

APPENDIX D-13 House Type by Community in the Project Area

APPENDIX D-13

(1/4)

No.	Name of village (LC1) or community	Number of house- hold	Number of hilly by type of house				Number of hilly with latrine				With/without electricity				
			Permanent		Semi- permanent with mud	Thatched house	With sanplat or slab	Without sanplat or slab	Total	(%)	With/without electricity				
			with iron roof	Without iron roof							With lack time	With lack hour	Lack out		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
1101	Kyabazamba	63	22	3	18	20		58	58	92.06%					1
1102	Kabale	80	3		77	0		10	10	12.50%					1
1103	Kigayaza	80	1	1	1	77		50	50	62.50%					1
1104	Kalyanjuba	67	6	58	3	0		3	3	4.48%					1
1105	Kyambobo	92	1		91	0		17	17	18.48%					1
1106	Lukonda	100	15	15	20	50		30	30	30.00%					1
1107	Makururu	15		4		11	10	0	10	66.67%					1
1108	Kyamabale	100	20	5	40	35		40	40	40.00%					1
1109	Kasambya	60	10	50		0		54	54	90.00%					1
1110	Kamengo	436	18	106	6	306		28	28	6.42%					1
1111	Kirasi	210	59	101		50	5	30	35	16.67%					1
1112	Nakitembe	120	8	13	94	5		30	30	25.00%					1
1113	Buyanja	130	50		50	30		90	90	69.23%					1
1114	Kagongero	552	25	30	70	427	30	514	544	98.55%					1
1115	Kebwire	57	5	1	13	38	5	46	51	89.47%					1
1116	Kyetume	288	50		120	118		50	50	17.36%					1
1117	Kyengerera	70	8	52	3	7	3	48	51	72.86%					1
1118	Kyangabakama	95	2		40	53	2	48	50	52.63%					1
1119	Kyayi														
1120	Nabugayo	60	11	45		4		44	44	73.33%					1
1121	Kalwanga A	175	15	5	20	135	1	29	30	17.14%					1
1122	Kiryanooga	155	20	50	85	0		125	125	80.65%					1
1123	Kakubansiri B	136	30	20	50	36		136	136	100.00%					1
1124	Lubale B	137	70	10	5	52		130	130	94.89%					1
1125	Nkokonjiru	80	30	50		0		80	80	100.00%					1
1126	Lugaaga	125	90	16	19	0		110	110	88.00%					1
1127	Lusongode	103	15	18	70	0	4	47	51	49.51%					1
1128	Luzira	345	30	120	164	31	50	283	333	96.52%					1
1129	Bulwadda East	150	5	0	145	0	1	149	150	100.00%					1
1129	Bulwadda West	150	20	30	70	30		130	130	86.67%					1
1130	Kawoko	116	23	91	2	0		40	40	34.48%					1
1131	Nakulamudde	78	40		10	28		63	63	80.77%					1
1132	Mawuki	80	50		30	0	1	69	70	87.50%					1
1133	Kiriri	300	100	3	192	5	10	260	270	90.00%	1	1	2	4	
1134	Mpogo	75	50	25		0		60	60	80.00%					1
1135	Buyinjabutoole	75	63	12		0	1	5	6	8.00%					1
1136	Part of Kiriri (1133)														
1137	Ngeye	50	35	15		0	10	0	10	20.00%					1
1138	Busolo	100	40		50	10		95	95	95.00%					1
1139	Maseruka	80	20	5	30	25		30	30	37.50%					1
1140	Kanzira	44	16	0	28	0	2	33	35	79.55%					1
1141	Ngomanene	54	50	4		0	7	47	54	100.00%					1
1142	Kyetume	212	112	100		0		200	200	94.34%					1
1142	Kyetume	26	0	0	26	0		6	6	23.08%					1
1201	Waroirongo	170	37	5	102	26	80	60	140	82.35%	1	1	3	2	
1202	Busukuma	190	70	20		100	30	60	90	47.37%	1	1	10	3	
1203	Kasambya	85	30	40	15	0	20	55	75	88.24%					1
1204	Kikoko	100	3	4	93	0		80	80	80.00%					1
1205	Setta	90	5	3	60	22		90	90	100.00%	1	1	3	3	
1206	Kijjudde	280	200	20	35	25	100	80	180	64.29%					1
1207	Magaji	250	240	4	6	0	8	242	250	100.00%					1
1208	Kiwenda T/C	214	186		20	8	120	54	174	81.31%	1	1	4	4	
1209	Kiwenda														
1210	Nabitato	100	72	15		13	15	55	70	70.00%	1	1	7	4	
1211	Buso	200	40	20	90	50	2	88	90	45.00%					1
1212	Menvu	220	200		20	0	2	98	100	45.45%	1	1	4	3	
1213	Kasozzi	200	50	30	80	40		80	80	40.00%					1
1214	Lugo	300	238	18	24	20	50	154	204	68.00%					1
1215	Mairyee	80	32	6	42	0	50	30	80	100.00%					1
1216	Kazinga	380	0	0	0	380	340	20	360	94.74%	1	1	3	4	
1216	Bulamu/Kasangati TC	72	65	7	0	0	8	64	72	100.00%	1	1	4	5	
1217															
1218	Magere	30	28		2	0	10	20	30	100.00%	1	1	7	4	
1219	Kazinga	300	200		100	0	10	190	200	66.67%	1	1	2	12	
1220	Kiwalinu	20	15	2	3	0	12	8	20	100.00%	1	1	10	3	
1221	Kiti A	150	130	3	17	0		52	52	34.67%					1
1222	Manyangwa	400	364		30	6	50	350	400	100.00%	1	1	7	3	
1223	Nalyamagooja	900	60	40	200	600	15	485	500	55.56%	1	1	2	4	
1224	Part of Setta (1217)	106	102	4		0		106	106	100.00%	1	1	1	7	
1225	Part of Magere (1218)														
1301	Kiwala	150	15	16	15	104	10	135	145	96.67%					1
1302	Nyando	100	15		10	75		30	30	30.00%					1
1303															
1304	Kanzira	150		100		50	25	25	50	33.33%					1
1305	Bwetyaba	475	10	5	29	431		5	5	1.05%					1
1306	Lugali	150	130	20		0	20	100	120	80.00%					1

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
1307 Ndibulungi		110			60	30		70	70	63.64%					1
1308 Batende		85	38	5	10	32		80	80	94.12%					1
1309 Bukesa		75	50	14	4	7		75	75	100.00%					1
1310 Tufube		80	60			20		30	30	37.50%					1
1311 Bugobango		110	30		80	0		70	70	63.64%					1
1401 Kyengeza		70	20	15	35	0		60	60	85.71%					1
1402 Wabiyinja		120	17	3	80	20		113	113	94.17%					1
1403 Nakikungube															
1404 Masulita A		50	48	2		0		20	20	40.00%					1
1405 Kyanama		350	50	15	280	5		320	320	91.43%					1
1406 Kyampisi		70	30	10	30	0	2	53	55	78.57%					1
1407 Malangaafa		60	30	30		0	2	58	60	100.00%					1
1408 Bugimba		89	50	20	19	0		89	89	100.00%					1
1409 Mugulukwa		80	20	20	35	5	5	65	70	87.50%					1
1410 Buso		40	9		30	1		30	30	75.00%					1
1411 Kyasa		180	12		168	0		25	25	13.89%					1
1412 Bembe		70	10	10	50	0		70	70	100.00%					1
1413 Namayumba		100	90	10		0		80	80	80.00%					1
1414 Busaku		160	130	10	20	0	10	110	120	75.00%					1
1415 Buwembo		95	40	45	10	0		95	95	100.00%					1
1416 Kasengejie		240	35	5	100	100	6	230	236	98.33%					1
1417 Mende Central		196	60		120	16	5	191	196	100.00%					1
1418 Bukasa T/C		150	50	15	85	0		145	145	96.67%	1	1	2	4	
1419 Kisimbiri A-B-C/Wakiso T/C		700	430	7	200	63	50	604	654	93.43%	1	1	3	5	
1501 Kitutu T/C		73	68		5	0	2	4	6	8.22%					1
1502 Mpiji															
1503 Kikomazi		121	91		30	0		80	80	66.12%	1	1	2	3	
Total		14,857	5,243	1,676	4,086	3,852	1,201	8,894	10,101	0.44%	18	18	76	4,28	77
2101 Busooba/Kisombwa		80	20	60		0	40	30	70	87.50%					1
2102 Kilangwa		80			80	0		80	80	100.00%					1
2103 Kyengeza		85	30	20	35	0	5	35	40	47.06%					1
2104 Budigaba		86	13	48	20	5	10	70	80	93.02%					1
2105 Bwakagga		80	6	20	50	4	5	25	30	37.50%					1
2106 Kalonga		200	130	60	10	0		130	130	65.00%					1
2107 Mugungulu		200	120	20	60	0		180	180	90.00%					1
2108 Kisingiri		150	6	20	35	89	1	14	15	10.00%					1
2109 Kyamukona		400	40	15		345	25	15	40	10.00%					1
2110 Kyegoluso		80	40		40	0	2	8	10	12.50%					1
2111 Bakijulila		100	7		80	13		50	50	50.00%					1
2112 Kabowa		50	25		25	0	1	39	40	80.00%					1
2113 Kabubu		100	50		50	0	4	66	70	70.00%					1
2114 Kamusongola		250	11		30	209	2	148	150	60.00%					1
2115 Nakawala/Lwegula		138	18		65	55	6	101	107	77.54%					1
2116															
2117															
2118 Nakasaga		62	10		15	37		56	56	90.32%					1
2119 Kasambya T/C		200	60	26	100	14	60	100	160	80.00%					1
2120 Kikoma		210	4	6	100	100	1	129	130	61.90%					1
2121 Ngabano		128	79		33	16	7	93	100	78.13%					1
2122 Katoma		60	5		20	35	1	34	35	58.33%					1
2201 Kassanda		250	25		25	200		170	170	68.00%					1
2202 Namabaale		120	20			100		20	20	16.67%					1
2203 Kyabalanzi		70	9		35	26		0	0	0.00%					1
2204 Kamuli		100	5		80	15		20	20	20.00%					1
2205 Bweyongedde		81	22	30	29	0		43	43	53.09%					1
2206 Kasazi A		66	56	10		0	5	51	56	84.85%					1
2207 Kalama		78	10		50	18		20	20	25.64%					1
2208 Kikandwa		28	28			0	10	0	10	35.71%					1
2209 Bulyamagunju A		80	50	10	20	0	5	65	70	87.50%					1
2210 Makata		130	50	20	60	0		70	70	53.85%					1
2211 Mitembe		57	25	25	7	0		25	25	43.86%					1
2212 Kalama		150	3		10	137		145	145	96.67%					1
2213 Kyakasengulu		120	60	40	20	0	10	40	50	41.67%	1				1
2214 Kabanyi		87	7	20	50	10		20	20	22.99%					1
2215 Bukoba		165			10	155	12	0	12	7.27%					1
2216 Lukira		130	15	20	60	35		100	100	76.92%					1
2217 Kyawaruba		90	9		5	76		10	10	11.11%					1
2218 Kasana		90	35	5	50	0		70	70	77.78%					1
2219 Kalagi		170	12	3	15	110		140	140	82.35%					1
2220 Kamusenene		400	150	3	37	210	5	145	150	37.50%					1
2221 Manyogaseka		140	5		100	35	3	97	100	71.43%					1
2222 Kasawo		140	2		20	118		140	140	100.00%					1
2223 Lwenyange		48	6	3	39	0		30	30	62.50%					1
2224 Mbale		60				60		15	15	25.00%					1
2225 Mabuubi		67	37	30		0		15	15	22.39%					1
2226 Kalongo		120	5		105	10		45	45	37.50%					1
2227 Kitumbi		140	5		11	124	2	78	80	57.14%					1
2228 Kanoga		25	18		7	0	6	19	25	100.00%	1	1	2	2	
2301 Kikumbi-Kaba		61	10		20	31	34	20	54	88.52%					1
2302 Nakasetta		50	15		30	5	3	27	30	60.00%	1	1	4	4	
2303 Namyeso		76	50	5	21	0	4	46	50	63.79%					1

APPENDIX D-13

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
2304 Bugabo	73	53	20	0	1	64	63	89.04%							1
2305 Katakala	6	5	1	0		6	6	100.00%			1	1	5	2	1
2306 Magongolo	60	56	4	0	5	55	60	100.00%							1
2307 Nakibanza-Nyanzi	50	8	1	12	29	50	50	100.00%							1
2308 Busimbi	120	120		0	5	85	90	75.00%			1	1	3	8	
2309 Mitiyana A	134	120	1	10	3	108	109	81.34%			1	1	1	24	
2310															
2311 Kalangala	51	32		15	4		38	74.51%							1
2312 Lwogero B	68	20	30	10	8	2	0	2.94%							1
2313 Kiwanda	41	30		10	1		5	12.20%			1	1	3	4	
2314 Lweyo	100	80	20	0		30	70	100.00%			1	1	2	4	
2315 Kasikombe	94	60	30	4	0	7	83	95.74%							1
2316 Katungulu	60	4		46	10		55	91.67%							1
2317 Bodimbo	160	2	10	20	128		160	100.00%							1
2318 Kisanba	57	25		20	12		52	91.23%							1
2319 Kawolongojjo	170	10		100	60		120	70.59%							1
2320 Namungo	117	80	20	17	0		117	100.00%							1
2321 Sakanyonyi	400	370	30	0		3	0	0.75%			1	1	7	3	
2322 Bombo	50	35	12	3	0	10	0	20.00%							1
2323 Kabulamuliro	87	8	5	20	54		50	57.47%							1
2324 Bambula	121	96	10	15	0	2	13	12.40%							1
2401 Sserinya	150	110		10	30	30	110	93.33%							1
2402 Nabale	130		8	20	102		100	76.92%							1
2403 Maanyi	40	13		7	20	10	26	90.00%							1
2404 Mpongo	75	6	3	53	13		60	80.00%							1
2405 Misimba	62	18	44	0		1	32	53.23%							1
2406 Kinuli	100	50	20	30	0		35	35.00%							1
2407 Kabeele	50	7		13	30		4	8.00%							1
2408 Duwala	80	20	20	30	10		20	25.00%							1
2409 Bekina	90	10		3	77	10	50	66.67%							1
2410 Kkande	50	10		40	0	30	20	50.00%							1
2411 Kitongo	99	20		75	4	1	19	20.20%			1	1	7	9	
2412 Nakaziba	100	50	30	5	15		20	20.00%							1
2413 Kitebere	230	70	85	75	0		90	39.13%							1
2414 Watuba	200			200			100	50.00%							1
2415 Nabwiri	110	7		80	23		90	81.82%			1	1	2	2	
2416 Bukunduyulu	90	56	9	16	9	2	86	97.78%							1
2417 Banaze	200	25	5	170	0	5	155	80.00%							1
2418 Kalama	97	15		40	42	3	54	58.76%							1
2419 Nguzulo	70	15	1	40	14	6	44	71.43%							1
2420 Mwera	239	220	19	0		20	216	98.74%			1	1	3	4	
2421 Kakindu	150	43	30	77	0	3	137	93.33%			1	1	3	3	
2422 Mawanda	120	18		40	62	30	10	33.33%							1
2423 Kiwawu	52	31		21	0	2	49	98.08%			1	1	7	5	
2424 Maponga	62	6	10	25	21	10	45	88.71%							1
2425 Lulumbu	80	10		62	8	1	39	50.00%							1
2426 Kasalaga	110	75	20	15	0	3	107	100.00%							1
Total	10,983	3,537	1,017	3,043	3,386	502	5,938	6,440	58.64%		14	13	49	5,69	83
3101 Kiteera	126	30	20	60	16	15	105	95.24%			1	1	3	4	
3102 Kalangala A	150	100	20	10	20		90	60.00%							1
3103 Kalangala RCI	150	70	40	20	20		100	66.67%			1	1	2	4	
3104 Masiriba	60	40		20	0		55	91.67%							1
3105 Kafwe	82	20	15	47	0		23	28.05%							1
3106 Muyenje	138	38	50	50	0		38	27.54%							1
3107 Kayunga	120	20	20	3	77		115	95.83%							1
3108 Kabamba West	80	40	10	10	20	0	70	87.50%							1
3108 Kabamba East	40	2	0	38	0	1	32	82.50%							1
3109 Bukomero T/C	104	80	15	7	2	10	90	96.15%							1
3110 Namukoko	170	70	80	15	5	20	0	11.76%							1
3111 Kagozi	65	48	10	5	2	5	40	69.23%							1
3112 Mwezi B	73	10		20	43		64	87.67%							1
3113 Mwezi A															
3114 Kambizi	55	31	24		0		20	36.36%							1
3115 Ndiraba	220	100	20	100	0	10	190	90.91%							1
3116 Bugomolwa	60	10	10	10	30		50	83.33%							1
3117 Ntwetwe T/C	42	30	5	7	0	2	38	95.24%							1
3118 Kilemeera/Lubaga	72	32	14	26	0		20	27.78%							1
3119															
3120 Bulagwe	94	15	20	59	0		20	21.28%							1
3121 Nkandwa B	98		38	60	0		83	84.69%							1
3122 Nakalama St. Kizito	130	30	20	50	30		70	53.85%							1
3123 Ntuti	100	50	20	10	20	5	75	80.00%							1
3124 Kikajjo	30	10	5	5	10		5	16.67%							1
3125 Lwanjolo	60	20	10	10	20		40	66.67%							1
3126 Kasaga	200	10		180	10		190	95.00%							1
3127 Kirinda	107	30	70	7	0	10	67	71.96%							1
3128 Kiringa	130	5		125	0		5	3.85%							1
3129 Nyaruringa	50			50			39	78.00%							1
3130 Kagoze	80	8		50	22	3	71	92.50%			1				1
3131 Sseesa	40	5	9	26	0		26	65.00%							1
3132 Kambugu	90	6	10	30	44		75	83.33%							1

