E. PROJECT COST ESTIMATE

E. PROJECT COST ESTIMATE

E-1 MASTER PLAN STUDY

LIST OF TABLES

Table E.1	Standard Cost of Long-term Program for Char Area	E-1
Table E.2	Standard Cost of Long-term Program for Haor Area	E-2

Table E.1 Standard Cost of Long-term Program for Char Area

Long-term Development Programs	Unit	Cost (Tk.)	Remarks
Sector-wise Programs			
1. Protection of Human Lives			
1-1 Flood Proofing Program			
1-1-1 Raising Plinth of Homestead Area	m3	50	Earth work only
1-1-2 Clustering Houses on High Platforms	nos	2,000,000	for 20 H/H, incl. homestead raising, hand tubewell, community
			latrine,etc.
1-2 Sheltering System Program			
1-2-1 Constructing Multi-purpose Flood Shelter	nos	11,000,000	Area 3,000 sq.m for people and cattles, incl. 2 shelter
			buildings, tubewell, community latrine clinic,etc.
1-2-2 Establishing Effective Flood Warning System	boat	200,000	One Engine boats for 200 refugees
1-2-3 Propagation of Flood Preparedness Awareness	gram		for flood preparedness Training cost of Gram by NGO
2. Living Environment Improvement			
2-1 Primary Health Care Promotion Program			
2-1-1 Enhancing Education of Nutrition and Health Care	gram	50,000	Nutrition and health care training to one Gram
2-1-2 Constructing Hand Tube-wells and Community Latrines			
1) Provision of Hand Tube-well	nos	4,500	for one raised hand tubewell
2) Provision of Sanitary Latrine	nos	55,000	for one community sanitary latrines
2-1-3 Providing Health Training	gram	25,000	Health Training to Village Doctor and Workers to one Gram
2-2 Rural Electrification Expansion Program		1 (00 000	
2-2-1 Extending Electricity Line	km	1,600,000	for electricity line including substations/10 km
3. Livelihood Development (Objective 3)			
3-1 Communication Activation Program			
3-1-1 Strengthening Rural Road Network		1 000 000	
1) Paving FC embankment	km		RCC pavement on existing embankment
2) Constructing submersible road	km	3,600,000	Embankment and RCC pavement with tree plantation
3-1-2 Constructing Pontoon Transport and Submersible Bridges		1 000 000	
1) Pontoon Transport	nos		one set of steel floating pontoon
2) Submersible Bridge	nos	500,000	25m length of submersible bridge with brick pier and RCC slat
3-1-3 Improving Pontoon Launch Ghats	nos	10,000,000	steel floating pontoon ghat
3-1-4 Provision of Tele/ radio Communication Netwok	1105	10,000,000	steel hoating pointoon gnat
1) Tele-communication	km	300.000	Cost of Telephone line extention
2) Radio-communication	km		Cost of wireless radio
3-2 Appropriate Farming Technologies Intriduction Program	nos	500,000	Cost of wheless faulo
3-2-1 Introducing Appropriate Farming Technologies			
1) Introducing to cultivate non-rice crops	gram	75.000	for Training cost to one Gram by DAE, UAO
2) Improving provision of crop seeds and other inputs	union		Cost of Seeds, fertilizer and other inputs supply to Union
2) imploying provision of crop seeds and other inputs	union	250,000	parishad
3-2-2 Providing Drying Yard with Parboilong Plant	nos	5,000,000	Area 1,500 sq.m of RCC pavement incl. Parboiling, milling
5-2-2 Troviding Drying Tard with Tarbonong Than	1105	5,000,000	plants and storage
3-3 Community Based Fishery Development and Management Pro	ram		planto and otorago
3-3-1 Introducing Fish Farm Tecnology	union	100.000	for Training cost to one Gram by DOF, UFO
3-3-3 Developing Pilot Fish Farm	farm		Earth digging and soil cement Cost for one fish pond of area
•••••••••••••••••••••		_, ,	3,750 sq.m
3-4 Growth Center Construction Program			
3-4-1 Constructing Growth Center	G.C.	5,108,658	Area 2,000 sq.m of Growth center incl. Meat, fish, vegetable
C			shed and women's corner, hand tubewel, community latrines,
			etc.
3-4-2 Strengthening Low Income Women's Groups	G.C.	50,000	Credit for starting women's group activity in one Growth center
•			
3-5 Skill Traning Program			
3-5-1 Provision of Skill Training Program	person		Education and skill training cost to one person
3-5-2 Provision of Credit for Starting Business	person	30,000	Credit for starting business to one person
8-6 Primary Education Strengthening Program			
3-6-1 Reorganizing School Committees	person	1,000	Cost of School lunch to one student for one year
Provision of School Lunch			
Monitoring Absentee School Children			
3-6-2 Rehabilitation of School Facilities	nos	1,300,000	50% of one scholl construction cost incl. Building, hand
			tubewell, community latrines
4. Capacity Building (Objective 4)			
4-1 Social Mobilization and Institutional Building Program			
4-1-1 Organizing Villigers	gram		Implementation cost of PLA in one Gram
4-1-2 Establishment of Bottom-up Planning System from Village	Level to	Upazila	

Table E.2 Standard Cost of Long-term Program for Haor Area

Long-term Development Programs	Unit	Cost (Tk.)	Remarks
1. Protection of Human Lives			
1-1 Flood Proofing Program			
1-1-1 Raising Plinth of Village Mounds with Protection			
1) Earth-only protection with vegetation	mound	110,000	Cost for one mound of 250 m length with vegetation
2) Retaining wall of the erosion-affected village mound			Cost for one mound of 250 m length with vegetation
2) Retaining wall of the erosion-affected village mound	mound	5,000,000	
	1	(000 000	wall
1-1-2b Expanding Area of Village Mounds	mound	6,900,000	One mound of 250 m length and 3m height of brick
			retaining wall with hand tubewell, latirne, etc.
1-1-3b Protection Measures against Wave Action			
1) Establishing a vegetative protection by Hijal and Koroch	mound	750,000	Cost for one mound of 250 m length with wave protection
			by Hijal and/or Koroch
2) Provision RCC retaining wall	mound	2,500,000	Cost for one mound of 250 m length with RCC retaining
ý		, ,	wall
1-2 Sheltering System Program			
1-2-1 Constructing Multi-purpose Flood Shelter	nos	11 000 000	Area 3,000 sq.m for people and cattles, incl. 2 shelter
1-2-1 Constructing Multi-purpose 1 lood Sherter	1105	11,000,000	buildings, tubewell, community latrine clinic,etc.
1.2.2 Establishing Effective Election Contains		500.000	
1-2-2 Establishing Effective Flood Warning System	gram		One Engine boats for 200 refugees and wireless radio
1-2-3 Propagation of Flood Preparedness Awareness	gram	40,000	for flood preparedness Training cost of Gram by NGO
2. Living Environment Improvement			
2-1 Primary Health Care Promotion Program			
2-1-1 Enhancing Education of Nutrition & Health Care	gram	50,000	Nutrition and health care training to one Gram
2-1-2 Constructing Hand Tube-wells and Community Latrines	Ī	, , ,	Ĭ
1) Provision of Hand Tube-well	nos	4,500	for one raised hand tubewell
2) Provision of Sanitary Latrine	nos		for one community sanitary latrines
2-1-3 Provision of Santary Earthe			Health Training to Village Doctor & Workers to one Gram
2-1-3 Providing realth Training	gram	25,000	realth framing to vinage Doctor & workers to one Gram
2-2 Rural Electrification Expansion Program			
2-2-1 Extending Electricity Line	km	1,600,000	for electricity line including substations/10 km
3. Livelihood Development (Objective 3)			
3-1 Communication Activation Program			
3-1-1 Strengthening Rural Road Network			
1) Paving flood control embankment	km	1.900.000	RCC pavement on existing embankment
2) Constructing submersible road	km		Embankment and RCC pavement with tree plantation
3-1-2 Constructing Pontoon Transport and Submersible Bridges	KIII	3,000,000	Embankment and RCC pavement with tree plantation
		1 000 000	
1) Pontoon Transport	nos		one set of steel floating pontoon
2) Submersible Bridge	nos	500,000	25m length of submersible bridge with brick pier and RCC
			slab
3-1-3 Improving Pontoon Launch Ghats	nos	10,000,000	steel floating pontoon ghat
3-1-4 Provision of Tele/ radio Communication Netwok			
1) Tele-communication	km	300,000	Cost of Telephone line extention
2) Radio-communication	nos	300,000	Cost of wireless radio
3-2 Appropriate Farming Technologies Intriduction Program		,	
3-2-1 Introducing Appropriate Farming Technologies			
1) Introducing to cultivate non-rice crops	arom	75 000	for Training cost to one Gram by DAE UAO
	gram		for Training cost to one Gram by DAE, UAO
2) Improving provision of crop seeds and other inputs	union	250,000	Cost of Seeds, fertilizer and other inputs supply to UP
3-2-2 Constructing Submersible Embankment	km	2,500,000	Earthern submersible enbankment with regulating gate
3-3 Community Based Fishery Development and Management Pro	ſ		
3-3-1 Introducing Fish Farm Tecnology	union	100,000	for Training cost to one Gram by DOF, UFO
3-3-2 Developing Pilot Fish Farm	farm	2,500,000	Earth digging and soil cement Cost for one fish pond of area
1 0		, ,	3,750 sq.m
3-4 Growth Center Construction Program			- y
8	GC	5,200,000	Area 2 000 sq m of Growth contar incl. montrest shad 1
3-4-1 Constructing Growth Center	G.C.	3,200,000	Area 2,000 sq.m of Growth center incl. market shed and
			women's corner, tubewel, community latrines, etc.
3-4-2 Strengthening Low Income Women's Groups	G.C.	50,000	Credit for starting women's group activity in one Growth
			center
3-5 Skill Traning Program			
3-5-1 Provision of Skill Training Program	person	4,000	Education and skill training cost to one person
3-5-2 Provision of Credit for Starting Business	person		Credit for starting business to one person
3-6 Primary Education Strengthening Program	per3011	10,000	creation summing business to one person
		1 000	Cost of School lunch to any states to
3-6-1 Reorganizing School Committees/Provision of School	person	1,000	Cost of School lunch to one student for one year
Lunch/Monitoring Absentee School Children			
3-6-2 Rehabilitation of School Facilities	nos	1,300,000	50% of one scholl construction cost incl. Building, hand
			tubewell, community latrines
4. Capacity Building			
4-1 Social Mobilization and Institutional Building Program			
4-1-1 Organizing Villigers	gram	300.000	Implementation cost of PLA in one Gram
	-		
4-1-2 Establishment of Bottom-up Planning System from Village			

