. 15000/ Unit		-	-	2 units	0.30	12 units	1.80	10 units	1.50	-	-	24 Units	3.60
8	Cattle Rearing @Rs. 15000/ Unit						2 Units	1.00	31 units	15.50	-	-	33 Units	16.50
	TOTAL OF C					**6.30**		**31.50**		**44.10**				**81.90**
	TOTAL OF III - WATERSHED WORKS PHASE (A+B+C)					**53.85**		**270.90**		**129.15**				**459.90**
IV	***CONSOLIDATION &WITHDRAWAL PHASE***	800- Other Expen ditures *09-Consoli dation and withdrawal works*												
1	Repairs & Maintenance of CPR's		-	-	-	-	-	-	-	-	-	12.50	-	12.50
2	Improving the sustainability of various interventions		-	-	-	-	-	-	-	-	-	9.00	-	9.00
3	Documentation of successful experiences & preparation of Consolidation Report		-	-	-	-	-	-	-	-	-	10.00	-	10.00
4	Capacity Building of W.C., SHGs, UGs, for maintenance & operation of Assets during post project period													
	TOTAL OF IV		**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**31.50**	**-**	**31.50**
	GRAND TOTAL OF (I TO IV)			**37.80**		**88.20**		**315.00**		**157.50**		**31.50**		**630.00**

N.B : " C " = Creation " M " = Maintenance

Divisional Officer,
Cum
Project Leader
Project Implementation Agency (IWMP)
Soil & Water Conservation Division,
Nongstoin

Deputy Commissioner,
West Khasi Hills District,
Nongstoin

Year wise Financial Break Up of Rongbeng Dagal Watershed IWMP-IV (Physical in %) (Rs. In lakhs)

Sl. No.	Activities	1st Year		2nd Year		3rd Year		4th Year		5th Year		Total	
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1.	Administrative Cost			2%	3.5	5%	9.0	3%	5.4	-	-	10%	18.00
2.	Monitoring	-	-	0.2%	.36	0.5%	.90000	0.3%	0.54	-	-	1%	1.80
3.	Evaluation	-	-	0.3 E	0.54	0.5 E	0.9	0.2 E	0.36	-	-	1%	1.80
4.	Entry Point Activities	4%	7.2	-	-	-	-	-	-	-	-	4%	7.20
5.	Institutional, capacity building & training, IEC activities	1%	1.8	2%	3.6	1%	1.8	1%	1.8	-	-	5%	9.0
6.	Preparation of DPR	1%	1.8	-	-	-	-	-	-	-	-	1%	1.80
7.	Watershed work phase	-	-	7.5%	13.50	35%	63.0	7.5%	13.5	-	-	50%	90.0
8.	Livelihood activities	-	-	1%	1.80	3%	5.40	6%	10.80	-	-	10%	18.0
9.	Production system & Micro enterprises	-	-	1%	1.80	5%	9.0	7%	12.60	-	-	13%	23.40
10.	Consolidation phase	-	-	-	-	-	-	-	-	5%	9.0	5%	9.0
	Total	**6%**	**10.80**	**14%**	**25.20**	**50%**	**90.00**	**25%**	**45.00**	**5%**	**9.0**	**100%**	**180.00**

Divisional Officer
Soil & Water Conservation
Cum
Project Leader of
Rongbeng-Dagal Watershed Committee.

Deputy Commissioner
West Khasi Hills District.

WATERSHED TREATMENT PLAN OF RONGBENG-DAGAL MICRO WATERSHED UNDER IWMP-WEST KHASI HILLS PROJECT IV.

Name of District: West Khasi Hills **Total Geographical Area: 2387 Ha** **Total Project Cost: 180 Lakhs**

Name of C&RD Block: Mawshynrut **Area Proposed for Treatment: 1200 Ha** **Nos. of Village: 6 Nos.**

Sl. No	Particulars/Activities	Budget Head of Account	First Year 2010-11		Second Year 2011-12		Third Year 2012-13		Fourth Year 2013-14		Fifth Year 2014-15		Total	
			Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin
I	**Administration**													
A	Administrative Cost													
	i.Honorarium to WDT Members ii.Honorarium to Watershed Volunteers iii.Honorarium to Watershed Committee Organiser. iv.Small honorarium to Watershed Committee members. v.Small honorarium to Sub Watershed Committee members. vi.Honorarium/Fees to chartered Accountant. vii.Hiring charge of vehicles. viii.Office expenses/overhead expenditure(stores & stationeries, POL printing of booklets, IWMP guideline, signboard, Xerox, typing & printing, computer set purchase, etc.) ix.Documentation & reporting (cost of cameras/digital cameras, photography) Honorarium to office assistant, TA/DA of staff, hiring charge of Office building	2402 S&WC 800- other expenditure			2%	3.6	5%	9.0	3%	5.4			10%	18.00
B	**Monitoring**	800-other expenditure 02-Monitoring & Evaluation			0.2% M	.36	0.5% M	.90	.3% M	.45			1%	1.8
C	**Evaluation**				0.3% E	.54	0.5% E	.90	.2% E	.36			1%	1.8
	Total of I				**2.5%**	**4.50**	**6%**	**10.80**	**3.5%**	**6.30**			**12%**	**21.60**

II	**Preparation Phase**	800-other expenditure 27-minor works												
A	***Entry Point Activities***		4%	7.2									4%	7.2
B	***Institutional, Capacity Building & Training IEC activities.***	800-other expenditure 04-institutional & capacity building 20 other administrative expenses												
	Awareness campaign & capacity building of farmers, capacity building of SHGs, UGs, capacity building of WC members, capacity building of PIA, institutional training, exposure visit-off campus (SHGs, UGs, WC, WDT) etc.		1%	1.8	2%	3.6	1%	1.8	1%	1.8			5%	9.0
C	***Preparation of Detailed Project Report***	800-other expenditure 05-preparation of DPR												
	1)Cost of resources inventory works													
	2)Cost of PRA exercises													
	3)Cost of land use survey works													
	4)Cost of formulating		1%	1.8									1%	1.8
	Total of II		**6%**	**10.80**	**2%**	**3.60**	**2%**	**3.60**					**10%**	**18.00**
III	**Watershed Works Phase**	800-other expenditure 06- watershed treatment/ development works												
A	**Watershed Treatment/Development**													
1	***Arable Land Treatment***													
	1)Agro-Horticulture @ s. 8600/Ha				85.217	7.32864	109.00	9.41311					194.217	16.74175
	2)Contour Bunding @ Rs. 7500/Ha						M	8.775					-	8.775
	3)Half moon terracing @ Rs. 7500/Ha						125ha	9.375					125ha	9.375
	4)Improvement of Existing Paddy Field @ Rs. 4300/Ha						72.047ha	3.098					72.047ha	3.098
	Total of A 1.				**85.217**	**7.32864**	**306.047**	**30.66111**					**391.264**	**37.98975**

2	***Non-Arable Land Treatment***													
	1)Afforestation with pine/non pine @ Rs. 10100/Ha	-Do-					135ha	13.635					135ha	13.635
	2)Strip Plantation @ Rs. 4266/Ha						99.745ha	4.2551					99.745ha	4.2551
	3)Improvement of degraded forest @ Rs. 3600/Ha						41.223ha	1.484	330ha	11.88			371.223ha	13.364
	Total of A 2.						**275.968**	**19.3741**	**330.00**	**11.88**			**605.968**	**17.8901**
3	***Drainage Line Treatment***	800-other expenditure 06- watershed treatment/ development works												
	1)Head Water Dam +				7 nos.	4.46096								4.46096
	2)Check Dam +				5 nos.	1.7104								1.71040
	3)Water Harvesting Farm Pond +						5 nos.	4.75407						4.75407
	4)Diversion Dam +						2 nos.	1.2456						1.2456
	5)Lead Channel +						1619.5 rmt	0.70156						0.70156
	6)Retaining Wall +						12 nos.	2.3665						2.3665
	7)Diversion Channel +						4342.2 rmt	3.34313						3.34313
	8)Small dug out pond +						2 nos.	0.55393	11 nos.	1.62				2.17392
	Total of A 3.				**154.78**	**6.17136**	**17.985ha**	**12.96479**	**30.00ha**	**1.62**			**202.768**	**20.75614**
	Grant Total of A (1+2+3)				**240 Ha**	**13.50**	**600 Ha**	**63.00**	**330 Ha**	**13.50**				**90.00**

B	**Livelihood Activities**	800-other expenditure 07- livelihood activities												
	Tailoring/Knitting @ Rs. 8000/uts.						14 nos.	1.115					14 nos.	1.115
	Carpentry/Hallow block making @ Rs. 5000/uts						19 nos.	0.95					19 nos.	0.95
	Kitchen gardening & vermi compose @ Rs. 2500/uts				72 nos.	1.80	49uts.	1.225	319uts.	7.975			440uts.	10.865
	Vermi compose & weaving @ Rs. 12500/uts						6uts.	0.75					6uts.	0.75
	Piggery/Poultry @ Rs, 8000/uts.						12uts.	0.96	22uts.	1.625			34uts.	2.72
	Pisciculture @ Rs. 10000/uts.						4 nos.	0.40	12uts.	1.20			16uts.	1.60
	Total of B				**72 nos.**	**1.80**	**99uts.**	**5.40**	**353uts.**	**10.80**			**524uts.**	**18.00**
C	**Production System & Micro Enterprises**	800-other expenditure 08-production system & micro enterprises												
	Poultry/Piggery @ Rs. 30000/uts				6uts.	1.80	1ut.	0.2835					7uts.	2.0832
	Pisciculture @ Rs. 30000/uts.						6uts.	1.80					6uts.	1.80
	Mud brick making @ Rs. 30000/uts								6uts.	1.80			6uts.	1.80
	Weaving & Handloom @ Rs. 30000/uts								6uts.	1.80			6uts.	1.80
	Bettlenut processing/Rice Mill/Agro Machinery @ Rs. 50000/uts						15uts.	6.9165					15uts.	6.9165
	Cattle rearing @ Rs. 50000/ust								18uts.	9.00			18uts.	9.00
	Total C				**6uts.**	**1.80**	**22uts.**	**9.00**	**30uts.**	**12.6**			**58uts.**	**23.4**

IV	**Consolidation & Withdrawal Phase**	800-other expenditure 09-consolidation and withdrawal works												
1.	Repair & maintenance of CPR's											3.70		3.70
2.	Improving the sustainable of various Intervention											2.00		2.00
3.	Documentation of successful experience and preparation of consolidation report											1.80		1.80
4.	Capacity Building of WC, SHGs, UGs for maintenance and operation of Assets during post Project										**5%**	1.50	**5%**	1.50
	Total IV											**9.00**		**9.00**
	Grant Total (1 - 4)			**10.80**		**25.2**		**91.68**		**43.20**		**9.00**		**180.00**

N.B: Sign C mean creation and sign M mean maintenance.

N.B: Sign + mean for work which convergence with MGNRGA.

Divisional Officer
Soil & Water Conservation
Cum
Project Leader of
Rongbeng-Dagal Watershed Committee.

Deputy Commissioner
West Khasi Hills District.

VILLAGE WISE ACTION PLAN OF RONGBENG-DAGAL MICRO WATERSHED UNDER IWMP IV WEST KHASI HILLS PTOJECT-IV

Name of District: West Khasi Hills ***Nos. of villages: 6 Nos.*** ***Project Area: 1200 Ha***

Name of C&RD Block: Mawshynrut ***Physical in Ha/Nos/Rm/Units*** ***Financial: (Rs. In lakhs)***

		Sl. No.	Villages	Dalbot A		Dalbot B		N. Rongbeng		N. Bolking		N. Wahkatak		N. Mongchung		Total	
			Particulars	Phy	Fin	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*	*15*	*16*	*17*	*18*
Activities	Arable Land Treatment	1.	Agro-Horticulture	30.80ha	2.50	39ha	3.2565	44ha	3.674	39ha	2.5885	26.50ha	2.21275	30ha	2.505	209.30	16.73675
		2.	Countor Bounding	20ha	1.65	19ha	1.425	22ha	1.65	19ha	1.425	15ha	1.125	20ha	1.5	115.00	8.775
		3.	Half moon Terracing	24ha	1.80	21ha	1.575	23ha	1.725	20ha	1.5	16ha	1.2	21ha	1.575	125.00	9.375
		4.	Improvement of Existing Paddy Field	13ha	.559	12ha	.516	13ha	.559	12ha	.516	9ha	.387	12ha	.516	71.00	3.093
			Total (A)		**6.514**		**6.7725**		**7.608**		**6.0295**		**4.92475**		**6.141**	**520.3ha**	**37.98975**
	Non Arable Land Treatment	1.	Afforestation	21ha	2.121	23ha	2.323	26ha	2.626	23ha	2.323	18ha	1.818	24ha	2.424	135.00ha	13.635
		2.	Strip Plantation	24ha	1.82348	11ha	.46926	13ha	.55458	12ha	.51192	9ha	.38394	12ha	.51192	81.00ha	4.2551
		3.	Improvement of Degraded Forest	81.223 ha	2.924	60ha	2.16	64ha	2.412	58ha	2.088	45ha	1.62	60ha	2.16	368.223ha	13.364
			Total (B)		**6.86848**		**4.95226**		**5.59258**		**4.92292**		**3.82194**		**5.09592**	**584.223ha**	**31.2541**
	Drainage Line Treatment	1.	Head water Dam		.3724				1.1104		.93816		1.3504		1.8		5.57136
		2.	Water Harvesting Pond		1.1408		.7728		.955		1.0		.88547		.6		5.35407
		3.	Diversion Dam		.6764				.5692								1.2456
		4.	Lead Channel		.19356		.1188				.14		.146		.1032		.70156
		5.	Retaining Wall		.42072				.10928		.72558		.11652		.9944		2.3665
		6.	Diversion Channel		.85144		1.73096		.06074		.50				.2		3.34314
		7.	Small Dug Out Pond		.1372		.42768		.7948		.29384		.22992		.29048		2.17392
			Total (C)		**3.79252**		**3.05024**		**3.59942**		**3.59758**		**2.72831**		**3.98808**		**20.75615**

	Livelihood Activities	1.	Tailoring/Knitting @ Rs. 8000/uts	2 no.	0.16	2 uts	0.16	3 no.	.235	2 no.	.16	2 no.	.16	3 no.	0.24	14 nos.	1.115
		2.	Carpentry/Basketry/Hallow Block making/Agro. @ Rs. 5000/uts	3 no.	.15	3 no.	.15	3 no.	.15	4 no.	.20	3 no.	.15	3 no.	.15	18 uts.	0.95
		3.	Kitchen Gardening/Compost pit @ Rs. 2500/each	88 nos.	2 .0	77 uts	1 .92	86 no.	2.15	65 no.	1.625	50 nos.	1.24	78 nos.	1.93	440 nos.	10.865
		4.	Vermin compose/weaving @ Rs. 12500/each	1 no.	.125	1ut.	.125	1 no.	.125	1 no.	.125	1 no.	.125	1 no.	.125	6 nos.	0.75
		5.	Piggery/Poultry @ Rs. 8000/each	10uts.	.80	5uts.	.40	5 no.	.40	5 no.	.40	4 no.	.32	5 no.	.40	34uts.	2.72
		6.	Pisciculture @ Rs. 10000/uts	2uts	.20	2uts	.20	3 nos	.30	4uts	.40	3 no	.30	2 no	.20	16uts	1.60
			Total D	**106 no.**	**3.435**	**90 nos.**	**2.955**	**10 nos.**	**3.36**	**81uts.**	**2.91**	**63 nos.**	**2.295**	**92 nos.**	**3.045**	**533uts**	**18.00**
Activities	Production System & Micro Enterprises	1.	Piggery/Poultry @ Rs. 30000/uts	1 no	.30	1 no	.30	1 no	.30	1 no	.30	2 nos.	0.5835	1 no	.30	7 nos.	2.0835
		2.	Pisciculture @ Rs. 30000/uts	1 no	.30	1 no	.30	1 no	.30	1 no	.30	1 no	.30	1 no	.30	6 nos.	1.80
		3.	Weaving/handloom/grocery shop @ Rs. 30000/uts	1 no	.30	1 no	.30	1 no	.30	1 no	.30	1 no	.30	1 no	.30	6 nos.	1.80
		4.	Mud brick making @ Rs. 30000/uts	1 no	.30	1 no	.30	1 no	.30	1 no	.30	1 no	.30	1 no	.30	6 nos.	1.80
		5.	Bettlenut processing/rice mill/agro machinery @ Rs. 50000/uts	3 nos.	1.7655	3 nos.	1.1415	4 nos.	1.668	2 nos.	1.083	-	-	3 nos.	1.2585	15 nos.	6.9165
		6.	Cattle rearing @ Rs. 80000/uts	3 nos.	1.50	3 nos.	1.50	3 nos.	1.50	3 nos.	1.50	3 nos.	1.50	3	1.50	18 nos.	9.00
			Total E	**10 nos.**	**4.4655**	**10 nos.**	**3.8415**	**11 nos.**	**4.368**	**9 nos.**	**3.783**	**8 nos.**	**2.9835**	**10 nos.**	**3.9585**	**58 nos.**	**23.40**
			Grand Total (A+B+C+D)		**25.0755**		**21.5715**		**24.528**		**21.243**		**16.7535**		**22.2285**		**131.4**

WDT Members
Community Organisation.

WTD Member
Forestry.

WDT Members
(Civil Engineer).

WDT Members
Agriculture.

Project Leader
Rongbeng-Dagal Watershed
Committee IWMP IV.

Detail of 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	Name of Projects	Year of Sanctions	Project Duration (dd/mm/yyyy)		Area of the Projects	Project cost (Rs in Lakh)	Name of Micro watersheds & code Nos.(as per Dolr's unique codification)	Area(Ha) of the projects				Area details(Ha) (falling within the Projects)				
					From	To				Cultivated rainfed area	Cultivated irrigated area	Uncultivated wasteland		Pvt. Agri. Land	Forest Land	Community Land	Others (pl. specify)	Total Area (Ha)
1.	Meghalaya	West Khasi Hills	IWMP IV	2010-11	2010-2011	2014-2015	1200	180.00 Lakhs	Rongbeng-Dagal Watershed, 3ClA5b2c 3ClA5b3c 3ClA5b2d	132		Temporary Fallow 1068	Permanent	132	2110	124	21	2387

Fund provision for the IWMP projects from all sources:

1	2	3		4										5
District	Name of project	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	Name of private sector	Financial contribution	Name	Financial contribution	Name	Financial contribution	Name	Financial contribution	
West Khasi Hills	WKH-IWMP IV	162.00	18.00	MGNREGS	2544582	Nil	Nil	Nil	Nil	Nil	Nil	Nil		Rs. 205.44582

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

1	2	3	4	5				6				
Sl. No.	Name of State	Name of District	Name of Projects	District Agency's Project Account details				Watershed Committee (WC) Account details				
				Name of the Bank & Branch where project account has been opened	Account No. (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 & Branch where project account has been opened	Account No. (to be obtained confidentially)	Account type (savings/ current/ others)	Name & designation of authorized person who operate the account
1	Meghalaya	West Khasi Hills	WKH-IWMP IV	State Bank of India, Nongstoiñ Branch.	31150653956	Saving	Shri. D.K.Khonglah	Rongbeng Dagal watershed committee	SBI Nongstoiñ	Yet to obtain	saving	Chairman WC Secretary WC Project Leader

OFFICE OF THE
DISTRICT RURAL DEVELOPMENT AGENCY
WEST KHASI HILLS DISTRICT
NONGSTOIN

No.DRDA/NG-63/Con/NREGA/09/ 93 **Dated Nongstoin the 25th April, 2011**

CERTIFICATE OF APPROVAL

In pursuance to the Provision of Convergence/Dovetailing of Mahatma Gandhi NREGA Operational Guidelines, the below mentioned projects are hereby approved to be taken up under convergence of IWMP during the financial year 2011-12, 2012-13 and 2013-14 with Soil and Water Conservation Department , Nongstoin Vide proposal No.ND/IWMP/Genl/2010-11/91-93 dt 12th April, 2011.

Block	Name of Project	Unit of Measurement Units/m^3	Name of Village	Fin. Year	Wages MGNREGS (60%)	Materials Soil & WC Deptt (40%)	Total (100%)	Phy. target
Mawshynrut C&RD Block	**Construction of Small dug out pond**	M^3	**Dalbot A** Under Rongbeng Dagal Watershed	2nd 2011-12 3rd 2012-13 4th 2013-14	- - 20580	- - 13720	- - 34300	
	Total of 1				**20580**	**13720**	**34300**	
	Construction of head Water Dam	m^3		2nd 2011-12 3rd 2012-13 4th 2013-14	122220 - -	81480 - -	203700 - -	
	Total of 2				**122220**	**81480**	**203700**	
	Construction of Harvesting Farm Pond	m^3		2nd 2011-12 3rd 2012-13 4th 2013-14	171120 - -	114080 - -	285200 - -	
	Total of 3				**171120**	**114080**	**285200**	
	Construction of Diversion Dam	cum		2nd 2011-12 3rd 2012-13 4th 2013-14	- 101460 -	- 67640 -	- 169100 -	
	Total of 4				**101460**	**67640**	**169100**	
	Construction of Lead Channel	Rmt		2nd 2011-12 3rd 2012-13 4th 2013-14	- 29034 -	- 19356 -	- 48390 -	
	Total of 5				**29034**	**19356**	**48390**	
	Construction of Retaining Wall	m^3		2nd 2011-12 3rd 2012-13 4th 2013-14	- 63108 -	- 42072 -	- 105180 -	
	Total of 6				**63108**	**42072**	**105180**	
	Construction of Diversion Channel	m^3		2nd 2011-12 3rd 2012-13 4th 2013-14	- - 127716	- - 85144	- - 212860	
	Total of 7				**127716**	**85144**	**212860**	
	Grand Total				**635238**	**423492**	**1058730**	

District Programme Coordinator
MGNREGA/MGNREGS
West Khasi Hills District
Nongstoin

Block	Name of Project	Unit of Measurement Units/m^3	Name of Village	Fin. Year	Wages MGNREGS (60%)	Materials Soil & WC Deptt (40%)	Total (100%)	Phy. target
Mawshynrut C&RD Block	**Construction of Small dug out pond**	M^3	**Dalbot B** Under Rongbeng Dagal Watershed	2nd 2011-12 3rd 2012-13 4th 2013-14	- - 43572	- - 29048	- - 72620	
	Total of 1				**43572**	**29048**	**72620**	
	Construction of head Water Dam	m^3		2nd 2011-12 3rd 2012-13 4th 2013-14	Nil	Nil	nil	
	Total of 2							
	Construction of Harvesting Farm Pond	m^3		2nd 2011-12 3rd 2012-13 4th 2013-14	115920 - -	77280 - -	193200 - -	
	Total of 3				**115920**	**77280**	**193200**	
	Construction of Diversion Dam	cum		2nd 2011-12 3rd 2012-13 4th 2013-14	Nil	Nil	nil	
	Total of 4							
	Construction of Lead Channel	Rmt		2nd 2011-12 3rd 2012-13 4th 2013-14	- 17820 -	- 11880 -	- 29700 -	
	Total of 5				**17820**	**11880**	**29700**	
	Construction of Retaining Wall	m^3		2nd 2011-12 3rd 2012-13 4th 2013-14	- - -	- - -	- - -	
	Total of 6							
	Construction of Diversion Channel	m^3		2nd 2011-12 3rd 2012-13 4th 2013-14	- - 199500	- - 133000	- - 332500	
	Total of 7				**199500**	**133000**	**332500**	
	Grand Total				**376812**	**251208**	**628020**	

District Programme Coordinator
MGNREGA/MGNREGS
West Khasi Hills District
Nongstoin

Block	Name of Project	Unit of Measurement Units/m^3	Name of Village	Fin. Year	Wages MGNREGS (60%)	Materials Soil & WC Deptt (40%)	Total (100%)	Phy. target
Mawshynrut C&RD Block	**Construction of CC Dam**	M^3	**Nongshram Rongbeng** Under Rongbeng Dagal Watershed	2nd 2011-12 3rd 2012-13 4th 2013-14	166560 - -	111040 - -	277600 - -	
	Total of 1				**166560**	**111040**	**277600**	
	Construction of head Water Dam	m^3		2nd 2011-12 3rd 2012-13 4th 2013-14	Nil	Nil	nil	
	Total of 2							
	Construction of Harvesting Farm Pond	m^3		2nd 2011-12 3rd 2012-13 4th 2013-14	143251 - -	95500 - -	238751 - -	
	Total of 3				**143256**	**95500**	**238751**	
	Construction of Diversion Dam	cum		2nd 2011-12 3rd 2012-13 4th 2013-14	- 85380 -	- 56920 -	- 142300 -	
	Total of 4				**85380**	**56920**	**142300**	
	Construction of Lead Channel	Rmt		2nd 2011-12 3rd 2012-13 4th 2013-14	- - -	- - -	- - -	
	Total of 5							
	Construction of Retaining Wall	m^3		2nd 2011-12 3rd 2012-13 4th 2013-14	- 22392 -	- 4928 -	- 27320 -	
	Total of 6				**22392**	**4928**	**27320**	
	Construction of Diversion Channel	m^3		2nd 2011-12 3rd 2012-13 4th 2013-14	- - -	- - -	- - -	
	Total of 7							
	Construction of Small dug out pond	cum		2nd 2011-12 3rd 2012-13 4th 2013-14	- - 119220	- - 79480	- - 198700	
	Total of 8				**119220**	**79480**	**198700**	
	Grand Total				**536803**	**347868**	**884671**	

District Programme Coordinator
MGNREGA/MGNREGS
West Khasi Hills District
Nongstoin

Block	Name of Project	Unit of Measurement Units/m^3	Name of Village	Fin. Year	Wages MGNREGS (60%)	Materials Soil & WC Deptt (40%)	Total (100%)	Phy. target
Mawshynrut C&RD Block	**Construction of CC Dam**	M^3	**Nongshram Bolking** Under Rongbeng Dagal Watershed	2nd 2011-12 3rd 2012-13 4th 2013-14	- - -	- - -	- - -	
	Total of 1							
	Construction of head Water Dam	m^3		2nd 2011-12 3rd 2012-13 4th 2013-14	66360 - -	44240 - -	110600 - -	
	Total of 2				**66360**	**44240**	**110600**	
	Construction of Harvesting Farm Pond	m^3		2nd 2011-12 3rd 2012-13 4th 2013-14	150000 - -	100000 - -	250000 - -	
	Total of 3				**150000**	**100000**	**250000**	
	Construction of Diversion Dam	cum		2nd 2011-12 3rd 2012-13 4th 2013-14	- - -	- - -	- - -	
	Total of 4							
	Construction of Lead Channel	Rmt		2nd 2011-12 3rd 2012-13 4th 2013-14	- - -	- - -	- - -	
	Total of 5							
	Construction of Retaining Wall	m^3		2nd 2011-12 3rd 2012-13 4th 2013-14	- 108837 -	- 72558 -	- 181395 -	
	Total of 6				**108837**	**72558**	**181395**	
	Construction of Diversion Channel	m^3		2nd 2011-12 3rd 2012-13 4th 2013-14	- - 9110	- - 6074	- - 15184	
	Total of 7				**9110**	**6074**	**15184**	
	Construction of Small dug out pond			2nd 2011-12 3rd 2012-13 4th 2013-14	- - 43476	- - 28984	- - 72460	
	Total of 8				**43476**	**28984**	**72460**	
	Grand Total				**377783**	**251856**	**629639**	