APPENDIX D-13 (4/4)

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
3133 Kambugu		33	5	2	26	0	3	27	30	90.91%					1
3134 Kilyankozzi		80	3		77	0		2	2	2.50%					1
3135 Katoma		100	40	40	20	0		40	40	40.00%					1
3136 Kibiga		250	20		230	0		200	200	80.00%					1
3137 Gogonya		170	100	30	40	0		0	0	0.00%					1
3138 Bukasa		50	2	1	30	17		10	10	20.00%					1
3139 Kalangala/Kibooga		67	15		22	30	4	46	50	74.63%	1	1	2	2	
3140															
3141 Bwizibwera B		250	39	3	200	8		180	180	72.00%	1	1	2	2	
3142 Lufula		100	25		75	0	70	10	80	80.00%	1	1	1	1	
3143 Hospital Village		90	90			0		90	90	100.00%	1	1	3	4	
3144 Bwizibwera A		200	67		133	0	10	0	10	5.00%	1	1	2	4	
3145 Sinde		40	15	7	8	10		35	35	87.50%					1
3146 Kawaawa		49	34	6	9	0		40	40	81.63%					1
3147 Nikokonjeru		200	30	10	100	60	3	183	186	93.00%					1
3148 Kyanika		52	1		1	50	1	45	46	88.46%					1
3149 Lunya		70	15	10	45	0		68	68	97.14%					1
3150 Nakaziba		60	20	10	20	10		60	60	100.00%					1
3151 Kijumagwa		40	3		11	26		37	37	92.50%					1
3152 Nsanje		70	6	3		61		40	40	57.14%					1
3153 Buyonga		94	10	34	50	0		45	45	47.87%					1
3154															
3155 Kabutemba		76	10	6	40	20	2	26	28	36.84%					1
3156 Kambugu		47		25	22	0	2	38	40	85.11%					1
3157 Kayonza		25	18	7		0	1	24	25	100.00%					1
3158 Kyarajoni		80				80		20	20	25.00%					1
3159 Katanabiro		70	14		5	51		68	68	97.14%					1
3160 Kagalama		120	4		20	96	2	118	120	100.00%					1
3161 Byerima B		60	20	10	30	0		0	0	0.00%					1
3162															
3163 Biiko		90	4		30	56	2	68	70	77.78%					1
3164 Buguluma		200	3		3	194		50	50	25.00%					1
3165 Nabwendo		80	2	1	50	27		60	60	75.00%					1
3166															
3167 Ndiraweru		400	56	6	42	296		120	120	30.00%					1
3168 Nakasizi		60	35	25		0	4	46	50	83.33%					1
3169 Nakasengere		100	5	3	84	8	1	79	80	80.00%					1
3170 Nanyole/Magala Mem		78	35	25	18	0	10	50	60	76.92%					1
3171 Muwanga		270	7		250	13		200	200	74.07%					1
3172 Kikonda		100	30	10	30	30		10	10	10.00%					1
3172 Buraza		66	10	3	47	6		2	2	3.03%					1
3173 Nakakabala		50		42	8	0		10	10	20.00%					1
3174 Kyanbogo		58	3	55		0		58	58	100.00%					1
3175 Kigando/Buraza															
3176 Muijanza		90	8	2	40	40		8	8	8.89%					1
3177															
3178 Bananywa		300		1	70	229		100	100	33.33%					1
3179 Nsanbya		65	25	25	15	0	20	11	31	47.69%					1
3180 Kyakabuga		30	2	13	5	10		5	5	16.67%					1
3181															
3182															
3183 Barnusuta		102	13		82	7	4	85	89	87.25%					1
3184 Kayunga		40	8	31	1	0	2	14	16	40.00%					1
3185 Masodde		330	50	70	210	0	5	95	100	30.30%	1				
3186 Vvukuba		130	15	10	105	0	2	98	100	76.92%					1
3187 Kalagi		150	50	30	40	30	7	123	130	86.67%					1
3188 Kiyombya		42	5		12	25	4	36	40	95.24%					1
3189 Kivaguzi		130	5		110	15	2	128	130	100.00%					1
3190 Mulagi		80	20	10	27	23	2	74	76	95.00%					1
3191 Kigando		200	150	50		0	10	160	170	85.00%					1
3192 Bulyanzige		95	35	38	22	0		0	0	0.00%					1
3193 Gayaza West		65	38	23	4	0	4	36	40	61.54%					1
3194 Kasambya B		46	15		31	0	1	29	30	65.22%					1
3195 Nkondo		80	5	1	20	54		51	51	63.75%					1
3196 Butambuka		102	13		13	76	2	70	72	70.59%					1
3197 Kiryajjobyo West		70	15		55	0		60	60	85.71%					1
3198 Luvuna		60			7	53		40	40	66.67%					1
3199 Kisala		150	1		12	137		120	120	80.00%					1
3200 Kyerere East		113	10		70	33		108	108	95.58%					1
Total		9,581	2,239	1,233	3,740	2,369	261	5,562	5,823	60.78%	9	7	15	3,14	84

Source: Result of Inventory Survey for Community made by JICA, 1995.

APPENDIX D-14 Population of Live Stocks by Community in the Project Area

APPENDIX D-14

(1/4)

No.	Name of village (LC1) or community	Population in a community	Number of households	Number of livestock (heads)								
				Cattle	Sheep	Goats	Poultry	Others				
								Pigs	Rabbits	Chicken	Turkeys	Ducks
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1101	Kyabagamba	250	63	300	20	25	150	4				
1102	Kabale	230	80	500	100	200	500	20				
1103	Kigayaza	400	80	560	20	210	520	50				
1104	Kalyanjuba	450	67	600	80	120	1,000	15				
1105	Kyambobo	300	92	10,000	20	180	600					
1106	Lukonda	400	100	200	50	100	400	50				
1107	Makururu	25	15	10	5	12						
1108	Kyamabale	700	100	40	25	70	100					
1109	Kasambya	156	60	800	20	100	72	10				
1110	Kamengo	-	436	700	10	100	100	10				
1111	Kirasi	3,550	210	10,000	200	1,000	100	30				
1112	Nakitembe	300	120	4,000	100	300	200					
1113	Buyanja	200	130	5,000	20	30	30					
1114	Kagongero	800	552	4	5	20	40					
1115	Kabwire	600	57	143	9	70	580					
1116	Kyehume	563	288	2,000	10	100	1,000					
1117	Kyengerera	300	70	5,000		300	100					
1118	Kyangabakama	165	95	600	100	800	2,000					
1119	Kyayi	-	-	-	-	-	-					
1120	Nabugayo	140	60	700	20	200	600	10				
1121	Kahwanga A	450	175	30	10	40	120					
1122	Kiryaronga	350	155	200	40	150	350	100	50			
1123	Kakubansiri B	300	136	350	50	75	1,000					200
1124	Lubale B	500	137	50	10	7		5				
1125	Nkokonjeru	500	80	40	12	20	150					
1126	Lugaga	350	125	350	200	150	300	200	100			
1127	Lusongode	467	103	400	20	50	400	80				
1128	Luzira	1,328	345	1,200	54	200	2,500					
1129	Bulwadda East	300	150	40	8	30	450	30				
1129	Bulwadda West	2,000	150	60	15	50	700	40				
1130	Kawoko	400	116	600	25	30	1,200	20				
1131	Nakulamudde	800	78	60		30	700	50				
1132	Mawuki	480	80	40	2	30	150	5				
1133	Kiriri	1,500	300	150	10	30	1,500					
1134	Mpogo	420	75	35	8	10	300	40				
1135	Buyinjabutoole	1,000	75	50	20	30	750	100				
1136	Part of Kiriri (1133)	-	-	-	-	-	-					
1137	Ngeye	400	50	100	50	80	1,200		300			
1138	Busolo	800	100	200	30	50	2,500	150				
1139	Maseruka	1,000	80	150	30	40	300	80	50			
1140	Kanzira	220	44	40	5	10	80	30				
1141	Ngomanene	350	54	13	20	6	100					
1142	Kyehume	800	212	180	30	20	200	40				
1142	Kyehume	200	26	2,000	50	150						
1201	Wamirongo	680	170	210	30	60	610	50				
1202	Busukuma	340	190	20	10	20	80	10				
1203	Kasambya	491	85	30	10	20	100	15				
1204	Kikoko	225	100	45	15	50	300	200				
1205	Setia	185	90	92	10	13	720	80				
1206	Kijjudde	450	280	15	85	70	700	250				
1207	Magigi	450	250	500	20	30	40,000	45				
1208	Kiwenda T/C	1,000	214	100	30	80	2,000	500				
1209	Kiwenda	-	-	-	-	-	-					
1210	Nabitale	750	100	160	16	60	860	30				
1211	Buso	1,700	200	310	50	100	1,500	110				
1212	Meovu	1,500	220	40	7	10	200	20				
1213	Kasozzi	5,000	200	80	30	50	400	200				
1214	Lugo	1,450	300	640	250	800	2,064	1,208				
1215	Mairyie	250	80	480	10	580	48	20				
1216	Kazinga	500	380	30	12	20	600	10				
1216	Bulamu/Kasangati TC	400	72	20	0	8	500	15				
1217	-	-	-	-	-	-	-					
1218	Magere	400	30	80	10	12	5,000	52				
1219	Kazinga	330	300	20	5	10	250	12				
1220	Kiwalimu	300	20	30	20	50	120	20				
1221	Kiti A	250	150	15	7	18	750	30				
1222	Manyangwa	750	400	70	12	20	1,130					
1223	Nalyamagonja	4,500	900	400	30	30	1,000	15				
1224	Part of Setia (1217)	300	106	20	8	8	100					
1225	Part of Magere (1218)	-	-	-	-	-	-					
1301	Kiwala	800	150	110	6	45	1,000	20	30			
1302	Ngando	550	100	300		100	160					
1303	-	-	-	-	-	-	-					
1304	Kanzira	400	150	120	20	50	200	60				
1305	Bwetyaba	3,325	475	3,000	100	100	4,000	100				
1306	Lugali	700	150	100	20	30	450					

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1307	Ndibulungi	1,000	110	1,500	100	450	15,000	80				
1308	Butende	700	85	150	30	80	750					
1309	Bukesa	300	75	50	12	16	20					
1310	Tufube	200	80	250	40	80	300	50				
1311	Bugobango	328	110	150	50	70	400	20				
1401	Kyengeza	500	70	40	10	150	800	200				
1402	Wabiyinja	750	120	16	21	4	480	30				
1403	Nakikungube	-	-	-	-	-	-	-				
1404	Masulita A	250	50	3	3	20	120	20				
1405	Kyanuna	1,300	350	50	20	100	600					
1406	Kyampisi	500	70	50	15	30	300					
1407	Malangaata	400	60	32	16	50	600	100				
1408	Bugimba	526	89	40	30	25	200	100				
1409	Muguluka	600	80	30	40	70	250	80				
1410	Buso	250	40	10	10	30	400	50				
1411	Kyasa	600	180	21	18	40	360	70				
1412	Bembe	500	70	15	10	20	200	20				
1413	Namanyumba	500	100	100	10	20	50	50				
1414	Busaku	800	160	10	10	30	200	60				
1415	Buwembo	250	95	2	30	50	200	20				
1416	Kasengeje	1,000	240	16	6	25	1,900	40				
1417	Mende Central	1,000	196	94	15	20	271	4				
1418	Bukasa T/C	600	150	60	20	20	200	50				
1419	Kisimbiri A-B-C/Wakiso T/C	3,000	700	150	38	185	560	200				
1501	Kituntu T/C	630	73	30	10	10	600	60				
1502	Mpigi	-	-	-	-	-	-	-				
1503	Kikomazi	650	121	100	-	200	3,000	150				
Total		69,554	14,857	57,501	2,900	9,464	115,665	5,695	530	0	0	205
2101	Busooba/Kisombwa	250	80	9,000	60	800	100					
2102	Kilanga	327	80	200	20	50	800	10				
2103	Kyengeza	595	85	400	50	50	150	60				
2104	Bodigaba	602	86	30	30	40	150	50				
2105	Bwakagga	400	80	300	100	60	700					
2106	Kalonga	600	200	200	30	70	1,500	30				
2107	Mugungulu	700	200	700	30	50	100	30				
2108	Kisimpizi	800	150	-	-	20	500	50				
2109	Kyamukona	700	400	100	30	150	1,000	30				
2110	Kyeguluso	400	80	20	10	50	200	60				
2111	Bakijulila	325	100	5	1	20	320		10			
2112	Kabowa	350	50	-	10	30	40					
2113	Kabubu	400	100	20	30	30	500	20				
2114	Kamusongola	1,750	250	200	50	80	40	50				
2115	Nakawala/Iwegula	700	138	170	34	80	416	22				
2116	-	-	-	-	-	-	-	-				
2117	-	-	-	-	-	-	-	-				
2118	Nakasaga	500	62	30	10	20	100	50				
2119	Kasombya T/C	800	200	200	20	300	400	150				
2120	Kikoma	575	210	300	20	50	200					
2121	Ngabano	700	128	180	26	20	340	5				
2122	Katoma	400	60	30	25	100	300	100				
2201	Kaseanda	1,700	250	6	-	-	500	30				
2202	Namabaale	350	120	100	50	50	200					
2203	Kyabalanzi	280	70	30	40	40	100	50				
2204	Kanuli	300	100	50	-	100	300					
2205	Bweyongedde	362	81	30	15	25	150	15				
2206	Kasazi A	700	66	6	-	20	130	10				
2207	Kalama	360	78	20	10	20	50	10				
2208	Kikandwa	200	28	19	-	-	-	-				
2209	Bulyamaganju A	560	80	100	4	10	100	30				
2210	Makafa	700	130	100	25	20	300	50				
2211	Milenbe	390	57	65	5	20	285	57				
2212	Kalama	450	150	100	50	20	100	20				
2213	Kyakasengulu	420	120	60	20	40	100	60				
2214	Kabanyi	532	87	120	-	-	50	12				
2215	Bukoba	285	165	8,000	50	60	10	33				
2216	Lukira	910	130	300	120	250	12,000	200				
2217	Kyawatuba	630	90	120	15	20	100	11				
2218	Kasana	450	90	300	10	10	200	50				
2219	Kalaji	500	170	202	40	70	2,000	200				
2220	Kamusenene	600	400	600	150	400	600	150				
2221	Manyogaseka	740	140	300	20	500	1,500	50	30			
2222	Kasawo	300	140	50	20	10	300	15				
2223	Lwenyange	470	48	20,000	50	100	1,000	30				
2224	Mbale	300	60	-	-	-	46					
2225	Mabuubi	200	67	15	5	25	340			125		
2226	Kalonga	400	120	100	50	150	600	120				
2227	Kitumbi	300	140	230	12	50	700	32				
2228	Kanoga	200	25	40	15	30	200	30				
2301	Kilumbi-Kaba	360	61	60	10	20	100	60				100
2302	Nakasetta	1,200	50	12	8	20	100					
2303	Namyeso	300	76	30	10	10	100		20			