E. PROJECT COST ESTIMATE

E-2 FEASIBILITY STUDY

LIST OF TABLES

Table E.3	Summary of Project Cost for Algar Char and Gurai Gram	E-3
Table E.4	Summary of Project Cost for Algar Char in Para Wise	E - 4
Table E.5	Summary of Project Cost for Gurai Gram in Para Wise	E-5
Table E.6	Direct Construction Cost of Algar Char Gram in Para Wise	E-6
Table E.7	Direct Construction Cost of Gurai Gram in Para Wise (1/2)	E - 7
Table E.7	Direct Construction Cost of Gurai Gram in Para Wise (2/2)	E-8
Table E.8	Construction Cost Breakdown (1/5)	E -9
Table E.8	Construction Cost Breakdown (2/5)	E-10
Table E.8	Construction Cost Breakdown (3/5)	E-11
Table E.8	Construction Cost Breakdown (4/5)	E-12
Table E.8	Construction Cost Breakdown (5/5)	E-13
Table E.9	Unit Construction Cost	E-14
Table E.10	Summary of Annual Maintenance Cost for Algar Char and Gurai Gram	E-15
Table E.11	Annual Maintenance Cost of Algar Char Gram	E-16
Table E.12	Annual Maintenance Cost of Gurai Gram	E - 17
Table E.13	Unit Maintenance Cost for Algar Char Gram	E-18
Table E.14	Unit Maintenance Cost for Gurai Gram	E-19

l. Algar Char Gram		Unit: Taka	
Description		Amount	Remarks
A. Direct Cost			
L Flood Proofing and Im	provement of Living Environment		
I-1 Sheltering place by	raising school groud	816,575	A=4,500 sq.m
I-2 Approach road to s	sheltering place	484,492	L=503 m
I-3 Homestaed raising		934,995	61 H/H
I-4 Raised hand tubev	vell	8,170	(1+5) nos.
I-5 Flood warning and	evacuation	20,000	
Sub-total (I)		2,264,232	
II. Support Services for L	ivelihood Development		
II-1 Home gardening p	romotion with nurtition education	20,000	
II-2 Poultry promotion		20,000	
II-3 Skill training on ha	and weaving	14,000	
II-4 Mulberry plantation	n and cocoon production	20,000	
Sub-total (II)	74,000	
Direct Cost Total (A)		2,338,232	
3. Land Acquisition		362,923	A=10,674 sq.m
C. Indirect Cost			
I. Administrative cost	(5.0%) of Direct cost	116,912	
II. Engineering fee	(8.0%) of Direct cost	187,059	
Total (I+II)		303,970	
D. Physical Contingency	(10.0%) of Direct cost	233,823	
E. Price Contingency	(5.0%) of above total	161,947	
Ground Total (A+B+C	C+D+E)	3,400,895	

Table E.3 Summary of Project Cost for Algar Char and Gurai Gram

2. Gurai Gram

2. Gurai Gram		Unit: Taka		
Description	1	Amount	Remarks	
A. Direct Cost				
I. Flood Proo	fing and Imp	rovement of Living Environment		
I-1 Mour	nd protection		11,482,897	L=1,756 m
I-2 Raise	d hand tubewe	11	176,548	(19+27) nos.
I-3 Train	ing on Flood v	arning and evacuation	20,000	
Sub-	total (I)		11,679,445	
II. Support S	ervices for Li	velihood Development		
II-1 Poult	ry promotion		22,000	
II-2 Home	e gardening pr	omotion with nurtition education	20,000	
II-3 Nurse	ery developme	nt for social forestry	14,000	
II-4 Techi	nical training c	n fish culture utilizing borrow pit	14,000	
II-5 Train	ing on entrepr	eneurship & business management for a parboi	26,000	
Sub-	total (II)		96,000	
Direct Cost	Total (A)		11,775,445	
B. Land acquisitio	n		662,300	A=8,950 sq.m
C. Indirect Cost				
I. Administra	tive cost	(5.0%) of Direct cost	588,772	
II. Engineerin	g fee	(8.0%) of Direct cost	942,036	
Tota	(I+II)	1,530,808		
D. Physical conting	gency	(10.0%) of Direct cost	1,177,545	
E. Price contingen	cy	(5.0%) of above total	757,305	
Ground Tot	tal (A+B+C+	-D+E)	15,903,402	

Table E.4 Summary of Project Cost for Algar Char Gram in Para Wise

Description	Amount	Remarks
Direct Cost		
1. Common		
I. Flood Proofing and Improvement of Living Environment		
I-1 Sheltering place by raising school groud	816,575	A=4,500 sq.m
I-2 Approach road to sheltering place	484,492	L=503 m
I-3 Flood warning and evacuation	20,000	
Sub-total (I)	1,321,067	
II. Support Services for Livelihood Development	, ,	
II-1 Home gardening promotion with nurtition education	20,000	
II-2 Poultry promotion	20,000	
II-3 Skill training on hand weaving	14,000	
II-4 Mulberry plantation and cocoon production	20,000	
	7 4,000	
Sub-total (II)		
1. Common Direct cost (I+II) III. Land Acquisition for sheltering place and road	<u>1,395,067</u> 212,048	A=6,237 sq.m
111. Land Acquisition for sneuening place and road	414,040	A Upt roquin
2. Mokbul bapari Para		
I. Flood Proofing and Improvement of Living Environment		
I-1 Homestaed raising	150,126	11 H/H
I-2 Raised hand tubewell	0	
2. Mokbul bapari Para Direct cost (1)	150,126	
II. Land Acquisition for homestead raising	24,225	A=713 sq.m
II. Datu Acquistion for noncoscal faising		II / 10 Squitt
4. Aklas member/ Samad fokir Para		
I. Flood Proofing and Improvement of Living Environment		
I-1 Homestaed raising	342,392	22 H/H
I-2 Raised hand tubewell	0	
4. Aklas member/ Samad fokir Para Direct cost (I)	342,392	
II. Land Acquisition for homestead raising	55,250	A=1,625 sq.m
PAT LINELY I BET MENTANDE FOIL HOUSE AND IN INCOME		,
5. Joynal member/ Hassan Khalifa Para		
÷		
I. Flood Proofing and Improvement of Living Environment	117 176	28 H/H
I-1 Homestaed raising	442,476	20 11/11
I-2 Raised hand tubewell	0	
5. Joynal member/ Hassan Khalifa Para Direct cost (I)	442,476	A=7 100 a=
II. Land Acquisition for homestead raising	71,400	A=2,100 sq.m
(Zalil demoni Dana		
6. Zolil dewani Para		
I. Flood Proofing and Improvement of Living Environment	^	
I-1 Homestaed raising	0	(0 - 2)
I-2 Raised hand tubewell	2,622	(0+3) nos.
6. Zolil dewani Para Direct cost (I)	2,622	
II. Land Acquisition for homestead raising	0	
7. Maher munshi Para		
I. Flood Proofing and Improvement of Living Environment	•	
I-1 Homestaed raising	0	(1.)
I-2 Raised hand tubewell	5,548	(1+2) nos.
7. Maher munshi Para Direct cost (I)	5,548	
II. Land Acquisition for homestead raising	0	
	A 444 A44	
Direct Cost Total (A)	2,338,232	
		
. Land Acquisition	362,923	
. Indirect Cost		
I. Administrative cost (5.0%) of Direct cost	116,912	
II. Engineering fee (8.0%) of Direct cost	187,059	
Total (I+II)	303,970	
). Physical Contingency (10.0%) of Direct cost	233,823	
C. Price Contingency (5.0%) of above total	161,947	
Ground Total (A+B+C+D+E)	3,400,895	

Table E.5 Summary of Project Cost for Gurai Gram in Para Wise

Description	Unit: Taka Amount	Remarks
Hrect Cost		
Common		
L Flood Proofing and Improvement of Living Environment	20,000	
I-1 Training on flood warning and evacuation II. Support Services for Livelihood Development	20,000	
II-1 Poultry promotion	22,000	
II-2 Home gardening promotion with nurtition education	20,000	
II-3 Nursery development for social forestry	14,000	
II-4 Technical training on fish culture utilizing borrow pit	14,000	
II-5 Training on entrepreneurship & business management for a parboiling plant operation	26,000	
Sub-total (II) Common Direct Cost (I+II)	96,000 116,000	
III. Land acquisition for parboiling and fish ponds	110,000	
Chila Para I. Flood Proofing and Improvement of Living Environment		
I-1 Mound protection	720 328	L=115 m
I-2 Raised hand tubewell	-	(1+0) nos.
1. Chila Para Direct cost (I)	728,378	(
II. Land acquisition for homestead raising	29,600	A=400 sq.m
Bania Para		
I. Flood Proofing and Improvement of Living Environment		
I-1 Mound protection	1,421,931	L=230 m
I-2 Raised hand tubewell	,	(4+2) nos.
2. Bania Para Direct cost (I)	1,455,879	1-600
II. Land acquisition for homestead raising	51,060	A=690 sq.m
Uttar Para		
I. Flood Proofing and Improvement of Living Environment	1 0/0 = / -	1-205
I-1 Mound protection I-2 Raised hand tubewell	1,863,754	L=307 m
4. Uttar Para Direct cost (I)	1,863,754	
II. Land acquisition for homestead raising	· · · · · · · · · · · · · · · · · · ·	A=720 sq.m
Fakir Para I. Flood Proofing and Improvement of Living Environment		
I-1 Mound protection	995,993	L=154 m
I-2 Raised hand tubewell	,	(0+1) nos.
5. Fakir Para Direct cost (I)	996,867	(, , , , , , , , , ,
II. Land acquisition for homestead raising	53,280	A=720 sq.m
Jal Para		
I. Flood Proofing and Improvement of Living Environment		
I-1 Mound protection	1,687,391	
I-2 Raised hand tubewell		(4+0) nos.
6. Jal Para Direct cost (I) II. Land acquisition for homestead raising	1,719,591	A=1,050 sq.m
		A 1,050 aq.itt
Kuna Para		
I. Flood Proofing and Improvement of Living Environment I-1 Mound protection	1,298,872	I = 202 m
I-2 Raised hand tubewell	, ,	(0+10) nos.
7. KunaPara Direct cost (I)	1,307,612	(0,10)100
II. Land acquisition for homestead raising		A=900 sq.m
Dakhin Para		
I. Flood Proofing and Improvement of Living Environment		
I-1 Mound protection	1,410,023	L=227 m
I-2 Raised hand tubewell	29,394	(3+6) nos.
10. Dakhin Para Direct cost (I)	1,439,417	
II. Land acquisition for homestead raising	53,280	A=720 sq.m
Purba Para		
I. Flood Proofing and Improvement of Living Environment		
I-1 Mound protection	2,084,605	
I-2 Raised hand tubewell		(7+8) nos.
11. Purba Para Direct cost (I+II+III+IV) II. Land acquisition for homestead raising	2,147,947	A=3,750 sq.m
		π−3,750 sq.m
Direct Cost Total (A)	11,775,445	
B. Land Acquisition	662,300	A=8,950 sq.m
C. Indirect Cost		-
I. Administrative cost (5.0%) of Direct cost	588,772	
II. Engineering fee (8.0%) of Direct cost	942,036	
Total (I+II+III)	1,530,808	
D Physical contingency (10.0%) of Direct cost		
D. Physical contingency(10.0%) of Direct costE. Price contingency(5.0%) of above total	1,177,545 757,305	