District Programme Coordinator
MGNREGA/MGNREGS
West Khasi Hills District
Nongstoin

Block	Name of Project	Unit of Measurement Units/m^3	Name of Village	Fin. Year	Wages MGNREGS (60%)	Materials Soil & WC Deptt (40%)	Total (100%)	Phy. target
Mawshynrut C&RD Block	**Construction of CC Dam**	M^3	**Nongshram Wahkatak** Under Rongbeng Dagal Watershed	2nd 2011-12 3rd 2012-13 4th 2013-14	- - -	- - -	- - -	
	Total of 1							
	Construction of head Water Dam	m^3		2nd 2011-12 3rd 2012-13 4th 2013-14	55860 - -	37240 - -	93100 - -	
	Total of 2				**55860**	**37240**	**93100**	
	Construction of Harvesting Farm Pond	m^3		2nd 2011-12 3rd 2012-13 4th 2013-14	132820 - -	88547 - -	221367 - -	
	Total of 3				**132820**	**88547**	**221367**	
	Construction of Diversion Dam	cum		2nd 2011-12 3rd 2012-13 4th 2013-14	- - -	- - -	- - -	
	Total of 4							
	Construction of Lead Channel	Rmt		2nd 2011-12 3rd 2012-13 4th 2013-14	- 21900 -	- 14600 -	- 36500 -	
	Total of 5				**21900**	**14600**	**36500**	
	Construction of Retaining Wall	m^3		2nd 2011-12 3rd 2012-13 4th 2013-14	- 17478 -	- 11652 -	- 29130 -	
	Total of 6				**17478**	**11652**	**29130**	
	Construction of Diversion Channel	m^3		2nd 2011-12 3rd 2012-13 4th 2013-14	- - -	- - -	- - -	
	Total of 7							
	Construction of Small dug out pond			2nd 2011-12 3rd 2012-13 4th 2013-14	- - 34488	- - 22992	- - 57480	
	Total of 8				**34488**	**22992**	**57480**	
	Grand Total				**262546**	**175031**	**437577**	

District Programme Coordinator
MGNREGA/MGNREGS
West Khasi Hills District
Nongstoin

Block	Name of Project	Unit of Measurement Units/m^3	Name of Village	Fin. Year	Wages MGNREGS (60%)	Materials Soil & WC Deptt (40%)	Total (100%)	Phy. target
Mawshynrut C&RD Block	**Construction of CC Dam**	M^3	**Nongshram Mongchung** Under Rongbeng Dagal Watershed	2nd 2011-12 3rd 2012-13 4th 2013-14	90000 - -	60000 - -	150000 - -	
	Total of 1				**90000**	**60000**	**150000**	
	Construction of head Water Dam	m^3		2nd 2011-12 3rd 2012-13 4th 2013-14	270000 - -	180000 - -	450000 - -	
	Total of 2				**270000**	**180000**	**450000**	
	Construction of Harvesting Farm Pond	m^3		2nd 2011-12 3rd 2012-13 4th 2013-14	- - -	- - -	- - -	
	Total of 3							
	Construction of Diversion Dam	cum		2nd 2011-12 3rd 2012-13 4th 2013-14	- - -	- - -	- - -	
	Total of 4							
	Construction of Lead Channel	Rmt		2nd 2011-12 3rd 2012-13 4th 2013-14	- - -	- - -	- - -	
	Total of 5							
	Construction of Retaining Wall	m^3		2nd 2011-12 3rd 2012-13 4th 2013-14	- 149160 -	- 99440 -	- 248600 -	
	Total of 6				**149160**	**99440**	**248600**	
	Construction of Diversion Channel	m^3		2nd 2011-12 3rd 2012-13 4th 2013-14	- 30000 -	- 20000 -	- 50000 -	
	Total of 7				**30000**	**20000**	**50000**	
	Construction of Small dug out pond			2nd 2011-12 3rd 2012-13 4th 2013-14	- - 43572	- - 29048	- - 72620	
	Total of 8				**43572**	**29048**	**72620**	
	Grand Total				**582732**	**388488**	**971220**	

District Programme Coordinator
MGNREGA/MGNREGS
West Khasi Hills District
Nongstoin

Action Plan of M.G.N.R.E.G.S, under Rongbeng-Dagal I.W.M.P – IV

Sl. No.	Name of works	Nos.	2011-2012	2012-13	2013-14	Total
1.	Construction of CC Dam	5 nos.	322920.00.	-	-	322920.00.
2.	Construction of Head Water Dam	7 nos.	514440.00.	-	-	514440.00.
3.	Construction of Water Harvesting Farm Pond	5 nos.	-	713116.00.	-	713116.00.
4.	Construction of Diversion Dam	2 nos.	-	186760.00.	-	186760.00.
5.	Construction of Lead Channel	1619.5 rmt.	-	68754.00.	-	68754.00.
6.	Construction of Retaining Wall	12 nos.	-	360975.00.	-	360975.00.
7.	Construction of Diversion Channel	4342.2 rmt	-	-	366326.00.	366326.00.
8.	Construction of Small dug out pond	13 nos.	-	-	306708.00.	360708.00.
			8,37,360.00.	13,23,605.00.	6,73,034.00.	26,53,239.00.

(Rupees Twenty six lakhs fifty three thousand two hundred thirty nine) only.

The above works plan are only for MGNREGS wages components as 40% material cost were work in details Action Plan of Village Wise.

Submitted.

Details of convergence of IWMP with other schemes:

1	2	3	4	5	6	7
District	**Name of Project**	**Name of Department with scheme converging with IWMP**	**Fund made available to IWMP due to convergence (Rs in lakhs)**	**Name of activity/task/ structure undertaken with converged funds** **(a). Structures** **(b). Livelihood** **(c). Any others please specify**	**Reference no. of activity/ task/structure in DPR@**	**Level at which decision for convergence was taken**
West Khasi Hills	WKH- IWMP IV					
		MGNREGS C&RD Block	2544582	Structure: CC Dam. Head Water Dam. Retaining Wall. Diversion Dam. Lead Channel. Water Harvesting Structure. Diversion Channel. Small Dug Out Pond.	As per Drainage Line Treatment Plan which mark +	District Level, Block Level, Village Employee Council Level.

Public – Private partnership in the IWMP Project:

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 intervention	Expected outcomes	Actual outcomes	Comments
			(a). MoU	(b). Contract	(c). Other please specify	IWMP	Private sector				
Nil											

from column no.2 totals of State implementing the programme; from column no. 3 total no. of District; from column no.4 total no. of project under PPP; from column no.5 total no. of private companies/agencies; from column no.7 total amount may be mentioned at the end of the table for the entire Country

CHAPTER - 6
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				
Sl. No.	State	Name of the Training Institute	Full address with contact no, website & email	Name & designation of the head of Institute	Type of Institute	Area (s) of specialization	Accreditation details	Performance				
								Reference Year	No. of training assigned	No. of Trainees to be trained	No. of Training conduct	No. of trainees trained
1.	Meghalaya	NIRD (NER)	Guwahati	Director	Central Govt.	Remote sensing Rural Devp.	NA					
2.		SIRD	Nongsder	Director	State Govt.	Capacity Building	NA					
3.		RRTC	Umran	Director	Don-Bosco	Agro-Horti, Animal Husbandry, entrepreneurship.	NA					
4.		ICAR	Umiam	Director	Central Govt.	- Do -	NA					
5.		VTC	Kyrdem Kulai	Director	State Govt.	Animal husbandry	NA					
6.		Fruit Garden	Shillong	Director	State Govt.	Agri-Hodti, fruit processing	NA					

*From column no.2 total number of State implementing the programme; from column no.3 no. of Training Institute; from column no.9 total no. of category-wise training and trainees may be given at the end of the table for the entire country.

#Central Govt. Dept/State Govt. Dept/Autonomous Body/Research Institute/Universities/Other (please specify).

$ Capacity Building/Agriculture/Horticulture/Animal Husbandry/Pisiculture/Remote Sensing/Water Conservation/Ground Water/Forestry/Livelihood/Entrepreneurship Development/Others (pl. specify).

The training institute must fulfill the conditions mention in the operation guideline:

(1). Technical experts in field required by IWMP. (2). Past Experience. (3). Annual turnover. (4). Receives Fund either from Central or State Govt.

(5). Publication. (6). Not black listed by any Govt. Organization. (7). Audited Account. (8). Organizational structure.

Table 6.2: Capacity Building activities for the Year 2010-11 to 2014-15 as on 31.03.2011 (dd.mm.yyyy).

1	2	3	4	5	6		7	
Project Stakeholder	Total no. of persons	No. of person trained so far	No. of person to be trained during current financial year	No. of person to be trained during financial year	Sources of Funding for Training		Fund Utilized	
					(a). DoLR	(b). Any others (pl. specify)	(a). DoLPR	(b). Any others (pl. specify)
SLNA								
DRDA/ZP Cell								
PIAs								
WDTs	2							
UGs	243		243		1.80		1.80	
SHGs	55		55					
WCs√	18		18					
GPs								
Community	1286		1286		100%			
Others (pl. specify)								

Table 6.3: Information, Education & Communication (IEC) activities for the year 2010-11 as on 31-03-2011 (dd/mm/yyyy).

1	2	3	4	5
Activity	Executing Agency	Estimated Expenditure (Rs)	Expenditure Incurred (Rs)	Outcome (may quantity, wherever possible)
Awareness	S&WC (T) Division	1.80	1.80	Better Awareness and understanding About Project concept. Better Awareness about natural resources conservation
PRA Exercise	S&WC (T) Division			
Exposure Visits	S&WC (T) Division			
Capacity Building	S&WC (T) Division			
Preparation of pamphlets, booklets, banner & posters	S&WC (T) Division			

CHAPTER - 7
EXPECTED OUTCOMES

Table 7.1: Employment related outcomes:

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
	M					M								
	36000		18000	54000		486		243	729		70	-	50	120

Table 7.2: Migration details from Project Areas:

1	2	3	4	5	6	7	8	9	10	
Name of District	Name of Project	Name of Village	No. of persons migrating	No. of days per year of migration	Major season(s) for migrating	Distance of destination of migration from the village(km)	Occupation during migration	Income from such occupation (Rs. In lakhs	For reduced migration identity major activities of IWMP responsible	
									(a). Structure	(b). Livelihood
West Khasi Hills	IWMP-IV	Dalbot A	46	90	Seeking livelihood and daily labor in coal mine area during lean season (seasonal migration)	15 Km	Laborer in coal mine	0.375	Structure	Livelihood
		Dalbot B	39	90						
		N. Rongbeng	43	90						
		N. Bolking	31	90						
		N. Wahkatak	25	90						
		N. Mongchung	59	90						

*From column no.2 total no. of State; from column no.3 total no. of District; from column no.4 total no. of Project; from column no.5 total no. of village; from column no.6 total no. of persons; from column no.7 average no. of days for annual migration; from column no.8 average distance of migration from the village and from column no.9 average income from occupation during migration, for the entire country may be given at the end of the table.

7.3: Economic benefits accrued to women:

1		2		3		4
Wages		Training		Livelihood		Total (Rs. In lakhs)
Women days	Amount (Rs. In lakhs)	No. of women participants	Amount (Rs. In lakhs)	No. of women beneficiaries	Value of assistance provided (Rs. In lakh)	
18000	18.00	243		243	23.40	

*From column no.2 total no. of State 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
Name of District	Name of Project	Name of Villages	Particular of CPR	Nature of right	Period of right	Beneficiary details (No. of families)				User charges (Rs.)
						SC	ST	Others	Total	
		Dalbot A. Dalbot B. Nongshram Rongbeng. Nongshram Bolking. Nongshram Wahkatak. Nongshram Mongchung.	Improvement of degraded forest, footpath, footbridge, CC Dam, washing place wells, irrigation channel.	FWMFD P P WI Wd WI	Lifeline					

*From column no.2 no. of State; from column no.3 no. of District; from column no.4 no. of Project; from column no.5 no. of villages; from column no.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 the table no. M(SP) 10, column no.5 may be filled as required.

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

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
MEP	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 sale sand and minerals
So	for right to	collect soil for nursery and plantation activities and constructions
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)	

7.5: Water related outcomes:

7.5.1 Details of average ground water table depth in the Project Areas of the Country: State-wise (in meters)

Name of District	Name of Project	Sources	Pre-Project level	Mid-term project level	Post-project level	Increase/decrease (Col.8-Col.6)	Remarks
		Open wells	-	-	-	-	-
		Bore wells	-	-	-	-	-
		Others (pl. specify)	Very poor to poor	Poor	Good	Increased	-

*From column no.2 total no. of State; from column no.3 total no. of District; from column no.4 total no. of Project; from column no.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 depth 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.

7.5.2 Status of Drinking Water:

1	2	3			4			5
District	Name of Project	Availability of Drinking water (no. of month in a year)			Quality of Drinking water			Comments
		Pre-project	Post-project	Change in availability	Pre-project	Post-project	Change in availability	
	IWMP-IV	7-9 months	12 months	10-12 months	Moderate	Improved	Improved	

*From column no.2 total no. of State implementing the programme, from column no.3 total no. of District, from column no.4 category-wise no. of project, from column no.5 average no. of month may be given at the end of the table for the entire country.

Table 7.5.3 Water used efficiency:

1	2	3	4			
District	Name of Project	Name of major crop	Water saving in cu.m			
			Through water saving device	Through water conserving agronomic practices	Any other (please specify)	Total
West Khasi Hills	IWMP-IV	Paddy				
		Potato				
		Maize				
		Sweet potato				
		Vegetables				

*From column no.2 total no. of State implementing the programme, from column no.3 total no. of District, from column no.4 total no. of Project, from column no.6 practices-wise total may be mention at the end of the table for the entire country.

Sprinkler, Drip PVC pipe etc.

Vermi Compost, Organic manuring, Mulching, Chech basin, Alternate furrow, Ridges & furrow and other scientific practices.

Table 7.6: Vegetation/Crop related outcomes:

Table 7.6.1 Details of Karif Crop Area and yield in the Project Area:

1	2	3	4						5						6					
Name of District	Name of Project	Name of Crops	Pre-Project						Mid-Term						Post-Project					
			Area (Ha)		Average yield (Qtl/Ha)		Total Production (Qtl)		Area (Ha)		Average yield (Qtl/Ha)		Total Production (Qtl)		Area (Ha)		Average yield (Qtl/Ha)		Total Production (Qtl)	
			Irri	Rf	Irri	Rf	Irri	Rf	Irri	Rf	Irri	Rf	Irri	Rf	Irri	Rf	Irri	Rf	Irri	Rf
West Khasi Hills	IWMP-IV	Paddy		69		17		1173	32	69	19	19	608	1311	32	69	21	21	672	1449
		Maize		42		10		420	15	42	12	12	180	504	15	42	14	14	210	588
		Ginger		26		75		1950	5	26	76	76	380	1976	5	26	78	78	390	2028
		Cereals crops vegetable		21		10		210	10	21	12	12	120	252	10	21	14	14	140	294

*From column no.2 total no. of State, from column no.3 total no. of District, from column no.4 total no. of Project, from column no.5 total no. of crop from column no.6 to 8 the total of the area average yield/ha and total production category-wise entire country may be given at the end of the table for the:- Irri-Irrigated, Rf-Rainfed.

Table 7.6.2 Details of Rabi Crop Area and Yield in the Project Area:

1	2	3	4	5	6						7						8					
Sl. No.	Name of State	Name of District	Name of Project	Name of Crops	Pre-Project						Mid-Term						Post-Project					
					Area (ha)		Average yield (Qtl/ha)		Total production (Qtl)		Area (ha)		Average yield (Qtl/ha)		Total production (Qtl)		Area (ha)		Average yield (Qtl/ha)		Total production (Qtl)	
					Irri	Rf	Irri	Rf	Irri	Rf	Irri	Rf	Irri	Rf	Irri	Rf	Irri	Rf	Irri	Rf	Irri	Rf
	Meghalaya	West Khasi Hills	IWMP-IV																			
				Cereals crop vegetable		52		10		520	20	52	12	12	240	624	20	52	14	14	280	728

*From column no.2 total no. of State, from column no.3 total no. of District, from column no.4 total no. of Project, from column no.5 total no. of crop from column no.6 to 8 the total of the area average yield/ha and total production category-wise entire country may be given at the end of the table for the:- 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.	Name of State	Name of District	Name of Project	Name of Crops	Pre-Project						Mid-Term						Post-Project					
					Area (ha)		Average yield (Qtl/ha)		Total production (Qtl)		Area (ha)		Average yield (Qtl/ha)		Total production (Qtl)		Area (ha)		Average yield (Qtl/ha)		Total production (Qtl)	
					Irri	Rf	Irri	Rf	Irri	Rf	Irri	Rf	Irri	Rf	Irri	Rf	Irri	Rf	Irri	Rf	Irri	Rf
- Nil -																						

*From column no.2 total no. of State, from column no.3 total no. of District, from column no.4 total no. of Project, from column no.5 total no. of crop from column no.6 to 8 the total of the area average yield/ha and total production category-wise entire country may be given at the end of the table for the:- Irri-Irrigated, Rf-Rainfed.

Table 7.6.4 Increase/Decrease in the Area under Fodder:

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

*From column no.2 total of State implementing the programme, from column no.3 total no. of District, from column no.4 total no. of Project, from column no.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/vegetative cover:

1	2	3	4			5		
District	Name of Project	Duration of Project	Existing area under 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
West Khasi Hills	IWMP IV	5 (Five)		2010	1086	234.745	-	-

*From column no.2 total of State implementing the programme, from column no.3 total no. of District, from column no.4 total no. of Project, from column no.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 the 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
West Khasi Hills	IWMP IV	5		2010		194.217	-	

*From column no.2 total of State implementing the programme, from column no.3 total no. of District, from column no.4 total no. of Project, from column no.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 the Area under Fuel-Wood:

1	2	3	4			5		
District	Name of Project	Duration of Project	Existing area under Fuel-wood (Ha)			Achievement (Ha)		
			Source/Name of report	Year of Reference	Area already under fuel-wood	Area under fuel-wood proposed to be covered through IWMP	Area under fuel-wood actually covered through IWMP	Change in area under fuel-wood
West Khasi Hills	IWMP IV	5			205.00	371.223	-	-

*From column no.2 total of State implementing the programme, from column no.3 total no. of District, from column no.4 total no. of Project, from column no.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 liters, for solids please mention in Kgs. And income in Rs)

1	2	3	4			5			6			7
Name of District	Name of Project	Type of animals	Pre-Project			Mid-Term			Post-Project			Remarks
			No.	Yield	Income	No.	Yield	Income	No.	Yield	Income	
West Khasi Hills	IWMP IV	Piggery Poultry Cows	241 500 241			34uts 7uts 18uts			- - - - -	- - - - -	- - - - -	- - - - -

*From column no.2 total no. of state, from column no.3 total no. of District, from column no.4 total no. of Project, from column no.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 livelihood created for landless people: (contd…..)

1	2	3	4	5				6	7					8					
District	Project	Name of activity	Funds 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	Other (Pl. specify)	Total		SC	ST	Others	Women	Total	SC	ST	Others	Women	Total
West Khasi Hills	IWMP IV																	

*From column no.2 total no. of State, from column no.3 total no. of District, from column no.4 total no. of Project, 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 in directly in the activity		Annual increase in income due to activity (Rs)	Impact of livelihoods programmes				Any other information (pl. specify)
			Migration (no. of beneficiaries)		Development of backward-forward linkages		
Total	Grand Total		Pre-Project	Post-Project	Pre-Project	Post-Project	

Table 7.7.4 Details of other livelihoods created for farmers:

1	2	3	4	5				6	7				8			
District	Project	Name of activity	Funds required for the activity (Rs in lakhs)	Sources of funding (Rs.)				Actual expenditure incurred on activity (Rs.)	No. of Farmers trained				No. of Farmers taking up activity			
				Project fund	Beneficiary	Other (Pl. specify)	Total		SF	MF	LF	Total	SF	MF	LF	Total
		Carpentry/Hallow block making. Vermi compose & weaving. Piggery/Poultry. Pisciculture.	0.95. 0.75. 2.72 1.60	0.95. 0.75. 2.72 1.60	Nil											

*From column no.2 total no. of State, from column no.3 total no. of District, from column no.4 total no. of Project, 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:

9		10	11				12
No. of persons employed indirectly		Annual increase in income due to activity (Rs)	Impact of livelihoods programmes				Any other information (pl. specify)
			Migration (no. of beneficiaries)		Development of backward-forward linkages		
Total	Grand Total		Pre-Project	Post-Project	Pre-Project	Post-Project	
			241	-	1		

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.)
		(A). Backward linkages	3	2	5
		(1). Seed certification			
		(2). Seed supply system			
		(3). Fertilizer supply system			
		(4). Pesticide supply system			
		(5). Credit Institutions			
		(6). Water supply	Nil	Nil	
		(7). Extension services	Nil	1	2
		(8). Nurseries	Nil	2	
		(9). Tools/machinery supply.	0	5	7
		(10). Price support system			
		(11). Labour		720	900
		(12). Any other (please specify)			
		(B). Forward linkages	2	1	3
		(1). Harvesting/threshing machinery	Nil	5	6
		(2). Storage (including cold storage)			
		(3). Road network	3	3	3
		(4). Transport facilities	3	3	3
		(5). Markets/Mandis	1	1	1
		(6). Agro and other industries	0	0	0
		(7). Milk and other collection centers			
		(8). Labour		1200	1500
		(9). Any other (please specify)			

*From column no.2 total no. of State implementing the programme, from column no.3 total no. of District, from column no.4 total no. of Project, 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**
		Status of water table					
		Ground water structures repaired/rejuvenated					
		Quality of drinking water			Moderately	Improve	
		Availability of drinking water			Insufficient	Sufficient	
		Increase in irrigational potential			100%		
		Change in cropping/land use pattern			Mono cropping	Double cropping	
		Area under agricultural crop					
		i.	Area under single crop		100		
		ii.	Area under double crop		120		
		iii.	Area under multiple crop				
		Net increase in crop production area					
		Increase in area under vegetation					
		Increase in area under horticulture					
		Increase in area under fuel & folder					
		Increase in milk production					
		No. of SHGs			2		
		Increase in no. of livelihoods			38uts		
		Increase in income			35000	50000	
		Migration			253	Nil	
		No. of school going children					
		SHG Federations formed					
		Credit linkage with Banks			6	6	
		Resource use agreements					
		WDF Collection & managements				1 no.	
		Summary of lessons learnt		May be attached as a separate file			

Table 7.10: Cost effectiveness of structure/activity

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 benefits (Rs)	Benefits cost ratio	IRR
West Khasi Hills	WKH-IWMP IV	Rongbeng-Dagal Watershed Committee	As per Action Plan	140.40	1195.09825			1.14:1	

*From column no.2 total no. of State implementing the programme, from column no.3 total no. of District, from column no.4 total no. of Project, 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.

BENEFIT COST RATIO OF RONGBENG DAGAL WATERSHED UNDER IWMP
WEST KHASI HILLS DISTRICT PROJECT – IV

Year	Total Project Cost (A)	Input/running Cost to be burn by farmer (B)	Total Cost (A+B)	Total Benefit	Discount factor (15%)	Discount cost	Discounted benefit	Internal rate of return
1	10.80	0	10.8	0	0.87	9.396	0	
2	25.20	68.4302	93.6302	130.30555	0.756	70.7844312	98.5109958	
3	90.00	96.33295	186.33295	139.1525	0.658	122.6070811	91.562345	
4	45.00	120.1261	165.1261	149.2245	0.572	94.4521292	85.356414	
5	9.00	120.8865	129.8865	163.305	0.497	64.5535905	81.162585	
6		121.8645	121.8645	162.6032	0.432	52.645464	70.2445824	
7		121.8645	121.8645	166.6478	0.376	45.821052	62.6595728	
8		121.8645	121.8645	182.2078	0.327	39.8496915	59.5819506	
9		121.8645	121.8645	178.5153	0.284	34.609518	50.6983452	
10		121.8645	121.8645	180.6473	0.247	30.1005315	44.6198831	
Total			**1195.09825**	**1452.60895**		**564.819489**	**644.3966739**	

Benefit cost ratio = $\frac{\text{Discounted Benefit.}}{\text{Discounted Cost.}}$

= $\frac{644.3966739.}{564.819489.}$

= 1.140889588.

Benefit cost ratio = 1.14:1

Estimate for construction of Diversion Channel of Shri.

at village under Rongbeng-Dagal IWMP IV.

(As per PWD {Rd} scheduled of rate 2007-08).

1/3(b); Earth work in excavation for Bridges and Culverts below the lowest bed level including dewatering and bailing out water in order to keep the foundation trenches of water and protecting the sides of the foundation by adequate shorting, scaffolding including levelling the foundation longitudinal and transversely etc, as directed by the Engineer-in-charge.

C. (ii); Loamy soil etc.

$219 \times \frac{2.00+1.20}{2} \times 1.30\text{m} = 455.52\text{m}^3$

@ Rs. 73/m^3 = Rs. 33,252.00.

Say = Rs. 33,250.00.

(Rupees Thirty three thousand two hundred fifty) only.

Estimate for construction of Diversion Channel of Shri.

at village under Rongbeng-Dagal IWMP IV.

(As per PWD {Rd} scheduled of rate 2007-08).

1/3(b); Earth work in excavation for Bridges and Culverts below the lowest bed level including dewatering and bailing out water in order to keep the foundation trenches of water and protecting the sides of the foundation by adequate shorting, scaffolding including levelling the foundation longitudinal and transversely etc, as directed by the Engineer-in-charge.

C. (ii); Loamy soil etc.

$$219 \times \frac{2.00+1.20}{2} \times 1.30\text{m} = 455.52\text{m}^3$$

@ Rs. 73/m³ = Rs. 33,252.00.

Say = Rs. 33,250.00.

(Rupees Thirty three thousand two hundred fifty) only.

Estimate for construction of Diversion Channel of Shri.

at village under Rongbeng-Dagal IWMP IV.

(As per PWD {Rd} scheduled of rate 2007-08).

1/3(b); Earth work in excavation for Bridges and Culverts below the lowest bed level including dewatering and bailing out water in order to keep the foundation trenches of water and protecting the sides of the foundation by adequate shorting, scaffolding including levelling the foundation longitudinal and transversely etc, as directed by the Engineer-in-charge.