APPENDIX D₁ 4

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
2304	Bugabo	500	73	200	60	20	300	50		100		
2305	Katakala	36	6	64		10	80	45				
2306	Magongolo	700	60	40	20	20	200	40				
2307	Nakibanga-Nyanzi	300	50	7	40	25	500	80				
2308	Busimbi	700	120	40	5	10	860	15				
2309	Mitiyana A	250	134	9		25	800	35				
2310												
2311	Kalangala	520	51	36	14	24	40	16				
2312	Lwogero B	890	68	20	10	15	2,000	120				
2313	Kiwanda	350	41	45	13	15	500					
2314	Lweyo	800	100	200	30	30	300	100				
2315	Kasikombe	700	94	4	20	30	250	300				
2316	Kahungulu	450	60		5	20	600	30				
2317	Budinbo	1,000	160	3	4	20	100					
2318	Kisamba	450	57	20	25	35	200	25				
2319	Kawolongojjo	680	170	30	50	50	200					
2320	Namungo	650	117	20	6	20	40	60				
2321	Sakanyonyi	600	400	18	5	30	100	150				
2322	Bombo	250	50	100	10	40	150	30				
2323	Kabulamaliro	430	87	6		15	170					
2324	Bambula	620	123	7	25	33	750	8				
2401	Sserinya	600	150	400	20	30	300	800				
2402	Nabale	600	130	80	10	100	400	60				
2403	Maanyi	600	40	60	5	15	310	100				
2404	Mpongo	200	75	80	10	15	400	50	70			
2405	Misimba	400	62	70	23	31	125	39				
2406	Kiruli	400	100	60	40	40	200		70			
2407	Kabeele	400	50	40	7	11	200	40				
2408	Buwala	500	80	50	6	10	500	100				
2409	Bekina	800	90	40	3	30	700	60				
2410	Kkande	240	50	25	15	10	900	60				
2411	Kitongo	400	99	80	20	30	200	100				
2412	Nakaziba	400	100	50	10	100	200	50				
2413	Kitebere	1,000	210	100	20	7	200	180				
2414	Watuba	650	200	250	25	30	400	150				
2415	Nabwiri	1,000	110	20	30	15	300	50				
2416	Bukundagulu	365	90	100	10	20	450	210				
2417	Bananze	1,200	200	60	40	50	800					
2418	Kalama	460	97	110	12	30	400	60				
2419	Ngugulo	280	70	70	11	28	430	50				
2420	Mwera	780	239	230	20	30	2,500	200				
2421	Kakindu	1,000	150	80	16	30	120	35				
2422	Mawanda	330	120	60	15	30	400	20				
2423	Kiwawu	600	52	30	15	4	120	8				
2424	Magonga	370	62	105	10	8	210	50				
2425	Luhumbu	700	80	50	10	20						
2426	Kasalaga	500	110	50	15	30	550	200				
Total		52,974	10,983	46,469	2,150	5,421	49,772	5,820	200	225	5	100
3101	Kateera	504	126	1	3	30	950					
3102	Kalangala A	900	150	30	20	60	500					
3103	Kalangala RC1	400	150	20	10	100	200	50				
3104	Masiriba	600	60	40	10	100	302	60				
3105	Katwe	470	82	420	32	110	120	15				
3106	Muyenje	690	138	12,000	200	3,000	500	50				
3107	Kayunga	800	120	20	10	500	2,000					
3108	Kabamba West	320	80	30	5	10	70	6				
3108	Kabamba East	280	40	15	0	10	10	3				
3109	Bukomero T/C	800	104	25	5	10	500					
3110	Namukoko	1,020	170	400	30	40	90	30				
3111	Kapogo	350	65	80	5	25	200	30				
3112	Mwezi B	480	73	6	50	56	120	25				
3113	Mwezi A											
3114	Kambizi	175	55	85	20	35	22					
3115	Ndibata	1,320	220			100	200	100				
3116	Bugomolwa	450	60	12	50	100	300					
3117	Nhwetwe T/C	200	42	1	20	50	250					
3118	Kilemeera/Tubuga	288	72	20	6	40	130	20				
3119												
3120	Bulagwe	222	94	23	10	80	300	30				
3121	Nkandwa B	500	98		20	30	150	1				
3122	Nakalama St. Kizito	200	130	50	10	20	500	100				
3123	Ntuti	540	100	80	60	100	55	100				
3124	Kikajjo	200	30	130	20	30	500	20				
3125	Lwanjolo	450	60	50	80	40	500	30				
3126	Kasega	380	200	20	20	80	800	30				
3127	Kirinda	600	107	70	30	40	100	30				
3128	Kizinga	500	130	50	20	70	50	60				
3129	Nyamiringa	210	50	1,800	40	60	560					
3130	Kapobe	330	80	210	10	120	430	35				
3131	Sseesa	300	40	100		70	40					
3132	Karubugu	400	90	1	70	80	100	40				

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
3133	Karobu	468	33	5	43	92	159	30				
3134	Kilyakozzi	350	80	7	5	20	100	4				
3135	Katoma	200	100	50	15	60	100					
3136	Kibiga	800	250	200	20	350	1,250	450				
3137	Gogonya	500	170	100	20	180	700	70				
3138	Bukasa	250	50	6	10	30	70					
3139	Kalagala/Kibooga	210	67	100	11	68	120	15				
3140												
3141	Bwizibwera B	1,000	250	10		12	950					
3142	Lufula	680	100	30		32	600					
3143	Hospital Village	390	90	11		24	120					
3144	Bwizibwera A	930	200	23	11	51	1,200	100				
3145	Sinde	280	40	3	15	20	150	10				
3146	Kawaawa	320	49	3	8	100	700	20				
3147	Nikokonjeru	1,400	200	31	10	200	500	50				
3148	Kyanka	300	52	15	6	20	160	16				
3149	Lwanya	400	70	20	8	30	500	100				
3150	Nakaziba	360	60	100	15	70	200	100				
3151	Kijunagwa	280	40	2	2	15	70	6				
3152	Nsanje	350	70	1,500		200	700	20				
3153	Buyonza	470	94	250	7	100	500					
3154												
3155	Kabuteruba	380	76	40	12	56	1,100	200				
3156	Kambugu	235	47	30	12	50	180	35				
3157	Kayonza	200	25			30	200	20				
3158	Kyarajoni	515	80	40,000	20	5,000	200					
3159	Katanabiro	136	70	20	6	70	300	10				
3160	Kagalama	480	120	2,500			200					
3161	Byerima B	380	60			20	400					
3162												
3163	Biiko	400	90	220	30	56	310	42				
3164	Buguluma	580	200		7	50	800					
3165	Nabwendo	600	80	200	150	250	400	450				
3166												
3167	Ndiraweru	1,100	400	67	20	230	1,200	150				
3168	Nakasozzi	350	60	15	10	15	100	6				
3169	Nakasengere	300	100	1	9	20	300	40				
3170	Natyole/Magala Mem	400	78	75	20	100	300	40				
3171	Muwanga	600	270	9	20	300	1,000	200				
3172	Kikonda	140	100	20	10	140	500	50				
3172	Buraza	126	66	8	6	100	1,000	4				
3173	Nakakabala	300	50	700	10	50	100					
3174	Kyambogo	123	58		5	70	150					
3175	Kipando/Buraza	750				4						
3176	Mujunza	356	90		10	50	500					
3177												
3178	Bananywa	1,500	300		10	20	2,000					
3179	Nsanbya	150	65			100	300	10				
3180	Kyakabuga	160	30			300	500					
3181												
3182												
3183	Bamusuta	850	102	29	10	150	1,200	20				
3184	Kayunga	280	40	5		52	130	7				
3185	Masodde	900	330	50	30	50	3,300	50			20	
3186	Vvumba	500	130	60		260	650	130				
3187	Kalapi	350	150	29	20	120	400	200				
3188	Kiyotibya	500	42	30	20	25	400	10				
3189	Kiwaguzi	500	130	20	10	30	650	25				
3190	Mulagi	350	80	65	36	28	53	6				
3191	Kipando	500	200	30	18	48	100	50				
3192	Bulyanzige	450	95	80	25	48	250	80				
3193	Gayaza West	586	65	2		20	100	8				
3194	Kasambya B	350	46		2	18	30		10			
3195	Nkondo	500	80		60	40	320	6				
3196	Butambuka	520	102		50	130	420	12				
3197	Kiryajijoby West	400	70		40	400	1,000	30				
3198	Luvuna	300	60			30	40					
3199	Kisala	750	150		12	43	450					
3200	Kyerere East	600	113		30	200	1,500	60				
Total		43,516	9,581	62,580	1,804	15,663	42,431	3,807	10	0	20	10

Source: Result of Inventory Survey for Community made by JICA, 1993.

APPENDIX D-15 Agricultural Land and Products in the Project Area

A. Average Agricultural Land Area of a Household

(As of 1995)

Item	District											
	Average			Mpigi			Mubende			Kiboga		
	Accessible land	Cultivated land	Cultivated rate	Accessible land	Cultivated land	Cultivated rate	Accessible land	Cultivated land	Cultivated rate	Accessible land	Cultivated land	Cultivated rate
Land area (acre)	5.52	2.58	47.05%	6.04	2.71	44.78%	4.84	2.57	53.04%	5.68	2.46	43.32%

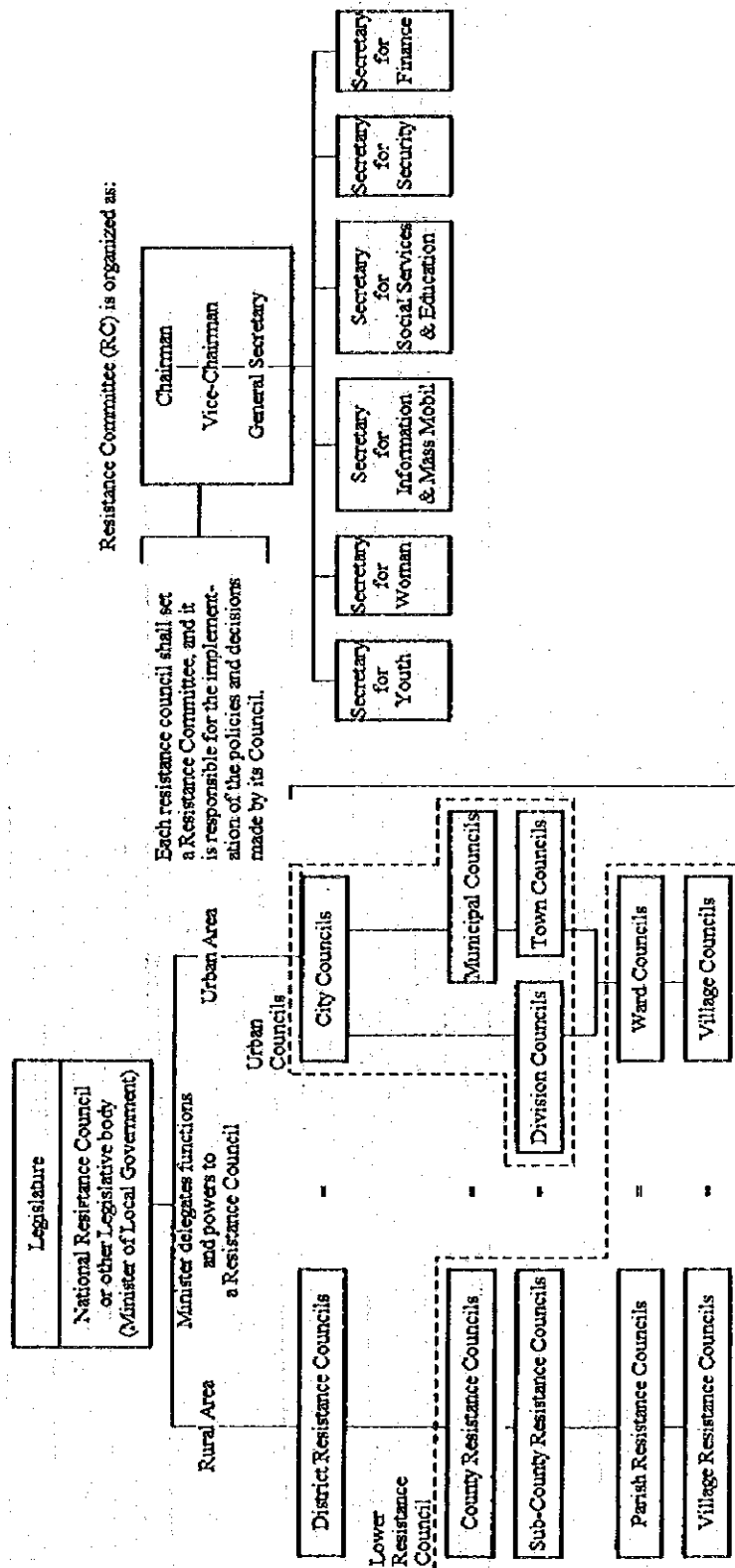
B. Agricultural Products

(As of 1995)