Table E.6 Direct Construction Cost of Algar Char Gram in Para Wise

Description	Unit	Qty.	Unit cost	Unit: Taka Amount	Remarks
. Common		X19.		2 and diff	A WALARA DAJ
I. Flood Proofing and Improvement of Living Environm	ient				
I-1 Sheltering place by raising school groud				816,575	
I-1-1 Raising ground	LS	1	803,465		A=4,500 sq.m
I-1-2 Hand tubewell	no	3	4,370	13,110	, ,
I-2 Approach road to sheltering place			.,	484,492	
I-2-1 Approach road	m	503	864	434,363	
I-2-2 Culvert	no	3	16,710	50,129	
I-3 Flood warning and evacuation			,	20,000	
I-3-1 2-way wireless system	set		(450,000)	-	covered by the FFWC Pilot Project
I-3-2 Engine boat	no		(200,000)		covered by UZ office
I-3-3 Training on Flood warning and evacuation	LS	1	20,000	20,000	2
Sub-total (I)				1,321,067	
II. Support Services for Livelihood Development					
II-1 Home gardening promotion with nurtition education	LS	1	20,000	20,000	
II-2 Poultry promotion	LS	1	20,000	20,000	
II-3 Skill training on hand weaving	LS	1	14,000	14,000	
II-4 Mulberry plantation and cocoon production	LS	1	20,000	20,000	
Sub-total (II)				74,000	
1.Common Direct cost Total(I+II)				1,395,067	
IV. Land Acquisition				212,048	
IV-1 Sheltering place by raising school groud	sq.m	4,275	34	145,350	
IV-2 Approach road to sheltering place	-	1,962	34	66,698	
. Mokbul bapari Para					
I. Flood Proofing and Improvement of Living Environm	nent				
I-1 Homestaed raising	cu.m	1,425	105	150,126	11 H/H
I-2 Raised hand tubewell				0	
I-4-1 New hand tubewell	no			0	
I-4-2 Raising only	no			0	
2. Mokbul bapari Para Direct cost Total(I)				150,126	
II. Land Acquisition for homestead raising	sq.m	713	34	24,225	
I-2 Raised hand tubewell I-4-1 New hand tubewell I-4-2 Raising only	no no			0 0 0	
4. Aklas member/ Samad fokir Para Direct cost Total(I)				342,392	
IV. Land Acquisition for homestead raising	sq.m	1,625	34	55,250	
. Joynal member/ Hassan Khalifa Para					
I. Flood Proofing and Improvement of Living Environm	rent				
I. FROM I FORMING and Improvement of Living Environment I-1 Homestaed raising		4,200	105	<u>44</u> 7 476	28 H/H
I-2 Raised hand tubewell	vu .111	7,200	102	444,470	20 IVII
I-4-1 New hand tubewell	no			0	
I-4-2 Raising only	no			0	
5. Joynal member/ Hassan Khalifa Para Direct cost Tota				442,476	
IV. Land Acquisition for homestead raising	sq.m	2,100	34	71,400	
. Zolil dewani Para					
I. Flood Proofing and Improvement of Living Environm	ıent				
I-1 Homestaed raising	cu.m	0	105	0	
I-2 Raised hand tubewell				2,622	
I-4-1 New hand tubewell	no	0	3,800	, 0	
I-4-2 Raising only	no	3	874	2,622	
6. Zolil dewani Para Direct cost Total(I)				2,622	
IV. Land Acquisition for homestead raising	sq.m	0	34	0	
	օգոս	U		0	
. Maher munshi Para					
I. Flood Proofing and Improvement of Living Environm	ient				
I-1 Homestaed raising	cu.m	0	105	0	
I-2 Raised hand tubewell		2		5,548	
I-4-1 New hand tubewell	no	1	3,800	3,800	
I-4-2 Raising only	no	2	874	1,748	
7. Maher munshi Para Direct cost Total(I)				5,548	
IV. Land Acquisition for homestead raising	sq.m	0	34	0	
· · · · · ·	અનુ.મા		J4	U	
ect Construction Total				2,338,232	

Table E.7 Direct Construction Cost of Gurai Gram in Para Wise

Description	Unit	Qty.	Unit Cost	Unit: Taka Amount	(1/ 2 Remarks
mmon					
I. Flood Proofing and Improvement of Living Environment	nt			0	
I-1 Training on flood warning and evacuation	LS	1	20,000	20,000	
II. Support Services for Livelihood Development					
II-1 Poultry promotion	LS	1	22,000	22,000	
II-2 Home gardening promotion with nurtition education	LS	1	20,000	20,000	
II-3 Nursery development for social forestry	LS	1	14,000	14,000	
II-4 Technical training on fish culture utilizing borrow pit	LS	1	14,000	14,000	
II-5 Training on entrepreneurship & business management f		1	26,000	26,000	
Sub-total (II)				96,000	
Common Direct cost (I+II)				116,000	
III. Land Acquisition				0	
1. Chila Para					
I. Flood Proofing and Improvement of Living Environme	nt				
I-1 Mound protection				720,328	
I-1-1 Retaining wall by Brick masonry	m	115	5,672	652,239	
I-1-2 Earth filling	cu.m	800	85	68,089	
I-2 Raised hand tubewell				8,050	
I-2-1 New hand tubewell	no	1	8,050	8,050	
I-2-2 Raising only	no	0	874	0	
1. Chila Para Direct cost (I)				728,378	
II. Land Acquisition for homestead raising	sq.m	400	74	29,600	
2. Bania Para					
I. Flood Proofing and Improvement of Living Environme	nt				
I-1 Mound protection				1,421,931	
I-1-1 Retaining wall by Brick masonry	m	230	5,672	1,304,477	
I-1-2 Earth filling	cu.m	1,380	85	117,454	
I-2 Raised hand tubewell		-		33,948	
I-2-1 New hand tubewell	no	4	8,050	32,200	
I-2-2 Raising only	no	2	874	1,748	
2. Bania Para Direct cost (I)	110		0/4	1,455,879	
II. Land Acquisition for homestead raising	sq.m	690	74	51,060	
4. Uttar Para	-			· · · ·	
L Flood Proofing and Improvement of Living Environme	nt				
I-1 Mound protection				1,863,754	
I-1-1 Retaining wall by Brick masonry	m	307	5,672	1,741,194	
I-1-2 Earth filling	cu.m	1,440	85	122,561	
I-2 Raised hand tubewell				0	
I-2-1 New hand tubewell	no	0	8,050	0	
I-2-2 Raising only	no	Ő	874	0	
4. Uttar Para Direct cost (I)			0/1	1,863,754	
IL Land Acquisition for homestead raising	sq.m	720	74	53,280	
5. Fakir Para L Flood Proofing and Improvement of Living Environme	nt				
I. Flood Proofing and Improvement of Living Environme	μL				
I-1 Mound protection				995,993	
I-1-1 Retaining wall by Brick masonry	m	154	5,672	873,433	
	cu.m	1,440	85	122,561	
I-1-2 Earth filling				874	
I-1-2 Earth filling I-2 Raised hand tubewell					
I-1-2 Earth filling I-2 Raised hand tubewell I-2-1 New hand tubewell	no	0	8,050	0	
I-1-2 Earth filling I-2 Raised hand tubewell I-2-1 New hand tubewell I-2-2 Raising only	no no	0 1	8,050 874		
I-1-2 Earth filling I-2 Raised hand tubewell I-2-1 New hand tubewell			, .	0	

(2/2)Unit Description Oty. Unit Cost Amount Remarks 6. Jal Para I. Flood Proofing and Improvement of Living Environment I-1 Mound protection 1,687,391 I-1-1 Retaining wall by Brick masonry 1,508,656 266 5.672 m I-1-2 Earth filling 178,734 2,100 85 cu.m 32.200 I-2 Raised hand tubewell I-2-1 New hand tubewell 4 8.050 32,200 no I-2-2 Raising only 0 874 0 no 1,719,591 6. Jal Para Direct cost (I) 1,050 74 II. Land Acquisition for homestead raising sq.m 77,700 7. Kuna Para I. Flood Proofing and Improvement of Living Environment I-1 Mound protection 1,298,872 I-1-1 Retaining wall by Brick masonry 202 5,672 m 1,145,671 I-1-2 Earth filling cu.m 1,800 85 153,201 I-2 Raised hand tubewell 8,740 I-2-1 New hand tubewell 8,050 no 0 0 8,740 I-2-2 Raising only 10 874 no 7. Kuna Para Direct cost (I) 1,307,612 **II. Land Acquisition** for homestead raising 900 74 66,600 sq.m 10. Dakhin Para L Flood Proofing and Improvement of Living Environment I-1 Mound protection 1,410,023 I-1-1 Retaining wall by Brick masonry 227 5,672 1,287,462 m I-1-2 Earth filling 122.561 cu.m 1.440 85 I-2 Raised hand tubewell 29,394 I-2-1 New hand tubewell 3 8,050 24,150 no I-2-2 Raising only 6 874 5,244 no 10. Dakhin Para Direct cost (I) 1,439,417 II. Land Acquisition for homestead raising 720 74 53,280 sq.m 11. Purba Para I. Flood Proofing and Improvement of Living Environment I-1 Mound protection 2,084,605 I-1-1 Retaining wall by Brick masonry 255 5,672 m 1,446,268 I-1-2 Earth filling 7,500 85 638,336 cu.m I-2 Raised hand tubewell 63,342 I-2-1 New hand tubewell 7 8,050 56,350 no I-2-2 Raising only 8 874 6,992 no 11. Purba Para Direct cost (I) 2,147,947 II. Land Acquisition for homestead raising sq.m 3,750 74 277,500 **Direct Construction Total** 11,775,445