C. (ii); Loamy soil etc.

$$219 \times \frac{2.00+1.20}{2} \times 1.30\text{m} = 455.52\text{m}^3$$

@ Rs. 73/m³ = Rs. 33,252.00.

Say = Rs. 33,250.00.

(Rupees Thirty three thousand two hundred fifty) only.

Estimate for construction of Diversion Channel of Shri.

at village under Rongbeng-Dagal IWMP IV.

(As per PWD {Rd} scheduled of rate 2007-08).

1/3(b); Earth work in excavation for Bridges and Culverts below the lowest bed level including dewatering and bailing out water in order to keep the foundation trenches of water and protecting the sides of the foundation by adequate shorting, scaffolding including levelling the foundation longitudinal and transversely etc, as directed by the Engineer-in-charge.

C. (ii); Loamy soil etc.

$$219 \times \frac{2.00+1.20}{2} \times 1.30\text{m} = 455.52\text{m}^3$$

@ Rs. 73/m³ = Rs. 33,252.00.

Say = Rs. 33,250.00.

(Rupees Thirty three thousand two hundred fifty) only.

Estimate for construction of Diversion Channel of Shri.

at village under Rongbeng-Dagal IWMP IV.

(As per PWD {Rd} scheduled of rate 2007-08).

1/3(b); Earth work in excavation for Bridges and Culverts below the lowest bed level including dewatering and bailing out water in order to keep the foundation trenches of water and protecting the sides of the foundation by adequate shorting, scaffolding including levelling the foundation longitudinal and transversely etc, as directed by the Engineer-in-charge.

C. (ii); Loamy soil etc.

$$219 \times \frac{2.00+1.20}{2} \times 1.30\text{m} = 455.52\text{m}^3$$

@ Rs. 73/m³ = Rs. 33,252.00.

Say = Rs. 33,250.00.

(Rupees Thirty three thousand two hundred fifty) only.

Estimate for construction of Diversion Channel of Shri.

at village under Rongbeng-Dagal IWMP IV.

(As per PWD {Rd} scheduled of rate 2007-08).

1/3(b); Earth work in excavation for Bridges and Culverts below the lowest bed level including dewatering and bailing out water in order to keep the foundation trenches of water and protecting the sides of the foundation by adequate shorting, scaffolding including levelling the foundation longitudinal and transversely etc, as directed by the Engineer-in-charge.

C. (ii); Loamy soil etc.

$$219 \times \frac{2.00+1.20}{2} \times 1.30\text{m} = 455.52\text{m}^3$$

@ Rs. 73/m³ = Rs. 33,252.00.

Say = Rs. 33,250.00.

(Rupees Thirty three thousand two hundred fifty) only.

Estimate for construction of Diversion Channel of Shri.

at village under Rongbeng-Dagal IWMP IV.

(As per PWD {Rd} scheduled of rate 2007-08).

1/3(b); Earth work in excavation for Bridges and Culverts below the lowest bed level including dewatering and bailing out water in order to keep the foundation trenches of water and protecting the sides of the foundation by adequate shorting, scaffolding including levelling the foundation longitudinal and transversely etc, as directed by the Engineer-in-charge.

C. (ii); Loamy soil etc.

$$219 \times \frac{2.00+1.20}{2} \times 1.30\text{m} = 455.52\text{m}^3$$

@ Rs. 73/m³ = Rs. 33,252.00.

Say = Rs. 33,250.00.

(Rupees Thirty three thousand two hundred fifty) only.

Estimate for construction of Diversion Channel of Shri.

at village under Rongbeng-Dagal IWMP IV.

(As per PWD {Rd} scheduled of rate 2007-08).

1/3(b); Earth work in excavation for Bridges and Culverts below the lowest bed level including dewatering and bailing out water in order to keep the foundation trenches of water and protecting the sides of the foundation by adequate shorting, scaffolding including levelling the foundation longitudinal and transversely etc, as directed by the Engineer-in-charge.

C. (ii); Loamy soil etc.

$$219 \times \frac{2.00+1.20}{2} \times 1.30\text{m} = 455.52\text{m}^3$$

@ Rs. 73/m³ = Rs. 33,252.00.

Say = Rs. 33,250.00.

(Rupees Thirty three thousand two hundred fifty) only.

Estimate for construction of Diversion Channel of Shri.

at village under Rongbeng-Dagal IWMP IV.

(As per PWD {Rd} scheduled of rate 2007-08).

1/3(b); Earth work in excavation for Bridges and Culverts below the lowest bed level including dewatering and bailing out water in order to keep the foundation trenches of water and protecting the sides of the foundation by adequate shorting, scaffolding including levelling the foundation longitudinal and transversely etc, as directed by the Engineer-in-charge.

C. (ii); Loamy soil etc.

$$219 \times \frac{2.00+1.20}{2} \times 1.30\text{m} = 455.52\text{m}^3$$

@ Rs. 73/m³ = Rs. 33,252.00.

Say = Rs. 33,250.00.

(Rupees Thirty three thousand two hundred fifty) only.

Estimate for construction of Diversion Channel of Shri.

at village under Rongbeng-Dagal IWMP IV.

(As per PWD {Rd} scheduled of rate 2007-08).

1/3(b); Earth work in excavation for Bridges and Culverts below the lowest bed level including dewatering and bailing out water in order to keep the foundation trenches of water and protecting the sides of the foundation by adequate shorting, scaffolding including levelling the foundation longitudinal and transversely etc, as directed by the Engineer-in-charge.

C. (ii); Loamy soil etc.

$$219 \times \frac{2.00+1.20}{2} \times 1.30\text{m} = 455.52\text{m}^3$$

@ Rs. 73/m³ = Rs. 33,252.00.

Say = Rs. 33,250.00.

(Rupees Thirty three thousand two hundred fifty) only.

Estimate for construction of Diversion Channel of Shri.

at village under Rongbeng-Dagal IWMP IV.

(As per PWD {Rd} scheduled of rate 2007-08).

1/3(b); Earth work in excavation for Bridges and Culverts below the lowest bed level including dewatering and bailing out water in order to keep the foundation trenches of water and protecting the sides of the foundation by adequate shorting, scaffolding including levelling the foundation longitudinal and transversely etc, as directed by the Engineer-in-charge.

C. (ii); Loamy soil etc.

$$219 \times \frac{2.00+1.20}{2} \times 1.30\text{m} = 455.52\text{m}^3$$

@ Rs. 73/m³ = Rs. 33,252.00.

Say = Rs. 33,250.00.

(Rupees Thirty three thousand two hundred fifty) only.

Estimate for construction of Diversion Channel of Shri.

at village under Rongbeng-Dagal IWMP IV.

(As per PWD {Rd} scheduled of rate 2007-08).

1/3(b); Earth work in excavation for Bridges and Culverts below the lowest bed level including dewatering and bailing out water in order to keep the foundation trenches of water and protecting the sides of the foundation by adequate shorting, scaffolding including levelling the foundation longitudinal and transversely etc, as directed by the Engineer-in-charge.

C. (ii); Loamy soil etc.

$$219 \times \frac{2.00+1.20}{2} \times 1.30\text{m} = 455.52\text{m}^3$$

@ Rs. 73/m³ = Rs. 33,252.00.

Say = Rs. 33,250.00.

(Rupees Thirty three thousand two hundred fifty) only.

Estimate for construction of Diversion Channel of Shri.

at village under Rongbeng-Dagal IWMP IV.

(As per PWD {Rd} scheduled of rate 2007-08).

1/3(b); Earth work in excavation for Bridges and Culverts below the lowest bed level including dewatering and bailing out water in order to keep the foundation trenches of water and protecting the sides of the foundation by adequate shorting, scaffolding including levelling the foundation longitudinal and transversely etc, as directed by the Engineer-in-charge.

C. (ii); Loamy soil etc.

$100 \times \frac{2.00+1.20}{2} \times 1.30m = 208m^3$

@ Rs. 73/m^3 = Rs. 15,184.00.

Say = Rs. 15,150.00.

(Rupees Fifteen thousand one hundred fifty) only.

Estimate for construction of Diversion Channel of Shri.

at village under Rongbeng-Dagal IWMP IV.

(As per PWD {Rd} scheduled of rate 2007-08).

1/3(b); Earth work in excavation for Bridges and Culverts below the lowest bed level including dewatering and bailing out water in order to keep the foundation trenches of water and protecting the sides of the foundation by adequate shorting, scaffolding including levelling the foundation longitudinal and transversely etc, as directed by the Engineer-in-charge.

C. (ii); Loamy soil etc.

100x $\frac{2.00+1.20}{2}$ x1.30m = 208m³

@ Rs. 73/m³ = Rs. 15,184.00.

Say = Rs. 15,150.00.

(Rupees Fifteen thousand one hundred fifty) only.

Estimate for construction of Diversion Channel of Shri.

at village under Rongbeng-Dagal IWMP IV.

(As per PWD {Rd} scheduled of rate 2007-08).

1/3(b); Earth work in excavation for Bridges and Culverts below the lowest bed level including dewatering and bailing out water in order to keep the foundation trenches of water and protecting the sides of the foundation by adequate shorting, scaffolding including levelling the foundation longitudinal and transversely etc, as directed by the Engineer-in-charge.

C. (ii); Loamy soil etc.

$100 \times \frac{2.00+1.20}{2} \times 1.30m = 208m^3$

@ Rs. 73/m^3 = Rs. 15,184.00.

Say = Rs. 15,150.00.

(Rupees Fifteen thousand one hundred fifty) only.

Estimate for construction of Diversion Channel of Shri.

at village under Rongbeng-Dagal IWMP IV.

(As per PWD {Rd} scheduled of rate 2007-08).

1/3(b); Earth work in excavation for Bridges and Culverts below the lowest bed level including dewatering and bailing out water in order to keep the foundation trenches of water and protecting the sides of the foundation by adequate shorting, scaffolding including levelling the foundation longitudinal and transversely etc, as directed by the Engineer-in-charge.

C. (ii); Loamy soil etc.

100x $\frac{2.00+1.20}{2}$ x1.30m = 208m³

@ Rs. 73/m³ = Rs. 15,184.00.

Say = Rs. 15,150.00.

(Rupees Fifteen thousand one hundred fifty) only.

Estimate for construction of Diversion Channel of Shri.

at village under Rongbeng-Dagal IWMP IV.

(As per PWD {Rd} scheduled of rate 2007-08).

1/3(b); Earth work in excavation for Bridges and Culverts below the lowest bed level including dewatering and bailing out water in order to keep the foundation trenches of water and protecting the sides of the foundation by adequate shorting, scaffolding including levelling the foundation longitudinal and transversely etc, as directed by the Engineer-in-charge.

C. (ii); Loamy soil etc.

$100 \times \frac{2.00+1.20}{2} \times 1.30m = 208m^3$

@ Rs. 73/m^3 = Rs. 15,184.00.

Say = Rs. 15,150.00.

(Rupees Fifteen thousand one hundred fifty) only.

Estimate for construction of Diversion Channel of Shri.

at village under Rongbeng-Dagal IWMP IV.

(As per PWD {Rd} scheduled of rate 2007-08).

1/3(b); Earth work in excavation for Bridges and Culverts below the lowest bed level including dewatering and bailing out water in order to keep the foundation trenches of water and protecting the sides of the foundation by adequate shorting, scaffolding including levelling the foundation longitudinal and transversely etc, as directed by the Engineer-in-charge.

C. (ii); Loamy soil etc.

$100 \times \frac{2.00+1.20}{2} \times 1.30\text{m} = 208\text{m}^3$

@ Rs. 73/m^3 = Rs. 15,184.00.

Say = Rs. 15,150.00.

(Rupees Fifteen thousand one hundred fifty) only.

Estimate for construction of Diversion Channel of Shri.

at village under Rongbeng-Dagal IWMP IV.

(As per PWD {Rd} scheduled of rate 2007-08).

1/3(b); Earth work in excavation for Bridges and Culverts below the lowest bed level including dewatering and bailing out water in order to keep the foundation trenches of water and protecting the sides of the foundation by adequate shorting, scaffolding including levelling the foundation longitudinal and transversely etc, as directed by the Engineer-in-charge.

C. (ii); Loamy soil etc.

$100 \times \frac{2.00+1.20}{2} \times 1.30m = 208m^3$

@ Rs. 73/m^3 = Rs. 15,184.00.

Say = Rs. 15,150.00.

(Rupees Fifteen thousand one hundred fifty) only.

Estimate for construction of Diversion Channel of Shri.

at village under Rongbeng-Dagal IWMP IV.

(As per PWD {Rd} scheduled of rate 2007-08).

1/3(b); Earth work in excavation for Bridges and Culverts below the lowest bed level including dewatering and bailing out water in order to keep the foundation trenches of water and protecting the sides of the foundation by adequate shorting, scaffolding including levelling the foundation longitudinal and transversely etc, as directed by the Engineer-in-charge.

C. (ii); Loamy soil etc.

$100 \times \frac{2.00+1.20}{2} \times 1.30m = 208m^3$

@ Rs. 73/m^3 = Rs. 15,184.00.

Say = Rs. 15,150.00.

(Rupees Fifteen thousand one hundred fifty) only.

Estimate for construction of Diversion Channel of Shri.

at village under Rongbeng-Dagal IWMP IV.

(As per PWD {Rd} scheduled of rate 2007-08).

1/3(b); Earth work in excavation for Bridges and Culverts below the lowest bed level including dewatering and bailing out water in order to keep the foundation trenches of water and protecting the sides of the foundation by adequate shorting, scaffolding including levelling the foundation longitudinal and transversely etc, as directed by the Engineer-in-charge.

C. (ii); Loamy soil etc.

$100 \times \frac{2.00+1.20}{2} \times 1.30m = 208m^3$

@ Rs. 73/m^3 = Rs. 15,184.00.

Say = Rs. 15,150.00.

(Rupees Fifteen thousand one hundred fifty) only.

Estimate for construction of Diversion Channel of Shri.

at village under Rongbeng-Dagal IWMP IV.

(As per PWD {Rd} scheduled of rate 2007-08).

1/3(b); Earth work in excavation for Bridges and Culverts below the lowest bed level including dewatering and bailing out water in order to keep the foundation trenches of water and protecting the sides of the foundation by adequate shorting, scaffolding including levelling the foundation longitudinal and transversely etc, as directed by the Engineer-in-charge.

C. (ii); Loamy soil etc.

$100 \times \frac{2.00+1.20}{2} \times 1.30m = 208m^3$

@ Rs. 73/m^3 = Rs. 15,184.00.

Say = Rs. 15,150.00.

(Rupees Fifteen thousand one hundred fifty) only.

Estimate for construction of Diversion Channel of Shri.

at village under Rongbeng-Dagal IWMP IV.

(As per PWD {Rd} scheduled of rate 2007-08).

1/3(b); Earth work in excavation for Bridges and Culverts below the lowest bed level including dewatering and bailing out water in order to keep the foundation trenches of water and protecting the sides of the foundation by adequate shorting, scaffolding including levelling the foundation longitudinal and transversely etc, as directed by the Engineer-in-charge.

C. (ii); Loamy soil etc.

$100 \times \frac{2.00+1.20}{2} \times 1.30\text{m} = 208\text{m}^3$

@ Rs. 73/m^3 = Rs. 15,184.00.

Say = Rs. 15,150.00.

(Rupees Fifteen thousand one hundred fifty) only.

Estimate for construction of Diversion Channel of Shri.

at village under Rongbeng-Dagal IWMP IV.

(As per PWD {Rd} scheduled of rate 2007-08).

1/3(b); Earth work in excavation for Bridges and Culverts below the lowest bed level including dewatering and bailing out water in order to keep the foundation trenches of water and protecting the sides of the foundation by adequate shorting, scaffolding including levelling the foundation longitudinal and transversely etc, as directed by the Engineer-in-charge.

C. (ii); Loamy soil etc.

$100 \times \frac{2.00+1.20}{2} \times 1.30m = 208m^3$

@ Rs. 73/m^3 = Rs. 15,184.00.

Say = Rs. 15,150.00.

(Rupees Fifteen thousand one hundred fifty) only.

Estimate for construction of Diversion Channel of Shri.

at village under Rongbeng-Dagal IWMP IV.

(As per PWD {Rd} scheduled of rate 2007-08).

1/3(b); Earth work in excavation for Bridges and Culverts below the lowest bed level including dewatering and bailing out water in order to keep the foundation trenches of water and protecting the sides of the foundation by adequate shorting, scaffolding including levelling the foundation longitudinal and transversely etc, as directed by the Engineer-in-charge.

C. (ii); Loamy soil etc.

$100 \times \frac{2.00+1.20}{2} \times 1.30\text{m} = 208\text{m}^3$

@ Rs. 73/m^3 = Rs. 15,184.00.

Say = Rs. 15,150.00.

(Rupees Fifteen thousand one hundred fifty) only.

Estimate for construction of Diversion Channel of Shri.

at village under Rongbeng-Dagal IWMP IV.

(As per PWD {Rd} scheduled of rate 2007-08).

1/3(b); Earth work in excavation for Bridges and Culverts below the lowest bed level including dewatering and bailing out water in order to keep the foundation trenches of water and protecting the sides of the foundation by adequate shorting, scaffolding including levelling the foundation longitudinal and transversely etc, as directed by the Engineer-in-charge.

C. (ii); Loamy soil etc.

$100 \times \frac{2.00+1.20}{2} \times 1.30\text{m} = 208\text{m}^3$

@ Rs. 73/m^3 = Rs. 15,184.00.

Say = Rs. 15,150.00.

(Rupees Fifteen thousand one hundred fifty) only.

Estimate for construction of Diversion Channel of Shri.

at village under Rongbeng-Dagal IWMP IV.

(As per PWD {Rd} scheduled of rate 2007-08).

1/3(b); Earth work in excavation for Bridges and Culverts below the lowest bed level including dewatering and bailing out water in order to keep the foundation trenches of water and protecting the sides of the foundation by adequate shorting, scaffolding including levelling the foundation longitudinal and transversely etc, as directed by the Engineer-in-charge.

C. (ii); Loamy soil etc.

$$164.7 \times \frac{2.00+1.20}{2} \times 1.30\text{m} = 342.57\text{m}^3$$

@ Rs. 73/m³ = Rs. 25,007.61.

Say = Rs. 25,000.00.

(Rupees Twenty five thousand) only.

Estimate for construction of Diversion Channel of Shri.

at village under Rongbeng-Dagal IWMP IV.

(As per PWD {Rd} scheduled of rate 2007-08).

1/3(b); Earth work in excavation for Bridges and Culverts below the lowest bed level including dewatering and bailing out water in order to keep the foundation trenches of water and protecting the sides of the foundation by adequate shorting, scaffolding including levelling the foundation longitudinal and transversely etc, as directed by the Engineer-in-charge.

C. (ii); Loamy soil etc.

$$164.7 \times \frac{2.00+1.20}{2} \times 1.30\text{m} = 342.57\text{m}^3$$

@ Rs. 73/m³ = Rs. 25,007.61.

Say = Rs. 25,000.00.

(Rupees Twenty five thousand) only.

Estimate for construction of Retaining Wall of Shri.

at village, under Rongbeng-Dagal IWMP IV.

(As per PWD {Rd} scheduled of rate 2007-08).

1/3(b); Earth work in excavation for Bridges and Culverts below the lowest bed level including dewatering and bailing out water in order to keep the foundation trenches of water and protecting the sides of the foundation by adequate shorting, scaffolding including levelling the foundation longitudinal and transversely etc, as directed by the Engineer-in-charge.

c. (ii); Loamy soil etc,

16.50x1.20x0.90m = 17.82m³

@ Rs. 73/m³ = Rs. 1,300.86.

2/22; ; Providing regular stone masonry in retaining walls breast walls and wing walls etc, with hammer dressed or blunt chisel dressed stones of heavy section (size not less than 25cmx25cm x30cm long) with proper key stones each not less than (25cmx25cmx75cm long) set in cement mortar 1:6 including carriage of stones within 200m holes at 1.2 to 1.5m a part a staggered complete (a height of wall for every 1m should be kept exposed till inspected by the Supervising Officer.

$$16.50 \times \frac{1.20+0.80}{2} \times 2.00\text{m} = 33\text{m}^3$$

@ Rs. 1020/m³ = Rs. 33,660.00.

3/25; Providing cement concrete work in abutment, wing wall and return wall in prop 1:4:8 with hard broken stones aggregates 40mm nominal size including necessary carriage of stones and sand within 200m and curing (excluding shuttering)

16.50x1.20x0.10m = 1.98m³

@ Rs. 2022/m³ = Rs. 4,003.56.

4/39; Providing 12mm thick cement plastering in proportion 1:4 including screening the sand clearing the surface and carriage of sand within 200m complete and carriage of sand within 200m complete as directed (No plastering is to be done in taining walls, breast walls and face walls).

40.00x2.50m = 33.00m²

@ Rs. 86/m² = Rs. 2,838.00.

5/37; Extra carriage of sand stone aggregates, stone chips and building stones beyond the initial lead including loading and unloading and average to

a). By truck load

i). At initial load for 360qtls @ Rs. 15/qtl = Rs. 5,400.00.

ii). At subsequent load per km for 4km @ Rs. 1.65/qtl = Rs. 2,376.00.

b). By head load for 360qtls @ Rs. 45/qtl = Rs. 16,200.00.

Total = Rs. 23,976.00.

Grand Total = Rs. 65,778.42.

Say = Rs. 65,750.00.

(Rupees Sixty five thousand seven hundred fifty) only.

Estimate for construction of Retaining Wall of Shri.

at village, under Rongbeng-Dagal IWMP IV.

(As per PWD {Rd} scheduled of rate 2007-08).

1/3(b); Earth work in excavation for Bridges and Culverts below the lowest bed level including dewatering and bailing out water in order to keep the foundation trenches of water and protecting the sides of the foundation by adequate shorting, scaffolding including levelling the foundation longitudinal and transversely etc, as directed by the Engineer-in-charge.

c. (ii); Loamy soil etc,

16.50x1.20x0.90m = 17.82m³

@ Rs. 73/m³ = Rs. 1,300.86.

2/22; ; Providing regular stone masonry in retaining walls breast walls and wing walls etc, with hammer dressed or blunt chisel dressed stones of heavy section (size not less than 25cmx25cm x30cm long) with proper key stones each not less than (25cmx25cmx75cm long) set in cement mortar 1:6 including carriage of stones within 200m holes at 1.2 to 1.5m a part a staggered complete (a height of wall for every 1m should be kept exposed till inspected by the Supervising Officer.

$16.50 \times \frac{1.20+0.80}{2} \times 2.00m = 33m^3$

@ Rs. 1020/m³ = Rs. 33,660.00.

3/25; Providing cement concrete work in abutment, wing wall and return wall in prop 1:4:8 with hard broken stones aggregates 40mm nominal size including necessary carriage of stones and sand within 200m and curing (excluding shuttering)

16.50x1.20x0.10m = 1.98m³

@ Rs. 2022/m³ = Rs. 4,003.56.

4/39; Providing 12mm thick cement plastering in proportion 1:4 including screening the sand clearing the surface and carriage of sand within 200m complete and carriage of sand within 200m complete as directed (No plastering is to be done in taining walls, breast walls and face walls).

40.00x2.50m = 33.00m²

@ Rs. 86/m² = Rs. 2,838.00.

5/37; Extra carriage of sand stone aggregates, stone chips and building stones beyond the initial lead including loading and unloading and average to

a). By truck load

i). At initial load for 360qtls @ Rs. 15/qtl = Rs. 5,400.00.

ii). At subsequent load per km for 4km @ Rs. 1.65/qtl = Rs. 2,376.00.

b). By head load for 360qtls @ Rs. 45/qtl = Rs. 16,200.00.

Total = Rs. 23,976.00.

Grand Total = Rs. 65,778.42.

Say = Rs. 65,750.00.

(Rupees Sixty five thousand seven hundred fifty) only.

Estimate for construction of Retaining Wall of Shri.

at village, under Rongbeng-Dagal IWMP IV.

(As per PWD {Rd} scheduled of rate 2007-08).

1/3(b); Earth work in excavation for Bridges and Culverts below the lowest bed level including dewatering and bailing out water in order to keep the foundation trenches of water and protecting the sides of the foundation by adequate shorting, scaffolding including levelling the foundation longitudinal and transversely etc, as directed by the Engineer-in-charge.

c. (ii); Loamy soil etc,

16.50x1.20x0.90m = 17.82m³

@ Rs. 73/m³ = Rs. 1,300.86.

2/22; ; Providing regular stone masonry in retaining walls breast walls and wing walls etc, with hammer dressed or blunt chisel dressed stones of heavy section (size not less than 25cmx25cm x30cm long) with proper key stones each not less than (25cmx25cmx75cm long) set in cement mortar 1:6 including carriage of stones within 200m holes at 1.2 to 1.5m a part a staggered complete (a height of wall for every 1m should be kept exposed till inspected by the Supervising Officer.

$16.50 \times \frac{1.20+0.80}{2} \times 2.00m = 33m^3$

@ Rs. 1020/m³ = Rs. 33,660.00.

3/25; Providing cement concrete work in abutment, wing wall and return wall in prop 1:4:8 with hard broken stones aggregates 40mm nominal size including necessary carriage of stones and sand within 200m and curing (excluding shuttering)

16.50x1.20x0.10m = 1.98m³

@ Rs. 2022/m³ = Rs. 4,003.56.

4/39; Providing 12mm thick cement plastering in proportion 1:4 including screening the sand clearing the surface and carriage of sand within 200m complete and carriage of sand within 200m complete as directed (No plastering is to be done in taining walls, breast walls and face walls).

40.00x2.50m = 33.00m²

@ Rs. 86/m² = Rs. 2,838.00.

5/37; Extra carriage of sand stone aggregates, stone chips and building stones beyond the initial lead including loading and unloading and average to

a). By truck load

i). At initial load for 360qtls @ Rs. 15/qtl = Rs. 5,400.00.

ii). At subsequent load per km for 4km @ Rs. 1.65/qtl = Rs. 2,376.00.

b). By head load for 360qtls @ Rs. 45/qtl = Rs. 16,200.00.

Total = Rs. 23,976.00.

Grand Total = Rs. 65,778.42.

Say = Rs. 65,750.00.

(Rupees Sixty five thousand seven hundred fifty) only.

Estimate for construction of Retaining Wall of Shri.

at village, under Rongbeng-Dagal IWMP IV.

(As per PWD {Rd} scheduled of rate 2007-08).

1/3(b); Earth work in excavation for Bridges and Culverts below the lowest bed level including dewatering and bailing out water in order to keep the foundation trenches of water and protecting the sides of the foundation by adequate shorting, scaffolding including levelling the foundation longitudinal and transversely etc, as directed by the Engineer-in-charge.

c. (ii); Loamy soil etc,

16.50x1.20x0.90m = 17.82m³

@ Rs. 73/m³ = Rs. 1,300.86.