Kind of products	% of communities in 3 Districts to:			Number of communities to:			Number of communities to:			Number of communities to:		
	Grow	Use for themselves	Sell to markets	Grow	Use for themselves	Sell to markets	Grow	Use for themselves	Sell to markets	Grow	Use for themselves	Sell to markets
Total communities of 3 Districts sampled	285			-	-	-	-	-	-	-	-	-
Kassava	83.86%	85.26%	45.61%	78	80	48	86	87	41	75	76	41
Yams	50.88%	49.12%	16.84%	47	39	17	50	52	15	48	49	16
Sweet potatoes	95.09%	93.68%	50.88%	90	88	47	95	95	52	86	84	46
Irish potatoes	61.75%	58.95%	31.23%	49	48	23	78	69	44	49	51	22
Maize	95.44%	91.23%	70.88%	94	84	67	93	90	75	85	86	60
Sorghum	64.56%	26.32%	55.79%	67	15	61	69	38	61	48	22	37
Beans	96.49%	94.74%	77.54%	95	89	73	95	95	82	85	86	66
Finger millets	42.46%	37.54%	27.02%	45	32	30	33	32	25	43	43	22
Soya beans	40.70%	32.98%	25.96%	50	37	36	31	22	20	35	35	18
Matooke bananas	92.98%	90.18%	55.44%	94	88	43	88	90	64	81	79	51
Sweet bananas	79.65%	70.88%	48.77%	74	63	46	80	68	47	73	71	46
Cabbages	48.77%	48.07%	34.74%	56	47	45	52	51	43	31	39	11
Onions	46.67%	51.93%	28.07%	45	50	25	40	48	24	48	50	31
Tomatoes	70.18%	69.82%	60.35%	65	62	62	77	73	67	58	64	43
Pineapples	38.60%	39.30%	19.30%	16	20	10	48	46	25	46	46	20
Ground nuts	89.12%	86.32%	57.89%	88	80	55	88	87	57	78	79	53
Sim sim	9.12%	11.93%	8.07%	7	8	5	2	7	2	17	19	16
Cotton	5.26%	2.46%	7.02%	1	0	1	1	3	2	13	4	17
Coffee	89.82%	39.65%	84.21%	81	28	73	93	38	92	82	47	75
Tee	4.56%	9.82%	5.96%	3	8	5	9	11	10	1	9	2
Sugar cane	7.72%	7.02%	7.37%	3	3	3	11	9	10	8	8	8
Avocado	1.75%	1.75%	0.70%	3	3	1	2	2	1	0	0	0
Fruits	1.40%	1.40%	0.70%	2	2	2	2	2	0	0	0	0
Mangoes	0.70%	0.70%	0.35%	1	1	0	1	1	1	0	0	0
Jack fruits	2.46%	2.11%	0.70%	3	2	1	3	3	0	1	1	1
Peas	1.05%	1.05%	1.05%	3	3	3	0	0	0	0	0	0
Vanilla	2.46%	1.05%	2.11%	5	3	4	2	0	2	0	0	0
Passion fruits	4.21%	3.86%	2.81%	3	2	3	7	7	5	2	2	0
Tobacco	1.75%	0.35%	1.40%	2	0	2	0	0	0	3	1	2
Cowpeas	1.40%	1.40%	0.35%	1	1	0	0	0	0	3	3	1
Vegitable/greens	2.46%	2.11%	1.75%	5	4	4	2	2	1	0	0	0
Green peppers	0.35%	0.35%	0.35%	1	1	1	0	0	0	0	0	0
Silk	0.35%	0.00%	0.35%	1	0	1	0	0	0	0	0	0
Pumpkins	0.35%	0.35%	0.00%	0	0	0	1	1	0	0	0	0
Egg plants	0.35%	0.35%	0.00%	0	0	0	0	0	0	1	1	0
Total communities of all crops				1,178	991	797	1,239	1,129	868	1,102	1,055	705
Distribution rate (%) of crops				-	84.13%	67.66%	-	91.12%	70.06%	-	95.74%	63.97%

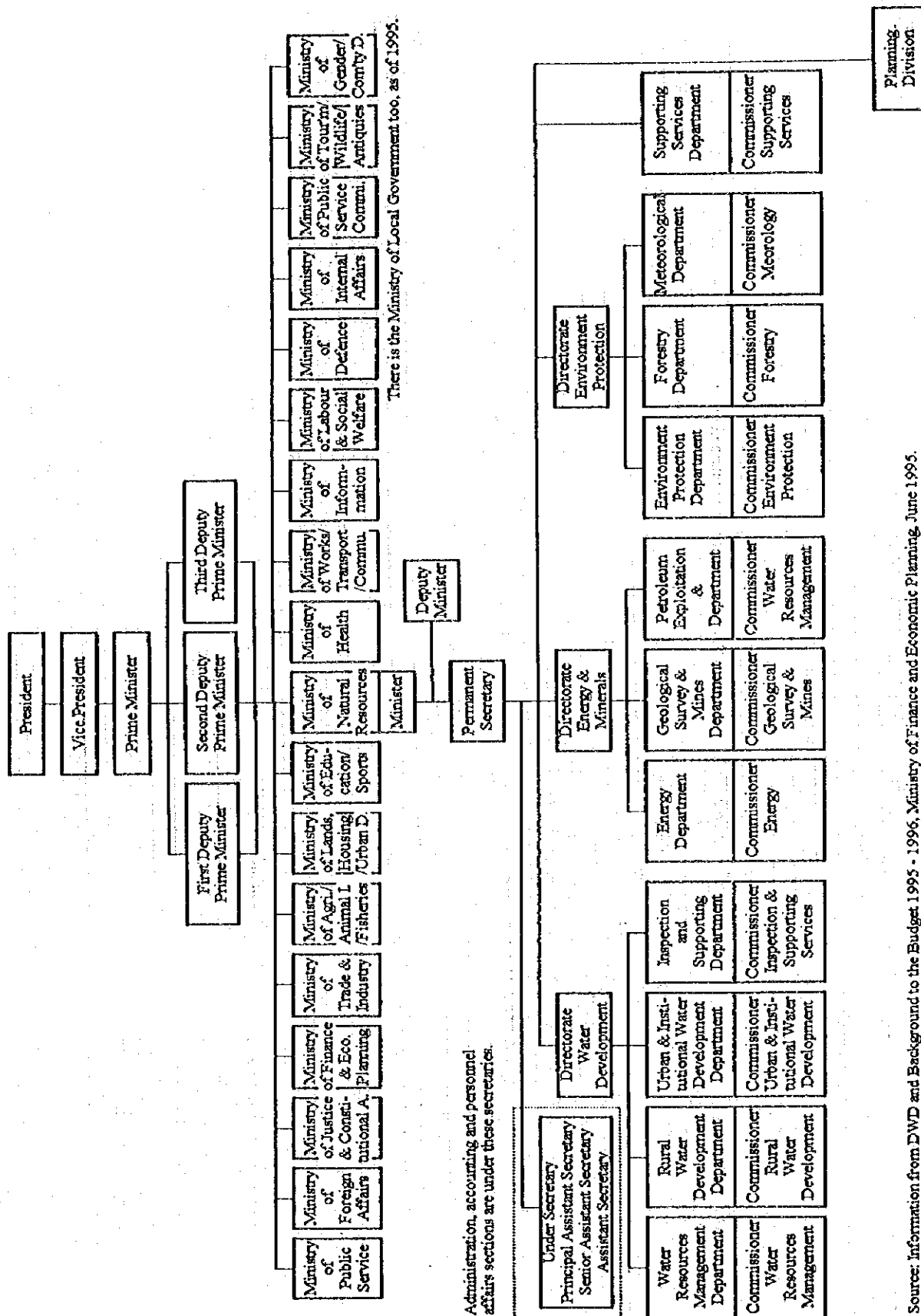
Source : Result of Inventory Survey for Community made by JICA, 1995.

APPENDIX D-16 Organization of Local Government

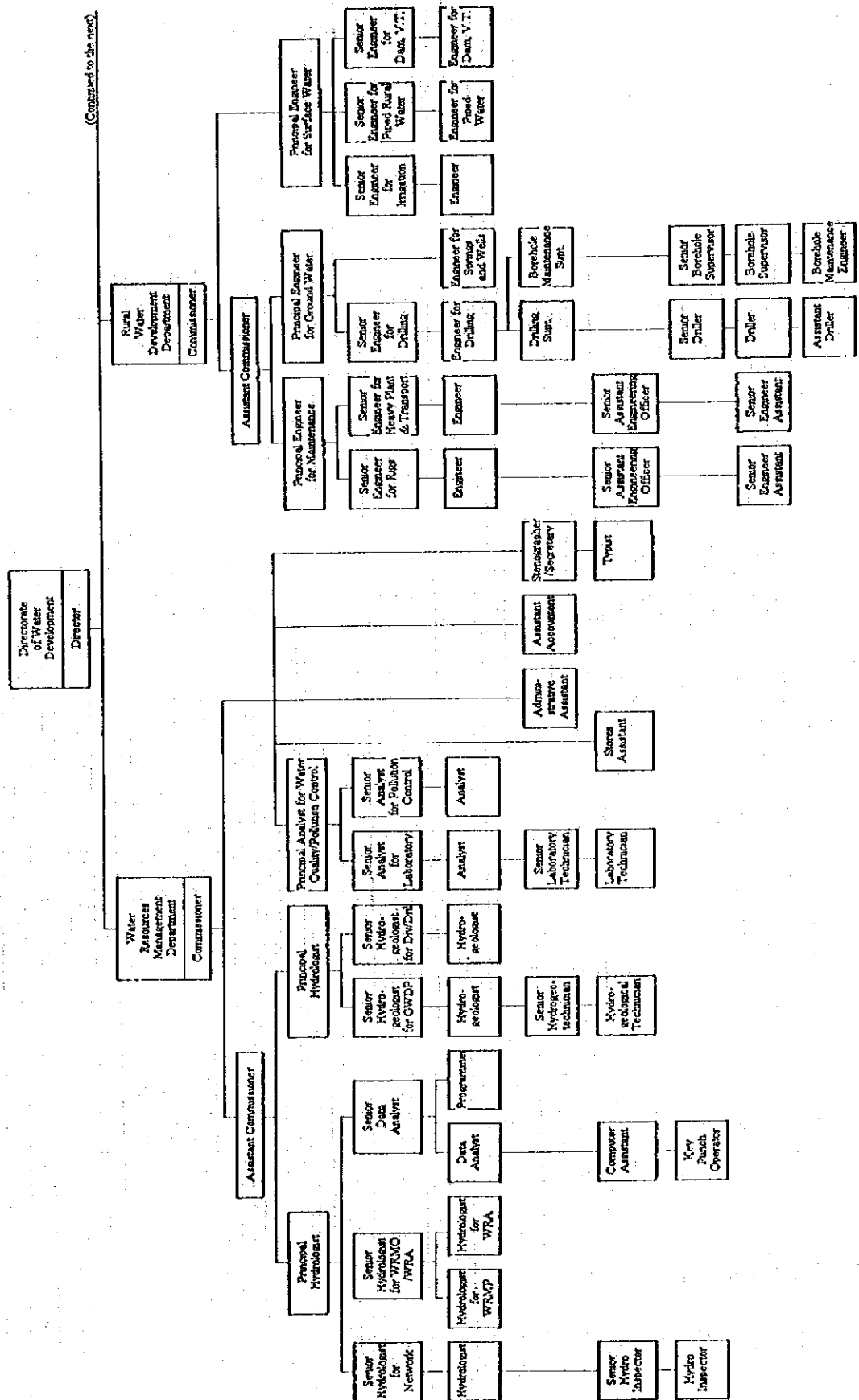


Source: Statute Supplement No. 8 to the Uganda Gazette No. 55 Volume LXXXV dated 31st December, 1993.
"The Local Governments (Resistance Councils) Statute, 1993", Ministry of Local Government.

APPENDIX D-17 Organization of the Government and the Ministry of Natural Resources

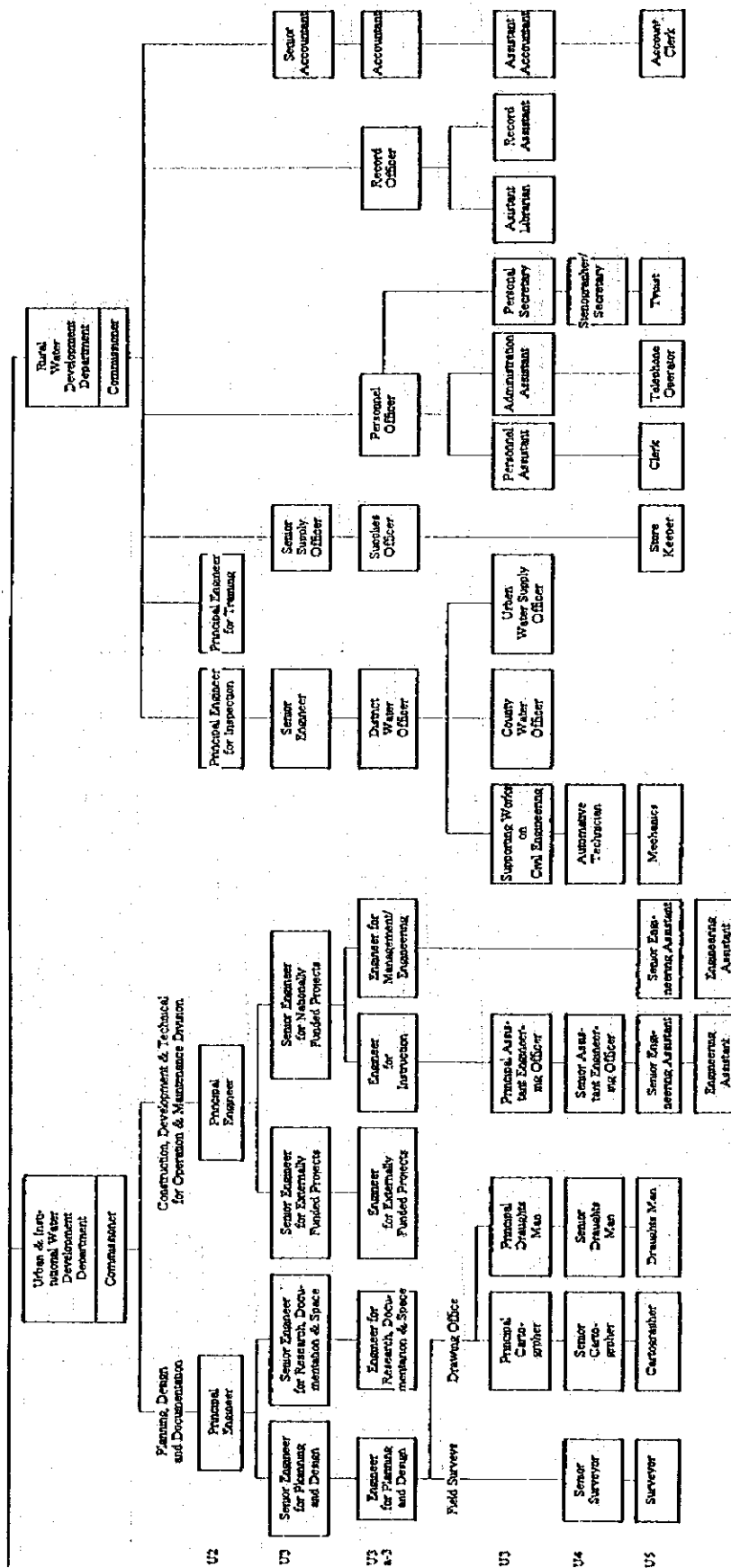


APPENDIX D-18 Organization of Directorate of Water Development (1/2)



Source : Organization Chart of DWD

APPENDIX D-18 Organization of Directorate of Water Development (2/2)



Source : Organization Chart of DWD

APPENDIX D-19 Local Government Budget Cycle

Stage Action	Responsibility centres	Output	Timing
1 Budget conference	Councillors, Chief Executive, Heads of Departments, Central Agencies, and NGOs.	List of Political Priorities/ Guidelines for Sectoral Planning.	April
2 Identification of sectoral priorities	Sectoral Committee members, Chief Executive, and Heads of Departments.	Sectoral Policy Guidelines, and Costed Sectoral Priorities	May
3 Review of costed priorities	Finance Committee, Chief Executive, Chief Finance Officer, and Heads of Departments.	Examination of Committee Proposals for Consistency with Policy and Resources.	June
4 Debate on Committees proposals	Finance Committee, District Development Committee, and Committee Chairman.	Integrated Committee Proposals/ Draft Budget.	July
5 Preparation of final draft budget	Chief Executive, Chief Finance Officer & Planner, and Economist.	Final Draft.	August
6 Preparation of budget for Council approval	Members of the Resistance Council, Chief Executive, and Heads of Departments.	Approved, Legal and binding Budget.	September
7 Budget implementation and monitoring	Councillors, Sectoral Committees, Chief Executive, Chief Finance Officer, and Heads of Departments.	Detailed Implementation Plans and Performance Reports, and Increased Accountability.	Continuous

Source : Decentralization Secretariat, Ministry of Local Government.