Table E.7 Direct Construction Cost of Gurai Gram in Para Wise

1-1. Revetment by Brick Chips in Gabion with Vegetaition (H=2.8 m) (
Description	Unit	Quantity	Unit price	Amount	Remarks			
			(Tk.)	(Tk.)				
Excavation	cu.m	3.100	29	91				
Backfill	cu.m	4.800	56	268				
Brick gabion	sq.m	6.500	1,059	6,886	t=0.30 m			
Brick wall	cu.m	0.530	1,311	695	with masonry work			
Concrete 1:3:6	cu.m	0.054	728	39	incl.homework			
Flat brick	cu.m	0.054	978	53				
Filter sand	cu.m	0.600	237	142				
Geotextile	sq.m	7.100	124	878				
Anckor	set	3.000	71	213				
Top anchor	set	1.000	224	224				
Hijol/ Koroch vegetation	sq.m	3.000	230	690				
Total	-			10,180				

Table E.8 Construction Cost Breakdown (1/5)

1-2. Revetment by Brick Chips in Gabion with Vegetaition (H=2.0 m)								
Description	Unit	Quantity	Unit price	Amount	Remarks			
			(Tk.)	(Tk.)				
Excavation	cu.m	2.300	29	67	· · · · · · · · · · · · · · · · · · ·			
Backfill	cu.m	3.200	56	179				
Brick gabion	sq.m	5.000	1,059	5,297	t=0.30 m			
Brick wall	cu.m	0.530	1,311	695	with masonry work			
Concrete 1:3:6	cu.m	0.053	728	39	incl.homework			
Flat brick	cu.m	0.053	978	51				
Filter sand	cu.m	0.300	237	71				
Geotextile	sq.m	5,500	124	680				
Anckor	set	2.000	71	142				
Top anchor	set	1.000	224	224	Reinforced bar 1.5 kg			
Hijol/ Koroch vegetation	sq.m	3.000	230	690	÷			
Total	-			8,136				

2-1. Revetment by C		(per m)			
Description	Unit	Quantity	Unit price	Amount	Remarks
			(Tk.)	(Tk.)	•
Excavation	cu.m	1.100	29	32	
Backfill	cu.m	4.500	56	251	
Concrete block	sq.m	8.850	625	5,528	40x40x15cm
Geotextile	sq.m	9.900	124	1,224	100+7.5 labour charge
Filter sand	cu.m	0.890	237	211	t=10 cm
Brick wall	cu.m	0.060	1,311	79	with masonry work
Brick base	cu.m	0.120	978		t=15 cm
Total				7,442	

Table E.8 Construction Cost Breakdown (2/5)

2-2. Revetment by C		(per m)			
Description	Unit	Quantity	Unit price	Amount	Remarks
-			(Tk.)	(Tk.))
Excavation	cu.m	1.100	29	32	
Backfill	cu.m	2.760	56	154	
Concrete block	sq.m	6.300	625	3,935	40x40x15cm
Geotextile	sq.m	7.250	124	896	100+7.5 labour charge
Filter sand	cu.m	0.630	237	149	t=10 cm
Brick wall	cu.m	0.060	1,311	79	with masonry work
Brick base	cu.m	0.120	978		t=15 cm
Total				5,363	

3-1. Retaining Wall by RC	3.0 m)			(per m)	
Description	Unit	Quantity	Unit price	Amount	Remarks
			(Tk.)	(Tk.)	
Excavation	cu.m	4.600	29	135	
Backfill	cu.m	7.900	56	441	
R.C.C. 1:2:4(crushed stone)	cu.m	2.320	5,281	12,253	incl.reinforce, homewor
Filter sand	cu.m	0.160	237	38	
Brick base	cu.m	0.230	978	225	
Weep hole	unit	2.000	13	27	
Total				13,118	

3-2. Retaining Wall by RC	C (H=2	2.0 m)			(per 1.0 m)
Description	Unit	Quantity	Unit price	Amount	Remarks
		_	(Tk.)	(Tk.)	1
Excavation	cu.m	3,000	29	88	
Backfill	cu.m	4,400	56	246	
R.C.C. 1:2:4(crushed stone)	cu.m	1.380	5,281	7,288	incl.reinforce, homewor
Filter sand	cu.m	0.080	237	19	
Brick base	sq.m	2.600	978	2,542	
Weep hole	unit	1.000	13	13	
Total				10,196	

4-1. Retaining Wall by B	(per 3.0 m)				
Description	Unit	Quantity	Unit price	Amount	Remarks
			(Tk.)	(Tk.)	
Excavation	cu.m	10.710	29	314	
Backfill	cu.m	14.040	56	784	
Brick woks	cu.m	9.370	1,311	12,286	with masonry work
Concrete 1:3:6	cu.m	4.950	728	3,604	incl.homework
Weep hole	set	2.000	13	27	
Total (per 3.0 m length)				17,015	
Total (per meter)				5,672	

Table E.8	Construction	Cost	Breakdown	(3/5)
-----------	--------------	------	-----------	-------

Table E.8 Construction Co	St Die		,		
4-2. Retaining Wall by Brid					(per 3.0 m)
Description	Unit	Quantity	Unit price		Remarks
			(Tk.)	(Tk.)	
Excavation	cu.m	7.200	29	211	
Backfill	cu.m	7.130	56	398	·.1 1
Brick works	cu.m	5.860	1,311	/,684	with masonry works
Concrete 1:3:6	cu.m	1.800	728 13	1,311	incl.homework
Weep hole Total (2.0 m longth)	set	1.000	15	9,617	
Total (3.0 m length)				3,206	
Total per meter				5,200	
5-1. Wave Protection by R	CC W	all (H=4.0 m)	1		(per 3.0 m)
Description	Unit	Quantity	Unit price	Amount	Remarks
1			(Tk.)	(Tk.)	
Excavation	cu.m	6.300	29	185	
Backfill	cu.m	3,350	56	187	
R.C.C. 1:2:4(crushed stone)	cu.m	3.140	5,281	16,584	incl.reinforce, homewor
Total (3.0 m length)				16,955	
Total per meter				5,652	
5-2. Wave Protection by R					(per 3.0 m)
Description	Unit	Quantity	Unit price	Amount	Remarks
		- .	(Tk.)	(Tk.)	
Excavation	cu.m	5.700	29	167	
Backfill	cu.m	2.850	56	159	
R.C.C. 1:2:4(crushed stone)	cu.m	2.680	5,281		incl.reinforce, homewor
Total (3.0 m length)				14,480	
Total per meter				4,197	
6. Unit Cost of Brick Maso	nrv				
Description	Unit	Quantity	Unit price	Amount	Remarks
Detemption	Cint	Quantity	(Tk.)	(Tk.)	
Brick bats	cu.m	1,000	978		material
Brick works	cu.m	1.000	334	334	masonry work
Total				1,311	·····
7. Unit Cost of Brick Gabio	on Mat	tless			(per sq.m)
Description	Unit	Quantity	Unit price	Amount	Remarks
			(Tk.)		
Wire mesh	sq.m.		247		2.00 x 120%
Brick chips	cu.m.		1,093	328	
Settlement for brick gabion	L.S.	1.000	69	69	(Wire mesh)x10%
Total				1,059	
8. Unit Cost of Weep Hole					(per sq.m)
Description	Unit	Quantity	Unit price	Amount	Remarks
		L	(Tk.)		/
Bambou pipe	m	0.350	20	7	
Sand bag	lbag		4	4	
Plug sand	L.S.	0.012	206	2	
Total				13	
					· · · · ·
9. Unit Cost of Anchor		~~~~	A A A A	#7	(per set)
Concrete 1:3:6	cum	0.016	4,444	71	
10.Unit Cost of Eartfilling					(nor m)
Description	Unit	Quantity	Unit price	Amount	(per m) Remarks
Description	Out	Quality	(Tk.)		
Embankment	cu.m	1.000	<u> </u>	<u> </u>	
Excavation	cu.m	1.000	29	29	
Total		1.000	~/	85	
				~~~	

## Table E.8 Construction Cost Breakdown (4/5)

10. Approach road to S	School				(per m)
Description	Unit	Quantity	Unit price	Amount	Remarks
			(Tk.)	(Tk.)	
Brick pavement	sq.m	0.140	198	28	
Striping(excavation)	cu.m	1.500	29	44	
Embankment(backfill)	cu.m	7.800	56	435	
Plantation and turfing	sq.m	10.000	13	127	
Road side tree	m	1.000	230	230	
Total				864	
11. Culvert					(per no.)
Description	Unit	Quantity	Unit price	Amount	Remarks
			(Tk.)	(Tk.)	
Excavation		108.000	29	3,163	
Brick works		21.600	334	7,209	with masonry work
R.C.C. 1:2:4 (crushed st	tone)	1.200	5,281	6,338	incl.reinforced, homework
Back filling		0.000	56	0	incl.in road
Total				16,710	
12. Unit Cost of Brick	Pavement				(per m)
Description	Unit	Quantity	Unit price	Amount	Remarks
			(Tk.)	(Tk.)	
Brick chips	cu.m	0.055	1,093	60	t=0.05x1.0x110%
Brick chips works	sq.m	1.000	138	138	
Total	-			198	

#### 0 Approach road to School

13. Fish Pond				(per pond)	
Description	Unit	Quantity 1	Unit price	Amount Remarks	
			(Tk.)	(Tk.)	
Excavation	cu.m	6,160.000	29	180,429	
Plantation	sq.m	300.000	230	69,000	
Brick pavement	cu.m		1,230	0	
Soil cement	cu.m				
Total				249,429	

#### 14. Dry yard, Parboiling and Milling Plant (per plant) Amount Remarks Description Unit Quantity Unit price (Tk.) (Tk.)Excavation(Striping) 180,000 5,272 15x80x0.15m 29 cu.m Filter sand 237 14,228 15x80x0.05m cu.m 60.000 R.C.C. 1:2:4 (Brick chips) cu.m 4,444 533,307 15x80x0.10m 120.000 Milling, Store house, 140.000 805 112,700 10x7m x 2 house sq.m Parboiling house 40,250 10x7m x 1 house sq.m 70.000 575 Milling 138,000 138,000 no 1.000 Parboiling plant 92,000 92,000 set 1,000 8,050 Tubewell 16,100 2.000 no Total 951,857