2/22; ; Providing regular stone masonry in retaining walls breast walls and wing walls etc, with hammer dressed or blunt chisel dressed stones of heavy section (size not less than 25cmx25cm x30cm long) with proper key stones each not less than (25cmx25cmx75cm long) set in cement mortar 1:6 including carriage of stones within 200m holes at 1.2 to 1.5m a part a staggered complete (a height of wall for every 1m should be kept exposed till inspected by the Supervising Officer.

$16.50 \times \frac{1.20+0.80}{2} \times 2.00m = 33m^3$

@ Rs. 1020/m³ = Rs. 33,660.00.

3/25; Providing cement concrete work in abutment, wing wall and return wall in prop 1:4:8 with hard broken stones aggregates 40mm nominal size including necessary carriage of stones and sand within 200m and curing (excluding shuttering)

16.50x1.20x0.10m = 1.98m³

@ Rs. 2022/m³ = Rs. 4,003.56.

4/39; Providing 12mm thick cement plastering in proportion 1:4 including screening the sand clearing the surface and carriage of sand within 200m complete and carriage of sand within 200m complete as directed (No plastering is to be done in taining walls, breast walls and face walls).

40.00x2.50m = 33.00m²

@ Rs. 86/m² = Rs. 2,838.00.

5/37; Extra carriage of sand stone aggregates, stone chips and building stones beyond the initial lead including loading and unloading and average to

a). By truck load

i). At initial load for 360qtls @ Rs. 15/qtl = Rs. 5,400.00.

ii). At subsequent load per km for 4km @ Rs. 1.65/qtl = Rs. 2,376.00.

b). By head load for 360qtls @ Rs. 45/qtl = Rs. 16,200.00.

Total = Rs. 23,976.00.

Grand Total = Rs. 65,778.42.

Say = Rs. 65,750.00.

(Rupees Sixty five thousand seven hundred fifty) only.

Estimate for construction of Check Dam of Shri.

at village, under Rongbeng-Dagal IWMP IV.

(As per PWD {Rd} scheduled of rate 2007-08).

1/1; Site preparation like jungle clearance etc, at L/S rate = Rs. 1,250.00.

2/3 (b); Earth work in excavation for Bridges and Culverts below the lowest bed level including dewatering and bailing out water in order to keep the foundation trenches of water and protecting the sides of the foundation by adequate shorting, scaffolding including levelling the foundation longitudinal and transversely etc, as directed by the Engineer-in-charge.

b). 19.00x1.80x1.00m = 34.20m³

@ Rs. 84/m³ = Rs. 2,872.80.

3/5; Earth work in filling or in an embankment in layers not exceeding 20cm thick including breaking clods, dressing, sectioning and ramming and lead up to 30m and lift up to 150cm, (ii). With earth obtained from borrow pits in the private land at the contractor's own arrangement.

19.00x1.80x1.00m = 44.46m³

@ Rs. 108/m³ = Rs. 4,801.68.

4/21;Providing regular dry stone masonry walls with hammer dressed or blunt chisel dressed stones of heavy section (size not less than 5cmx25cmx30cm long) with proper key stones each not less than 25cm x25cmx75cm long including carriage of stone within 200m and filling in trenches

(a). With new stones

19.00x1.80x1.00m = 34.20m³

$19.00 \times \frac{1.80+1.00}{2} \times 1.95m = 51.87m^3$

= 86.07m³

@ Rs. 618/m³ = Rs. 53,191.26.

5/37; Extra carriage of sand stone aggregates, stone chips and building stones beyond the initial lead including loading and unloading and average

Head load for 287qtls @ Rs. 45/qtl per Km = Rs. 12,915.00.

Grand Total = Rs. 75,030.74.

Say = Rs. 75,000.00.

(Rupees Seventy five thousand) only.

Estimate for construction of Check Dam of Shri.

at village, under Rongbeng-Dagal IWMP IV.

(As per PWD {Rd} scheduled of rate 2007-08).

1/1; Site preparation like jungle clearance etc, at L/S rate = Rs. 1,250.00.

2/3 (b); Earth work in excavation for Bridges and Culverts below the lowest bed level including dewatering and bailing out water in order to keep the foundation trenches of water and protecting the sides of the foundation by adequate shorting, scaffolding including levelling the foundation longitudinal and transversely etc, as directed by the Engineer-in-charge.

b). 19.00x1.80x1.00m = 34.20m³

@ Rs. 84/m³ = Rs. 2,872.80.

3/5; Earth work in filling or in an embankment in layers not exceeding 20cm thick including breaking clods, dressing, sectioning and ramming and lead up to 30m and lift up to 150cm, (ii). With earth obtained from borrow pits in the private land at the contractor's own arrangement.

19.00x1.80x1.00m = 44.46m³

@ Rs. 108/m³ = Rs. 4,801.68.

4/21;Providing regular dry stone masonry walls with hammer dressed or blunt chisel dressed stones of heavy section (size not less than 5cmx25cmx30cm long) with proper key stones each not less than 25cm x25cmx75cm long including carriage of stone within 200m and filling in trenches

(a). With new stones

19.00x1.80x1.00m = 34.20m³

$19.00 \times \frac{1.80+1.00}{2} \times 1.95m = 51.87m^3$

= 86.07m³

@ Rs. 618/m³ = Rs. 53,191.26.

5/37; Extra carriage of sand stone aggregates, stone chips and building stones beyond the initial lead including loading and unloading and average

Head load for 287qtls @ Rs. 45/qtl per Km = Rs. 12,915.00.

Grand Total = Rs. 75,030.74.

Say = Rs. 75,000.00.

(Rupees Seventy five thousand) only.

Estimate for construction of Diversion Channel of Shri.

at village under Rongbeng-Dagal IWMP IV.

(As per PWD {Rd} scheduled of rate 2007-08).

1/3(b); Earth work in excavation for Bridges and Culverts below the lowest bed level including dewatering and bailing out water in order to keep the foundation trenches of water and protecting the sides of the foundation by adequate shorting, scaffolding including levelling the foundation longitudinal and transversely etc, as directed by the Engineer-in-charge.

C. (ii); Loamy soil etc.

$104.8 \times \frac{2.00+1.20}{2} \times 1.30m = 217.98m^3$

@ Rs. 73/m^3 = Rs. 15,912.54.00.

Say = Rs. 15,910.00.

(Rupees Fifteen thousand nine hundred ten) only.

Estimate for construction of Small Dug Out Pond of Shri.

at village, under Rongbeng-Dagal IWMP IV.

(As per PWD {Rd} scheduled of rate 2007-08).

1/1; Site preparation like jungle clearance etc, at L/S rate = Rs. 500.00.

2/3; Volume of earth work

V= 1.50 [20.00x15.00+4(18.50x13.50)+18.00x13.00] = 383.25m³

6

@ Rs. 73/m³ = Rs. 27,977.25.

3/3 (b); Earth work in excavation for Bridges and Culverts below the lowest bed level including dewatering and bailing out water in order to keep the foundation trenches of water and protecting the sides of the foundation by adequate shorting, scaffolding including levelling the foundation longitudinal and transversely etc, as directed by the Engineer-in-charge.

c. (ii); Loamy soil etc,

80.00x1.00x1.00m = 80.00m³

@ Rs. 73/m³ = Rs. 4,840.00.

Grand Total = Rs. 34,317.25.

Say = Rs. 34,300.00.

(Rupees Thirty four thousand three hundred) only.

Estimate for construction of Retaining Wall of Shri.

at village, under Rongbeng-Dagal IWMP IV.

(As per PWD {Rd} scheduled of rate 2007-08).

1/3(b); Earth work in excavation for Bridges and Culverts below the lowest bed level including dewatering and bailing out water in order to keep the foundation trenches of water and protecting the sides of the foundation by adequate shorting, scaffolding including levelling the foundation longitudinal and transversely etc, as directed by the Engineer-in-charge.

1.20x0.50x12.00m = 7.20m³

@ Rs. 46/m³ = Rs. 331.20.

2/23; Providing regular stone masonry work only in abutment walls with hammer dressed of heavy section (size not less than 25cmx25cm x30cm long) with proper key stones each not less than (25cmx25cmx75cm long) in cement mortar 1:4 including carriage of stones within 200m complete filling in trenches and providing weep holes at 1.2 to 1.5m a part a staggered complete (a height of wall for every 1m should be kept exposed till inspected by the Supervising Officer).

b). With new stones

$$12.00 \times \frac{1.10+0.40}{2} \times 1.20m = 10.80m^3$$

@ Rs. 1022/m³ = Rs. 11,037.60.

3/25; Providing cement concrete work in abutment, wing wall and return wall in prop 1:4:8 with hard broken stones aggregates 40mm nominal size including necessary carriage of stones and sand within 200m and curing (excluding shuttering)

12.00x1.20x0.10m = 1.44m³

@ Rs. 2022/m³ = Rs. 2,911.68.

Grand Total = Rs. 14,279.88.

Say = Rs. 14,280.00.

(Rupees Fourteen thousand two hundred eighty) only.

Estimate for construction of Retaining Wall of Shri.

at village, under Rongbeng-Dagal IWMP IV.

(As per PWD {Rd} scheduled of rate 2007-08).

1/3 (a); Earth work in excavation to the proper grade including light dressing. Providing cambering and super lavation as directed and removal of spoils up to 30cm and all lift.

b). Soil mixed with moorum, gravels boulders up to one man size (above 0.30 cubic metre each)

13.50x1.00x0.50m = 6.75m³

@ Rs. 22/m³ = Rs. 148.50.

2/22; Providing cement concrete work in abutment, wing wall and return wall in prop 1:4:8 with hard broken stones aggregates 40mm nominal size including necessary carriage of stones and sand within 200m and curing (excluding shuttering)

13.50x $\frac{0.80+0.60}{2}$ x1.40m = 13.23m³

@ Rs. 2022/m³ = Rs. 13,494.60.

3/25; Providing cement concrete work in abutment, wing wall and return wall in prop 1:4:8 with hard broken stones aggregates 40mm nominal size including necessary carriage of stones and sand within 200m and curing (excluding shuttering)

13.50x1.40x0.10m = 1.89m³

@ Rs. 2022/m³ = Rs. 3,821.58.

Grand Total = Rs. 17,464.68.

Say = Rs. 17,380.00.

(Rupees Seventeen thousand three hundred eighty) only.

Estimate for construction of Retaining Wall of Shri.

at village, under Rongbeng-Dagal IWMP IV.

(As per PWD {Rd} scheduled of rate 2007-08).

1/3(b); Earth work in excavation for Bridges and Culverts below the lowest bed level including dewatering and bailing out water in order to keep the foundation trenches of water and protecting the sides of the foundation by adequate shorting, scaffolding including levelling the foundation longitudinal and transversely etc, as directed by the Engineer-in-charge.

1.00x0.40x22.00m = 8.80m³

@ Rs. 46/m³ = Rs. 404.80.

2/23; Providing regular stone masonry work only in abutment walls with hammer dressed of heavy section (size not less than 25cmx25cm x30cm long) with proper key stones each not less than (25cmx25cmx75cm long) in cement mortar 1:4 including carriage of stones within 200m complete filling in trenches and providing weep holes at 1.2 to 1.5m a part a staggered complete (a height of wall for every 1m should be kept exposed till inspected by the Supervising Officer).

b). With new stones

$$22.00 \times \frac{0.80+0.60}{2} \times 1.20\text{m} = 21.12\text{m}^3$$

@ Rs. 1022/m³ = Rs. 21,584.64.

3/3(b); Earth work in excavation for Bridges and Culverts below the lowest bed level including dewatering and bailing out water in order to keep the foundation trenches of water and protecting the sides of the foundation by adequate shorting, scaffolding including levelling the foundation longitudinal and transversely etc, as directed by the Engineer-in-charge.

c. (ii); Loamy soil etc,

$$80.\underline{00} \times \frac{1.20+0.80}{2} \times 1.20\text{m} = 96\text{m}^3$$

@ Rs. 73/m³ = Rs. 7,008.00.

Grand Total = Rs. 28,996.64.

Say = Rs. 28,990.00.

(Rupees Twenty eight thousand nine hundred ninety) only.

Estimate for construction of Retaining Wall of Shri.

at village, under Rongbeng-Dagal IWMP IV.

(As per PWD {Rd} scheduled of rate 2007-08).

1/3(b); Earth work in excavation for Bridges and Culverts below the lowest bed level including dewatering and bailing out water in order to keep the foundation trenches of water and protecting the sides of the foundation by adequate shorting, scaffolding including levelling the foundation longitudinal and transversely etc, as directed by the Engineer-in-charge.

1.30x0.40x18.00m = 9.36m³

@ Rs. 46/m³ = Rs. 430.56.

2/23; Providing regular stone masonry work only in abutment walls with hammer dressed of heavy section (size not less than 25cmx25cm x30cm long) with proper key stones each not less than (25cmx25cmx75cm long) in cement mortar 1:4 including carriage of stones within 200m complete filling in trenches and providing weep holes at 1.2 to 1.5m a part a staggered complete (a height of wall for every 1m should be kept exposed till inspected by the Supervising Officer).

b). With new stones

$$18.00 \times \frac{1.20+0.60}{2} \times 1.20m = 38.88m^3$$

@ Rs. 1022/m³ = Rs. 39,735.36.

3/25; Providing cement concrete work in abutment, wing wall and return wall in prop 1:4:8 with hard broken stones aggregates 40mm nominal size including necessary carriage of stones and sand within 200m and curing (excluding shuttering)

18.00x1.20x0.10m = 2.16m³

@ Rs. 2022/m³ = Rs. 4,367.52.

Grand Total = Rs. 44,533.44.

Say = Rs. 44,530.00.

(Rupees Forty four thousand five hundred thirty) only.

Estimate for construction of Lead Channel of Shri.

at village under Rongbeng-Dagal IWMP IV.

(As per PWD {Rd} scheduled of rate 2007-08).

1/11. (i); Cutting road side drain 60cm wide 60cm deep including dressing grading and removal of soils up to 15 metres complete.

b). In soil mixed with gravel on small boulders for 453 Rm.

of 0.60mx1.00m

@ Rs. 30/Rm. = Rs. 13,590.00.

d). In soft rock for 300 Rm. 0.60mx1.00m

@ Rs. 43/Rm. = Rs. 12,900.00.

e). In medium rock or hard shale for 300 Rm. 0.60mx1.00m

@ Rs. 73/Rm. = Rs. 21,900.00.

Total = Rs. 48,390.00.

(Rupees Forty eight thousand three hundred ninety) only.

Estimate for construction of Diversion Dam of Shri.

at village under Rongbeng-Dagl IWMP IV.

(As per PWD {Rd} scheduled of rate 2007-08).

1/1; Site preparation like jungle clearance etc, at L/S rate

2/3(b); Earth work in excavation for Bridges and Culverts below the lowest bed level including dewatering and bailing out water in order to keep the foundation trenches of water and protecting the sides of the foundation by adequate shorting, scaffolding including levelling the foundation longitudinal and transversely etc, as directed by the Engineer-in-charge.

b. Red soil, 23.50x1.80x0.90m = 38.07m³

@ Rs. 84/m³ = Rs. 3,197.88.

3/25; Providing cement concrete work in abutment, wing wall and return wall in prop 1:4:8 with hard broken stones aggregates 40mm nominal size including necessary carriage of stones and sand within 200m and curing (excluding shuttering)

23.50x1.722x0.10m = 4.042m³

23.50x0.82x0.10m = 1.927m³

5.969m³

@ Rs. 2022/m³ = Rs. 12,069.31.

4/22; Providing regular stone masonry in retaining walls breast walls and wing walls etc, with hammer dressed or blunt chisel dressed stones of heavy section (size not less than 25cmx25cm x30cm long) with proper key stones each not less than (25cmx25cmx75cm long) set in cement mortar 1:6 including carriage of stones within 200m holes at 1.2 to 1.5m a part a staggered complete (a height of wall for every 1m should be kept exposed till inspected by the Supervising Officer.

$23.50 \times \frac{1.72+0.82}{2} \times 2.90\text{m} = 86.55\text{m}^3$

@ Rs. 1020/m³ = Rs. 88,28.00.

5/37; Extra carriage of sand stone aggregates, stone chips and building stones beyond the initial lead including loading and unloading and average

A. By truck load
   (i): 1st km per kilometre or part thereof for 92.5m³
   @ Rs. 91/km = Rs. 8,417.50.
   (ii): Subsequent km per kilometre or part thereof for 92.5m³
   @ 60/km = Rs. 5,550.00.
B. By head load for 1147qtls @ Rs. 45/qtl. =Rs. 12,375.00.

= Rs. 65,582.50.

Grand Total = Rs. 1,69,130.69.

Say = Rs. 1,69,100.00.

(Rupees One lakh sixty nine thousand one hundred) only.

Estimate for construction of Water Harvesting Farm Pond of Shri.

at village under Rongbeng-Dagal IWMP IV.

(As per PWD {Rd} scheduled of rate 2007-08).

1/1; Site preparation at L/S Rate = Rs.

2/3(b); Earth work in excavation for Bridges and Culverts below the lowest bed level including dewatering and bailing out water in order to keep the foundation trenches of water and protecting the sides of the foundation by adequate shorting, scaffolding including levelling the foundation longitudinal and transversely etc, as directed by the Engineer-in-charge.

22.75x1.00x1.10m = 25.02m^3

@ Rs. 84/m^3 = Rs. 2,101.68.

3/24(a); Providing stone pitching with one man size boulders not less than 25cmx30cm long including the interstices with spoils and carriage of stone filling within a distance of 200m complete as directed.

22.75x(√3.00²+6.00²)x0.30m = 45.73m^3

@ Rs. 432/m^3 = Rs. 19,755.36.

4/37; Extra for carriage of sand stone aggregates, stone chips and building stones beyond the initial lead including loading and unloading and average

a). 1st Km per kilometre or part thereof @ Rs. 91/m^3 for 53.52m^3 = Rs. 4,870.32.

b). Subsequent Km per kilometre or part thereof @ Rs. 15/m^3

for 53.52m^3 = Rs. 3,211.20.

5/27; Providing cement concrete proportion 1:2:4 corresponding M150 with very hard granular black chips of 20mm down grade including curing and necessary local carriage of stone aggregates and sand within 200m (excluding shuttering and reinforcements).

22.75x $\frac{0.35+0.20}{2}$ x3.70m = 23.15m³

@ Rs. 2951/m³ = Rs. 68,315.65.

6/38; Providing shuttering in RCC bridge and culverts with dressed planks not less than 25mm thick properly joined with battens of minimum size 75mm x 100mm at a spacing of not more than 600mm centre to create to the proper level including covering in the contact face with polythene sheet and removing the same after the concrete hardens.

2x22.75x3.70m = 168.35m³

@ Rs. 281/m³ = Rs. 47,306.35.

7/3(b); Earth work in excavation for Bridges and Culverts below the lowest bed level including dewatering and bailing out water in order to keep the foundation trenches of water and protecting the sides of the foundation by adequate shorting, scaffolding including levelling the foundation longitudinal and transversely etc, as directed by the Engineer-in-charge.

64.00x $\frac{0.60+1.00}{2}$ x1.00m = 51.20m³

@ Rs. 73/m³ = Rs. 3,737.60.

8/5; Earth work in filling or in an embankment in layers not exceeding 20cm thick including breaking clods, dressing, sectioning and ramming and lead up to 30metres and lift up to 150cm.

22.75x3.40x3.00m = 232.05m³

2x½x22.75x6.00x3.00 = 409.50m³

641.55m³

@ Rs. 108/m³ = Rs. 69,287.40.

9/6; Extra of rolling the embankment in layer of 20cm with power roller 8 to 10 tonnes capacity to run at least 5 passes until the embankment is compacted including watering hire charge of roller and supply of necessary fuel etc. complete (Sequence of operation should be filling in layers including breaking clods etc, up to the desired thickness to be followed by rolling operation, alternately as directed)

@ Rs. 33/m^3 for 641.55m^3 = Rs. 21,171.15.

10/9; Turfing after dressing the side slope or bed with good grass sods available in the vicinity including ramming properly to ground and pinning them with small bamboo/wooden pegs and carrying of sods within 30 metres.

22.75 x 3.00m = 68.25

22.75 x 6.70m = 152.42

= 220.67m^2

@ Rs. 19/m^2 = Rs. 4,192.73.

11/10; Extra for the carriage of sods beyond the initial lead of 30m for the lead of every 30m or part thereof

@ Rs. (10+10+10) 30/m^2 for 220.67m^2 = Rs. 6,620.10.

12/21; Providing regular dry stone masonry walls with hammer dressed o blunt chisel dressed stones of heavy section (size not less than 25cm x25cmx30cm long) with proper key stones each not less than 25cmx 25cmx75cm long including carriage of stone within 200metres and filling in trenches.

125mm dia @ Rs. 950.63/Rm for 10 Rm = Rs. 9506.30.

13/1.17; Supply of plug

1 no 150mm dia @ Rs. 645.16 each = Rs. 645.16.

14/1.8; Supplying socket 150mm dia

@ Rs. 1160/each = Rs. 1160.00.

15/22; Providing regular stone masonry in retaining walls breast walls and wing walls etc, with hammer dressed or blunt chisel dressed stones of heavy section (size not less than 25cmx25cm x30cm long) with proper key stones each not less than (25cmx25cmx75cm long) set in cement mortar 1:6 including carriage of stones within 200m holes at 1.2 to 1.5m a part a staggered complete (a height of wall for every 1m should be kept exposed till inspected by the Supervising Officer.

1x11.80x0.60x0.30m = 2.124m³

2x11.80x0.80x0.30m = 5.664m³

= 7.788m³

@ Rs. 1020/m³ = Rs. 7943.76.

16/39; Providing 12mm thick cement plastering in proportion 1:4 including screening the sand clearing the surface and carriage of sand within 200m complete and carriage of sand within 200m complete as directed (No plastering is to be done in taining walls, breast walls and face walls).

1x11.80x0.60m = 7.08m²

2x11.80x0.50m = 11.80m²

2x11.80x0.40m = 9.44m²

4x0.50x0.60m = 1.20m²

= 29.52m²

@ Rs. 86/m² = Rs. 2,538.72.

17/37; Extra carriage of sand stone aggregates, stone chips and building stones beyond the initial lead including loading and unloading and average to

a). By truck load distance 51 Km for 104 qtls @ Rs. 1.65/qtl = Rs. 8,751.60.

b). By head load 1 Km @ Rs. 45/qtl = Rs. 4,650.00.

Grand Total = Rs. 2,85,764.35.

Say = Rs. 2,85,200.00.

(Rupees Two lakhs eighty five thousand two hundred) only.

Estimate for construction of Head Water Dam of Shri.

at village under Rongbeng-Dagal IWMP IV.

(As per PWD {Rd} scheduled of rate 2007-08).

1/1; Site preparation like jungle clearance etc, at L/S Rate = Rs. 400.00.

2/3(b); Earth work in excavation for Bridges and Culverts below the lowest bed level including dewatering and bailing out water in order to keep the foundation trenches of water and protecting the sides of the foundation by adequate shorting, scaffolding including levelling the foundation longitudinal and transversely etc, as directed by the Engineer-in-charge.

b; Red soil

9.00x0.80x0.90m = 6.48m³

8.20x2.10x0.30m = 5.17m³

4x1.60x0.70x0.90m = 4.03m³

2x4.30x0.60x0.50m = 2.58m³

18.26m³

@ Rs. 84/m³ = Rs. 1,533.84.

3/26; Providing cement concrete work in abutment, wing wall and return wall in prop 1:3:6 with hard broken stone aggregates 40mm downgraded including necessary local carriage of stone aggregates sand within 200m and curing (excluding shuttering)

9.00x0.80x0.90m = 6.48m³

$9.00 \times \frac{0.80+0.70}{2} \times 1.75m = 11.81m^3$

18.29m³

@ Rs. 2281/m³ = Rs. 41,719.49.

4/25; Providing cement concrete work proportion 1:4:8 with hard broken aggregates 40mm nominal size including necessary local carriage of stone and sand within a distance of 200metre and curing (excluding shuttering).

4x1.60x0.60x3.10m = 11.90m³

7.80x0.30x1.10m = 2.54m³

14.47m³

@ Rs. 2022/m³ = Rs. 29,258.34.

5/22; Providing regular stone masonry in retaining walls breast walls and wing walls etc, with hammer dressed or blunt chisel dressed stones of heavy section (size not less than 25cmx25cm x30cm long) with proper key stones each not less than (25cmx25cmx75cm long) set in cement mortar 1:6 including carriage of stones within 200m holes at 1.2 to 1.5m a part a staggered complete (a height of wall for every 1m should be kept exposed till inspected by the Supervising Officer.

2x4.30x0.60x1.10m = 5.68m³

1x7.80x1.50x0.30m = 3.51m³

2x4.30x0.50x0.30m = 1.29m³

= 10.48m³

@ Rs. 1020/m³ = Rs. 10,689.60.

6/38; Providing shuttering in RCC bridge and culverts with dressed planks not less than 25mm thick properly joined with battens of minimum size 75mm x 100mm at a spacing of not more than 600mm centre to create to the proper level including covering in the contact face with polythene sheet and removing the same after the concrete hardens.

2x9.00x2.50m = 45.00m²

2x1.60x3.00m = 9.60m²

2x1.90x3.00m = 11.40m²

= 66.00m²

@ Rs. 281/m³ = Rs. 18,546.00.

7/39; Providing 12mm thick cement plastering in proportion 1:4 including screening the sand clearing the surface and carriage of sand within 200m complete and carriage of sand within 200m complete as directed (No plastering is to be done in taining walls, breast walls and face walls).

1x7.80x1.70m = 13.26m²

1x7.80x1.80m = 14.04m²

1x7.80x2.70m = 21.06m²

4x4.30x0.60m = 10.32m²

2x4.30x1.70m = 14.62m²

4x1.60x2.20m = 14.08m²

4x2.20x0.60m = 5.28m²

2x7.70x0.40m = 6.16m²

= 98.82m²

@ Rs. 86/m² = Rs. 8,498.52.

Grand Total = Rs. 1,10,645.79.

Say = Rs. 1,10,600.00.

(Rupees One lakh ten thousand six hundred) only.

Estimate for construction of Head Water Dam of Shri.

at village under Rongbeng-Dagal IWMP IV.

(As per PWD {Rd} scheduled of rate 2007-08).

1/1; Site preparation like jungle clearance etc, at L/S Rate = Rs.

2/3(b); Earth work in excavation for Bridges and Culverts below the lowest bed level including dewatering and bailing out water in order to keep the foundation trenches of water and protecting the sides of the foundation by adequate shorting, scaffolding including levelling the foundation longitudinal and transversely etc, as directed by the Engineer-in-charge.

c. (ii); Loamy soil etc.