APPENDIX D-20 Public Finance

A. Current (US\$ billion)

Item	1993/94 Outturn	1994/95 Target	1994/95 Outturn	Deviation	Performance ratio (%)
Revenue and Grants	678.2	690.6	752.5	61.9	109.0%
Revenue	395.7	498.4	525.5	27.1	105.4%
Grants	282.5	192.2	227.0	34.8	118.1%
Expenditure	851.4	841.3	866.6	25.3	103.0%
Recurrent expenditure	416.8	441.5	486.0	44.6	110.1%
Development expenditure	431.9	397.8	368.8	-29.0	92.7%
Net lending	2.8	2.0	11.7	9.7	585.5%
Overall deficit					
Commitment	-173.3	-150.7	-114.1	36.6	75.7%
Excluding grants	-455.7	-342.9	-341.0	1.8	99.5%
Change in arrears	-51.0	-37.2	-23.5	13.7	63.1%
Adjustment to cash	9.0	0.0	3.1	3.1	-
Overall deficit (cash)	-215.3	-187.9	-134.4	53.4	71.6%
Financing	216.3	187.9	134.4	-53.4	71.6%
Foreign	243.2	234.0	233.8	-0.1	99.9%
Domestic	-27.0	-46.1	-99.4	-53.3	215.7%
Banking system	-36.7	-51.9	-99.4	-47.5	191.4%
Non-bank	9.7	5.8	0.0	-5.8	0.0%
Share rate (%) in GDP					
Revenue	9.7%		10.7%		
Expenditure	20.9%		17.9%		
Deficit (commitment)	-4.3%		-2.4%		
Overall deficit	-11.3%		-7.0%		
Excluding grants	-5.3%		-2.8%		
Deficit (cash basis)					

B. Target

Item	1995/96	1996/97	1997/98	Annual growth rate (%)
Resources (Revenue)	996.0	1,071.0	1,176.0	8.7%
Recurrent revenue	604.0	702.0	796.0	14.8%
Net foreign financing	452.0	420.0	445.0	-0.8%
Domestic financing	-60.0	-51.0	-65.0	4.1%
Expenditure	996.0	1,071.0	1,185.0	9.1%
Wages	160.0	220.0	260.0	27.5%
Interest	72.0	68.0	56.0	-11.8%
Non-wage recurrent	307.0	323.0	365.0	9.0%
Ministrial expenditure	272.0	278.0	315.0	7.6%
Statutory expenditure	12.0	16.0	18.0	22.5%
Other expenditure	23.0	29.0	32.0	18.0%
Domestic development	63.0	74.0	80.0	12.7%
Foreign expenditure	362.0	367.0	390.0	3.8%
Others	32.0	19.0	34.0	3.1%

Source:

Background to the Budget 1995 - 1996, - Economic Performance 1994 - 1995 and Medium Term Strategy 1995/96 - 1997/98 - , Ministry of Finance and Economic Planning, June 1995.

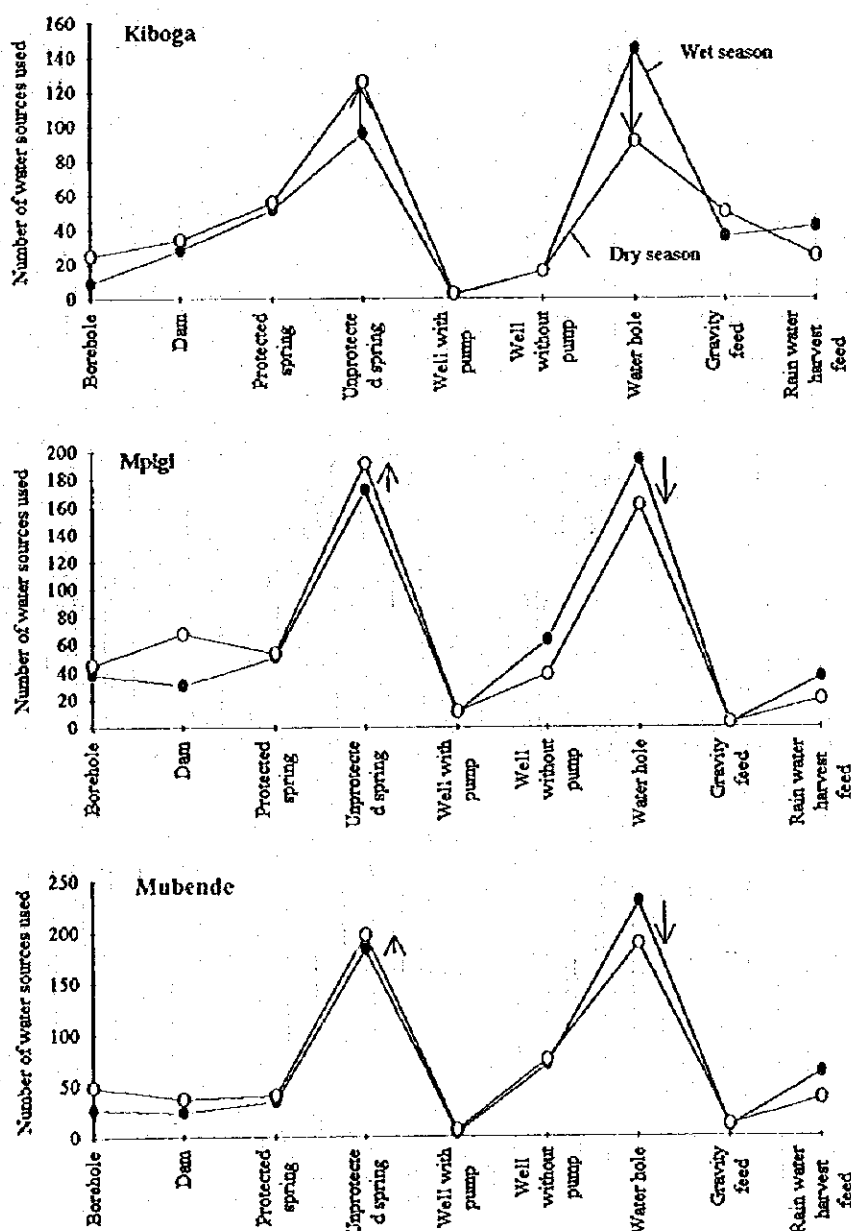
APPENDIX D-21 Type of Water Sources and Time Spent to and at Water Sources in Wet and Dry Seasons

A. In Figures

Type of Water Sources	District					
	Kiboga		Mpigi		Mubende	
	Wet season	Dry season	Wet season	Dry season	Wet season	Dry season
Borehole	9	25	38	45	27	48
Dam	28	34	30	68	24	36
Protected spring	52	56	51	54	34	40
Unprotected spring	96	126	172	191	184	198
Well with pump	2	3	10	11	3	6
Well without pump	16	16	63	38	70	75
Water hole	145	91	194	161	231	189
Gravity feed	36	50	2	3	9	11
Rain water harvest feed	42	25	36	20	62	36
Time spent to water source	35	80	44	78	33	74
Time spent at water source	8	19	12	18	9	20
Total time spent to take water	44	99	56	96	43	94
Average in 3 districts	Wet season: 48		Dry season: 96			

Source: Result of Inventory Survey for Household made by JICA Study Team, 1995.

B. Patterns of Water Sources Used by Season



APPENDIX D-22 Main Water Collector in Wet Season

Age group	Gender and priority order (persons)						Total by			Female share rate by age group			Female share rate by age group in total (%)
	Female			Male			priority order group			by priority order group (%)			
	1st	2nd	3rd	1st	2nd	3rd	1st	2nd	3rd	1st	2nd	3rd	
Kiboga													
0 - 5	6	3	0	0	1	1	6	4	1	100.0%	75.0%	0.0%	81.8%
6 - 10	79	22	6	28	25	12	107	47	18	73.8%	46.8%	33.3%	62.2%
11 - 15	34	33	14	31	59	13	65	92	27	52.3%	35.9%	51.9%	44.0%
16 - 40	132	60	25	65	38	16	197	98	41	67.0%	61.2%	61.0%	64.6%
Over 40	23	9	8	24	7	4	47	16	12	48.9%	56.3%	66.7%	53.3%
Total	274	127	53	148	130	46	422	257	99	64.9%	49.4%	53.5%	
Child share rate (0-10) by gender by priority group (%)	31.0%	19.7%	11.3%	18.9%	20.0%	28.3%	26.8%	19.8%	19.2%	Child share rate (0-10) to the total water collector:			23.5%
Mpigi													
0 - 5	6	3	2	7	4	3	13	7	5	46.2%	42.9%	40.0%	44.0%
6 - 10	72	47	22	68	45	16	140	92	38	51.4%	51.1%	57.9%	52.2%
11 - 15	61	58	21	56	70	23	117	128	44	52.1%	45.3%	47.7%	48.4%
16 - 40	150	87	35	104	57	26	254	144	61	59.1%	60.4%	57.4%	59.3%
Over 40	30	14	10	37	7	11	67	21	21	44.8%	66.7%	47.6%	49.5%
Total	319	209	90	272	183	79	591	392	169	54.0%	53.3%	53.3%	
Child share rate (0-10) by gender by priority group (%)	24.5%	23.9%	26.7%	27.6%	26.8%	24.1%	25.9%	25.3%	25.4%	Child share rate (0-10) to the total water collector:			25.6%
Mubende													
0 - 5	11	3	5	2	3	1	13	6	6	84.6%	50.0%	83.3%	76.0%
6 - 10	99	46	22	65	60	16	164	106	38	60.4%	43.4%	57.9%	51.2%
11 - 15	41	53	13	57	97	23	98	150	36	41.8%	35.3%	36.1%	37.7%
16 - 40	205	71	49	92	71	17	297	142	66	69.0%	50.0%	74.2%	64.4%
Over 40	33	19	20	34	10	8	67	29	28	49.3%	65.5%	71.4%	58.1%
Total	389	192	109	250	241	65	639	433	174	60.9%	44.3%	62.6%	
Child share rate (0-10) by gender by priority group (%)	28.3%	25.5%	24.8%	26.8%	26.1%	26.2%	27.7%	25.9%	25.3%	Child share rate (0-10) to the total water collector:			26.7%

Source : Result of Inventory Survey for Household made by JICA Study Team, 1995.

APPENDIX D-23 Estimation of People's Capability to Pay for Water

(A) Times/Day to Collect Water and Number of 20 Ltrs Jerrycans Used/Day

Item	District		
	Kiboga	Mpigi	Mubende
Times/day to collect water	2.5	2.8	2.6
No. of 20 ltr jerry cans used/d	3.6	4.5	4.3

(B) Amount of Actual Payment or Willingness to Pay for Water

Amount group (US\$)	Number of samples by District								
	Kiboga			Mpigi			Mubende		
	Actually paid amount to sources	Amount of willingness to pay	Actually paid amount to water vendor	Actually paid amount to sources	Amount of willingness to pay	Actually paid amount to water vendor	Actually paid amount to sources	Amount of willingness to pay	Actually paid amount to water vendor
0	384	133	-	379	92	-	564	156	-
5	-	6	-	-	15	-	-	17	-
10	1	26	-	2	23	-	0	41	-
15	-	2	0	-	4	1	-	1	0
20	0	32	0	3	38	1	1	45	1
25	0	30	0	2	46	3	1	36	1
30	-	7	0	-	5	0	-	8	1
40	-	-	0	-	-	0	-	-	1
50	11	149	6	13	241	16	4	212	9
55	-	0	-	-	0	-	-	1	-
80	-	-	0	-	-	1	-	-	0
90	-	0	0	-	1	0	-	0	1
100	16	41	30	41	72	74	17	79	50
125	-	0	-	-	0	-	-	1	-
150	0	1	4	12	3	21	9	9	15
200	7	3	8	34	26	61	6	17	36
250	0	0	1	0	0	1	2	2	5
300	0	1	5	5	2	4	0	2	1
400	0	-	0	1	-	2	0	-	1
500	2	1	6	2	1	2	4	2	1
700	-	-	1	-	-	0	-	-	0
1,000	-	-	0	-	-	1	-	-	0
Total samples	458	432	61	526	569	188	645	629	122
Weighted mean	10	35	180	31	50	149	11	45	144
(Excluded 0 US\$)	62			111			86		
(US\$/20 ltrs)									

Source : Result of Inventory Survey for Household made by JICA Study Team, 1995.

(Note) - : No samples.