#### Table E.8 Construction Cost Breakdown (5/5)

#### 15. Sheltering Place by School Raising

Description	Unit	Quantity 1	Unit price	Amount Remarks	
			(Tk.)	(Tk.)	
Embankment	cu.m	8,550.000	56	477,270	
Excavation	cu.m	8,550.000	29	250,434	
Plantation and turing	m	270.000	281	75,762	
Total				803,465	

16. Plantation and	l Turfing			(per m)	
Description	Unit	Quantity U	Unit price	Amount Remarks	
			(Tk.)	(Tk.)	
Plantation	sq.m	1.000	230	230	
Turfing	m	4.000	13	51	
Total				281	

#### 17. Homestead Raising

17. Homestead Raising				(per cu.m)	
Description	Unit	Quantity	Unit price	Amount Remarks	
-			(Tk.)	(Tk.)	
Embankment	cu.m	1.000	56	56	
Excavation	cu.m	1.000	29	29	
turing	m	0.400	51	20	
Total				105	

18. Training on Flood	l Warning a	(per H/H)			
Description	Unit	Quantity Unit price		Amount Remarks	
			(Tk.)	(Tk.)	
Food for Training	H/H	1.000	1,000	1,000	
Teacher				0	
Total				1,000	

· · ·			Unit cost	
Jnit	Unit cost	Remarks	in 2002	() <b>9</b> 1
	(Tk.)		(Tk.)	
no	70.0	per day	60.00	
no	86.3	per day	75,00	
no	160.0	per day	140.00	
no	140.0	per day	120.00	
cu.m	29.3		25,47	
cu.m	55.8		48.54	
cu.m	977.5		850.00	
u.m	1,092.5		950.00	
cu.m	333.7		290.20	
sq.m	137.8	for pavement	119.83	
sq.m	624.6	40x40x15cm	543.11	
u.m	5,281.4	incl.reinforce, homework	4,592.56	
u.m	4,444.2	incl.reinforce, homework	3,864.54	
u.m	728.1	incl.homework	633.17	
cu.m	237.1		206.21	
sq.m	123.6		107.50	
set	71.1		61.85	
set	224.3		195.00	
sq.m	247.1		214.85	
LS	69.0	(Wire mesh )x10%	60.00	
m	8.1	. ,	7.00	
bag	4.6		4.00	
LS	2.8		2.47	
sq.m	12.7		11.00	Tk.4+7(material+work)
sq.m	230,0		200.00	
no	1,150.0		1,000.00	
m	287.5		250.00	
no	4,370.0	incl.construction	3,800.00	based on questionnaire
no	874.0		·	1/5 of new construction
no	8,050.0	incl.construction	7,000.00	based on questionnaire
no	805.0		700.00	1
no	575.0		500.00	
set	92,000.0		80,000.00	
set	138,000.0		120,000.00	
set	450,000.0		,	
no	200,000.0			
sq.m	34.0			
sq.m	250.0			
sq.m	34.0			
sq.m	74.0			
H/H	1,000.0			
	no no no u.m u.m u.m u.m u.m u.m u.m u.m u.m u.m	no         70.0           no         86.3           no         160.0           no         140.0           u.m         29.3           u.m         55.8           u.m         977.5           u.m         1,092.5           u.m         333.7           q.m         137.8           q.m         624.6           u.m         5,281.4           u.m         5,281.4           u.m         237.1           q.m         123.6           set         71.1           set         224.3           q.m         247.1           LS         69.0           m         8.1           bag         4.6           LS         2.8           q.m         12.7           q.m         230.0           no         1,150.0           m         287.5           no         4,370.0           no         8,050.0           no         8,050.0           no         575.0           set         92,000.0           set         450,000.0           no	no $70.0$ per day           no $86.3$ per day           no $160.0$ per day           no $140.0$ per day           num $29.3$ num $29.3$ num $197.5$ num $1092.5$ num $1092.5$ num $333.7$ $q.m$ $127.8$ for pavement $q.m$ $237.1$ incl.reinforce, homework $u.m$ $237.1$ incl.homework $u.m$ $237.1$ g.m $247.1$ LS $69.0$ (Wire mesh)x10%         m $m$ $8.1$ $agg$ $4.6$ LS $2.8$ $q.m$ $2.7$ $q.m$ $230.0$ incl	no $70.0$ per day $60.00$ no $86.3$ per day $75.00$ no $160.0$ per day $140.00$ no $140.0$ per day $120.00$ u.m $29.3$ $25.47$ u.m $55.8$ $48.54$ u.m $977.5$ $850.00$ u.m $1,092.5$ $950.00$ u.m $333.7$ $290.20$ q.m $137.8$ for pavement $119.83$ q.m $624.6$ $40x40x15cm$ $543.11$ u.m $5,281.4$ incl.reinforce, homework $4,592.56$ u.m $4,444.2$ incl.reinforce, homework $3,864.54$ u.m $728.1$ incl.reinforce, homework $3,864.54$ u.m $728.1$ incl.nework $633.17$ u.m $237.1$ $206.21$ $107.50$ set $71.1$ $61.85$ set $224.3$ $195.00$ q.m $230.0$ $200.00$ no $8.1$ $7.00$ pag $4.6$ $4.00$ LS $2.8$ $2.47$ q.m $12.7$ $11.00$ q.m $230.0$ $200.00$ no $8,050.0$ $100.000$ no $8,050.0$ $120,000.00$ no $80,50.0$ $80,000.00$ set $138,000.0$ $120,000.00$ set $450,000.0$

#### Table E.9 Unit Construction Cost

Sources: STANDARD SPECIFICATIONS & SCHEDULE OF RATES October 2000

(Mymensingh Region)

	Description	Unit	Qty.	Unit	Amount Remarks
				M. Cost	
, Flood	Proofing and Improvement of Living Envir	ronment			
I-1	Sheltering place by raising school groud	LS	1	28,248	28,248
I-2	Approach road to sheltering place	LS	1	20,262	20,262
I-3	Flood warning and evacuation	LS	1	0	0
I-4	Homestaed raising	H/H	61	877	53,473
I-5	Raised hand tubewell	no	6	219	1,311
<u>OM</u>	Cost Total				103,294

## Table E.10 Summary of Annual Maintenance Cost for Algar Char and Gurai Gram

#### 2. Gurai Gram

	Description	Unit	Qty.	Unit	Amount Remarks
				M. Cost	
. Flood	Proofing and Improvement of Liv	ing Environment			
I-1	Mound protection	m	1,756	121	211,627
I-4	Raised hand tubewell	no	46	403	18,515
OM	Cost Total				230,142

## Table E.11 Annual Maintenance Cost of Algar Char Gram

Description	Unit	Qty.	Unit	Amount Remarks		
<u> </u>	M. Cost					
1. Common OM Cost						
I. Flood Proofing and Improvement of Living Environment				48,510		
I-1 Sheltering place by raising school groud	LS	1	28,248	28,248		
I-2 Approach road to sheltering place	LS	1	20,262	20,262		
I-3 Flood warning and evacuation	LS	1	0	0		
2. Mokbul bapari Para OM Cost						
L Flood Proofing and Improvement of Living Environment				9,643		
I-1 Homestaed raising	H/H	11	877	9,643		
I-2 Raised hand tubewell	no	0	219	0		
4. Aklas member/ Samad fokir Para OM Cost						
I. Flood Proofing and Improvement of Living Environment				19,285		
I-1 Homestaed raising	H/H	22	877	19,285		
I-2 Raised hand tubewell	no	0	219	0		
5. Joynal member/ Hassan Khalifa Para OM Cost						
I. Flood Proofing and Improvement of Living Environment				24,545		
I-1 Homestaed raising	H/H	28	877	24,545		
I-2 Raised hand tubewell	no	0	219	0		
6. Zolil dewani ParaOM Cost						
I. Flood Proofing and Improvement of Living Environment				656		
I-1 Homestaed raising	H/H	0	877	0		
I-2 Raised hand tubewell	no	3	219	656		
7. Maher munshi Para						
I. Flood Proofing and Improvement of Living Environment				656		
I-1 Homestaed raising	H/H	0	877	0		
I-2 Raised hand tubewell	no	3	219	656		
M Cost Total				103,294		

## Table E.12 Annual Maintenance Cost of Gurai Gram

	Description	Unit	Qty.	Unit	Amount Remarks
				M. Cost	
1. Chila	a Para OM Cost				
I. Fle	ood Proofing and Improvement o	f Living Envir	onment		14,262
I-1	Mound protection	m	115	121	13,859
<u>I-4</u>	Raised hand tubewell	no	1	403	403
2. Bani	a Para OM Cost				
I. Flo	ood Proofing and Improvement o	f Living Envir	onment		30,134
I-1	Mound protection	m	230	121	2 <b>7</b> ,719
I-4	Raised hand tubewell	no	6	403	2,415
4. Utta	r Para OM Cost				
L Flo	ood Proofing and Improvement o	f Living Envir	onment		36,999
I-1	Mound protection	m	307	121	36,999
<u>I-4</u>	Raised hand tubewell	no	0	403	0
5. Faki	r Para OM Cost				
L Flo	ood Proofing and Improvement o	f Living Envir	onment		18,962
I-1	Mound protection	m	154	121	18,560
<u>I-4</u>	Raised hand tubewell	no	1	403	403
6. Jal P	ara OM Cost				
I. Flo	ood Proofing and Improvement o	f Living Envir	onment		33,667
I-1	Mound protection	m	266	121	32,057
<u>I-4</u>	Raised hand tubewell	no	4	403	1,610
7. Kuna	a Para OM Cost				
I. Flo	ood Proofing and Improvement o	f Living Envir	onment		28,369
I-1	Mound protection	m	202	121	24,344
<u>I-4</u>	Raised hand tubewell	no	10	403	4,025
). Dakl	nin Para OM Cost				
L Flo	od Proofing and Improvement o	f Living Envir	onment		30,980
I-1	Mound protection	m	227	121	27,357
I-4	Raised hand tubewell	no	9	403	3,623
l. Purb	a Para OM Cost				
I. Flo	od Proofing and Improvement o	f Living Envir	onment		36,769
I-1	Mound protection	m	255	121	30,732
I-4	Raised hand tubewell	no	15	403	6,038
MC	st Total	100 and 2		-	230,142