8.20x0.90x0.60m = 4.43m³

7.00x1.80x0.30m = 3.78m³

4x1.80x0.70x0.60m = 3.02m³

2x4.30x0.70x0.60m = 3.61m³

14.84m³

@ Rs. 73/m³ = Rs. 1,246.56.

3/26; Providing cement concrete work in abutment, wing wall and return wall in prop 1:3:6 with hard broken stone aggregates 40mm downgraded including necessary local carriage of stone aggregates sand within 200m and curing (excluding shuttering)

8.20x0.90x0.60m = 4.43m³

$8.20 \times \frac{0.90+0.60}{2} \times 1.60m = 9.84m^3$

14.27m³

@ Rs. 2281/m³ = Rs. 32,549.87.

4/25; Providing cement concrete work proportion 1:4:8 with hard broken aggregates 40mm nominal size including necessary local carriage of stone and sand within a distance of 200metre and curing (excluding shuttering).

4x1.80x0.60x2.70m = 11.66m³

7.00x0.30x1.10m = 2.31m³

13.97m³

@ Rs. 2022/m³ = Rs. 28,247.34.

5/22; Providing regular stone masonry in retaining walls breast walls and wing walls etc, with hammer dressed or blunt chisel dressed stones of heavy section (size not less than 25cmx25cm x30cm long) with proper key stones each not less than (25cmx25cmx75cm long) set in cement mortar 1:6 including carriage of stones within 200m holes at 1.2 to 1.5m a part a staggered complete (a height of wall for every 1m should be kept exposed till inspected by the Supervising Officer.

2x4.30x0.60x1.10m = 5.68m³

1x7.00x1.50x0.30m = 3.15m³

2x4.30x0.50x0.30m = 1.29m³

= 10.12m³

@ Rs. 1020/m³ = Rs. 10,322.40.

6/38; Providing shuttering in RCC bridge and culverts with dressed planks not less than 25mm thick properly joined with battens of minimum size 75mm x 100mm at a spacing of not more than 600mm centre to create to the proper level including covering in the contact face with polythene sheet and removing the same after the concrete hardens.

2x8.20x2.20m = 36.08m³

4x1.80x2.10m = 09.42m³

45.80m³

@ Rs. 281/m³ = Rs. 12,869.80.

7/39; Providing 12mm thick cement plastering in proportion 1:4 including screening the sand clearing the surface and carriage of sand within 200m complete and carriage of sand within 200m complete as directed (No plastering is to be done in taining walls, breast walls and face walls).

1x8.20x1.70m = 13.94m²

1x8.20x1.80m = 14.76m²

1x7.00x2.60m = 18.20m²

4x4.30x0.60m = 10.32m²

4x1.80x2.70m = 19.44m²

2x0.60x0.50m = 0.60m²

2x4.30x1.70m = 14.62m²

= 91.88m²

@ Rs. 86/m² = Rs. 7,901.68.

Grand Total = Rs. 93,137.65.

Say = Rs. 93,100.00.

(Rupees Ninety three thousand one hundred) only.

Estimate for construction of Small Dug Out Pond of Shri.

at village, under Rongbeng-Dagal IWMP IV.

(As per PWD {Rd} scheduled of rate 2007-08).

1/1; Site preparation like jungle clearance etc, at L/S rate = Rs. 250.00.

2/3 (b); Earth work in excavation for Bridges and Culverts below the lowest bed level including dewatering and bailing out water in order to keep the foundation trenches of water and protecting the sides of the foundation by adequate shorting, scaffolding including levelling the foundation longitudinal and transversely etc, as directed by the Engineer-in-charge.

c. (ii); Loamy soil etc,

Pond: $\frac{1.50}{6}$ (20.00x18.00)+(4x18.50x16.50)+17.00x15.00 = 459m³

Side Drain: 70.00 x $\frac{1.10+0.70}{2}$ x1.00 = 63m³

= 522m³

@ Rs. 73/m³ = Rs. 38,106.00.

Total = Rs. 38,356.00.

Say = Rs. 38,320.00.

(Rupees Thirty eight thousand three hundred twenty) only.

Estimate for construction of Small Dug Out Pond of Shri.

at village, under Rongbeng-Dagal IWMP IV.

(As per PWD {Rd} scheduled of rate 2007-08).

1/1; Site preparation like jungle clearance etc, at L/S rate = Rs. 500.00.

2/3; Volume of earth work

V= 1.50 [20.00x15.00+4(18.50x13.50)+18.00x13.00] = 383.25m³

6

@ Rs. 73/m³ = Rs. 27,977.25.

3/3 (b); Earth work in excavation for Bridges and Culverts below the lowest bed level including dewatering and bailing out water in order to keep the foundation trenches of water and protecting the sides of the foundation by adequate shorting, scaffolding including levelling the foundation longitudinal and transversely etc, as directed by the Engineer-in-charge.

c. (ii); Loamy soil etc,

80.00x1.00x1.00m = 80.00m³

@ Rs. 73/m³ = Rs. 4,840.00.

Grand Total = Rs. 34,317.25.

Say = Rs. 34,300.00.

(Rupees Thirty four thousand three hundred) only.

Estimate for construction of Small Dug Out Pond of Shri.

at village, under Rongbeng-Dagal IWMP IV.

(As per PWD {Rd} scheduled of rate 2007-08).

1/1; Site preparation like jungle clearance etc, at L/S rate = Rs. 500.00.

2/3; Volume of earth work

V= 1.50 [20.00x15.00+4(18.50x13.50)+18.00x13.00] = 383.25m³

6

@ Rs. 73/m³ = Rs. 27,977.25.

3/3 (b); Earth work in excavation for Bridges and Culverts below the lowest bed level including dewatering and bailing out water in order to keep the foundation trenches of water and protecting the sides of the foundation by adequate shorting, scaffolding including levelling the foundation longitudinal and transversely etc, as directed by the Engineer-in-charge.

c. (ii); Loamy soil etc,

80.00x1.00x1.00m = 80.00m³

@ Rs. 73/m³ = Rs. 4,840.00.

Grand Total = Rs. 34,317.25.

Say = Rs. 34,300.00.

(Rupees Thirty four thousand three hundred) only.

Estimate for construction of Lead Channel of Shri.

at village under Rongbeng-Dagal IWMP IV.

(As per PWD {Rd} scheduled of rate 2007-08).

1/11. (i); Cutting road side drain 60cm wide 60cm deep including dressing grading and removal of soils up to 15 metres complete.

a). In ordinary soil for 605 Rm. of 0.60mx1.00m

@ Rs. 27/Rm. = Rs. 16,335.00.

c). In soil mixed with boulders above one man size for 286 Rm,

of 0.60mx1.00m

@ Rs. 32/Rm. = Rs. 9,152.00.

d). In soft rock for 98 Rm, of 0.60mx1.00m

@ Rs. 43/Rm. = Rs. 4,214.00.

Total = Rs. 29,701.00.

Say = Rs. 29,700.00.

(Rupees Twenty nine thousand seven hundred) only.

Estimate for construction of Water Harvesting Farm Pond of Shri.

at village under Rongbeng-Dagal IWMP IV.

(As per PWD {Rd} scheduled of rate 2007-08).

1/1; Site preparation at L/S Rate = Rs. 730.00.

2/3(b); Earth work in excavation for Bridges and Culverts below the lowest bed level including dewatering and bailing out water in order to keep the foundation trenches of water and protecting the sides of the foundation by adequate shorting, scaffolding including levelling the foundation longitudinal and transversely etc, as directed by the Engineer-in-charge.

14.75x1.00x1.10m = 16.22m³

@ Rs. 84/m³ = Rs. 1,362.48.

3/24(a); Providing stone pitching with one man size boulders not less than 25cmx30cm long including the interstices with spoils and carriage of stone filling within a distance of 200m complete as directed.

14.75x(√3.00²+6.00²)x0.30m = 29.65m³

@ Rs. 432/m³ = Rs. 12,808.80.

4/37; Extra for carriage of sand stone aggregates, stone chips and building stones beyond the initial lead including loading and unloading and average

a). 1st Km per kilometre or part thereof @ Rs. 91/m³ for 29.65m³= Rs. 2,698.15.

b). Subsequent Km per kilometre or part thereof @ Rs. 15/m³ for 29.65m³

= Rs. 2,223.75.

5/27; Providing cement concrete proportion 1:2:4 corresponding M150 with very hard granular black chips of 20mm down grade including curing and necessary local carriage of stone aggregates and sand within 200m (excluding shuttering and reinforcements).

14.75x $\frac{0.35+0.20}{2}$ x3.70m = 15.00m³

@ Rs. 2951/m³ = Rs. 44,265.00.

6/38; Providing shuttering in RCC bridge and culverts with dressed planks not less than 25mm thick properly joined with battens of minimum size 75mm x 100mm at a spacing of not more than 600mm centre to create to the proper level including covering in the contact face with polythene sheet and removing the same after the concrete hardens.

2x14.75x3.70m = 109.15m³

@ Rs. 281/m³ = Rs. 30,671.15.

7/3(b); Earth work in excavation for Bridges and Culverts below the lowest bed level including dewatering and bailing out water in order to keep the foundation trenches of water and protecting the sides of the foundation by adequate shorting, scaffolding including levelling the foundation longitudinal and transversely etc, as directed by the Engineer-in-charge.

50.00x $\frac{0.60+1.00}{2}$ x1.00m = 40.00m³

@ Rs. 73/m³ = Rs. 2,920.00.

8/5; Earth work in filling or in an embankment in layers not exceeding 20cm thick including breaking clods, dressing, sectioning and ramming and lead up to 30metres and lift up to 150cm.

14.75x3.40x3.00m = 150.45m³

2x½x14.75x6.00x3.00 = 265.50m³

415.95m³

@ Rs. 108/m³ = Rs. 44,922.60.

9/6; Extra of rolling the embankment in layer of 20cm with power roller 8 to 10 tonnes capacity to run at least 5 passes until the embankment is compacted including watering hire charge of roller and supply of necessary fuel etc. complete (Sequence of operation should be filling in layers including breaking clods etc, up to the desired thickness to be followed by rolling operation, alternately as directed)

@ Rs. 33/m^3 for 415.95m^3 = Rs. 13,726.35.

10/9; Turfing after dressing the side slope or bed with good grass sods available in the vicinity including ramming properly to ground and pinning them with small bamboo/wooden pegs and carrying of sods within 30 metres.

14.75 x 3.00m = 44.25m^2

14.75 x 6.70m = 98.82m^2

=143.07m^2

@ Rs. 19/m^2 = Rs. 2,718.33.

11/10; Extra for the carriage of sods beyond the initial lead of 30m for the lead of every 30m or part thereof

@ Rs. (10+10) 20/m^2 for 143.07m^2 = Rs. 2,861.40.

12/21; Providing regular dry stone masonry walls with hammer dressed o blunt chisel dressed stones of heavy section (size not less than 25cmx25cmx30cm long) with proper key stones each not less than 25cmx25cmx75cm long including carriage of stone within 200metres and filling in trenches.

125mm dia @ Rs. 950.63/Rm for 10 Rm = Rs. 9506.30.

13/1.17; Supply of plug

1 no 150mm dia @ Rs. 645.16 each = Rs. 645.16.

14/1.8; Supplying socket 150mm dia

@ Rs. 1160/each = Rs. 1160.00.

15/22; Providing regular stone masonry in retaining walls breast walls and wing walls etc, with hammer dressed or blunt chisel dressed stones of heavy section (size not less than 25cmx25cm x30cm long) with proper key stones each not less than (25cmx25cmx75cm long) set in cement mortar 1:6 including carriage of stones within 200m holes at 1.2 to 1.5m a part a staggered complete (a height of wall for every 1m should be kept exposed till inspected by the Supervising Officer.

1x11.80x0.60x0.30m = 2.124m³

2x11.80x0.80x0.30m = 5.664m³

= 7.788m³

@ Rs. 1020/m³ = Rs. 7943.76.

16/39; Providing 12mm thick cement plastering in proportion 1:4 including screening the sand clearing the surface and carriage of sand within 200m complete and carriage of sand within 200m complete as directed (No plastering is to be done in taining walls, breast walls and face walls).

1x11.80x0.60m = 7.08m²

2x11.80x0.50m = 11.80m²

2x11.80x0.40m = 9.44m²

4x0.50x0.60m = 1.20m²

= 29.52m²

@ Rs. 86/m² = Rs. 2,538.72.

17/37; Extra carriage of sand stone aggregates, stone chips and building stones beyond the initial lead including loading and unloading and average to

a). By truck load distance 49 Km for 98 qtls @ Rs. 1.65/qtl = Rs. 7,923.30.

b). By head load 1 Km @ Rs. 45/qtl = Rs. 4,410.00.

Grand Total = Rs. 1,93,201.85.

Say = Rs. 1,93,200.00.

(Rupees One lakhs ninety three thousand two hundred) only.

Estimate for construction of Small Dug Out Pond of Shri.

at village, under Rongbeng-Dagal IWMP IV.

(As per PWD {Rd} scheduled of rate 2007-08).

1/1; Site preparation like jungle clearance etc, at L/S rate = Rs. 500.00.

2/3; Volume of earth work

V= 1.50 [20.00x15.00+4(18.50x13.50)+18.00x13.00] = 383.25m³

6

@ Rs. 73/m³ = Rs. 27,977.25.

3/3 (b); Earth work in excavation for Bridges and Culverts below the lowest bed level including dewatering and bailing out water in order to keep the foundation trenches of water and protecting the sides of the foundation by adequate shorting, scaffolding including levelling the foundation longitudinal and transversely etc, as directed by the Engineer-in-charge.

c. (ii); Loamy soil etc,

80.00x1.00x1.00m = 80.00m³

@ Rs. 73/m³ = Rs. 4,840.00.

Grand Total = Rs. 34,317.25.

Say = Rs. 34,300.00.

(Rupees Thirty four thousand three hundred) only.

Estimate for construction of Small Dug Out Pond of Shri.

at village, under Rongbeng-Dagal IWMP IV.

(As per PWD {Rd} scheduled of rate 2007-08).

1/1; Site preparation like jungle clearance etc, at L/S rate = Rs. 250.00.

2/3 (b); Earth work in excavation for Bridges and Culverts below the lowest bed level including dewatering and bailing out water in order to keep the foundation trenches of water and protecting the sides of the foundation by adequate shorting, scaffolding including levelling the foundation longitudinal and transversely etc, as directed by the Engineer-in-charge.

c. (ii); Loamy soil etc,

Pond: $\frac{1.50}{6}$ (20.00x18.00)+(4x18.50x16.50)+17.00x15.00 = 459m³

Side Drain: 68.00 x $\frac{1.10+0.70}{2}$ x1.00 = 61.20m³

= 520.20m³

@ Rs. 73/m³ = Rs. 37,974.00.

Total = Rs. 38,224.00.

Say = Rs. 38,160.00.

(Rupees Thirty eight thousand one hundred sixty) only.

Estimate for construction of Diversion Channel of Shri.

at village under Rongbeng-Dagal IWMP IV.

(As per PWD {Rd} scheduled of rate 2007-08).

1/3(b); Earth work in excavation for Bridges and Culverts below the lowest bed level including dewatering and bailing out water in order to keep the foundation trenches of water and protecting the sides of the foundation by adequate shorting, scaffolding including levelling the foundation longitudinal and transversely etc, as directed by the Engineer-in-charge.

C. (ii); Loamy soil etc.

$100 \times \frac{2.00+1.20}{2} \times 1.30\text{m} = 208\text{m}^3$

@ Rs. 73/m^3 = Rs. 15,184.00.

(Rupees Fifteen thousand one hundred eighty four) only.

Estimate for construction of Retaining Wall of Shri.

at village, under Rongbeng-Dagal IWMP IV.

(As per PWD {Rd} scheduled of rate 2007-08).

1/3(b); Earth work in excavation for Bridges and Culverts below the lowest bed level including dewatering and bailing out water in order to keep the foundation trenches of water and protecting the sides of the foundation by adequate shorting, scaffolding including levelling the foundation longitudinal and transversely etc, as directed by the Engineer-in-charge.

c. (ii); Loamy soil etc,

40.00x1.40x1.00m = 56m³

@ Rs. 73/m³ = Rs. 4,088.00.

2/22; Providing regular stone masonry in retaining walls breast walls and wing walls etc, with hammer dressed or blunt chisel dressed stones of heavy section (size not less than 25cmx25cm x30cm long) with proper key stones each not less than (25cmx25cmx75cm long) set in cement mortar 1:6 including carriage of stones within 200m holes at 1.2 to 1.5m a part a staggered complete (a height of wall for every 1m should be kept exposed till inspected by the Supervising Officer.

$$40.00 \times \frac{1.20+0.80}{2} \times 2.50m = 100m^3$$

@ Rs. 1020/m³ = Rs. 1,02,000.00.

3/26; Providing cement concrete work in abutment, wing wall and return wall in prop 1:3:6 with hard broken stone aggregates 40mm downgraded including necessary local carriage of stone aggregates sand within 200m and curing (excluding shuttering)

40.00x2.50x0.10m = 10m³

@ Rs. 2281/m³ = Rs. 22,818.00.

4/38; Providing shuttering in RCC bridge and culverts with dressed planks not less than 25mm thick properly joined with battens of minimum size 75mm x 100mm at a spacing of not more than 600mm centre to create to the proper level including covering in the contact face with polythene sheet and removing the same after the concrete hardens.

40.00x2.50m = 100m²

@ Rs. 281/m² = Rs. 28,100.00.

5/39; Providing 12mm thick cement plastering in proportion 1:4 including screening the sand clearing the surface and carriage of sand within 200m complete and carriage of sand within 200m complete as directed (No plastering is to be done in taining walls, breast walls and face walls).

40.00x2.50m = 100m²

40.00x0.80m = 32m²

= 132m²

@ Rs. 86/m² = Rs. 11,352.00.

6/37; Extra carriage of sand stone aggregates, stone chips and building stones beyond the initial lead including loading and unloading and average to

a). By truck load distance 4Km for 2000qtls @ Rs. 1.65/qtl = Rs. 13,200.00.

Grand Total = Rs. 1,81,558.00.

Say = Rs. 1,81,395.00.

(Rupees One lakhs eighty one thousand three hundred ninety five) only.

Estimate for construction of Water Harvesting Farm Pond of Shri.

at village under Rongbeng-Dagal IWMP IV.

(As per PWD {Rd} scheduled of rate 2007-08).

1/1; Site preparation at L/S Rate = Rs. 350.00.

2/3(b); Earth work in excavation for Bridges and Culverts below the lowest bed level including dewatering and bailing out water in order to keep the foundation trenches of water and protecting the sides of the foundation by adequate shorting, scaffolding including levelling the foundation longitudinal and transversely etc, as directed by the Engineer-in-charge.

20.00x1.00x1.20m = 24.00m³

@ Rs. 84/m³ = Rs. 2,016.00.

3/24(a); Providing stone pitching with one man size boulders not less than 25cmx30cm long including the interstices with spoils and carriage of stone filling within a distance of 200m complete as directed.

20.00x(√3.00²+6.00²)x0.30m = 40.20m³

@ Rs. 432/m³ = Rs. 17,366.40.

4/37; Extra for carriage of sand stone aggregates, stone chips and building stones beyond the initial lead including loading and unloading and average

a). 1st Km per kilometre or part thereof @ Rs. 91/m³ for 40.20m³ = Rs. 3,658.20.

b). Subsequent 3km per kilometre or part thereof @ Rs. 15/m³

for 40.20m³ = Rs. 1,809.00.

= Rs. 5,467.20.

5/27; Providing cement concrete proportion 1:2:4 corresponding M150 with very hard granular black chips of 20mm down grade including curing and necessary local carriage of stone aggregates and sand within 200m (excluding shuttering and reinforcements).

20.00x $\frac{0.35+0.20}{2}$ x3.70m = 20.35m³

@ Rs. 2951/m³ = Rs. 60,052.85.

6/38; Providing shuttering in RCC bridge and culverts with dressed planks not less than 25mm thick properly joined with battens of minimum size 75mm x 100mm at a spacing of not more than 600mm centre to create to the proper level including covering in the contact face with polythene sheet and removing the same after the concrete hardens.

2x20.00x3.70m = 148.00m²

@ Rs. 281/m² = Rs. 41,588.00.

7/3(b); Earth work in excavation for Bridges and Culverts below the lowest bed level including dewatering and bailing out water in order to keep the foundation trenches of water and protecting the sides of the foundation by adequate shorting, scaffolding including levelling the foundation longitudinal and transversely etc, as directed by the Engineer-in-charge.

70.00x 0.60x1.00m = 42.00m³

@ Rs. 73/m³ = Rs. 3,066.00.

8/5; Earth work in filling or in an embankment in layers not exceeding 20cm thick including breaking clods, dressing, sectioning and ramming and lead up to 30metres and lift up to 150cm.

20.00x3.50x3.00m = 210.00m³

2x½x20.00x6.00x3.00 = 360.00m³

570.00m³

@ Rs. 108/m³ = Rs. 61,560.40.

9/6; Extra of rolling the embankment in layer of 20cm with power roller 8 to 10 tonnes capacity to run at least 5 passes until the embankment is compacted including watering hire charge of roller and supply of necessary fuel etc. complete (Sequence of operation should be filling in layers including breaking clods etc, up to the desired thickness to be followed by rolling operation, alternately as directed)

@ Rs. 33/m³ for 570m³ = Rs. 18,810.00.

10/9; Turfing after dressing the side slope or bed with good grass sods available in the vicinity including ramming properly to ground and pinning them with small bamboo/wooden pegs and carrying of sods within 30 metres.

20.00 x 3.00m = 60.00m²

20.00 x 6.70m = 134.00m²

= 194.00m²

@ Rs. 19/m² = Rs. 3,686.00.

11/10; Extra for the carriage of sods beyond the initial lead of 30m for the lead of every 30m or part thereof

@ Rs. (10+10) 20/m² for 194.00m² = Rs. 3,880.00.

12/21; Providing regular dry stone masonry walls with hammer dressed o blunt chisel dressed stones of heavy section (size not less than 25cmx25cmx30cm long) with proper key stones each not less than 25cmx25cmx75cm long including carriage of stone within 200m and filling in trenches.

125mm dia @ Rs. 950.63/Rm for 10 Rm = Rs. 9506.30.

13/1.17; Supply of plug.....

1 no 150mm dia @ Rs. 645.16 each = Rs. 645.16.

14/1.8; Supplying socket 150mm dia.....

@ Rs. 1160/each = Rs. 1160.00.

15/22; Providing regular stone masonry in retaining walls breast walls and wing walls etc, with hammer dressed or blunt chisel dressed stones of heavy section (size not less than 25cmx25cm x30cm long) with proper key stones each not less than (25cmx25cmx75cm long) set in cement mortar 1:6 including carriage of stones within 200m holes at 1.2 to 1.5m a part a staggered complete (a height of wall for every 1m should be kept exposed till inspected by the Supervising Officer.

1x11.80x0.60x0.30m = 2.124m³

2x11.80x0.80x0.30m = 5.664m³

= 7.788m³

@ Rs. 1020/m³ = Rs. 7943.76.

16/39; Providing 12mm thick cement plastering in proportion 1:4 including screening the sand clearing the surface and carriage of sand within 200m complete and carriage of sand within 200m complete as directed (No plastering is to be done in taining walls, breast walls and face walls).

1x11.80x0.60m = 7.08m²

2x11.80x0.50m = 11.80m²

2x11.80x0.40m = 9.44m²

4x0.50x0.60m = 1.20m²

= 29.52m²

@ Rs. 86/m² = Rs. 2,538.72.

17/37; Extra carriage of sand stone aggregates, stone chips and building stones beyond the initial lead including loading and unloading and average to

a). By truck load distance 52 Km for 82 qtls @ Rs. 1.65/qtl = Rs. 7,035.60.

b). By head load 1 Km @ Rs. 45/qtl = Rs. 3,444.00.

Grand Total = Rs. 2,50,115.99.

Say = Rs. 2,50,000.00.

(Rupees Two lakhs fifty thousand) only.

Estimate for construction of Head Water Dam of Shri.

at village under Rongbeng-Dagal IWMP IV.

(As per PWD {Rd} scheduled of rate 2007-08).

1/1; Site preparation like jungle clearance etc, at L/S Rate = Rs. 400.00.

2/3(b); Earth work in excavation for Bridges and Culverts below the lowest bed level including dewatering and bailing out water in order to keep the foundation trenches of water and protecting the sides of the foundation by adequate shorting, scaffolding including levelling the foundation longitudinal and transversely etc, as directed by the Engineer-in-charge.

b; Red soil

9.00x0.80x0.90m = 6.48m³

8.20x2.10x0.30m = 5.17m³

4x1.60x0.70x0.90m = 4.03m³

2x4.30x0.60x0.50m = 2.58m³

18.26m³

@ Rs. 84/m³ = Rs. 1,533.84.

3/26; Providing cement concrete work in abutment, wing wall and return wall in prop 1:3:6 with hard broken stone aggregates 40mm downgraded including necessary local carriage of stone aggregates sand within 200m and curing (excluding shuttering)

9.00x0.80x0.90m = 6.48m³

$9.00 \times \frac{0.80+0.70}{2} \times 1.75m = 11.81m^3$

18.29m³

@ Rs. 2281/m³ = Rs. 41,719.49.

4/25; Providing cement concrete work proportion 1:4:8 with hard broken aggregates 40mm nominal size including necessary local carriage of stone and sand within a distance of 200metre and curing (excluding shuttering).

4x1.60x0.60x3.10m = 11.90m³

7.80x0.30x1.10m = 2.54m³

14.47m³

@ Rs. 2022/m³ = Rs. 29,258.34.

5/22; Providing regular stone masonry in retaining walls breast walls and wing walls etc, with hammer dressed or blunt chisel dressed stones of heavy section (size not less than 25cmx25cm x30cm long) with proper key stones each not less than (25cmx25cmx75cm long) set in cement mortar 1:6 including carriage of stones within 200m holes at 1.2 to 1.5m a part a staggered complete (a height of wall for every 1m should be kept exposed till inspected by the Supervising Officer.

2x4.30x0.60x1.10m = 5.68m³

1x7.80x1.50x0.30m = 3.51m³

2x4.30x0.50x0.30m = 1.29m³

= 10.48m³

@ Rs. 1020/m³ = Rs. 10,689.60.

6/38; Providing shuttering in RCC bridge and culverts with dressed planks not less than 25mm thick properly joined with battens of minimum size 75mm x 100mm at a spacing of not more than 600mm centre to create to the proper level including covering in the contact face with polythene sheet and removing the same after the concrete hardens.

2x9.00x2.50m = 45.00m²

2x1.60x3.00m = 9.60m²

2x1.90x3.00m = 11.40m²

= 66.00m²

@ Rs. 281/m³ = Rs. 18,546.00.