APPENDIX D-24 Income Distribution of Average III in the Project Area

APPENDIX D-24

(As of 1995)

Expenditure	Average		Mpiji		Mubende		Kiboga	
	Amount (US\$)	Share rate (%)	Amount (US\$)	Share rate (%)	Amount (US\$)	Share rate (%)	Amount (US\$)	Share rate (%)
A. Average in whole communities sampled								
Tax	22,926	3.29%	22,450	2.57%	25,691	4.09%	20,636	3.52%
Education/school fees	138,174	19.85%	173,811	19.87%	125,940	20.06%	114,772	19.59%
Medical fees	181,286	26.04%	196,735	22.49%	147,526	23.49%	199,596	34.07%
Western	121,955	17.52%	134,677	15.39%	90,005	14.33%	141,183	24.10%
Traditional	59,331	8.52%	62,059	7.09%	57,521	9.16%	58,413	9.97%
Food/beverage	232,202	33.35%	302,094	34.53%	210,161	33.47%	184,352	31.47%
Water	49,755	7.15%	86,383	9.87%	47,168	7.51%	15,714	2.68%
Community activities	27,643	3.97%	27,073	3.09%	36,063	5.74%	19,793	3.38%
Others	44,237	6.35%	66,411	7.59%	35,365	5.63%	30,935	5.28%
Luxury	323	0.05%	553	0.06%	417	0.07%	0	0.00%
Clothing	9,918	1.42%	8,936	1.02%	16,667	2.65%	4,152	0.71%
Housing	797	0.11%	1,536	0.18%	313	0.05%	543	0.09%
Miscellaneous	33,198	4.77%	55,385	6.33%	17,969	2.86%	26,239	4.48%
Total Annual income	666,223	100.00%	874,957	100.00%	627,913	100.00%	585,798	100.00%
Average monthly income	55,019		72,913		52,326		48,816	
B. Average in communities of population lower than 240								
Tax	21,014	6.01%	18,250	4.89%	21,000	6.13%	23,792	7.16%
Education/school fees	60,946	17.44%	63,888	17.10%	38,200	11.16%	80,750	24.31%
Medical fees	85,556	24.49%	75,500	20.21%	87,000	25.41%	94,167	28.35%
Western	61,764	17.68%	54,875	14.69%	75,000	21.90%	55,417	16.68%
Traditional	23,792	6.81%	20,625	5.52%	12,000	3.50%	38,750	11.66%
Food/beverage	107,900	30.88%	115,250	30.86%	147,200	42.99%	61,250	18.44%
Water	24,025	6.88%	51,875	13.89%	200	0.06%	20,000	6.02%
Community activities	20,406	5.84%	11,250	3.01%	24,800	7.24%	25,167	7.58%
Others	29,528	8.45%	37,500	10.04%	24,000	7.01%	27,083	8.15%
Luxury	0	0.00%	0	0.00%	0	0.00%	0	0.00%
Clothing	20,500	5.87%	37,500	10.04%	24,000	7.01%	0	0.00%
Housing	0	0.00%	0	0.00%	0	0.00%	0	0.00%
Miscellaneous	9,028	2.58%	0	0.00%	0	0.00%	27,083	8.15%
Total Annual income	349,374	100.00%	373,513	100.00%	342,400	100.00%	332,208	100.00%
Average monthly income	29,114		31,126		28,533		27,684	
C. Average in communities of population between 201 - 600								
Tax	23,863	3.29%	24,334	2.51%	26,717	4.30%	20,539	3.50%
Education/school fees	154,396	21.28%	233,785	24.13%	123,567	19.88%	105,836	18.03%
Medical fees	200,741	27.66%	229,530	23.70%	156,617	25.20%	216,075	36.81%
Western	132,836	18.30%	155,558	16.06%	92,250	14.84%	150,700	25.67%
Traditional	67,904	9.36%	73,972	7.64%	64,367	10.36%	65,375	11.14%
Food/beverage	235,677	32.48%	313,319	32.35%	220,050	35.41%	173,663	29.59%
Water	29,369	4.05%	55,936	5.77%	14,800	2.38%	17,372	2.96%
Community activities	30,784	4.24%	31,102	3.21%	39,358	6.33%	21,891	3.73%
Others	50,854	7.01%	80,649	8.39%	40,333	6.49%	31,578	5.38%
Luxury	252	0.03%	755	0.08%	0	0.00%	0	0.00%
Clothing	10,690	1.47%	9,431	0.97%	16,667	2.68%	5,969	1.02%
Housing	430	0.06%	8	0.00%	500	0.08%	781	0.13%
Miscellaneous	39,483	5.44%	70,453	7.27%	23,167	3.73%	24,818	4.23%
Total Annual income	725,663	100.00%	968,655	100.00%	621,442	100.00%	586,953	100.00%
Average monthly income	60,472		80,721		51,787		48,913	
D. Average in communities of population between 601 - 1,000								
Tax	19,824	2.61%	18,657	2.42%	22,678	4.05%	18,136	1.92%
Education/school fees	158,937	20.93%	110,548	14.33%	153,537	27.39%	212,727	22.49%
Medical fees	192,501	25.35%	179,667	23.29%	140,019	24.98%	257,818	27.26%
Western	135,778	17.88%	120,932	15.68%	94,019	16.77%	192,364	20.34%
Traditional	56,723	7.47%	58,714	7.61%	46,000	8.21%	65,455	6.92%
Food/beverage	280,357	36.92%	322,781	41.83%	142,926	25.50%	375,364	39.69%
Water	44,017	5.80%	68,286	8.85%	49,411	8.81%	14,353	1.52%
Community activities	29,173	3.81%	33,190	4.30%	35,148	6.27%	19,182	2.03%
Others	34,491	4.54%	38,438	4.98%	16,852	3.01%	48,182	5.09%
Luxury	494	0.07%	0	0.00%	1,481	0.26%	0	0.00%
Clothing	2,240	0.29%	1,905	0.25%	4,815	0.86%	0	0.00%
Housing	2,265	0.30%	6,857	0.89%	0	0.00%	0	0.00%
Miscellaneous	29,471	3.88%	29,676	3.85%	10,556	1.88%	48,182	5.09%
Total Annual income	759,300	100.00%	771,567	100.00%	560,571	100.00%	945,763	100.00%
Average monthly income	63,275		64,297		46,714		78,814	
E. Average communities of population over 1,000								
Tax	24,072	2.45%	23,567	2.41%	27,250	1.82%	21,400	4.59%
Education/school fees	89,093	9.08%	92,917	9.52%	83,063	5.54%	91,300	19.57%
Medical fees	162,311	16.54%	162,583	16.65%	163,750	10.91%	160,600	34.42%
Western	103,422	10.54%	119,667	12.26%	73,000	4.86%	117,600	25.20%
Traditional	58,889	6.00%	42,917	4.40%	90,750	6.05%	43,000	9.22%
Food/beverage	380,217	38.75%	340,875	34.91%	619,375	41.28%	180,400	38.66%
Water	254,828	25.97%	275,533	28.22%	487,750	32.50%	1,200	0.26%
Community activities	10,067	1.03%	9,125	0.93%	19,375	1.29%	1,700	0.36%
Others	60,583	6.17%	71,750	7.35%	100,000	6.66%	10,000	2.14%
Luxury	333	0.03%	1,000	0.10%	0	0.00%	0	0.00%
Clothing	29,167	2.97%	0	0.00%	87,500	5.83%	0	0.00%
Housing	0	0.00%	0	0.00%	0	0.00%	0	0.00%
Miscellaneous	31,083	3.17%	70,750	7.25%	12,500	0.83%	10,000	2.14%
Total Annual income	981,171	100.00%	976,350	100.00%	1,500,563	100.00%	466,600	100.00%
Average monthly income	81,764		81,363		125,047		38,883	

Source: Result of Inventory Survey for Community made by JICA, 1995.

APPENDIX D-25 Annual Disbursement of Construction Cost, O/M and Replacement Costs

(A) Annual allocation of construction works (Number of places)

Cost item	Distribution				Total
	1997 Quantity	1998 Quantity	1999 Quantity	2000 Quantity	
Borehole	46	138	131	131	446
Borehole (dry)	9	30	42	53	134
Protected spring	10	60	63	54	187
Dugwell/pump	7	30	8	16	61
Valley dam	1	4	1	7	13
Level II works	0	1	0	0	1
Intervention (%)	10%	30%	30%	30%	100%
Sub total	73	263	245	261	842
Engineering fee (%)	40%	20%	20%	20%	100%
Administration (%)	19%	27%	27%	27%	100%

(B) Unit cost per construction works (US\$1,000)

Cost item	Labour cost		Material cost		Equipment cost		Total cost		
	L.C.	F.C.	L.C.	F.C.	L.C.	F.C.	L.C.	F.C.	Total
Borehole	0.4	0.0	1.9	6.9	0.0	5.3	2.3	12.2	14.5
Borehole (dry)	0.2	0.0	0.0	5.2	0.0	3.8	0.2	9.0	9.2
Protected spring	0.6	0.0	0.5	0.0	0.0	1.3	1.0	1.3	2.3
Dugwell/pump	0.5	0.0	0.8	1.3	0.0	1.2	1.3	2.4	3.8
Valley dam	7.2	0.0	23.2	20.1	0.0	25.3	30.4	45.4	75.9
Level II works	5.1	0.0	19.6	173.6	0.0	100.5	24.7	274.1	298.8
Intervention	251.0	0.0	47.0	0.0	0.0	148.0	298.0	148.0	446.0

(C) Annual allocation of construction cost (US\$1,000)

Cost item	1997			1998			1999			2000			Total		
	L.C.	F.C.	Total	L.C.	F.C.	Total	L.C.	F.C.	Total	L.C.	F.C.	Total	L.C.	F.C.	Total
Borehole	106	561	667	317	1,684	2,001	301	1,598	1,900	301	1,598	1,900	1,026	5,441	6,467
Borehole (dry)	2	81	83	6	271	277	8	380	388	10	480	490	26	1,212	1,238
Protected spring	10	13	23	61	77	138	64	80	145	55	69	124	191	239	430
Dugwell/pump	9	17	26	40	73	113	11	19	30	21	39	60	82	148	230
Valley dam	30	45	76	122	182	303	30	45	76	213	318	531	396	591	986
Level II works	0	0	0	25	274	299	0	0	0	0	0	0	25	274	299
Equipment supply	0	171	171	0	0	0	0	0	0	0	0	0	0	171	171
Intervention	30	15	45	89	44	134	89	44	134	89	44	134	298	148	446
Sub total	187	904	1,091	661	2,605	3,265	504	2,168	2,672	691	2,548	3,239	2,013	8,224	10,267
Engineering fee	0	411	411	0	205	205	0	205	205	0	205	205	0	1,027	1,027
Administration	98	0	98	139	0	139	139	0	139	139	0	139	513	0	513
Contingency	28	131	160	80	281	361	64	237	302	83	275	358	256	925	1,181
Total Financial cost	313	1,446	1,759	879	3,091	3,970	707	2,611	3,318	912	3,029	3,941	2,812	10,176	12,988
Economic cost	288	1,446	1,734	790	3,091	3,881	637	2,611	3,247	819	3,029	3,848	2,534	10,176	12,710

(D) Unit cost for replacement (US\$)

Cost item		Labour cost		Material cost		Equipment cost		Total cost		
		L.C.	F.C.	L.C.	F.C.	L.C.	F.C.	L.C.	F.C.	Total
Pumps for wells	Financial cost	50	0	190	1,710	0	50	240	1,760	2,000
	Economic cost	38	0	176	1,710	0	50	214	1,760	1,974
Pumps for Level II works	Financial cost	250	0	925	8,325	0	500	1,175	8,825	10,000
	Economic cost	191	0	857	8,325	0	500	1,048	8,825	9,873
Diesel Generator	Financial cost	600	0	4,900	44,100	0	400	5,500	44,500	50,000
	Economic cost	459	0	4,541	44,100	0	400	5,000	44,500	49,500

(E) Annual unit cost for operation and maintenance (US\$)

Cost item		Labour cost		Material cost		Equipment cost		Total cost		
		L.C.	F.C.	L.C.	F.C.	L.C.	F.C.	L.C.	F.C.	Total
Pumps for wells	Financial cost	50.0	0.0	9.5	85.5	0.0	2.5	59.5	88.0	147.5
	Economic cost	38.3	0.0	8.8	85.5	0.0	2.5	47.1	88.0	135.1
Pumps for Level II works	Financial cost	250.0	0.0	46.3	416.2	0.0	25.0	296.3	441.2	737.5
	Economic cost	191.3	0.0	42.9	416.2	0.0	25.0	234.2	441.2	675.4
Diesel Generator	Financial cost	600.0	0.0	245.0	2,205.0	0.0	20.0	845.0	2,225.0	3,070.0
	Economic cost	459.0	0.0	227.0	2,205.0	0.0	20.0	686.0	2,225.0	2,911.0

(F) Annual running cost for Level II Works (US\$)

Cost item	Labour cost		Material cost		Total cost		
	L.C.	F.C.	L.C.	F.C.	L.C.	F.C.	Total
Financial cost	5,000	0	180	1,620	5,180	1,620	6,800
Economic cost	3,825	0	167	1,620	3,992	1,620	5,612

APPENDIX D-26 Revenue for Operation and Maintenance as Financial Benefit

(A) Existing -paid-amount basis

District	Population in a community		Household (HH) to be served			Amount to be paid		Annual revenue :		Effective revenue (90%) (US\$1,000)
	As of 1995	As of 2005	Service population	Family size	Number of HH	per 20 ltr jerrycan (US\$.)	per HH per month (US\$.)	in US\$ (US\$ Mil.)	in US\$ (US\$1,000)	
Mpigi District	67,478	87,650	77,485	4.68	16,557	31	4,185	843	826	744
Mubende District	53,538	72,723	61,535	4.82	12,767	11	1,419	220	216	194
Kiboga District	43,988	58,488	39,256	4.54	8,647	10	1,080	114	111	100
Total/average	165,004	218,861	178,276		37,970	19	2,547	1,177	1,154	1,039

(Note) 1. Supplied water : 18 (Litre/person per day)

(B) Willingness-to-pay basis

District	Population in a community		Household (HH) to be served			Amount to be paid		Annual revenue :		Effective revenue (90%) (US\$1,000)
	As of 1995	As of 2005	Service population	Family size	Number of HH	per 20 ltr jerrycan (US\$.)	per HH per month (US\$.)	in US\$ (US\$ Mil.)	in US\$ (US\$1,000)	
Mpigi District	67,478	87,650	77,485	4.68	16,557	50	6,750	1,360	1,333	1,200
Mubende District	53,538	72,723	61,535	4.82	12,767	45	5,805	902	884	796
Kiboga District	43,988	58,488	39,256	4.54	8,647	35	3,780	398	390	351
Total/average	165,004	218,861	178,276		37,970	45	5,770	2,659	2,607	2,346

(Note) 1. Supplied water : 18 (Litre/person per day)

(C) Probable basis (1)

District	Population in a community		Household (HH) to be served			Amount to be paid		Annual revenue :		Effective revenue (90%) (US\$1,000)
	As of 1995	As of 2005	Service population	Family size	Number of HH	per 20 ltr jerrycan (US\$.)	per HH per month (US\$.)	in US\$ (US\$ Mil.)	in US\$ (US\$1,000)	
Mpigi District	67,478	87,650	77,485	4.68	16,557	7	1,000	199	195	175
Mubende District	53,538	72,723	61,535	4.82	12,767	7	1,000	153	150	133
Kiboga District	43,988	58,488	39,256	4.54	8,647	7	1,000	104	102	92
Total/average	165,004	218,861	178,276		37,970	7	1,000	456	447	402

(Note) 1. Supplied water : 20 (Litre/person per day)

(D) Probable basis (2)

District	Population in a community		Household (HH) to be served			Amount to be paid		Annual revenue :		Effective revenue (90%) (US\$1,000)
	As of 1995	As of 2005	Service population	Family size	Number of HH	per 20 ltr jerrycan (US\$.)	per HH per month (US\$.)	in US\$ (US\$ Mil.)	in US\$ (US\$1,000)	
Mpigi District	67,478	87,650	77,485	4.68	16,557	11	1,500	298	292	263
Mubende District	53,538	72,723	61,535	4.82	12,767	10	1,500	230	225	203
Kiboga District	43,988	58,488	39,256	4.54	8,647	11	1,500	156	153	137
Total/average	165,004	218,861	178,276		37,970	11	1,500	683	670	603

(Note) 1. Supplied water : 20 (Litre/person per day)

(E) Probable basis (3)

District	Population in a community		Household (HH) to be served			Amount to be paid		Annual revenue :		Effective revenue (90%) (US\$1,000)
	As of 1995	As of 2005	Service population	Family size	Number of HH	per 20 ltr jerrycan (US\$.)	per HH per month (US\$.)	in US\$ (US\$ Mil.)	in US\$ (US\$1,000)	
Mpigi District	67,478	87,650	77,485	4.68	16,557	14	2,000	397	390	351
Mubende District	53,538	72,723	61,535	4.82	12,767	14	2,000	306	300	270
Kiboga District	43,988	58,488	39,256	4.54	8,647	15	2,000	208	203	183
Total/average	165,004	218,861	178,276		37,970	14	2,000	911	893	804