# Table E.13 Unit Maintenannce Cost for Algar Char Gram

nual M						(for all)	
	laintenance Work for Approch Ro	ad to Shelterin				(per 0.5 km)	Unit: Ta
	Description		Unit	Qty.	Unit Cost	Amount	Remarks
	atine maintenance work (per 500m) One group of Length-person system	(per month)	m-day	220	70	15 400	10 workers x 22 days/month
	Annual cost per one group	(per 20 km)	3	220	15,400		11 months/ year
	Equipment for 10 workers	(per 20 km)	monui	11	10,400	107,400	TT monuis/ year
	Basket		no	4	100	400	
	Shovel		no	4	200	800	
	Pick axe		no	1	150	150	
4)	Hand rammer		no	2	300	600	
	Sub-total					1,950	
	Total maintenance cost per 20 km					171,350	Annual cost per 20 km
	Annual maintenannce per 0.5 km (I)					4,284	Annual cost per 0.5 km
	riodic maintenance work after flood s	eason					
	One group of length-person system		month	1.0	15,400		1 month x 1 group/year
	Annual maintenance cost (II)					5,133	once a 3 years
	mergency maintenance work after 20 Two groups of length-person system	years-frequency	month		15,400	0	2
	Annual maintenance cost (III)		monur		15,400		2 months x 2 group/20-years Once a 20-years
			month	12	500		for 0.5 km
	aterial (1% of construction cost)		ls	ĩ	484,492	•	Annual
					,	.,	
Total	Annual Maintenance Cost					20,262	(per 0.5 km: for all )
mun1 74	faintonango Work for Homoster	Daising			(man 11/11 -	100	17 1. m
	<u>Iaintenance Work for Homestead I</u> Description	vaising	Unit	Qty.	(per H/H: ) Unit Cost	Amount	Unit: Ta Remarks
	iodic maintenance work after flood se	ason	Jun	×17.		. anothit	
	One group of Length-person system	(per month)	m-day	110	70	7.700	5 workers x 22 days/month
	Annual cost per one group	(per H/H)	menth	0.2	7,700		1 week/ year
		·					once a 3 years
	Equipment for 5 workers						
	Basket		no	2	100	200	
	Shovel		no	2	200	400	
	Pick axe		no	1	150	150	
4)	Hand rammer		no	1	300	300	f
	Sub-total (per 5 years) Sub-total (Annual)						for 5 year Annual
	Annual maintenance cost (I)						Annual cost per H/H
	nergency maintenance work after 20 y	ears-frequency	flood			,25	Annual cost per 11/11
	One group of length-person system		month		15,400	0	2 weeks x 1 group/20-years
	Annual maintenance cost (II)						Once a 20-years
	laterial (1% of construction cost)		ls	1	15,328	153	Ave. height 1.5m x 100sq.m
Total	Annual Maintenance Cost					877	(per H/H)
nual M	laintenance Work for Sheltering P	lase (School)			(ner school	: 4.500 sa.m)	Unit Ts
	Laintenance Work for Sheltering P Description	lase (School)	Unit	Qty.	(per school Unit Cost	<mark>: 4,500 sq.m)</mark> Amount	Unit: Ta Remarks
			Unit	Qty.			
I. Per I-l	Description iodic maintenance work after flood se One group of Length-person system		Unit m-day	Qty. 220		Amount	Remarks
I. Per I-l	Description iodic maintenance work after flood se	ason			Unit Cost	Amount 15,400 <b>15,400</b>	Remarks 10 workers x 22 days/month 1 month x 1 group/ year
I. Per I-1	Description iodic maintenance work after flood se One group of Length-person system Annual cost per one group	eason (per month)	m-day	220	Unit Cost 70	Amount 15,400 <b>15,400</b>	Remarks 10 workers x 22 days/month
<b>I. Per</b> I-1 I-2	Description fodic maintenance work after flood se One group of Length-person system Annual cost per one group Equipment for 5 workers	eason (per month)	m-day month	220 1.0	Unit Cost 70 15,400	Amount 15,400 15,400 5,133	Remarks 10 workers x 22 days/month 1 month x 1 group/ year
<b>I. Per</b> I-1 I-2 I)	Description iodic maintenance work after flood se One group of Length-person system Annual cost per one group Equipment for 5 workers Basket	eason (per month)	m-day month no	220 1.0 4	Unit Cost 70 15,400 100	Amount 15,400 15,400 5,133 400	Remarks 10 workers x 22 days/month 1 month x 1 group/ year
<b>I. Per</b> I-1 I-2 1) 2)	Description iodic maintenance work after flood se One group of Length-person system Annual cost per one group Equipment for 5 workers Basket Shovel (Kodar)	eason (per month)	m-day month no no	220 1.0 4 4	Unit Cost 70 15,400 100 200	Amount 15,400 15,400 5,133 400 800	Remarks 10 workers x 22 days/month 1 month x 1 group/ year
I. Per I-1 I-2 1) 2) 3)	Description iodic maintenance work after flood se One group of Length-person system Annual cost per one group Equipment for 5 workers Basket Shovel (Kodar) Pick axe	eason (per month)	m-day month no no no	220 1.0 4 4 1	Unit Cost 70 15,400 100 200 150	Amount 15,400 15,400 5,133 400 800 150	Remarks 10 workers x 22 days/month 1 month x 1 group/ year
I. Per I-1 I-2 1) 2) 3)	Description iodic maintenance work after flood se One group of Length-person system Annual cost per one group Equipment for 5 workers Basket Shovel (Kodar) Pick axe Hand rammer	eason (per month)	m-day month no no	220 1.0 4 4	Unit Cost 70 15,400 100 200	Amount 15,400 15,400 5,133 400 800 150 600	Remarks 10 workers x 22 days/month 1 month x 1 group/ year once a 3-years
I. Per I-1 I-2 1) 2) 3)	Description iodic maintenance work after flood se One group of Length-person system Annual cost per one group Equipment for 5 workers Basket Shovel (Kodar) Pick axe Hand rammer Sub-total (per 5 years)	eason (per month)	m-day month no no no	220 1.0 4 4 1	Unit Cost 70 15,400 100 200 150	Amount 15,400 15,400 5,133 400 800 150 600 1,950	Remarks 10 workers x 22 days/month 1 month x 1 group/ year once a 3-years for 5 years
L. Per I-1 I-2 1) 2) 3) 4)	Description iodic maintenance work after flood se One group of Length-person system Annual cost per one group Equipment for 5 workers Basket Shovel (Kodar) Pick axe Hand rammer	eason (per month)	m-day month no no no	220 1.0 4 4 1	Unit Cost 70 15,400 100 200 150	Amount 15,400 15,400 5,133 400 800 150 600 1,950 390	Remarks 10 workers x 22 days/month 1 month x 1 group/ year once a 3-years
I. Per I-1 I-2 1) 2) 3) 4) II. En	Description iodic maintenance work after flood se One group of Length-person system Annual cost per one group Equipment for 5 workers Basket Shovel (Kodar) Pick axe Hand rammer Sub-total (per 5 years) Sub-total (Annual) Annual maintenance cost (I) mergency maintenance work after 20 y	(per month) (per H/H)	m-day month no no no	220 1.0 4 4 1	Unit Cost 70 15,400 100 200 150	Amount 15,400 15,400 5,133 400 800 150 600 1,950 390	Remarks 10 workers x 22 days/month 1 month x 1 group/ year once a 3-years for 5 years Annual
I. Per I-1 I-2 1) 2) 3) 4) II. En II-1	Description iodic maintenance work after flood se One group of Length-person system Annual cost per one group Equipment for 5 workers Basket Shovel (Kodar) Pick axe Hand rammer Sub-total (per 5 years) Sub-total (Annual) Annual maintenance cost (I) mergency maintenance work after 20 y Two group of length-person system	(per month) (per H/H)	m-day month no no no	220 1.0 4 4 1	Unit Cost 70 15,400 100 200 150	Amount 15,400 15,400 5,133 400 800 1,50 600 1,950 390 5,523	Remarks 10 workers x 22 days/month 1 month x 1 group/ year once a 3-years for 5 years Annual
I. Per I-1 I-2 1) 2) 3) 4) II. En II-1	Description iodic maintenance work after flood se One group of Length-person system Annual cost per one group Equipment for 5 workers Basket Shovel (Kodar) Pick axe Hand rammer Sub-total (per 5 years) Sub-total (Annual) Annual maintenance cost (1) mergency maintenance work after 20 y Two group of length-person system Annual maintenance cost (11)	(per month) (per H/H)	m-day month no no no <b>flood</b> month	220 1.0 4 4 1 2	Unit Cost 70 15,400 100 200 150 300 150 300	Amount 15,400 15,400 5,133 400 800 150 600 1,950 390 5,523 0 0 0	Remarks 10 workers x 22 days/month 1 month x 1 group/ year once a 3-years for 5 years Annual Annual 2 month x 2 group/20-years Once a 20-years
I. Per I-1 I-2 1) 2) 3) 4) II. En II-1 III.	Description iodic maintenance work after flood se One group of Length-person system Annual cost per one group Equipment for 5 workers Basket Shovel (Kodar) Pick axe Hand rammer Sub-total (per 5 years) Sub-total (Annual) Annual maintenance cost (I) mergency maintenance work after 20 y Two group of length-person system Annual maintenance cost (II) Care taker for plantation	(per month) (per H/H)	m-day month no no no flood	220 1.0 4 4 1	Unit Cost 70 15,400 100 200 150 300	Amount 15,400 15,400 5,133 400 800 150 600 1,950 390 5,523 0 0 0	Remarks 10 workers x 22 days/month 1 month x 1 group/ year once a 3-years for 5 years Annual 2 month x 2 group/20-years
I. Per I-1 I-2 I) 2) 3) 4) II. En II-1 III. IV. M	Description todic maintenance work after flood se One group of Length-person system Annual cost per one group Equipment for 5 workers Basket Shovel (Kodar) Pick axe Hand rammer Sub-total (Annual) Annual maintenance cost (I) mergency maintenance work after 20 y Two group of length-person system Annual maintenance cost (II) Care taker for plantation faterial	(per month) (per H/H)	m-day month no no no no flood month month	220 1.0 4 4 1 2	Unit Cost 70 15,400 100 200 150 300 15,400 500	Amount 15,400 15,400 5,133 400 800 1,950 600 1,950 390 5,523 0 6,000	Remarks 10 workers x 22 days/month 1 month x 1 group/ year once a 3-years for 5 years Annual Annual 2 month x 2 group/20-years Once a 20-years for 0.5 km
I. Per I-1 I-2 I) 2) 3) 4) II. En II-1 III. IV. M II-1	Description iodic maintenance work after flood se One group of Length-person system Annual cost per one group Equipment for 5 workers Basket Shovel (Kodar) Pick axe Hand rammer Sub-total (per 5 years) Sub-total (Annual) Annual maintenance cost (I) mergency maintenance work after 20 y Two group of length-person system Annual maintenance cost (II) Care taker for plantation faterial Raising (1% of construction cost)	(per month) (per H/H)	m-day month no no no <b>flood</b> month month ls	220 1.0 4 4 1 2 12 12	Unit Cost 70 15,400 100 200 150 300 15,400 500 803,465	Amount 15,400 15,400 5,133 400 800 150 600 1,950 390 5,523 0 0 6,000 8,035	Remarks 10 workers x 22 days/month 1 month x 1 group/ year once a 3-years for 5 years Annual 2 month x 2 group/20-years for 0.5 km 4,500sq.m
I. Per I-1 I-2 I) 2) 3) 4) II. En II-1 III. IV. M III-1	Description iodic maintenance work after flood se One group of Length-person system Annual cost per one group Equipment for 5 workers Basket Shovel (Kodar) Pick axe Hand rammer Sub-total (per 5 years) Sub-total (Annual) Annual maintenance cost (1) mergency maintenance work after 20 y Two group of length-person system Annual maintenance cost (II) Care taker for plantation faterial Raising (1% of construction cost) Tubewell (5% of construction cost)	(per month) (per H/H)	m-day month no no no no flood month month	220 1.0 4 4 1 2	Unit Cost 70 15,400 100 200 150 300 15,400 500	Amount 15,400 15,400 5,133 400 800 150 600 1,950 390 5,523 0 0 6,000 8,035 656	Remarks 10 workers x 22 days/month 1 month x 1 group/ year once a 3-years for 5 years Annual Annual 2 month x 2 group/20-years Once a 20-years for 0.5 km
I. Per I-1 I-2 1) 2) 3) 4) II. En II-1 III. IV. M II-1 III-2	Description iodic maintenance work after flood se One group of Length-person system Annual cost per one group Equipment for 5 workers Basket Shovel (Kodar) Pick axe Hand rammer Sub-total (per 5 years) Sub-total (Annual) Annual maintenance cost (I) mergency maintenance work after 20 y Two group of length-person system Annual maintenance cost (II) Care taker for plantation faterial Raising (1% of construction cost) Tubewell (5% of construction cost) Sub-total (Annual)	(per month) (per H/H)	m-day month no no no <b>flood</b> month month ls	220 1.0 4 4 1 2 12 12	Unit Cost 70 15,400 100 200 150 300 15,400 500 803,465	Amount 15,400 15,400 5,133 400 800 150 600 1,950 390 5,523 0 0 6,000 8,035 656 8,690	Remarks 10 workers x 22 days/month 1 month x 1 group/ year once a 3-years for 5 years Annual 2 month x 2 group/20-years Once a 20-years for 0.5 km 4,500sq.m 3 nos.
I. Per I-1 I-2 1) 2) 3) 4) II. En II-1 III. IV. M II-1 III-2	Description iodic maintenance work after flood se One group of Length-person system Annual cost per one group Equipment for 5 workers Basket Shovel (Kodar) Pick axe Hand rammer Sub-total (per 5 years) Sub-total (Annual) Annual maintenance cost (1) mergency maintenance work after 20 y Two group of length-person system Annual maintenance cost (II) Care taker for plantation faterial Raising (1% of construction cost) Tubewell (5% of construction cost)	(per month) (per H/H)	m-day month no no no <b>flood</b> month month ls	220 1.0 4 4 1 2 12 12	Unit Cost 70 15,400 100 200 150 300 15,400 500 803,465	Amount 15,400 15,400 5,133 400 800 150 600 1,950 390 5,523 0 0 6,000 8,035 656	Remarks 10 workers x 22 days/month 1 month x 1 group/ year once a 3-years for 5 years Annual 2 month x 2 group/20-years for 0.5 km 4,500sq.m
I. Per I-1 I-2 1) 2) 3) 4) II. En II-1 III. IV. M II-1 III. IV. M	Description iodic maintenance work after flood se One group of Length-person system Annual cost per one group Equipment for 5 workers Basket Shovel (Kodar) Pick axe Hand rammer Sub-total (per 5 years) Sub-total (Annual) Annual maintenance cost (I) mergency maintenance work after 20 y Two group of length-person system Annual maintenance cost (II) Care taker for plantation faterial Raising (1% of construction cost) Tubewell (5% of construction cost) Sub-total (Annual)	eason (per month) (per H/H)	m-day month no no no <b>flood</b> month month ls	220 1.0 4 4 1 2 12 12	Unit Cost 70 15,400 100 200 150 300 15,400 500 803,465	Amount 15,400 15,400 5,133 400 800 1,950 600 1,950 390 5,523 0 6,000 8,035 656 8,690 28,248	Remarks 10 workers x 22 days/month 1 month x 1 group/ year once a 3-years for 5 years Annual Annual 2 month x 2 group/20-years Once a 20-years for 0.5 km 4,500sq.m 3 nos. (per School)