7/39; Providing 12mm thick cement plastering in proportion 1:4 including screening the sand clearing the surface and carriage of sand within 200m complete and carriage of sand within 200m complete as directed (No plastering is to be done in taining walls, breast walls and face walls).

1x7.80x1.70m = 13.26m²

1x7.80x1.80m = 14.04m²

1x7.80x2.70m = 21.06m²

4x4.30x0.60m = 10.32m²

2x4.30x1.70m = 14.62m²

4x1.60x2.20m = 14.08m²

4x2.20x0.60m = 5.28m²

2x7.70x0.40m = 6.16m²

= 98.82m²

@ Rs. 86/m² = Rs. 8,498.52.

Grand Total = Rs. 1,10,645.79.

Say = Rs. 1,10,600.00.

(Rupees One lakh ten thousand six hundred) only.

Estimate for construction of Small Dug Out Pond of Shri.

at village, under Rongbeng-Dagal IWMP IV.

(As per PWD {Rd} scheduled of rate 2007-08).

1/1; Site preparation like jungle clearance etc, at L/S rate = Rs. 500.00.

2/3; Volume of earth work

V= 1.50 [20.00x15.00+4(18.50x13.50)+18.00x13.00] = 383.25m³

6

@ Rs. 73/m³ = Rs. 27,977.25.

3/3 (b); Earth work in excavation for Bridges and Culverts below the lowest bed level including dewatering and bailing out water in order to keep the foundation trenches of water and protecting the sides of the foundation by adequate shorting, scaffolding including levelling the foundation longitudinal and transversely etc, as directed by the Engineer-in-charge.

c. (ii); Loamy soil etc,

80.00x1.00x1.00m = 80.00m³

@ Rs. 73/m³ = Rs. 4,840.00.

Grand Total = Rs. 34,317.25.

Say = Rs. 34,300.00.

(Rupees Thirty four thousand three hundred) only.

Estimate for construction of Small Dug Out Pond of Shri.

at village, under Rongbeng-Dagal IWMP IV.

(As per PWD {Rd} scheduled of rate 2007-08).

1/1; Site preparation like jungle clearance etc, at L/S rate = Rs. 250.00.

2/3 (b); Earth work in excavation for Bridges and Culverts below the lowest bed level including dewatering and bailing out water in order to keep the foundation trenches of water and protecting the sides of the foundation by adequate shorting, scaffolding including levelling the foundation longitudinal and transversely etc, as directed by the Engineer-in-charge.

c. (ii); Loamy soil etc,

Pond: $\frac{1.50}{6}$ (25.00x22.00)+(4x23.50x20.50)+22.00x19.00 = 711.25m³

@ Rs. 73/m³ = Rs. 51,921.00.

3/11.1); Cutting road side drain 60cm wide 60cm deep including dressing grading and removal of spoils up to 15m complete.

b.) In soil mixed with boulder above one man size

ii). 0.60m x 1.00m

43.00 Running metre @ Rs. 30/Rm = Rs. 1,290.00.

Total = Rs. 53,461.00.

Say = Rs. 53,460.00.

(Rupees Fifty three thousand four hundred sixty) only.

Estimate for construction of Small Dug Out Pond of Shri.

at village, under Rongbeng-Dagal IWMP IV.

(As per PWD {Rd} scheduled of rate 2007-08).

1/1; Site preparation like jungle clearance etc, at L/S rate = Rs. 250.00.

2/3 (b); Earth work in excavation for Bridges and Culverts below the lowest bed level including dewatering and bailing out water in order to keep the foundation trenches of water and protecting the sides of the foundation by adequate shorting, scaffolding including levelling the foundation longitudinal and transversely etc, as directed by the Engineer-in-charge.

c. (ii); Loamy soil etc,

Pond: $\frac{1.50}{6}$ (20.00x18.00)+(4x18.50x16.50)+17.00x15.00 = 459m³

Side Drain: 70.00 x $\frac{1.10+0.70}{2}$ x1.00 = 63m³

= 522m³

@ Rs. 73/m³ = Rs. 38,106.00.

Total = Rs. 38,356.00.

Say = Rs. 38,320.00.

(Rupees Thirty eight thousand three hundred twenty) only.

Estimate for construction of Retaining Wall of Shri.

at village, under Rongbeng-Dagal IWMP IV.

(As per PWD {Rd} scheduled of rate 2007-08).

1/3(b); Earth work in excavation for Bridges and Culverts below the lowest bed level including dewatering and bailing out water in order to keep the foundation trenches of water and protecting the sides of the foundation by adequate shorting, scaffolding including levelling the foundation longitudinal and transversely etc, as directed by the Engineer-in-charge.

22x1.00x0.40m = 8.80m³

@ Rs. 46/m³ = Rs. 404.80.

2/23; Providing regular stone masonry work only in abutment walls with hammer dressed of heavy section (size not less than 25cmx25cm x30cm long) with proper key stones each not less than (25cmx25cmx75cm long) in cement mortar 1:4 including carriage of stones within 200m complete filling in trenches and providing weep holes at 1.2 to 1.5m a part a staggered complete (a height of wall for every 1m should be kept exposed till inspected by the Supervising Officer).

b). With new stones

$$22.00 \times \frac{0.80+0.60}{2} \times 1.20m = 21.12m^3$$

@ Rs. 1022/m³ = Rs. 21,584.64.

3/25; Providing cement concrete work in abutment, wing wall and return wall in prop 1:4:8 with hard broken stones aggregates 40mm nominal size including necessary carriage of stones and sand within 200m and curing (excluding shuttering)

22.00x1.20x0.10m = 2.64m³

@ Rs. 2022/m³ = Rs. 5,338.08.

Grand Total = Rs. 27,327.52.

Say = Rs. 27,320.00.

(Rupees Twenty seven thousand three hundred twenty) only.

Estimate for construction of Diversion Dam of Shri.

at village under Rongbeng-Dagal IWMP IV.

(As per PWD {Rd} scheduled of rate 2007-08).

1/1; Site preparation like jungle clearance etc, at L/S rate

2/3(b); Earth work in excavation for Bridges and Culverts below the lowest bed level including dewatering and bailing out water in order to keep the foundation trenches of water and protecting the sides of the foundation by adequate shorting, scaffolding including levelling the foundation longitudinal and transversely etc, as directed by the Engineer-in-charge.

b. Red soil,

20.00x1.80x1.00m = 36.00m³

@ Rs. 84/m³ = Rs. 3,024.00.

3/25; Providing cement concrete work in abutment, wing wall and return wall in prop 1:4:8 with hard broken stones aggregates 40mm nominal size including necessary carriage of stones and sand within 200m and curing (excluding shuttering)

20.00x1.72x0.10m = 3.44m³

20.00x0.82x0.10m = 1.64m³

5.08m³

@ Rs. 2022/m³ = Rs. 10,271.76.

4/22; Providing regular stone masonry in retaining walls breast walls and wing walls etc, with hammer dressed or blunt chisel dressed stones of heavy section (size not less than 25cmx25cm x30cm long) with proper key stones each not less than (25cmx25cmx75cm long) set in cement mortar 1:6 including carriage of stones within 200m holes at 1.2 to 1.5m a part a staggered complete (a height of wall for every 1m should be kept exposed till inspected by the Supervising Officer.

$20.00 \times \frac{1.72+0.82}{2} \times 3.00m = 76.20m^3$

@ Rs. 1020/m^3 = Rs. 77,724.00.

5/37; Extra carriage of sand stone aggregates, stone chips and building stones beyond the initial lead including loading and unloading and average

A. By truck load
   (i): 1st km per kilometre or part thereof for 81.28m^3
   @ Rs. 93/m^3 = Rs. 7,559.04.
   (ii): Subsequent km per kilometre or part thereof for 81.28m^3 @ 17/km for 4km = Rs. 5,527.04.

B. By head load for 849qtls @ Rs. 45/qtl. = Rs. 38,205.00.

= Rs. 51,291.08.

Grand Total = Rs. 1,42,310.84.

Say = Rs. 1,42,300.00.

(Rupees One lakh forty two thousand three hundred) only.

Estimate for construction of Water Harvesting Farm Pond of Shri.

at village under Rongbeng-Dagal IWMP IV.

(As per PWD {Rd} scheduled of rate 2007-08).

1/1; Site preparation at L/S Rate = Rs. 250.00.

2/3(b); Earth work in excavation for Bridges and Culverts below the lowest bed level including dewatering and bailing out water in order to keep the foundation trenches of water and protecting the sides of the foundation by adequate shorting, scaffolding including levelling the foundation longitudinal and transversely etc, as directed by the Engineer-in-charge.

19.00x1.00x1.10m = 20.90m³

@ Rs. 84/m³ = Rs. 1,755.60.

3/24(a); Providing stone pitching with one man size boulders not less than 25cmx30cm long including the interstices with spoils and carriage of stone filling within a distance of 200m complete as directed.

19.00x(√3.00²+6.00²)x0.30m = 38.19m³

@ Rs. 432/m³ = Rs. 16,498.08.

4/37; Extra for carriage of sand stone aggregates, stone chips and building stones beyond the initial lead including loading and unloading and average

a). 1st Km per kilometre or part thereof @ Rs. 91/m³ for 38.19m³= Rs. 3,475.29.

b). Subsequent Km per kilometre or part thereof @ Rs. 15/m³ for 38.19m³ = Rs. 2,291.40.

5/27; Providing cement concrete proportion 1:2:4 corresponding M150 with very hard granular black chips of 20mm down grade including curing and necessary local carriage of stone aggregates and sand within 200m (excluding shuttering and reinforcements).

$$19.00 \times \frac{0.35+0.20}{2} \times 3.70\text{m} = 19.332\text{m}^3$$

@ Rs. 2951/m³ = Rs. 57,050.20.

6/38; Providing shuttering in RCC bridge and culverts with dressed planks not less than 25mm thick properly joined with battens of minimum size 75mm x 100mm at a spacing of not more than 600mm centre to create to the proper level including covering in the contact face with polythene sheet and removing the same after the concrete hardens.

2x19.00x3.70m = 140.60m²

@ Rs. 281/m² = Rs. 39,508.60.

7/3(b); Earth work in excavation for Bridges and Culverts below the lowest bed level including dewatering and bailing out water in order to keep the foundation trenches of water and protecting the sides of the foundation by adequate shorting, scaffolding including levelling the foundation longitudinal and transversely etc, as directed by the Engineer-in-charge.

$$60.00 \times \frac{0.60+1.00}{2} \times 1.00m = 48.00m^3$$

@ Rs. 73/m³ = Rs. 3,504.00.

8/5; Earth work in filling or in an embankment in layers not exceeding 20cm thick including breaking clods, dressing, sectioning and ramming and lead up to 30metres and lift up to 150cm.

19.00x3.40x3.00m = 193.80m³
2x½x19.00x6.00x3.00 = 342.00m³
535.80m³

@ Rs. 108/m³ = Rs. 57,866.40.

9/6; Extra of rolling the embankment in layer of 20cm with power roller 8 to 10 tonnes capacity to run at least 5 passes until the embankment is compacted including watering hire charge of roller and supply of necessary fuel etc. complete (Sequence of operation should be filling in layers including breaking clods etc, up to the desired thickness to be followed by rolling operation, alternately as directed)

@ Rs. 33/m³ for 535.80m³ = Rs. 17,681.40.

10/9; Turfing after dressing the side slope or bed with good grass sods available in the vicinity including ramming properly to ground and pinning them with small bamboo/wooden pegs and carrying of sods within 30 metres.

19.00 x 3.00m = 57.00m²
19.00 x 6.70m = 127.30m²
= 184.30m²

@ Rs. 19/m² = Rs. 3,501.70.

11/10; Extra for the carriage of sods beyond the initial lead of 30m for the lead of every 30m or part thereof

@ Rs. (10+10) 20/m² for 184.30m² = Rs. 3,686.00.

12/21; Providing regular dry stone masonry walls with hammer dressed o blunt chisel dressed stones of heavy section (size not less than 25cmx25cmx30cm long) with proper key stones each not less than 25cmx25cmx75cm long including carriage of stone within 200metres and filling in trenches.

125mm dia @ Rs. 950.63/Rm for 10 Rm = Rs. 9506.30.

13/1.17; Supply of plug.....

1 no 150mm dia @ Rs. 645.16 each = Rs. 645.16.

14/1.8; Supplying socket 150mm dia.....

@ Rs. 1160/each = Rs. 1160.00.

15/22; Providing regular stone masonry in retaining walls breast walls and wing walls etc, with hammer dressed or blunt chisel dressed stones of heavy section (size not less than 25cmx25cm x30cm long) with proper key stones each not less than (25cmx25cmx75cm long) set in cement mortar 1:6 including carriage of stones within 200m holes at 1.2 to 1.5m a part a staggered complete (a height of wall for every 1m should be kept exposed till inspected by the Supervising Officer.

1x11.80x0.60x0.30m = 2.124m³

2x11.80x0.80x0.30m = 5.664m³

= 7.788m³

@ Rs. 1020/m³ = Rs. 7943.76.

16/39; Providing 12mm thick cement plastering in proportion 1:4 including screening the sand clearing the surface and carriage of sand within 200m complete and carriage of sand within 200m complete as directed (No plastering is to be done in taining walls, breast walls and face walls).

1x11.80x0.60m = 7.08m²
2x11.80x0.50m = 11.80m²
2x11.80x0.40m = 9.44m²
4x0.50x0.60m = 1.20m²
= 29.52m²

@ Rs. 86/m² = Rs. 2,538.72.

17/37; Extra carriage of sand stone aggregates, stone chips and building stones beyond the initial lead including loading and unloading and average to

a). By truck load distance 52 Km for 74 qtls @ Rs. 1.65/qtl = Rs. 6,349.20.

b). By head load 1 Km @ Rs. 45/qtl = Rs. 3,600.00.

Grand Total = Rs. 2,38,811.81.

Say = Rs. 2,38,751.00.

(Rupees Two lakhs thirty eight thousand seven hundred fifty one) only.

Estimate for construction of Check Dam of Shri.

at village, under Rongbeng-Dagal IWMP IV.

(As per PWD {Rd} scheduled of rate 2007-08).

1/1; Site preparation like jungle clearance etc, at L/S rate = Rs. 1,200.00.

2/3 (b); Earth work in excavation for Bridges and Culverts below the lowest bed level including dewatering and bailing out water in order to keep the foundation trenches of water and protecting the sides of the foundation by adequate shorting, scaffolding including levelling the foundation longitudinal and transversely etc, as directed by the Engineer-in-charge.

b). 23.00x1.80x1.00m = 41.40m³

@ Rs. 84/m³ = Rs. 3,477.60.

3/5; Earth work in filling or in an embankment in layers not exceeding 20cm thick including breaking clods, dressing, sectioning and ramming and lead up to 30m and lift up to 150cm, (ii). With earth obtained from borrow pits in the private land at the contractor's own arrangement.

23.00x1.20x1.95m = 51.06m³

23.00x.½(1.20x.95)m = 26.91m³

77.97m³

@ Rs. 108/m³ = Rs. 8,420.76.

4/21;Providing regular dry stone masonry walls with hammer dressed or blunt chisel dressed stones of heavy section (size not less than 5cmx25cmx30cm long) with proper key stones each not less than 25cmx25cmx75cm long including carriage of stone within 200m and filling in trenches

(a). With new stones

23.00x1.80x1.00m = 41.40m³

$23.00 \times \frac{1.80+1.00}{2} \times 1.95m = 62.79m^3$

= 104.19m³

@ Rs. 618/m³ = Rs. 64,389.42.

5/37; Extra carriage of sand stone aggregates, stone chips and building stones beyond the initial lead including loading andunloading and average to

Head load for 335qtls @ Rs. 45/qtl per Km = Rs. 15,075.00.

Grand Total = Rs. 92,562.78.

Say = Rs. 92,500.00.

(Rupees Ninety two thousand five hundred) only.

Estimate for construction of Check Dam of Shri.

at village, under Rongbeng-Dagal IWMP IV.

(As per PWD {Rd} scheduled of rate 2007-08).

1/1; Site preparation like jungle clearance etc, at L/S rate = Rs. 1,200.00.

2/3 (b); Earth work in excavation for Bridges and Culverts below the lowest bed level including dewatering and bailing out water in order to keep the foundation trenches of water and protecting the sides of the foundation by adequate shorting, scaffolding including levelling the foundation longitudinal and transversely etc, as directed by the Engineer-in-charge.

b). 23.00x1.80x1.00m = 41.40m³

@ Rs. 84/m³ = Rs. 3,477.60.

3/5; Earth work in filling or in an embankment in layers not exceeding 20cm thick including breaking clods, dressing, sectioning and ramming and lead up to 30m and lift up to 150cm, (ii). With earth obtained from borrow pits in the private land at the contractor's own arrangement.

23.00x1.20x1.95m = 51.06m³

23.00x.½(1.20x.95)m = 26.91m³

77.97m³

@ Rs. 108/m³ = Rs. 8,420.76.

4/21;Providing regular dry stone masonry walls with hammer dressed or blunt chisel dressed stones of heavy section (size not less than 5cmx25cmx30cm long) with proper key stones each not less than 25cmx25cmx75cm long including carriage of stone within 200m and filling in trenches

(a). With new stones

23.00x1.80x1.00m = 41.40m³

$23.00 \times \frac{1.80+1.00}{2} \times 1.95m = 62.79m^3$

= 104.19m³

@ Rs. 618/m³ = Rs. 64,389.42.

5/37; Extra carriage of sand stone aggregates, stone chips and building stones beyond the initial lead including loading andunloading and average to

Head load for 335qtls @ Rs. 45/qtl per Km = Rs. 15,075.00.

Grand Total = Rs. 92,562.78.

Say = Rs. 92,550.00.

(Rupees Ninety two thousand five hundred fifty) only.

Estimate for construction of Small Dug Out Pond of Shri.

at village, under Rongbeng-Dagal IWMP IV.

(As per PWD {Rd} scheduled of rate 2007-08).

1/1; Site preparation like jungle clearance etc, at L/S rate = Rs. 150.00.

2/3 (b); Earth work in excavation for Bridges and Culverts below the lowest bed level including dewatering and bailing out water in order to keep the foundation trenches of water and protecting the sides of the foundation by adequate shorting, scaffolding including levelling the foundation longitudinal and transversely etc, as directed by the Engineer-in-charge.

c. (ii); Loamy soil etc,

Pond: $\frac{1.50}{6}$ (20.00x15.00)+(4183.50x13.50)+17.00x12.00 = 375.75m³

@ Rs. 73/m³ = Rs. 27,429.75.

3/11.1); Cutting road side drain 60cm wide 60cm deep including dressing grading and removal of spoils up to 15m complete.

b.) In soil mixed with boulder above one man size

ii). 0.60m x 1.00m

40.00 Running metre @ Rs. 30/Rm = Rs. 1,200.00.

Total = Rs. 28,779.00.

Say = Rs. 28,740.00.

(Rupees Twenty eight thousand seven hundred forty) only.

Estimate for construction of Small Dug Out Pond of Shri.

at village, under Rongbeng-Dagal IWMP IV.

(As per PWD {Rd} scheduled of rate 2007-08).

1/1; Site preparation like jungle clearance etc, at L/S rate = Rs. 150.00.

2/3 (b); Earth work in excavation for Bridges and Culverts below the lowest bed level including dewatering and bailing out water in order to keep the foundation trenches of water and protecting the sides of the foundation by adequate shorting, scaffolding including levelling the foundation longitudinal and transversely etc, as directed by the Engineer-in-charge.

c. (ii); Loamy soil etc,

Pond: $\frac{1.50}{6}$ (20.00x15.00)+(4183.50x13.50)+17.00x12.00 = 375.75m³

@ Rs. 73/m³ = Rs. 27,429.75.

3/11.1); Cutting road side drain 60cm wide 60cm deep including dressing grading and removal of spoils up to 15m complete.

b.) In soil mixed with boulder above one man size

ii). 0.60m x 1.00m

40.00 Running metre @ Rs. 30/Rm = Rs. 1,200.00.

Total = Rs. 28,779.00.

Say = Rs. 28,740.00.

(Rupees Twenty eight thousand seven hundred forty) only.

Estimate for construction of Retaining Wall of Shri.

at village, under Rongbeng-Dagal IWMP IV.

(As per PWD {Rd} scheduled of rate 2007-08).

1/3(b); Earth work in excavation for Bridges and Culverts below the lowest bed level including dewatering and bailing out water in order to keep the foundation trenches of water and protecting the sides of the foundation by adequate shorting, scaffolding including levelling the foundation longitudinal and transversely etc, as directed by the Engineer-in-charge.

16.00x1.40x0.40m = 8.96m³

@ Rs. 46/m³ = Rs. 412.12.

2/23; Providing regular stone masonry work only in abutment walls with hammer dressed of heavy section (size not less than 25cmx25cm x30cm long) with proper key stones each not less than (25cmx25cmx75cm long) in cement mortar 1:4 including carriage of stones within 200m complete filling in trenches and providing weep holes at 1.2 to 1.5m a part a staggered complete (a height of wall for every 1m should be kept exposed till inspected by the Supervising Officer).

b). With new stones

$$16.00 \times \frac{1.20+0.80}{2} \times 1.60m = 23.04m^3$$

@ Rs. 1022/m³ = Rs. 23,546.88.

3/25; Providing cement concrete work in abutment, wing wall and return wall in prop 1:4:8 with hard broken stones aggregates 40mm nominal size including necessary carriage of stones and sand within 200m and curing (excluding shuttering)

16.00x1.60x0.10m = 2.56m³

@ Rs. 2022/m³ = Rs. 5,176.32.

Grand Total = Rs. 29,135.32.

Say = Rs. 29,130.00.

(Rupees Twenty nine thousand one hundred thirty) only.

Estimate for construction of Lead Channel of Shri.

at village under Rongbeng-Dagal IWMP IV.

(As per PWD {Rd} scheduled of rate 2007-08).

1/11. (i); Cutting road side drain 60cm wide 60cm deep including dressing grading and removal of soils up to 15 metres complete.

b). In soil mixed with gravel on small boulders for 400 Rm

of 0.60mx1.00m

@ Rs. 30/Rm. = Rs. 12,000.00.

c). In soil mixed with boulders above one man size for 47.50 Rm,

of 0.60mx1.00m

@ Rs. 32/Rm. = Rs. 1,520.00.

d). In soft rock for 110 Rm of 0.60mx1.00m

@ Rs. 43/Rm. = Rs. 4,730.00.

e). In medium rock or hard shale for 250 Rm of 0.60mx1.00m

@ Rs. 73/Rm. = Rs. 18,250.00.

Total = Rs. 36,500.00.

(Rupees Thirty six thousand five hundred) only.

Estimate for construction of Water Harvesting Farm Pond of Shri.

at village under Rongbeng-Dagal IWMP IV.

(As per PWD {Rd} scheduled of rate 2007-08).

1/3(b); Earth work in excavation for Bridges and Culverts below the lowest bed level including dewatering and bailing out water in order to keep the foundation trenches of water and protecting the sides of the foundation by adequate shorting, scaffolding including levelling the foundation longitudinal and transversely etc, as directed by the Engineer-in-charge.

17.50x1.00x1.10m = 19.25m³

@ Rs. 84/m³ = Rs. 1,617.00.

2/24(a); Providing stone pitching with one man size boulders not less than 25cmx30cm long including the interstices with spoils and carriage of stone filling within a distance of 200m complete as directed.

17.50x(√3.00²+6.00²)x0.30m = 35.175m³

@ Rs. 432/m³ = Rs. 15,195.60.

3/37; Extra for carriage of sand stone aggregates, stone chips and building stones beyond the initial lead including loading and unloading and average

a). 1st Km per kilometre or part thereof @ Rs. 91/m³ for 35.175m³ = Rs. 3,200.92.

b). Subsequent Km per kilometre or part thereof @ Rs. 15/m³ for 35.175m³

= Rs. 2,110.50.

c). Head load for 1km @ Rs. 4/m³ for 35.175m³ = Rs. 1,582.07.

4/27; Providing cement concrete proportion 1:2:4 corresponding M150 with very hard granular black chips of 20mm down grade including curing and necessary local carriage of stone aggregates and sand within 200m (excluding shuttering and reinforcements).

17.50x $\frac{0.35+0.20}{2}$ x3.70m = 17.806m³

@ Rs. 2951/m³ = Rs. 52,545.50.

5/38; Providing shuttering in RCC bridge and culverts with dressed planks not less than 25mm thick properly joined with battens of minimum size 75mm x 100mm at a spacing of not more than 600mm centre to create to the proper level including covering in the contact face with polythene sheet and removing the same after the concrete hardens.

2x17.50x3.70m = 129.50m²

@ Rs. 281/m² = Rs. 36,389.50.

6/3(b); Earth work in excavation for Bridges and Culverts below the lowest bed level including dewatering and bailing out water in order to keep the foundation trenches of water and protecting the sides of the foundation by adequate shorting, scaffolding including levelling the foundation longitudinal and transversely etc, as directed by the Engineer-in-charge.

60.00x $\frac{0.60+1.00}{2}$ x1.00m = 48.00m³

@ Rs. 73/m³ = Rs. 3,504.00.

7/5; Earth work in filling or in an embankment in layers not exceeding 20cm thick including breaking clods, dressing, sectioning and ramming and lead up to 30metres and lift up to 150cm.

17.50x3.50x3.00m = 178.50m³

2x½x17.50x6.00x3.00 = 315.00m³

493.50m³

@ Rs. 108/m³ = Rs. 53,298.00.

8/6; Extra of rolling the embankment in layer of 20cm with power roller 8 to 10 tonnes capacity to run at least 5 passes until the embankment is compacted including watering hire charge of roller and supply of necessary fuel etc. complete (Sequence of operation should be filling in layers including breaking clods etc, up to the desired thickness to be followed by rolling operation, alternately as directed)

@ Rs. 33/m³ for 493.50m³ = Rs. 16,285.50.

9/9; Turfing after dressing the side slope or bed with good grass sods available in the vicinity including ramming properly to ground and pinning them with small bamboo/wooden pegs and carrying of sods within 30 metres.

17.50 x 3.00m = 52.50m²

17.50 x 6.70m = 117.25m²

= 169.75m²

@ Rs. 19/m² = Rs. 3,225.25.

10/10; Extra for the carriage of sods beyond the initial lead of 30m for the lead of every 30m or part thereof

@ Rs. (10+10) 20/m² for 169.75m² = Rs. 3,395.00.

11/21; Providing regular dry stone masonry walls with hammer dressed o blunt chisel dressed stones of heavy section (size not less than 25cmx25cmx30cm long) with proper key stones each not less than 25cmx25cmx75cm long including carriage of stone within 200metres and filling in trenches.

125mm dia @ Rs. 950.63/Rm for 10 Rm = Rs. 9506.30.

12/1.17; Supply of plug.....

1 no 150mm dia @ Rs. 645.16 each = Rs. 645.16.