(Note) 1. Supplied water : 20 (Litre/person per day)

APPENDIX D-27 Financial Internal Rate of Return

Year in Year order	Financial cost		Financial benefit in each beneficiary's case										(US\$1,000)	
	Const- ruction cost	O/M Replace- ment cost	Case A		Case B		Case C		Case D		Case E		Cash Revenue	Cash balance
			Total Revenue	Cash balance	Revenue	Cash balance	Revenue	Cash balance	Revenue	Cash balance	Revenue	Cash balance		
1	1997	0	1,759	0	1,759	0	1,759	0	1,759	0	1,759	0	0	-1,759
2	1998	8	3,970	8	3,978	115	3,862	45	3,717	67	3,650	89	89	-3,889
3	1999	33	3,318	33	3,351	873	2,964	150	3,202	225	3,027	299	299	-3,052
4	2000	68	3,941	68	4,009	628	3,380	243	3,137	365	2,772	486	486	-3,522
5	2001	91	0	91	928	928	837	359	2,005	539	1,466	718	718	628
6	2002	91	0	91	955	864	891	369	2,065	554	1,511	739	739	648
7	2003	91	0	91	982	891	812	380	2,127	570	1,557	760	760	669
8	2004	91	108	108	1,010	812	2,281	391	2,082	586	1,695	782	782	583
9	2005	91	394	394	1,039	554	2,346	402	1,861	603	1,759	804	804	319
10	2006	91	280	280	1,039	668	2,346	402	1,975	603	1,872	804	804	433
11	2007	91	308	308	1,039	640	2,346	402	1,947	603	1,904	804	804	405
12	2008	91	0	91	1,039	948	2,346	402	2,255	603	2,153	804	804	713
13	2009	91	0	91	1,039	948	2,346	402	2,255	603	2,153	804	804	713
14	2010	91	0	91	1,039	948	2,346	402	2,255	603	2,153	804	804	713
15	2011	91	108	108	1,039	840	2,346	402	2,147	603	2,045	804	804	605
16	2012	91	394	394	1,039	554	2,346	402	1,861	603	1,822	804	804	319
17	2013	91	330	330	1,039	618	2,346	402	1,925	603	1,822	804	804	385
18	2014	91	308	308	1,039	640	2,346	402	1,947	603	2,045	804	804	405
19	2015	91	0	91	1,039	948	2,346	402	2,255	603	2,153	804	804	713
20	2016	91	0	91	1,039	948	2,346	402	2,255	603	2,153	804	804	713
21	2017	91	0	91	1,039	948	2,346	402	2,255	603	2,153	804	804	713
22	2018	91	108	108	1,039	840	2,346	402	2,147	603	2,045	804	804	605
23	2019	91	394	394	1,039	554	2,346	402	1,861	603	1,822	804	804	319
24	2020	91	330	330	1,039	618	2,346	402	1,925	603	1,822	804	804	383
25	2021	91	308	308	1,039	640	2,346	402	1,947	603	2,045	804	804	405
26	2022	91	0	91	1,039	948	2,346	402	2,255	603	2,153	804	804	713
27	2023	91	0	91	1,039	948	2,346	402	2,255	603	2,153	804	804	713
28	2024	91	0	91	1,039	948	2,346	402	2,255	603	2,153	804	804	713
29	2025	91	108	108	1,039	840	2,346	402	2,147	603	2,045	804	804	605
30	2026	91	394	394	1,039	554	2,346	402	1,861	603	1,822	804	804	319
31	2027	91	330	330	1,039	618	2,346	402	1,925	603	1,822	804	804	383
32	2028	91	358	358	1,039	590	2,346	402	1,897	603	1,54	804	804	355
33	2029	91	0	91	1,039	948	2,346	402	2,255	603	2,153	804	804	713
34	2030	91	0	91	1,039	948	2,346	402	2,255	603	2,153	804	804	713
35	2031	91	0	91	1,039	948	2,346	402	2,255	603	2,153	804	804	713
Total			12,988	2,824	4,560	20,372	32,019	11,647	72,298	51,925	12,389	18,583	24,777	4,405
In the condition of discount rate at 12 %:														
Present value:			10,791	5,962	4,829	13,462	2,671	2,307	8,484	3,460	4,614	6,177		
Financial internal rate of return (FIRR):					4.73%	15.52%		-4.70%		-0.61%				
B/C					0.55	-2.79		0.86		-0.41				

(Note) Case A : Existing-paid-amount basis, Case B : Willingness-to-pay basis, Case C : Probable basis (1), Case D : Probable basis (2) and Case E : Probable basis (3).

APPENDIX D-28 Estimation of Economic Benefit

(A) Time saving as a major economic benefit

District	Population in a community		Household (HH) to be served			Times per day to collect water	Time spent to collect water (m/one way)		Saved time per day HH (m/round)		Annual economic benefit in each District (US\$1,000)	Annual effective economic benefit (US\$1,000)
	As of 1995	As of 2005	Service population	Family size	Number of HH		(wet season)	(dry season)	(wet season)	(dry season)		
Mpigi District	67,478	87,650	77,485	4.68	16,557	2.8	44	78	130	320	1,220	779
Mubende District	53,538	72,723	61,535	4.82	12,767	2.6	35	74	65	268	556	355
Kiboga District	43,988	58,488	39,256	4.54	8,647	2.5	35	80	49	274	351	224
Total/average	165,004	218,861	178,276	4.70	37,970	2.7	39	77	90	292	2,127	1,358

- (Note) 1. Ordinary time spent to go water source : 20 (minutes per one time in one way)
 2. Hourly value of working time: 56 (US\$ per hour considering average number of tax payer per HH)
 3. Effective economic benefit rate (%): 85% (Percentage of annual income level per HH to the official labour wage)
 4. Effective water collector rate : 75% (Percentage of adult water collectors to the total water collectors)

(B) Decrease of medical expenditures as a second economic benefit

District	Population in a community		Household (HH) to be served			Annual average medical expenditures per HH (US\$)	Decrease of medical expenditures per HH Total (US\$ million)		Annual effective economic benefit in decrease of medical expenditures (50 % of full amount of medical expenditures in decrease) (US\$1,000)
	As of 1995	As of 2005	Service population	Family size	Number of HH		(US\$)	(US\$)	
Mpigi District	67,478	87,650	77,485	4.68	16,557	31,314	4,659	77	38
Mubende District	53,538	72,723	61,535	4.82	12,767	37,235	5,540	71	35
Kiboga District	43,988	58,488	39,256	4.54	8,647	40,303	5,997	52	25
Total/average	165,004	218,861	178,276		37,970	35,352	5,260	200	98

- (Note) Rates of incidence Rates of impact by Improved Water Supply
1. Water borne disease 12% 17%
 2. Water washed disease 79% 15%
 3. Water based disease 2% 60%
 4. Water related vector borne disease 7% 0%

APPENDIX D-29 Economic Internal Rate of Return

Year in Year order		Financial cost			Economic benefit	
		Const- ruction cost	O/M cost	Replace- ment cost	Total	Total of TS & MS Cash balance
1	1997	1,734	0	0	1,734	0
2	1998	3,881	7	0	3,888	163
3	1999	3,247	31	0	3,278	543
4	2000	3,848	77	0	3,925	882
5	2001	0	82	0	82	1,300
6	2002	0	82	0	82	1,338
7	2003	0	82	0	82	1,376
8	2004		82	107	189	1,415
9	2005		82	389	471	1,456
10	2006		82	276	359	1,456
11	2007		82	304	386	1,456
12	2008		82	0	82	1,456
13	2009		82	0	82	1,456
14	2010		82	0	82	1,456
15	2011		82	107	189	1,456
16	2012		82	389	471	1,456
17	2013		82	326	408	1,456
18	2014		82	304	386	1,456
19	2015		82	0	82	1,456
20	2016		82	0	82	1,456
21	2017		82	0	82	1,456
22	2018		82	107	189	1,456
23	2019		82	389	471	1,456
24	2020		82	326	408	1,456
25	2021		82	304	386	1,456
26	2022		82	0	82	1,456
27	2023		82	0	82	1,456
28	2024		82	0	82	1,456
29	2025		82	107	189	1,456
30	2026		82	389	471	1,456
31	2027		82	326	408	1,456
32	2028		82	353	436	1,456
33	2029		82	0	82	1,456
34	2030		82	0	82	1,456
35	2031		82	0	82	1,456
Total		12,710	2,579	4,501	19,790	44,873
In the condition of discount rate at 12 %:						
Present value:					10,540	8,357
Economic internal rate of return (EIRR):						8.86%
B/C						0.79

(Note) TS : Time saving, and ME : Decrease of medical expenditures.

APPENDIX D-30 Affordability to Pay

(A) For Operation and Maintenance

Level II system	Unit cost (US\$)	No. of unit	Total (US\$)	Remarks
O/M Cost Pumps for Level II System	737.5	5	3,687.5	
O/M Cost for Diesel Generator	3,070.0	1	3,070.0	
Annual Running Cost for Level II System	6,800.0	1	6,800.0	
Total (a)			13,557.5	
Service population :	3,604	Service households :	794	
Amount to be paid for O/M ((a)/12/794*exchange R: US\$1,020)(US\$)				1,451
Pumps for wells	Mpigi	Mubende	Kiboga	
O/M Cost Pumps (b)	147.5	147.5	147.5	
1) Based on the criteria				
Service population per unit (c)	430	430	430	
Average family size by District (d)	4.68	4.82	4.54	
Amount to be paid for O/M ((b)/12/((c)/(d))*exchange R:1,020)(US\$)	136	141	132	Average 136
2) For minimum community size				
Service population per unit (c)	150	150	150	
Average family size by District (d)	4.68	4.82	4.54	
Amount to be paid for O/M ((b)/12/((c)/(d))*exchange R:1,020)(US\$)	362	384	341	362

(B) For Replacement

Level II system	Unit cost (US\$)	No. of unit	Total (US\$)	Capital recovery
Replacement Cost Pumps for Level II System	10,000	5	50,000	12,018
Replacement Cost for Diesel Generator	50,000	1	50,000	8,551
Total (a) (Annual amount to be reserved for pumps and diesel generator)				20,569
Service population :	3,604	Service households :	794	
Monthly amount to be reserved for pumps and diesel generator ((a)/12/794*exchange R: US\$1,020)(US\$)				2,202
Pumps for wells	Mpigi	Mubende	Kiboga	
Replacement Cost(b in capital recovery)	2,000	2,000	2,000	481
1) Based on the criteria				
Service population per unit (c)	430	430	430	
Average family size by District (d)	4.68	4.82	4.54	
Monthly amount to be reserved for pumps ((b)/12/((c)/(d))*exchange R:1,020)(US\$)	445	458	431	Average 445
2) For the minimum community size				
Service population per unit (c)	150	150	150	
Average family size by District (d)	4.68	4.82	4.54	
Monthly amount to be reserved for pumps ((b)/12/((c)/(d))*exchange R:1,020)(US\$)	1,275	1,313	1,237	Average 1,275

Note :

1. Capital recovery factor (CRF): Pumps for both the boreholes and Level II system 0.24036
For diesel generator for Level II system 0.17102

Where,

$$CRF = i / (1 - (1+i)^{-n})$$

i = 0.15 (15 % as a price escalation rate)

n = recovery period (7 years for pumps, 15 years for diesel generator)

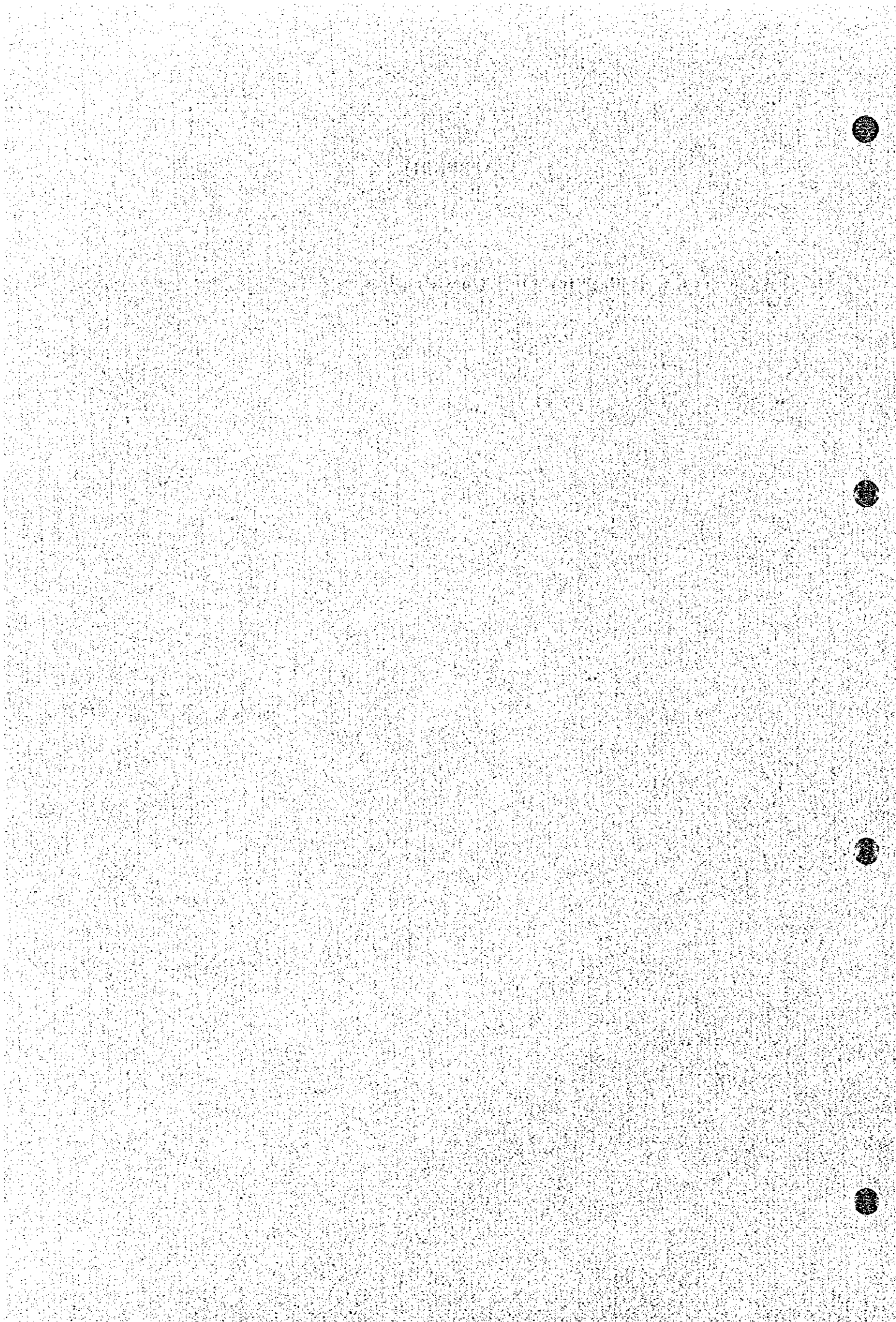
2. Exchange rate : US\$ 1.00 = US\$1,020 as of March 1996.