I. Per I-1 I-2 1) 2) 3 4) II. En II-1 III. IV. M II-1 III2 Total nual M	Description iodic maintenance work after flood se One group of Length-person system Annual cost per one group Equipment for 5 workers Basket Shovel (Kodar) Pick axe Hand rammer Sub-total (per 5 years) Sub-total (Annual) Annual maintenance cost (I) nergency maintenance work after 20 y Two group of length-person system Annual maintenance cost (II) Care taker for plantation faterial Raising (1% of construction cost) Tubewell (5% of construction cost) Sub-total (Annual) Annual Maintenance Cost Sub-total (Annual) Annual Maintenance Cost faintenance Work for Hand Tubew Description	eason (per month) (per H/H)	m-day month no no no <b>flood</b> month month ls	220 1.0 4 4 1 2 12 12	Unit Cost 70 15,400 100 200 150 300 15,400 500 803,465 13,110	Amount 15,400 15,400 5,133 400 800 1,950 600 1,950 390 5,523 0 6,000 8,035 656 8,690 28,248	10 workers x 22 days/month 1 month x 1 group/ year once a 3-years for 5 years Annual Annual 2 month x 2 group/20-years for 0.5 km 4,500sq.m 3 nos.
I. Per I-1 I-2 1) 2) 3) 4) II. En II. En II. IV. M III. IV. M II. 1 II. Total nual M	Description iodic maintenance work after flood se One group of Length-person system Annual cost per one group Equipment for 5 workers Basket Shovel (Kodar) Pick axe Hand rammer Sub-total (per 5 years) Sub-total (Annual) Annual maintenance cost (1) nergency maintenance work after 20 y Two group of length-person system Annual maintenance cost (II) Care taker for plantation faterial Raising (1% of construction cost) Tubewell (5% of construction cost) Sub-total (Annual) Annual Maintenance Cost faintenance Work for Hand Tubew Description terial	eason (per month) (per H/H)	m-day month no no no no flood month ls ls	220 1.0 4 4 1 2 12 12 1 1	Unit Cost 70 15,400 100 200 150 300 15,400 500 803,465 13,110 (per tubew Unit Cost	Amount 15,400 15,400 5,133 400 800 150 600 1,950 390 5,523 0 0 6,000 8,035 656 8,690 28,248 ell) Amount	Remarks 10 workers x 22 days/month 1 month x 1 group/ year once a 3-years for 5 years Annual 2 month x 2 group/20-years for 0.5 km 4,500sq.m 3 nos. (per School) Unit: Ta Remarks
I. Per I-1 I-2 1) 2) 3) 4) II. En II. En II. IV. M III. IV. M II. 1 II. Total nual M	Description iodic maintenance work after flood se One group of Length-person system Annual cost per one group Equipment for 5 workers Basket Shovel (Kodar) Pick axe Hand rammer Sub-total (per 5 years) Sub-total (Annual) Annual maintenance cost (I) nergency maintenance work after 20 y Two group of length-person system Annual maintenance cost (II) Care taker for plantation faterial Raising (1% of construction cost) Tubewell (5% of construction cost) Sub-total (Annual) Annual Maintenance Cost Sub-total (Annual) Annual Maintenance Cost faintenance Work for Hand Tubew Description	eason (per month) (per H/H)	m-day month no no no <b>flood</b> month ls ls	220 1.0 4 4 1 2 12 12 1	Unit Cost 70 15,400 100 200 150 300 15,400 500 803,465 13,110 (per tubew	Amount 15,400 15,400 5,133 400 800 150 600 1,950 390 5,523 0 0 6,000 8,035 656 8,690 28,248 ell) Amount	Remarks 10 workers x 22 days/month 1 month x 1 group/ year once a 3-years for 5 years Annual 2 month x 2 group/20-years Once a 20-years for 0.5 km 4,500sq.m 3 nos. (per School) Unit: Ta
I. Per I-1 I-2 1) 2) 3) 4) II. En II-1 III. IV. M II-1 III. Total nual M I. Mat	Description iodic maintenance work after flood se One group of Length-person system Annual cost per one group Equipment for 5 workers Basket Shovel (Kodar) Pick axe Hand rammer Sub-total (per 5 years) Sub-total (Annual) Annual maintenance cost (I) mergency maintenance work after 20 y Two group of length-person system Annual maintenance cost (II) Care taker for plantation faterial Raising (1% of construction cost) Tubewell (5% of construction cost) faintenance Work for Hand Tubew Description Tubewell (5% of construction cost)	eason (per month) (per H/H)	m-day month no no no no flood month ls ls	220 1.0 4 4 1 2 12 12 1 1	Unit Cost 70 15,400 100 200 150 300 15,400 500 803,465 13,110 (per tubew Unit Cost	Amount 15,400 15,400 5,133 400 800 1,950 600 1,950 390 5,523 0 6,000 8,035 656 8,690 28,248 ell) Amount 219	Remarks 10 workers x 22 days/month 1 month x 1 group/ year once a 3-years for 5 years Annual Annual 2 month x 2 group/20-years for 0.5 km 4,500sq.m 3 nos. (per School) Unit: Ta Remarks per no.
I. Per I-1 I-2 1) 2) 3) 4) II. En II-1 III. IV. M II-1 III. Total nual M I. Mat	Description iodic maintenance work after flood se One group of Length-person system Annual cost per one group Equipment for 5 workers Basket Shovel (Kodar) Pick axe Hand rammer Sub-total (per 5 years) Sub-total (Annual) Annual maintenance cost (1) nergency maintenance work after 20 y Two group of length-person system Annual maintenance cost (II) Care taker for plantation faterial Raising (1% of construction cost) Tubewell (5% of construction cost) Sub-total (Annual) Annual Maintenance Cost faintenance Work for Hand Tubew Description terial	eason (per month) (per H/H)	m-day month no no no no flood month ls ls	220 1.0 4 4 1 2 12 12 1 1	Unit Cost 70 15,400 100 200 150 300 15,400 500 803,465 13,110 (per tubew Unit Cost	Amount 15,400 15,400 5,133 400 800 150 600 1,950 390 5,523 0 0 6,000 8,035 656 8,690 28,248 ell) Amount	Remarks 10 workers x 22 days/month 1 month x 1 group/ year once a 3-years for 5 years Annual 2 month x 2 group/20-years for 0.5 km 4,500sq.m 3 nos. (per School) Unit: Ta Remarks
I. Per I-1 I-2 1) 2) 3) 4) II. En II-1 III. IV. M II. 1 III. IV. M II. 1 III. Total I. Mat	Description iodic maintenance work after flood se One group of Length-person system Annual cost per one group Equipment for 5 workers Basket Shovel (Kodar) Pick axe Hand rammer Sub-total (per 5 years) Sub-total (Annual) Annual maintenance cost (1) nergency maintenance work after 20 y Two group of length-person system Annual maintenance cost (11) Care taker for plantation faterial Raising (1% of construction cost) Tubewell (5% of construction cost) Sub-total (Annual) Annual Maintenance Cost faintenance Work for Hand Tubew Description terial Tubewell (5% of construction cost)	/ears-frequency	m-day month no no no flood month ls ls Unit ls	220 1.0 4 4 1 2 12 12 1 <b>Qry.</b> 1	Unit Cost 70 15,400 100 200 150 300 15,400 500 803,465 13,110 (per tubew Unit Cost 4,370	Amount 15,400 15,400 5,133 400 800 150 600 1,950 390 5,523 0 0 6,000 8,035 656 8,690 28,248 ell) Amount 219 219 (per day)	Remarks 10 workers x 22 days/month 1 month x 1 group/ year once a 3-years for 5 years Annual Annual 2 month x 2 group/20-years for 0.5 km 4,500sq.m 3 nos. (per School) Unit: Ta Remarks per no.
I. Per I-1 I-2 1) 2) 3) 4) II. En II-1 III. IV. M II1 III. IV. M II1 III. IV. M II1 II. Total L. Mat Total Comp	Description iodic maintenance work after flood se One group of Length-person system Annual cost per one group Equipment for 5 workers Basket Shovel (Kodar) Pick axe Hand rammer Sub-total (per 5 years) Sub-total (Annual) Annual maintenance cost (1) mergency maintenance work after 20 y Two group of length-person system Annual maintenance cost (1) Care taker for plantation faterial Raising (1% of construction cost) Tubewell (5% of construction cost) Sub-total (Annual) Annual Maintenance Cost faintenance Work for Hand Tubew Description terial Tubewell (5% of construction cost) Longent of Length-person system (one	/ears-frequency	m-day month no no no flood month ls ls Unit is	220 1.0 4 4 1 2 12 12 1 2 12 1 Persor	Unit Cost 70 15,400 100 200 150 300 15,400 500 803,465 13,110 (per tubew Unit Cost 4,370 Unit Cost	Amount 15,400 15,400 5,133 400 800 1,950 600 1,950 390 5,523 0 6,000 8,035 656 8,690 28,248 ell) Amount 219 (per day) Amount	Remarks 10 workers x 22 days/month 1 month x 1 group/ year once a 3-years for 5 years Annual Annual 2 month x 2 group/20-years for 0.5 km 4,500sq.m 3 nos. (per School) Unit: Ta Remarks per no.
I. Per I-1 I-2 1) 2) 3) 4) II. En II-1 III. IV. M III-1 III. IV. M III. III. IV. M II.1 III. IV. M II.1 II.2 Total Comp 1.	Description iodic maintenance work after flood se One group of Length-person system Annual cost per one group Equipment for 5 workers Basket Shovel (Kodar) Pick axe Hand rammer Sub-total (per 5 years) Sub-total (Annual) Annual maintenance cost (I) nergency maintenance work after 20 y Two group of length-person system Annual maintenance cost (II) Care taker for plantation faterial Raising (1% of construction cost) Tubewell (5% of construction cost) Sub-total (Annual) Annual Maintenance Cost faintenance Work for Hand Tubew Description terial Tubewell (5% of construction cost) Lannual Maintenance Cost Lannual Maintenance Cost Lannual Maintenance Cost Description terial Tubewell (5% of construction cost) Lannual Maintenance Cost Lannual Maintenance Cost Description terial Tubewell (5% of construction cost) Lannual Maintenance Cost Lannual Maintenance Cost Description terial Tubewell (5% of construction cost) Lannual Maintenance Cost	/ears-frequency	m-day month no no no no flood month ls ls Unit ls Unit is Unit m-day	220 1.0 4 4 1 2 12 1 1 2 12 1 1 Persor 2	Unit Cost 70 15,400 100 200 150 300 15,400 500 803,465 13,110 (per tubew Unit Cost 4,370 Unit Cost 70	Amount 15,400 15,400 5,133 400 800 150 600 1,950 390 5,523 0 0 0 6,000 8,035 656 8,690 28,248 ell) Amount 219 (per day) Amount 140	Remarks 10 workers x 22 days/month 1 month x 1 group/ year once a 3-years for 5 years Annual Annual 2 month x 2 group/20-years for 0.5 km 4,500sq.m 3 nos. (per School) Unit: Ta Remarks per no.
I. Per I-1 I-2 1) 2) 3) 4) II. En II-1 III. II2 <u>Total</u> I. Mat <u>Total</u> <u>Total</u> 1. Mat <u>2</u> 2.	Description iodic maintenance work after flood se One group of Length-person system Annual cost per one group Equipment for 5 workers Basket Shovel (Kodar) Pick axe Hand rammer Sub-total (per 5 years) Sub-total (Annual) Annual maintenance cost (I) mergency maintenance work after 20 y Two group of length-person system Annual maintenance cost (II) Care taker for plantation faterial Raising (1% of construction cost) Sub-total (Annual) Annual Maintenance Cost faintenance Work for Hand Tubew Description terial Tubewell (5% of construction cost) I Annual Maintenance Cost Earth excevator by Shovel (Kodar) Earth carrier by banboo basket	reason (per month) (per H/H) /ears-frequency /ears-frequency /ears-frequency	m-day month no no no no flood month ls ls Unit ls 	220 1.0 4 4 1 2 12 12 12 12 1 1 Persor 2 4	Unit Cost 70 15,400 100 200 150 300 15,400 500 803,465 13,110 (per tubew Unit Cost 4,370 Unit Cost 70 70	Amount 15,400 15,400 5,133 400 800 150 600 1,950 390 5,523 0 0 0 6,000 8,035 656 8,690 28,248 ell) Amount 219 (per day) Amount 140 280	Remarks 10 workers x 22 days/month 1 month x 1 group/ year once a 3-years for 5 years Annual Annual 2 month x 2 group/20-years for 0.5 km 4,500sq.m 3 nos. (per School) Unit: Ta Remarks per no.
I. Per I-1 I-2 1) 2) 3) 4) II. En II-1 III. IV. M III. IV. M III. IV. M II. III. IV. M II. III. II. Comp 1. 2. 3. 3. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1	Description iodic maintenance work after flood se One group of Length-person system Annual cost per one group Equipment for 5 workers Basket Shovel (Kodar) Pick axe Hand rammer Sub-total (per 5 years) Sub-total (Annual) Annual maintenance cost (I) nergency maintenance work after 20 y Two group of length-person system Annual maintenance cost (II) Care taker for plantation faterial Raising (1% of construction cost) Tubewell (5% of construction cost) Sub-total (Annual) Annual Maintenance Cost faintenance Work for Hand Tubew Description terial Tubewell (5% of construction cost) Lannual Maintenance Cost Lannual Maintenance Cost Lannual Maintenance Cost Description terial Tubewell (5% of construction cost) Lannual Maintenance Cost Lannual Maintenance Cost Description terial Tubewell (5% of construction cost) Lannual Maintenance Cost Lannual Maintenance Cost Description terial Tubewell (5% of construction cost) Lannual Maintenance Cost	reason (per month) (per H/H) /ears-frequency /ears-frequency /ears-frequency	m-day month no no no no flood month ls ls Unit ls 	220 1.0 4 4 1 2 12 1 1 2 12 1 1 Persor 2	Unit Cost 70 15,400 100 200 150 300 15,400 500 803,465 13,110 (per tubew Unit Cost 4,370 Unit Cost 70	Amount 15,400 15,400 5,133 400 800 150 600 1,950 390 5,523 0 0 0 6,000 8,035 656 8,690 28,248 ell) Amount 219 (per day) Amount 140	Remarks 10 workers x 22 days/month 1 month x 1 group/ year once a 3-years for 5 years Annual Annual 2 month x 2 group/20-years for 0.5 km 4,500sq.m 3 nos. (per School) Unit: Ta Remarks per no.