13/1.8; Supplying socket 150mm dia.....

@ Rs. 1160/each = Rs. 1160.00.

14/22; Providing regular stone masonry in retaining walls breast walls and wing walls etc, with hammer dressed or blunt chisel dressed stones of heavy section (size not less than 25cmx25cm x30cm long) with proper key stones each not less than (25cmx25cmx75cm long) set in cement mortar 1:6 including carriage of stones within 200m holes at 1.2 to 1.5m a part a staggered complete (a height of wall for every 1m should be kept exposed till inspected by the Supervising Officer.

1x11.80x0.60x0.30m = 2.124m³

2x11.80x0.80x0.30m = 5.664m³

= 7.788m³

@ Rs. 1020/m³ = Rs. 7943.76.

15/39; Providing 12mm thick cement plastering in proportion 1:4 including screening the sand clearing the surface and carriage of sand within 200m complete and carriage of sand within 200m complete as directed (No plastering is to be done in taining walls, breast walls and face walls).

1x11.80x0.60m = 7.08m²

2x11.80x0.50m = 11.80m²

2x11.80x0.40m = 9.44m²

4x0.50x0.60m = 1.20m²

= 29.52m²

@ Rs. 86/m² = Rs. 2,538.72.

16/37; Extra carriage of sand stone aggregates, stone chips and building stones beyond the initial lead including loading and unloading and average to

a). By truck load distance 52 Km for 59 qtls @ Rs. 1.65/qtl = Rs. 5,062.20.

b). By head load 1 Km @ Rs. 45/qtl = Rs. 2,655.00.

Grand Total = Rs. 2,21,858.34.

Say = Rs. 2,21,367.00.

(Rupees Two lakhs twenty one thousand three hundred sixty seven) only.

Estimate for construction of Head Water Dam of Shri.

at village under Rongbeng-Dagal IWMP IV.

(As per PWD {Rd} scheduled of rate 2007-08).

1/1; Site preparation like jungle clearance etc, at L/S Rate = Rs.

2/3(b); Earth work in excavation for Bridges and Culverts below the lowest bed level including dewatering and bailing out water in order to keep the foundation trenches of water and protecting the sides of the foundation by adequate shorting, scaffolding including levelling the foundation longitudinal and transversely etc, as directed by the Engineer-in-charge.

c. (ii); Loamy soil etc.

8.20x0.90x0.60m = 4.43m³

7.00x1.80x0.30m = 3.78m³

4x1.80x0.70x0.60m = 3.02m³

2x4.30x0.70x0.60m = 3.61m³

14.84m³

@ Rs. 73/m³ = Rs. 1,246.56.

3/26; Providing cement concrete work in abutment, wing wall and return wall in prop 1:3:6 with hard broken stone aggregates 40mm downgraded including necessary local carriage of stone aggregates sand within 200m and curing (excluding shuttering)

8.20x0.90x0.60m = 4.43m³

$8.20 \times \frac{0.90+0.60}{2} \times 1.60m = 9.84m^3$

14.27m³

@ Rs. 2281/m³ = Rs. 32,549.87.

4/25; Providing cement concrete work proportion 1:4:8 with hard broken aggregates 40mm nominal size including necessary local carriage of stone and sand within a distance of 200metre and curing (excluding shuttering).

4x1.80x0.60x2.70m = 11.66m³

7.00x0.30x1.10m = 2.31m³

13.97m³

@ Rs. 2022/m³ = Rs. 28,247.34.

5/22; Providing regular stone masonry in retaining walls breast walls and wing walls etc, with hammer dressed or blunt chisel dressed stones of heavy section (size not less than 25cmx25cm x30cm long) with proper key stones each not less than (25cmx25cmx75cm long) set in cement mortar 1:6 including carriage of stones within 200m holes at 1.2 to 1.5m a part a staggered complete (a height of wall for every 1m should be kept exposed till inspected by the Supervising Officer.

2x4.30x0.60x1.10m = 5.68m³

1x7.00x1.50x0.30m = 3.15m³

2x4.30x0.50x0.30m = 1.29m³

= 10.12m³

@ Rs. 1020/m³ = Rs. 10,322.40.

6/38; Providing shuttering in RCC bridge and culverts with dressed planks not less than 25mm thick properly joined with battens of minimum size 75mm x 100mm at a spacing of not more than 600mm centre to create to the proper level including covering in the contact face with polythene sheet and removing the same after the concrete hardens.

2x8.20x2.20m = 36.08m³

4x1.80x2.10m = 09.42m³

45.80m³

@ Rs. 281/m³ = Rs. 12,869.80.

7/39; Providing 12mm thick cement plastering in proportion 1:4 including screening the sand clearing the surface and carriage of sand within 200m complete and carriage of sand within 200m complete as directed (No plastering is to be done in taining walls, breast walls and face walls).

1x8.20x1.70m = 13.94m²

1x8.20x1.80m = 14.76m²

1x7.00x2.60m = 18.20m²

4x4.30x0.60m = 10.32m²

4x1.80x2.70m = 19.44m²

2x0.60x0.50m = 0.60m²

2x4.30x1.70m = 14.62m²

= 91.88m²

@ Rs. 86/m² = Rs. 7,901.68.

Grand Total = Rs. 93,137.65.

Say = Rs. 93,100.00.

(Rupees Ninety three thousand one hundred) only.

Estimate for construction of Small Dug Out Pond of Shri.

at village, under Rongbeng-Dagal IWMP IV.

(As per PWD {Rd} scheduled of rate 2007-08).

1/1; Site preparation like jungle clearance etc, at L/S rate = Rs. 250.00.

2/3 (b); Earth work in excavation for Bridges and Culverts below the lowest bed level including dewatering and bailing out water in order to keep the foundation trenches of water and protecting the sides of the foundation by adequate shorting, scaffolding including levelling the foundation longitudinal and transversely etc, as directed by the Engineer-in-charge.

c. (ii); Loamy soil etc,

Pond: $\frac{1.50}{6}$ (20.00x18.00)+(4x18.50x16.50)+17.00x15.00 = 459m³

Side Drain: 70.00 x $\frac{1.10+0.70}{2}$ x1.00 = 63m³

= 522m³

@ Rs. 73/m³ = Rs. 38,106.00.

Total = Rs. 38,356.00.

Say = Rs. 38,320.00.

(Rupees Thirty eight thousand three hundred twenty) only.

Estimate for construction of Small Dug Out Pond of Shri.

at village, under Rongbeng-Dagal IWMP IV.

(As per PWD {Rd} scheduled of rate 2007-08).

1/1; Site preparation like jungle clearance etc, at L/S rate = Rs. 250.00.

2/3 (b); Earth work in excavation for Bridges and Culverts below the lowest bed level including dewatering and bailing out water in order to keep the foundation trenches of water and protecting the sides of the foundation by adequate shorting, scaffolding including levelling the foundation longitudinal and transversely etc, as directed by the Engineer-in-charge.

c. (ii); Loamy soil etc,

Pond: $\frac{1.50}{6}$ (20.00x15.00)+(4x18.50x13.50)+17.00x12.00 = 375.75m³

Side Drain: 70.00 x $\frac{1.10+0.70}{2}$ x1.00 = 63.00m³

= 438.75m³

@ Rs. 73/m³ = Rs. 32,028.75.

3/9; Tugging after dressing the side slope or bed with good grass sods available in the vicinity including ramming properly to the ground and pinning them with small bamboo/wooden pegs and carrying of sods within 30m

2x $\frac{20.00+23.00}{2}$ x1.50 = 64.50m²

2x $\frac{15.00+18.00}{2}$ x1.50 = 49.50m²

= 114.00m²

@ Rs. 19/m² = Rs. 2,166.00.

Total = Rs. 34,444.75.

Say = Rs. 34,300.00.

(Rupees Thirty four thousand three hundred) only.

Estimate for construction of Retaining Wall of Shri.

at village, under Rongbeng-Dagal IWMP IV.

(As per PWD {Rd} scheduled of rate 2007-08).

1/3(b); Earth work in excavation for Bridges and Culverts below the lowest bed level including dewatering and bailing out water in order to keep the foundation trenches of water and protecting the sides of the foundation by adequate shorting, scaffolding including levelling the foundation longitudinal and transversely etc, as directed by the Engineer-n-charge.

c. (ii); Loamy soil etc,

14.00x1.20x0.90m = 15.12m³

@ Rs. 73/m³ = Rs. 1,103.76.

2/22; Providing regular stone masonry in retaining walls breast walls and wing walls etc, with hammer dressed or blunt chisel dressed stones of heavy section (size not less than 25cmx25cm x30cm long) with proper key stones each not less than (25cmx25cmx75cm long) set in cement mortar 1:6 including carriage of stones within 200m holes at 1.2 to 1.5m a part a staggered complete (a height of wall for every 1m should be kept exposed till inspected by the Supervising Officer.

$$14.00 \times \frac{1.20+0.80}{2} \times 2.00m = 28m^3$$

@ Rs. 1020/m³ = Rs. 28,560.00.

3/25; Providing cement concrete work in abutment, wing wall and return wall in prop 1:4:8 with hard broken stones aggregates 40mm nominal size including necessarycarriage of stones and sand within 200m and curing (excluding shuttering)

14.00x1.20x0.10m = 1.68m³

@ Rs. 2022/m³ = Rs. 3,396.96.

4/39; Providing 12mm thick cement plastering in proportion 1:4 including screening the sand clearing the surface and carriage of sand within 200m complete and carriage of sand within 200m complete as directed (No plastering is to be done in taining walls, breast walls and face walls).

14.00x2.00m = 28m²

@ Rs. 86/m² = Rs. 2,408.00.

5/37; Extra carriage of sand stone aggregates, stone chips and building stones beyond the initial lead including loading and unloading and average to

a). By truck load

i). At initial load for 245qtls @ Rs. 15/qtl = Rs. 3,675.00.

ii). At subsequent load per km for 3km @ Rs. 1.65/qtl = Rs. 1,212.75.

b). By head load for 245qtls @ Rs. 45/qtl = Rs. 11,025.00.

Total = Rs. 15,912.75.

Grand Total = Rs. 51,381.47.

Say = Rs. 51,350.00.

(Rupees Fifty one thousand three hundred fifty) only.

Estimate for construction of Head Water Dam of Shri.

at village under Rongbeng-Dagal IWMP IV.

(As per PWD {Rd} scheduled of rate 2007-08).

1/1; Site preparation like jungle clearance etc, at L/S Rate = Rs. 520.00.

2/3(b); Earth work in excavation for Bridges and Culverts below the lowest bed level including dewatering and bailing out water in order to keep the foundation trenches of water and protecting the sides of the foundation by adequate shorting, scaffolding including levelling the foundation longitudinal and transversely etc, as directed by the Engineer-in-charge.

c. (ii); Loamy soil etc.

11.80x1.00x1.00m = 11.80m³

10.60x2.10x0.30m = 6.68m³

4x2.10x0.70x1.00m = 5.88m³

2x5.00x0.60x0.50m = 3.00m³

27.36m³

@ Rs. 73/m³ = Rs. 1,997.28.

3/26; Providing cement concrete work in abutment, wing wall and return wall in prop 1:3:6 with hard broken stone aggregates 40mm downgraded including necessary local carriage of stone aggregates sand within 200m and curing (excluding shuttering)

11.80x0.80x1.00m = 09.44m³

11.80x $\frac{0.90+0.70}{2}$ x2.10m = 19.82m³

10.60x0.30x1.10m = 3.50m³

32.76m³

@ Rs. 2281/m³ = Rs. 74,725.56.

4/25; Providing cement concrete work proportion 1:4:8 with hard broken aggregates 40mm nominal size including necessary local carriage of stone and sand within a distance of 200metres and curing (excluding shuttering).

4x2.10x0.60x3.60m = 18.14m³

@ Rs. 2022/m³ = Rs. 36,679.08.

5/22; Providing regular stone masonry in retaining walls breast walls and wing walls etc, with hammer dressed or blunt chisel dressed stones of heavy section (size not less than 25cmx25cm x30cm long) with proper key stones each not less than (25cmx25cmx75cm long) set in cement mortar 1:6 including carriage of stones within 200m holes at 1.2 to 1.5m a part a staggered complete (a height of wall for every 1m should be kept exposed till inspected by the Supervising Officer.

2x5.00x0.60x1.10m = 6.60m³

1x10.60x2.10x0.30m = 6.68m³

2x5.00x0.50x0.30m = 1.50m³

= 14.78m³

@ Rs. 1020/m³ = Rs. 15,075.60.

6/38; Providing shuttering in RCC bridge and culverts with dressed planks not less than 25mm thick properly joined with battens of minimum size 75mm x 100mm at a spacing of not more than 600mm centre to create to the proper level including covering in the contact face with polythene sheet and removing the same after the concrete hardens.

2x11.80x3.10 = 73.16m³

2.10x3.60m = 7.56m³

= 80.72m³

@ Rs. 1020/m³ = Rs. 22,682.32.

7/39; Providing 12mm thick cement plastering in proportion 1:4 including screening the sand clearing the surface and carriage of sand within 200m complete and carriage of sand within 200m complete as directed (No plastering is to be done in taining walls, breast walls and face walls).

1x11.80x2.20m = 25.96m²

1x11.80x2.30m = 27.14m²

1x11.80x2.70m = 31.86m²

4x2.10x2.70m = 22.68m²

2x0.50x0.60m = 0.60m²

4x0.60x2.70m = 6.48m²

2x1.70x5.00m = 17.00m²

= 131.72m²

@ Rs. 86/m² = Rs. 11,327.92.

Grand Total = Rs. 1,63,007.76.

Say = Rs. 1,62,800.00.

(Rupees One lakhs sixty two thousand eight hundred) only.

Estimate for construction of Head Water Dam of Shri.

at village under Rongbeng-Dagal IWMP IV.

(As per PWD {Rd} scheduled of rate 2007-08).

1/1; Site preparation like jungle clearance etc, at L/S Rate = Rs. 250.00.

2/3(b); Earth work in excavation for Bridges and Culverts below the lowest bed level including dewatering and bailing out water in order to keep the foundation trenches of water and protecting the sides of the foundation by adequate shorting, scaffolding including levelling the foundation longitudinal and transversely etc, as directed by the Engineer-in-charge.

b; Red soil

8.20x0.90x0.60m = 4.43m³

7.00x1.80x0.30m = 3.78m³

4x1.80x0.70x0.60m = 3.02m³

2x4.30x0.70x0.60m = 3.61m³

14.84m³

@ Rs. 84/m³ = Rs. 1,246.56.

3/26; Providing cement concrete work in abutment, wing wall and return wall in prop 1:3:6 with hard broken stone aggregates 40mm downgraded including necessary local carriage of stone aggregates sand within 200m and curing (excluding shuttering)

8.20x0.90x0.60m = 4.43m³

$8.20 \times \frac{0.90+0.60}{2} \times 1.60m = 9.84m^3$

14.27m³

@ Rs. 2281/m³ = Rs. 32,549.87.

4/25; Providing cement concrete work proportion 1:4:8 with hard broken aggregates 40mm nominal size including necessary local carriage of stone and sand within a distance of 200metre and curing (excluding shuttering).

4x1.80x0.60x2.70m = 11.66m³

7.00x0.30x1.10m = 2.31m³

13.97m³

@ Rs. 2022/m³ = Rs. 28,247.34.

5/22; Providing regular stone masonry in retaining walls breast walls and wing walls etc, with hammer dressed or blunt chisel dressed stones of heavy section (size not less than 25cmx25cm x30cm long) with proper key stones each not less than (25cmx25cmx75cm long) set in cement mortar 1:6 including carriage of stones within 200m holes at 1.2 to 1.5m a part a staggered complete (a height of wall for every 1m should be kept exposed till inspected by the Supervising Officer.

2x4.30x0.60x1.10m = 5.68m³

1x7.00x1.50x0.30m = 3.15m³

2x4.30x0.50x0.30m = 1.29m³

= 10.12m³

@ Rs. 1020/m³ = Rs. 10,322.40.

6/38; Providing shuttering in RCC bridge and culverts with dressed planks not less than 25mm thick properly joined with battens of minimum size 75mm x 100mm at a spacing of not more than 600mm centre to create to the proper level including covering in the contact face with polythene sheet and removing the same after the concrete hardens.

2x8.20x2.20m = 36.08m³

@ Rs. 281/m³ = Rs. 10,138.48.

7/39; Providing 12mm thick cement plastering in proportion 1:4 including screening the sand clearing the surface and carriage of sand within 200m complete and carriage of sand within 200m complete as directed (No plastering is to be done in taining walls, breast walls and face walls).

1x7.00x1.70m = 11.90m²

1x7.00x1.80m = 12.60m²

1x7.00x2.60m = 18.20m²

4x4.30x0.60m = 10.32m²

4x1.80x2.70m = 19.44m²

= 72.46m²

@ Rs. 86/m² = Rs. 6,231.56.

Grand Total = Rs. 88,986.21.

Say = Rs. 88,900.00.

(Rupees Eighty eight thousand nine hundred) only.

Estimate for construction of Head Water Dam of Shri.

at village under Rongbeng-Dagal IWMP IV.

(As per PWD {Rd} scheduled of rate 2007-08).

1/1; Site preparation like jungle clearance etc, at L/S Rate = Rs. 200.00.

2/3(b); Earth work in excavation for Bridges and Culverts below the lowest bed level including dewatering and bailing out water in order to keep the foundation trenches of water and protecting the sides of the foundation by adequate shorting, scaffolding including levelling the foundation longitudinal and transversely etc, as directed by the Engineer-in-charge.

15.70x1.00x1.00m = 15.70m³

14.50x2.10x0.30m = 9.13m³

4x2.10x0.70x1.00m = 5.88m³

2x5.00x0.60x0.50m = 3.00m³

33.71m³

@ Rs. 84/m³ = Rs. 2,831.64.

3/26; Providing cement concrete work in abutment, wing wall and return wall in prop 1:3:6 with hard broken stone aggregates 40mm downgraded including necessary local carriage of stone aggregates sand within 200m and curing (excluding shuttering)

15.70x0.80x1.00m = 12.56m³

$15.70 \times \frac{0.80+0.60}{2} \times 2.10m = 23.08m^3$

14.50x0.30x1.10m = 4.78m³

40.42m³

@ Rs. 2281/m³ = Rs. 92,198.02.

4/25; Providing cement concrete work proportion 1:4:8 with hard broken aggregates 40mm nominal size including necessary local carriage of stone and sand within a distance of 200metres and curing(excluding shuttering).

4x2.10x0.60x3.60m = 18.14m³

@ Rs. 2022/m³ = Rs. 36,679.08.

5/22; Providing regular stone masonry in retaining walls breast walls and wing walls etc, with hammer dressed or blunt chisel dressed stones of heavy section (size not less than 25cmx25cm x30cm long) with proper key stones each not less than (25cmx25cmx75cm long) set in cement mortar 1:6 including carriage of stones within 200m holes at 1.2 to 1.5m a part a staggered complete (a height of wall for every 1m should be kept exposed till inspected by the Supervising Officer.

2x5.00x0.60x1.10m = 6.60m³

1x14.50x2.10x0.30m = 9.13m³

2x5.00x0.50x0.30m = 1.50m³

= 17.23m³

@ Rs. 1020/m³ = Rs. 17,574.60.

6/38; Providing shuttering in RCC bridge and culverts with dressed planks not less than 25mm thick properly joined with battens of minimum size 75mm x 100mm at a spacing of not more than 600mm centre to create to the proper level including covering in the contact face with polythene sheet and removing the same after the concrete hardens.

2x15.70x3.10m = 97.34m²

4x2.10x3.60m = 30.24m²

= 127.58m²

@ Rs. 281/m² = Rs. 35,849.98.

7/39; Providing 12mm thick cement plastering in proportion 1:4 including screening the sand clearing the surface and carriage of sand within 200m complete and carriage of sand within 200m complete as directed (No plastering is to be done in taining walls, breast walls and face walls).

1x14.50x2.20m = 31.90m²

1x14.50x2.30m = 33.35m²

1x14.50x2.70m = 39.15m²

4x2.10x2.70m = 22.68m²

2x0.50x0.60m = 0.60m²

4x0.60x2.70m = 6.48m²

2x1.70x5.00m = 17.00m²

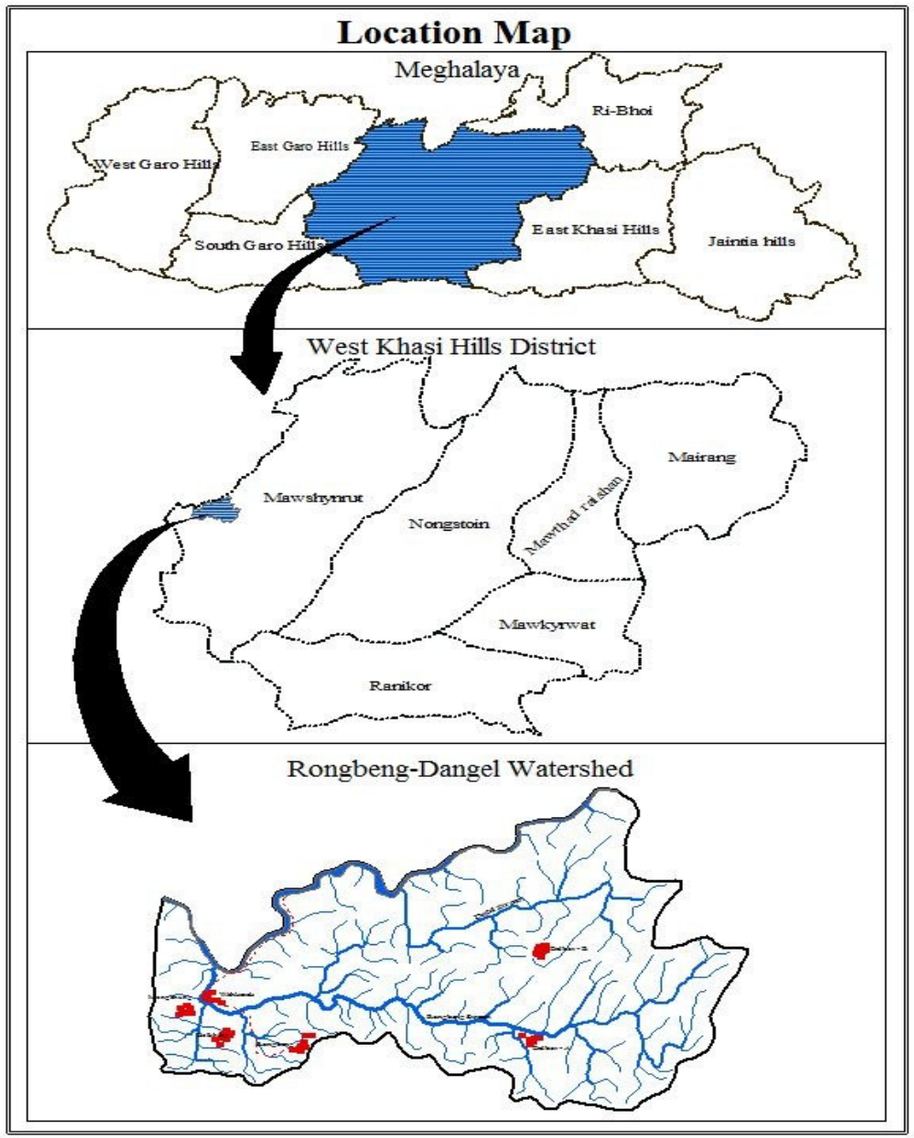
= 151.16m²

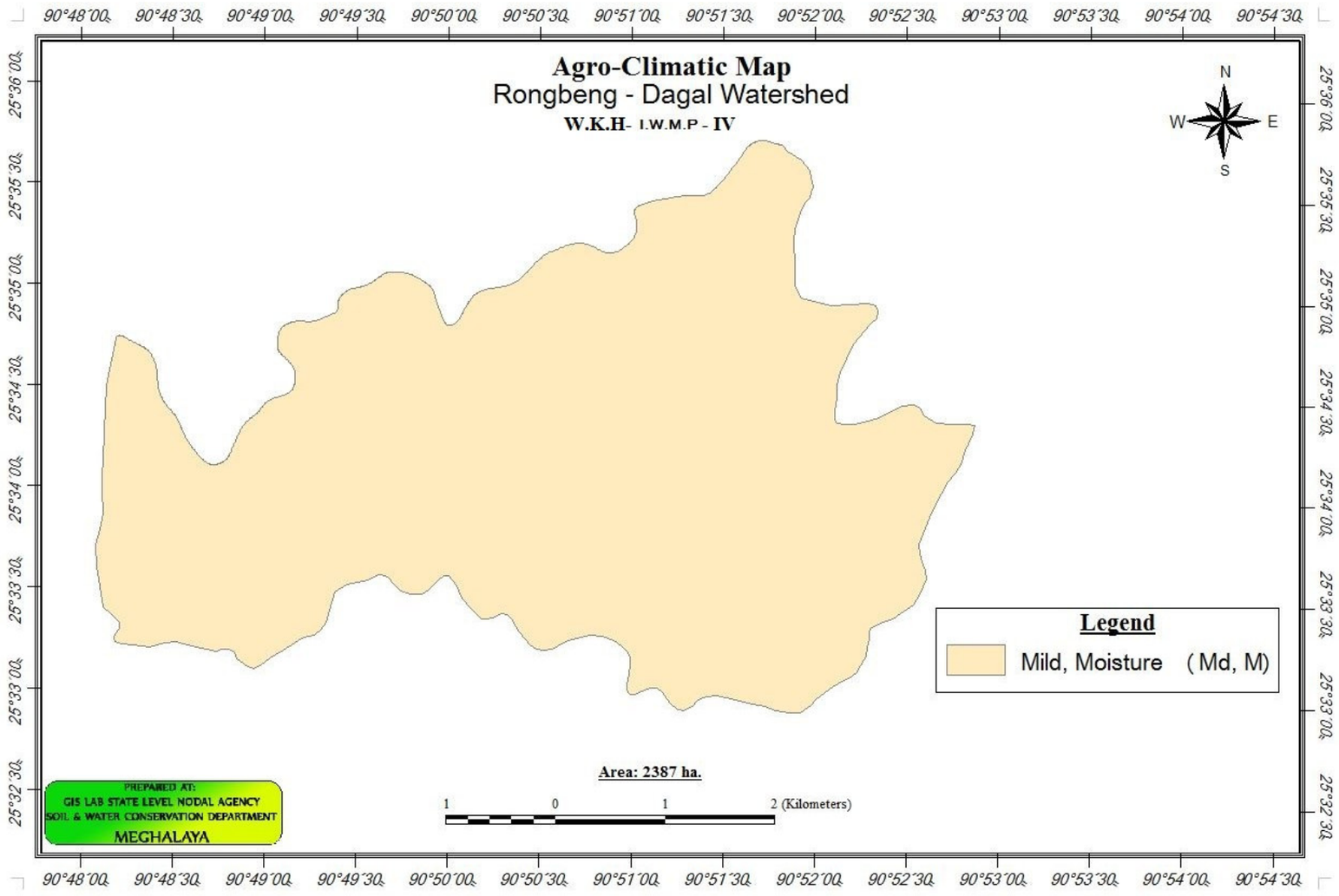
@ Rs. 86/m² = Rs. 12,999.76.