## Table E.14 Unit Maintenannce Cost for Gurai Gram

ual Maintenance Work for Retaining Wall		. (	pe <u>r 100 m)</u>		Unit: Tal
Description	Unit	Qty.	Unit Cost	Amount	Remarks
I. Periodic maintenance work after flood season	month	0.5	12,760	6,380	0.5 month x 1 group
II. Emergency maintenance work after 20 years-frequency flo	month		12,760	0	1 month x 1group
III. Material					
Wall (1% of construction cost)	ls	1	567,164	5,672	per 100 m
Total Annual Maintenance Cost				12,052	(per 100m)
			_	(per 100m	/day)
Component of Brick masonry repairing group (one group )	Unit	Person	Unit Cost	Amount	
I-1 Masonry skilled labour	m-day	1	160	160	10 workers x 22 days/month
Asst. masonry skilled labour	m-day	2	140	280	1 month x 1 group/ year
Unskilled labour	m-day	2	70	140	
Sub-total (per 100m/ day)				580	(per day)
100m/day				12,760	(per month)
nual Maintenance Work for Hand Tubewell (School)			(per Tubewe	в	Unit: T
Description	Unit	Qty.	Unit Cost	Amount	Remarks
I. Material		<u> </u>			
Tubewell (5% of construction cost)	ls	1	8,050	403	per no.
Total Annual Maintenance Cost					(per Tubewell)