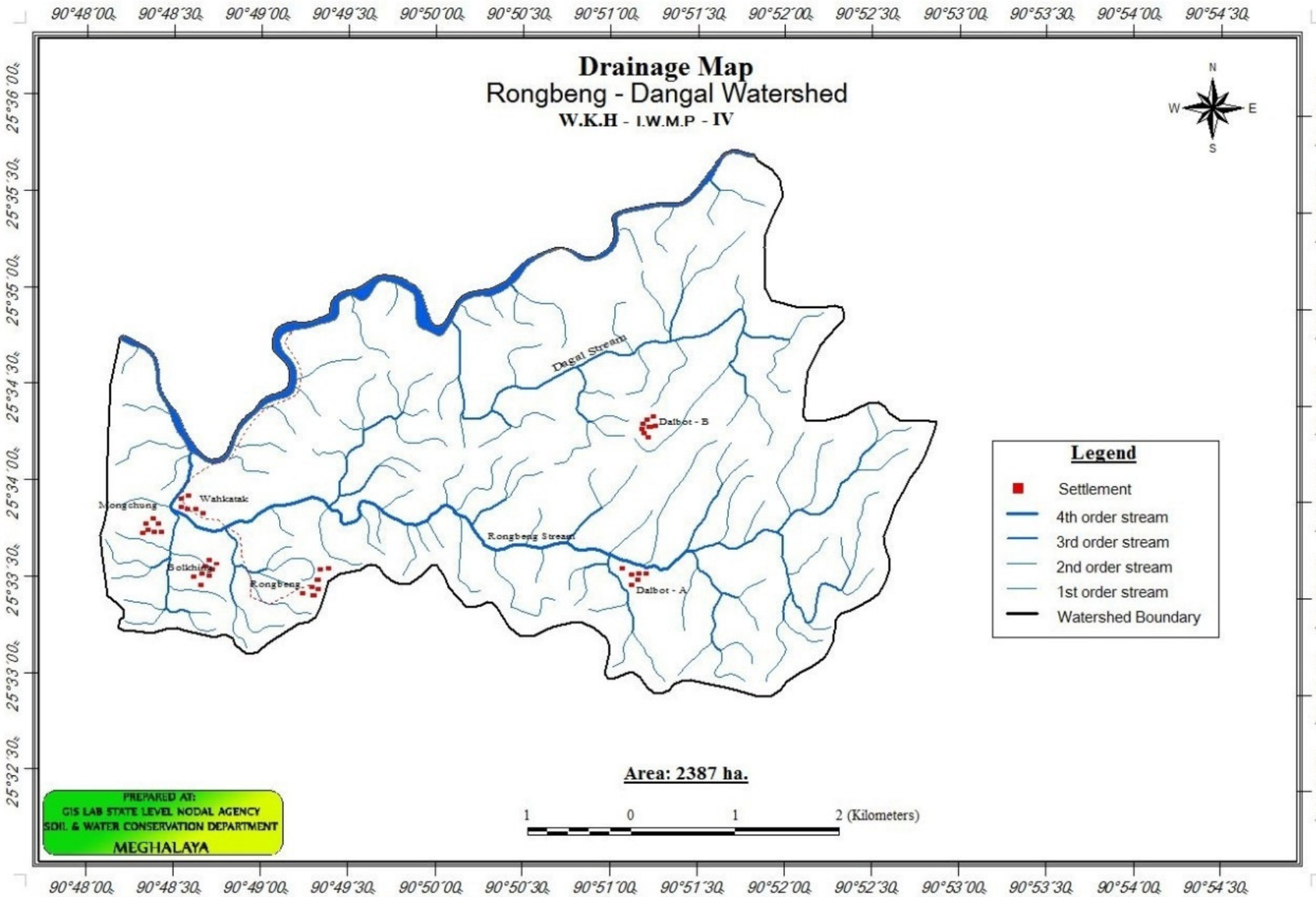
Grand Total = Rs. 1,98,333.08.

Say = Rs. 1,98,300.00.

(Rupees One lakhs ninety eight thousand three hundred) only.


Location Map
Meghalaya
Ri-Bhoi
East Garo Hills
West Garo Hills
East Khasi Hills
Jaintia hills
South Garo Hills
West Khasi Hills District
Mairang
Mawshynrut
Nongstoin
Mawthadraishan
Mawkyrwat
Ranikor
Rongbeng-Dangel Watershed

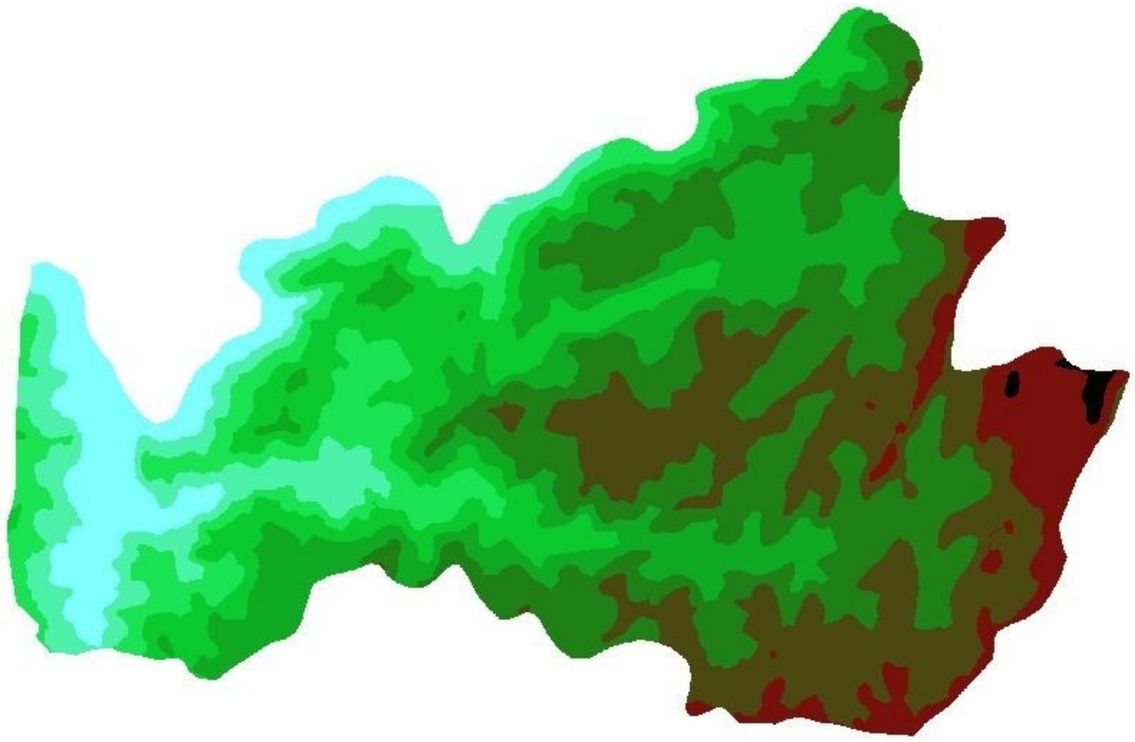

Agro-Climatic Map
Rongbeng - Dagal Watershed
W.K.H- I.W.M.P - IV
N
W
E
S
Legend
Mild, Moisture (Md, M)
Area: 2387 ha.
1 0 1 2 (Kilometers)
PREPARED AT:
GIS LAB STATE LEVEL NODAL AGENCY
SOIL & WATER CONSERVATION DEPARTMENT
MEGHALAYA
90°48´00
90°48´30
90°49´00
90°49´30
90°50´00
90°50´30
90°51´00
90°51´30
90°52´00
90°52´30
90°53´00
90°53´30
90°54´00
90°54´30
25°36´00
25°35´30
25°35´00
25°34´30
25°34´00
25°33´30
25°33´00
25°32´30


Drainage Map
Rongbeng - Dangal Watershed
W.K.H - I.W.M.P - IV
N
W
E
S
Dangal Stream
Dalbot - B
Wahkatak
Mongchung
Rongbeng Stream
Bolkhing
Rongbeng
Dalbot - A
Legend
Settlement
4th order stream
3rd order stream
2nd order stream
1st order stream
Watershed Boundary
Area: 2387 ha.
1 0 1 2 (Kilometers)
PREPARED AT:
GIS LAB STATE LEVEL NODAL AGENCY
SOIL & WATER CONSERVATION DEPARTMENT
MEGHALAYA
90°48´00
90°48´30
90°49´00
90°49´30
90°50´00
90°50´30
90°51´00
90°51´30
90°52´00
90°52´30
90°53´00
90°53´30
90°54´00
90°54´30
25°36´00
25°35´30
25°35´00
25°34´30
25°34´00
25°33´30
25°33´00
25°32´30

Elevation Map

Rongbeng - Dangel Watershed

W.K.H - I.W.M.P - IV



Legend

Elevation in Metres

- 379
- 379 - 419
- 419 - 459
- 459 - 499
- 499 - 539
- 539 - 579
- 579 - 619
- 619 - 659
- 659 - 700
- 700

Area: 2387 ha.

1 0 1 2 (Kilometers)

PREPARED AT:
GIS LAB STATE LEVEL NODAL AGENCY
SOIL & WATER CONSERVATION DEPARTMENT
MEGHALAYA

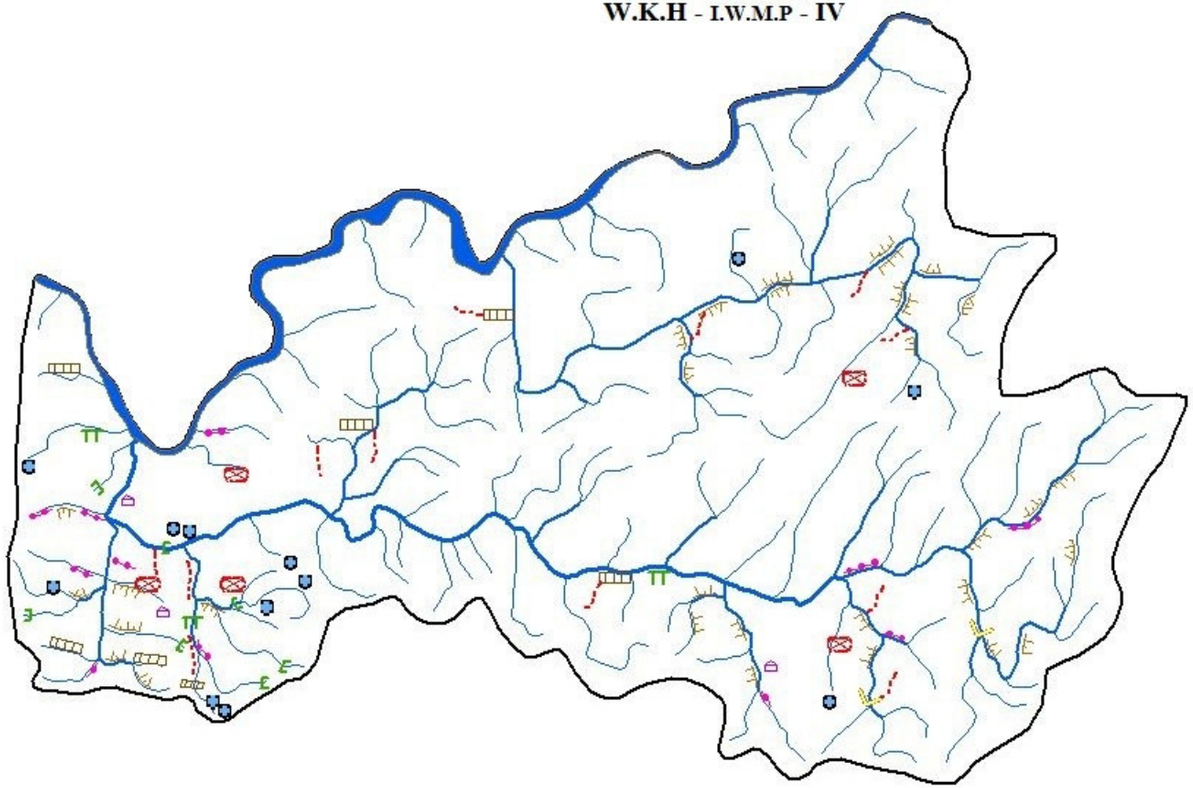
90°48´00 90°48´30 90°49´00 90°49´30 90°50´00 90°50´30 90°51´00 90°51´30 90°52´00 90°52´30 90°53´00 90°53´30 90°54´00 90°54´30

25°36´00 25°35´30 25°35´00 25°34´30 25°34´00 25°33´30 25°33´00 25°32´30

Proposed Engineering Map

Rongbeng - Dangal Watershed

W.K.H - I.W.M.P - IV



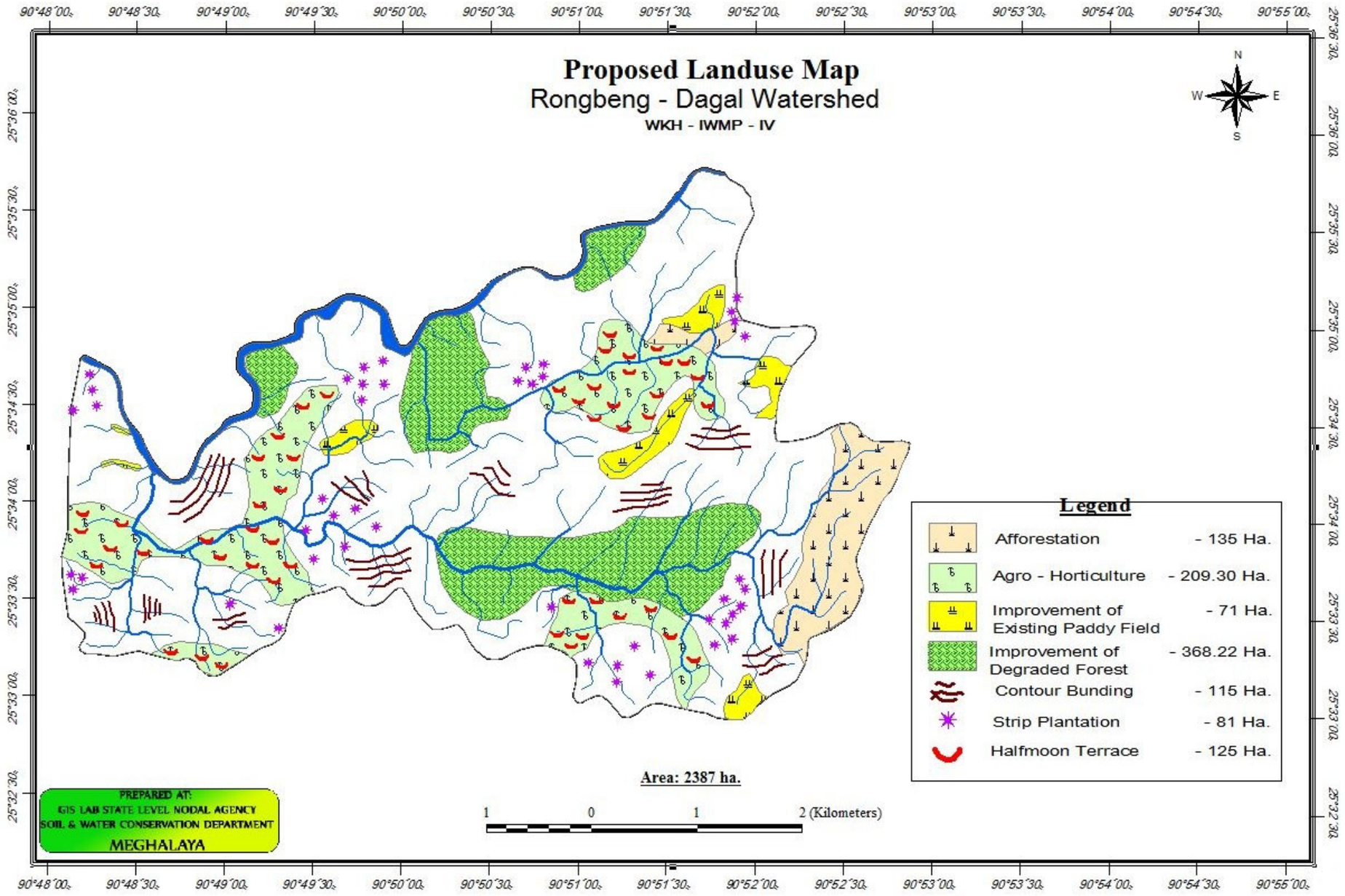
Legend

- Watershed Boundary
- Check Dam
- Diversion Dam
- Footh Brigde
- IEC Building
- Dug out pond
- Water Harvesting Structure
- Head water dam
- Diversion Channel
- Retaining Wall
- Lead Channel

Area: 2387 ha.

1 0 1 2 (Kilometers)

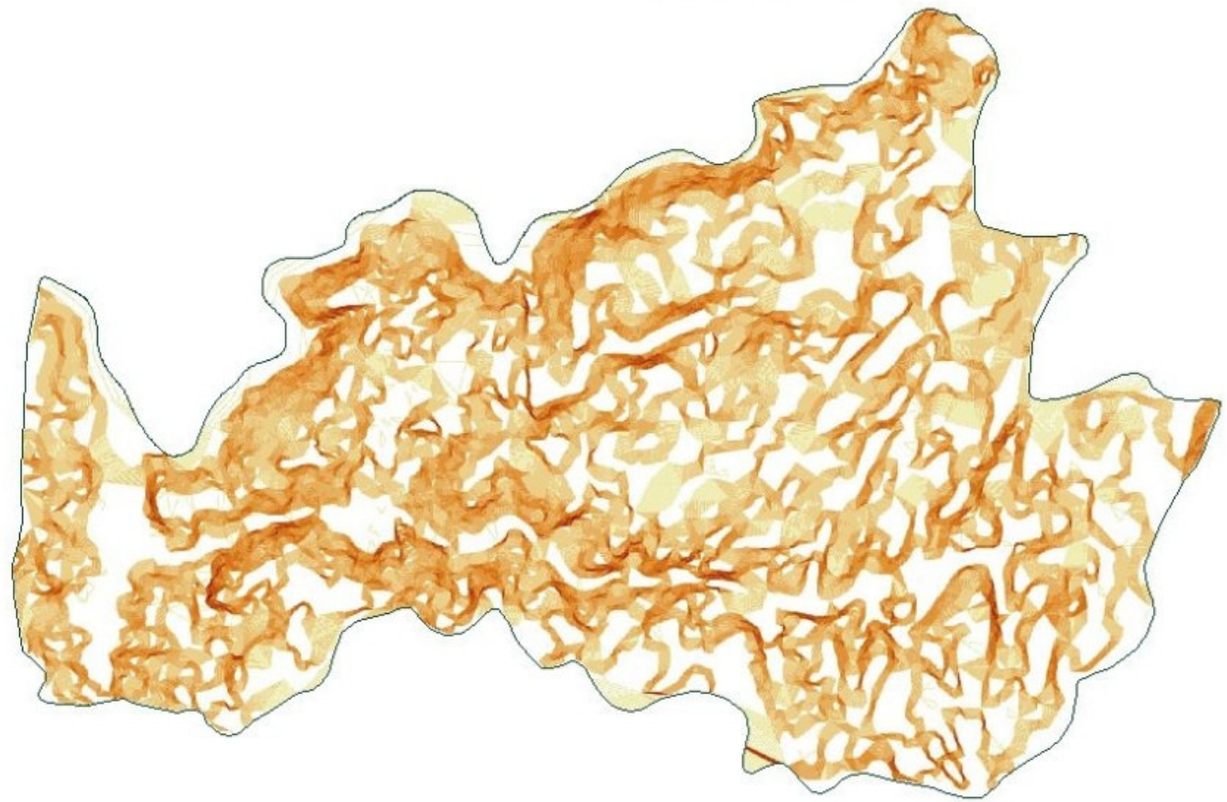
PREPARED AT:
GIS LAB STATE LEVEL NODAL AGENCY
SOIL & WATER CONSERVATION DEPARTMENT
MEGHALAYA


Proposed Landuse Map
Rongbeng - Dagal Watershed
WKH - IWMP - IV
N
W
E
S
Legend
Afforestation - 135 Ha.
Agro - Horticulture - 209.30 Ha.
Improvement of Existing Paddy Field - 71 Ha.
Improvement of Degraded Forest - 368.22 Ha.
Contour Bunding - 115 Ha.
Strip Plantation - 81 Ha.
Halfmoon Terrace - 125 Ha.
Area: 2387 ha.
1 0 1 2 (Kilometers)
PREPARED AT:
GIS LAB STATE LEVEL NODAL AGENCY
SOIL & WATER CONSERVATION DEPARTMENT
MEGHALAYA
90°48´00"
90°48´30"
90°49´00"
90°49´30"
90°50´00"
90°50´30"
90°51´00"
90°51´30"
90°52´00"
90°52´30"
90°53´00"
90°53´30"
90°54´00"
90°54´30"
90°55´00"
25°36´30"
25°36´00"
25°35´30"
25°35´00"
25°34´30"
25°34´00"
25°33´30"
25°33´00"
25°32´30"

Slope Map

Rongbeng - Dagal Watershed

W.K.H- I.W.M.P - IV



Legend

Slope in Percentage

- 0 - 7
- 7 - 14
- 14 - 21
- 21 - 28
- 28 - 35
- 35 - 42
- 42 - 49
- 49 - 56
- 56 - 63
- 63 - 70

N

W E

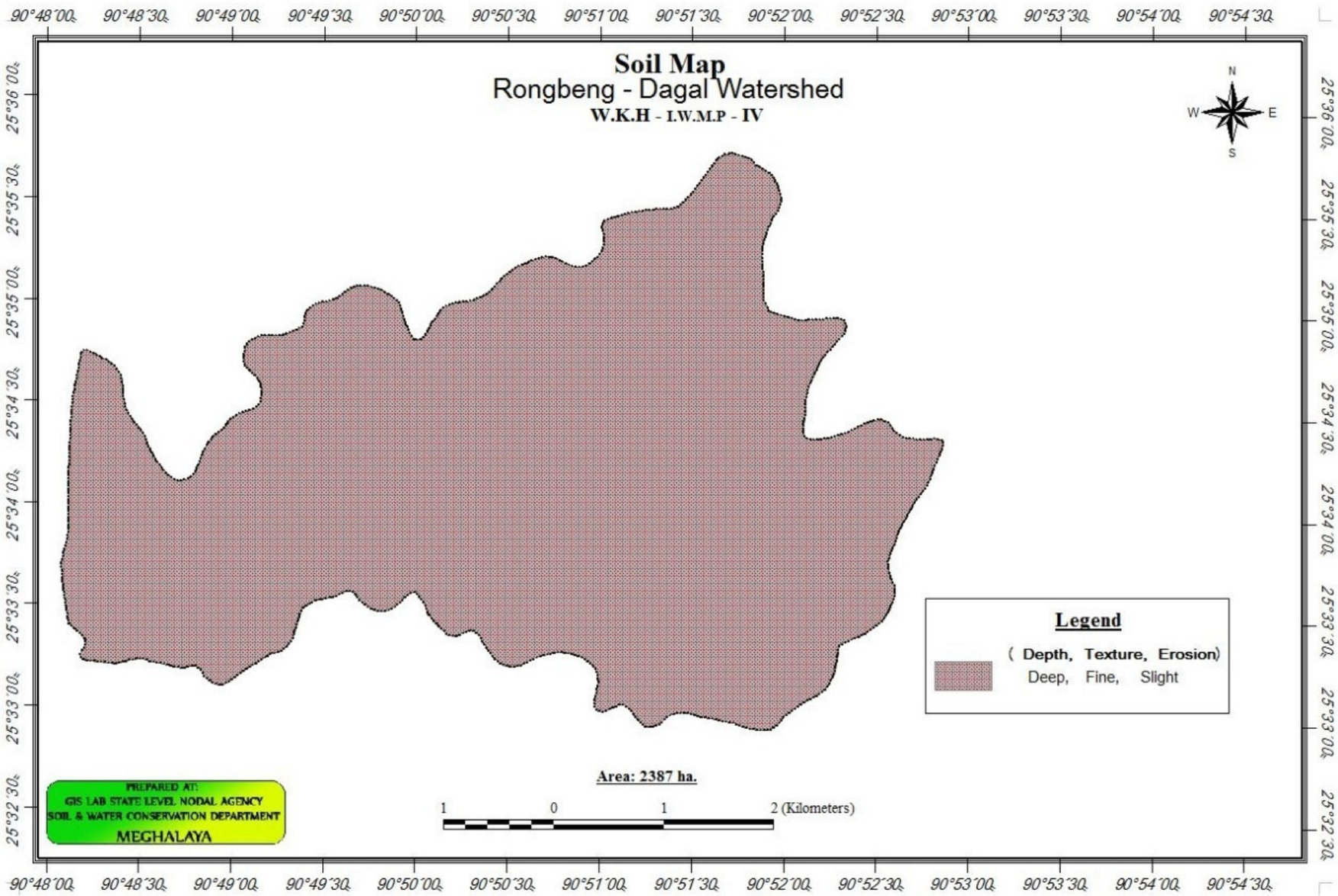
S

1 0 1 2 (Kilometers)

PREPARED AT:
GIS LAB STATE LEVEL NODAL AGENCY
SOIL & WATER CONSERVATION DEPARTMENT
MEGHALAYA

90°48'00" 90°48'30" 90°49'00" 90°49'30" 90°50'00" 90°50'30" 90°51'00" 90°51'30" 90°52'00" 90°52'30" 90°53'00" 90°53'30" 90°54'00" 90°54'30"

25°36'00" 25°35'30" 25°35'00" 25°34'30" 25°34'00" 25°33'30" 25°33'00" 25°32'30"


Soil Map
Rongbeng - Dagal Watershed
W.K.H - I.W.M.P - IV
N
W
E
S
90°48´00
90°48´30
90°49´00
90°49´30
90°50´00
90°50´30
90°51´00
90°51´30
90°52´00
90°52´30
90°53´00
90°53´30
90°54´00
90°54´30
25°36´00
25°35´30
25°35´00
25°34´30
25°34´00
25°33´30
25°33´00
25°32´30
Legend
(Depth, Texture, Erosion)
Deep, Fine, Slight
Area: 2387 ha.
1 0 1 2 (Kilometers)
PREPARED AT:
GIS LAB STATE LEVEL NODAL AGENCY
SOIL & WATER CONSERVATION DEPARTMENT
MEGHALAYA