APPENDIX E

Appendix E : Village Inventory Questionnaires

APPENDIX E

Appendix E : Village Inventory Questionnaires



APPENDIX-E: Water Supply, Sanitation and Village Inventory

VILLAGE _____ QNO _____

3.0 Socio-Economics of the Community

A. What is the total population in your community?	Write the numbers here
B. What is the total number of households (HH) in the community?	
C. How many people are an average HH?	
D. How many HHs are headed by a male?	
E. How many HHs are headed by a female?	
F. How many HHs in your community are permanent structures with iron sheet roof?	
G. How many HHs in your community are permanent structures, without iron sheet roof?	
H. How many HHs in your community are semipermanent structures plastered w/ mud?	
I. How many HHs in your community are grass thatched structures?	
J. Are there any households in your community that have a structure different than listed above? If yes, please specify:	
L. How many HH in your community has a latrine?	
M. How many HH in your community use a samplat or slab in their latrine?	

3.1 Electricity

Does your community have electricity from UEM? YES ☐ NO ☐

If yes,

How many times a week do you lack electricity ☐

What is the average length of each breakdown in hours ☐

VICA INVENTORY SURVEY QNO _____

Name on the list _____

Village name _____ Parish _____

Subcounty _____ District _____

1.0 The Village Development Committee (VDC)

1.1 When was the VDC established? Month _____ Year _____

The VDC is not established

1.2 How many members are in your VDC?

1.3 How many members are women?

1.4 Are the following positions in the VDC taken by a man or a woman?

The chairperson	Man	Woman
The secretary		
The treasurer		

2.0 Community Health Workers (CHEWs)

2.1 How many CHEWs does your community have?

2.2 How many CHEWs are women?

2.3 When were the CHEWs trained?

2.4 Who trained the CHEWs?

2.5 Which are the major HEALTH problems in your community?

1. _____
2. _____
3. _____
4. _____
5. _____

VILLAGE _____ QNO _____

3.2 Live stock

Type of Livestock	How many are there of this livestock in your village?
Cattle	
Sheep	
Goats	
Poultry	
Others, specify:	

3.3 What is the main occupation of people living in your community?

Occupation	Estimated number of HH's in this occupation
Subsistence farmers	
Cash crop farmers	
Dairy farmers	
Shop owners/traders	
Full time labourers	
Seasonal labourers	
Other, specify:	
3.4 Land access	In acres
How much land does an average household in your community have access to cultivate?	
How much of the land that an average household have access to is cultivated?	

VILLAGE _____ QNO _____

3.5 Agricultural products

Crops	Is this crop grown in your community?		Is the crop part of daily food?		Does the crop contribute to income?	
	YES	NO	YES	NO	YES	NO
Cassava						
Yams						
Sweet potatoes						
Irish potatoes						
Maize						
Sorghum						
Beans						
Pinger millet						
Soya beans						
Matoke-bananas						
Sweet-bananas						
Cabbages						
Onions						
Tomatoes						
Pineapples						
Ground nuts						
Sim Sim						
Cotton						
Coffee						
Tea						
Others specify:						

VILLAGE _____ QNO _____

4.0 Income distribution

WITHIN LAST YEAR, HOW MUCH MONEY (in US\$) DID THE AVERAGE HOUSEHOLD IN YOUR COMMUNITY SPEND ON:		Write the amount in US\$ here
1. Tax		
2. School fees		
3. Medical treatment (western medicine)		
4. Medical treatment (traditional)		
5. Food		
6. Water		
7. Community activities		
8. Others (specify)		
Total yearly expenditure in an average household in your community		

5.0 Community participation and development

5.1 What are the major problems in your community?

1. _____
2. _____
3. _____
4. _____
5. _____

5.2 Is there any customs or taboos concerning water in your community (e.g. water source, collecting, use or hygienic practices)? Please describe briefly:

- _____
- _____
- _____
- _____

VILLAGE _____ QNO _____

5.2 Which development projects are presently started or being started by the Village Development Committee in your community?

Briefly describe the Community Development Project here	Write here in details how your community contribute to this Community Development Project ?			
	Money amount	Labour	Local material	Others

5.3 Which are the future priority community development activities planned by the VDC?

1. _____
2. _____
3. _____
4. _____
5. _____

6.0 COMMUNITY WATER SUPPLY

6.1 How does the community maintain and repair the existing water facilities in the community?

- _____
- _____
- _____
- _____

6.2 How much is your community willing to and capable of paying for a 20 litres Jerry can of water

purchased from a water vendor. _____ US\$
collected at the tap _____ US\$

VILLAGE _____ QNO _____

6.3 How much is your community willing to contribute on monthly basis to ensure proper operation and maintenance of a new or improved community water supply?

Amount of money in US\$	Labour	Local materials	Others

6.4 Water collection in the rainy season

The major water collectors during the wet season in prioritized order	Specify transport, if other than by foot	If they did not have to collect water, what would they be likely to do in the time saved?
1.		
2.		
3.		

6.5 Water collection in the dry season

The major water collectors during the dry season in prioritized order	Specify transport, if other than by foot	If they did not have to collect water, what would they be likely to do in the time saved?
1.		
2.		
3.		

VILLAGE _____ QNO _____

6.8 What are the present sources of water? (Tick or number)

	Yield	Rail-able	In use	If Yes # HMs using the source	If no, please explain why?
	R M L Y No Y No				
Bore-Holes	B1 B2 B3 B4				
Wells with hand-pump	A1 A2 A3 A4				
Wells without hand-pump	G1 G2 G3 G4				
Dams	D1 D2 D3 D4				
Protected Spring	R1 R2 R3 R4				

Village

QNO.

... are the present sources of water? (tick or number).

5.8 What are the Present sources of water? (tick or number)									
	Yield				Reli- able	In use		If yes # Hhs using the source	If no, please explain why?
	H	M	L	Y	No	Y	No		
Un- protected Springs	U1								
	U2								
	U3								
	U4								
Water Solas	E1								
	E2								
	E3								
	E4								
Gravity Feed	G1								
	G2								
	G3								
	G4								
Rain water harvest									
Other, specify									
Total # of Hhs									

If the number of households above is different from the number of RM in 1960, explain why:

6.9 Please indicate each source with the above assigned letter on the attached map.

WILLIAMS

QNO

6.10 Safe water access and use	Number of HH
1	1
2	1
3	1
4	1
5	1
6	1
7	1
8	1
9	1
10	1
11	1
12	1
13	1
14	1
15	1
16	1
17	1
18	1
19	1
20	1
21	1
22	1
23	1
24	1
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81	1
82	1
83	1
84	1
85	1
86	1
87	1
88	1
89	1
90	1
91	1
92	1
93	1
94	1
95	1
96	1
97	1
98	1
99	1
100	1

How many HH in your community have access to clean and safe water?

How many of the above HXs in your community use clean and safe water?

How many **FE** in your community has access to one or more of the following water sources;
borehole, well with hand pump, protected spring or gravity feed water?

6.11 please list, in descending order of preference, the three best of the water sources mentioned above.

the three best of the water sources mentioned above	
No.	Source Reason for preference
1.	
2.	
3.	

6.12 Which of the above water sources are used for:

6.12	WHICH OF THE ABOVE WATER SOURCES ARE USED FOR:
1.	Domestic use, drinking
2.	Domestic use, other
3.	Livestock watering
4.	Agricultural use
5.	Industrial use

6-13 which of the above water sources has:

6.13	Which of the above water sources has:
Taste	
Smell	
Colour	
Hard (does not easily foam with soap)	

6.14 If the Community uses a borehole, please answer the following questions:

What is the colour of the water in the morning, when the borehole is first pumped?

if the water is coloured, how many jerry cans are pumped before it eventually gets clear?

6.15

For how many minutes do you have to pump the borehole to fill a 20 litres Jerry can ?					
0 - 5	5 - 10	10 - 15	15 - 20	20 - 25	More, specify

Compiled by _____

On _____

Time _____

Signature _____

WATER USER COMMITTEE QUESTIONNAIRE QNO _____

Village Name _____ Parish _____
 Sub-County _____ District _____

7.0 Water User Committee/Association and/or Village Water and Sanitation Committee.

7.1 Does your Community have a Water User Committee/Association and/or Village Water and Sanitation Committee?

YES	if NO then go to question 8.1
NO	

7.2 How many members are in your committee?

7.3 How many members are women

7.4 Are the following positions in the Committee taken by a man or a woman ?

The chairperson	Man	Woman
The secretary		
The treasurer		

7.5 How often does the committee meet ?

	times monthly
	times yearly
	when need arises

7.6 Has the committee been trained? YES NO

--	--

7.7 Who gave the training ? GOV Other

--	--

If other, please specify _____

7.8 How many water sources does the Committee take care of ?

Boreholes	
Wells with hand pump	
Protected springs	
Other	

If other, please specify _____

VILLAGE NAME _____ QNO _____

VISIT THE WATER SOURCE AND OBSERVE THE FOLLOWING

8.8 Water quality from the water source (8.1) Good ☐
Poor ☐

If poor, please specify _____
 (e.g., salty, smelly, brown)

8.9 Present condition of the water source (8.1) structures.

Ok	Needs repair	in need of repair, please specify
<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	<input type="checkbox"/>	

1. Pedestal
2. Apron
3. Spillway
4. Platform

8.10 Present condition of water source (8.1).

Yes	No	Other, please specify
<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	<input type="checkbox"/>	

1. Surrounding Clear
2. Fence appropriate
3. Grass cut
4. Soakaway functioning

8.11 If surroundings are dirty, please explain (tick more if needed)

<input type="checkbox"/>	Grass
<input type="checkbox"/>	Debris
<input type="checkbox"/>	Animal droppings
<input type="checkbox"/>	Dirty pools of water
<input type="checkbox"/>	Other

8.12 What type of drainage is provided?

<input type="checkbox"/>	None
<input type="checkbox"/>	Vegetable garden
<input type="checkbox"/>	Banana plants
<input type="checkbox"/>	Soak pit
<input type="checkbox"/>	Others

If others, please specify _____

Compiled by _____ On _____

QNO _____

7.9 Has the Committee set rules, for the use of the water source? YES ☐ NO ☐

7.10 If yes, do you have a written set of rules that I could see? YES ☐ NO ☐

7.11 Do you have a water source maintenance fund? YES ☐ NO ☐

7.12 How do you collect funds for maintenance of their water source?

<input type="checkbox"/>	Yearly fee
<input type="checkbox"/>	Container fee
<input type="checkbox"/>	Collection at time of maintenance or repair
<input type="checkbox"/>	Other

If other, please specify: _____

8.0 Water Source

8.1 Which borehole, well with hand pump or protected spring is used most by the community? Indicate letter and number of source in the box (ref. pg 8, 9 of RCL questionnaire) (8.1) ☐

8.2 How many caretakers does the water source (8.1) have? ☐

8.3 How many of the caretakers are women? ☐

8.4 Is the water source (8.1) functioning now? Yes, fully ☐
Yes, partly ☐ No ☐

8.5 If yes partly or no, how long has this condition lasted, in weeks? ☐

8.6 If yes partly or no, give assessment of fault No water ☐
Low water ☐ Mechanical problem ☐

8.7 If mechanical, please give reason for lack of repair

<input type="checkbox"/>	No spares
<input type="checkbox"/>	No hand pump mechanic (HPM)
<input type="checkbox"/>	HPM not able to repair
<input type="checkbox"/>	Not able to pay
<input type="checkbox"/>	Don't know

HOUSEHOLD QUESTIONNAIRE VILLAGE INVENTORY SURVEY

QNo. A _____

Name on the list _____ Village _____

Parish _____ Sub-country _____

District _____

2.0 DEMOGRAPHICS

2.1 HEAD OF HOUSEHOLD

Gender ☐ Male ☐ Female

Marital Status ☐ Single ☐ Divorced/Widowed ☐ Married ☐ Co-habiting

Does [your spouse] / [a friend or a relative] contribute to the household's economy ?

YES ☐ NO ☐

Tribe ☐ Ganda ☐ Other _____ Specify _____

Religion ☐ Christian ☐ Moslem ☐ Other _____ Specify _____

Highest educational level

Years of primary education ☐
Years of secondary education ☐
Years of post secondary education ☐

HOUSEHOLD

QNo. A _____

Number of people in the household

Males ☐
Females ☐
Total ☐

Number of children:

below 5 years of age ☐ Boys ☐ Girls ☐
aged 6 to 12 years ☐
aged 6 to 12 years in school ☐

2.0 WATER AVAILABILITY AND UTILIZATION

2.1 Where do you get water from?

Water Source	Rainy season		Dry Season		Prefer
	Time spent in min.		Time spent in min		
	to source	at source	to source	at source	
Borehole					
dam					
protected spring					
unprotected spring					
well with pump					
well without pump					
water hole					
gravity feed					
rain water					
harvest feed					

2.2 Who collects the water? (Fill the table in prioritized order)

Rainy season		Dry season	
Collector	Age	Collector	Age
1.	1.		
2.	2.		
3.	3.		

HOUSEHOLD

QNo_A _____

2.3 Which container does your household use most for water collection ?

Jerry cans	
Clay pots	
Pans	
Other	

If other please specify: _____

2.4 Does the container specified above have a lid?

NO	
YES	

Specify _____

2.5 By what means does the main collector carry the water from the source?

Bicycle	
By foot	
Other	

Specify _____

2.6 How many times does the main water collector go to collect water in a day?

--

2.7 How many 20 litres jerrycans of water does your household use per day?

--

2.8 How much do you pay per 20 litres container you collect from the water source?

US\$

2.9 What is the money collected used for? _____

2.10 How much would you be willing to pay for a 20 litre jerrycon of water ?

US\$

2.11 Do you play any role in the maintenance of the water source?

YES	
NO	

If yes, proceed to question 2.14.

2.12 If no, explain why. _____

HOUSEHOLD

QNo_A _____

2.13 If no, do you feel there is any role you can play?

YES	
NO	

2.14 If yes, which one? _____

2.15 How many litres of water do you purchase from water vendors per day?

Litres

2.16 How much do you pay per 20 litre container?

US\$

3.0 HEALTH AND SANITATION

3.1 Within the last week, has any member of your family, above one year of age, had diarrhoea?

YES	
NO	

3.2 Have you ever heard of a san plat, slab or ventilated pit latrine?

YES	
NO	

3.3 If yes, what was the source of information?

health worker		poster
chief		radio
RC Official		newspaper

other (specify) _____

HOUSEHOLD

4.0 ECONOMY

4.1 Have you in last month bought

	YES	NO
Sugar.....		
Cooking oil.....		
Washing bar-soap.....		
Paraffin.....		
Salt.....		

4.2 For this crop year, did you

Buy fertilizer.....		
Hire a porter (mupakasi).....		
Do porter's work.....		

4.3 How many do you have

Mat.....		Chicken.....
Blanket.....		Coat/Sheep.....
Chair.....		Cow.....
Bed		Cupboard.....

HOUSEHOLD

QNo_A _____

K.0 Knowledge, Attitudes and Practices

K.1 Please mention three most common diseases which are spread by dirty hands.

1. _____
2. _____
3. _____

K.2 How can you prevent diarrhoea?

1. _____
2. _____
3. _____

K.3 How can you prevent worms?

1. _____
2. _____
3. _____

HOUSEHOLD

QNo_A _____

5.0 THINGS TO OBSERVE AND NOTE

5.1 Condition of main house	YES	NO
fired bricks.....		
glass window.....		
tin roof.....		

5.2 Type of latrine

None.....	
Traditional pit latrine with dirt ground	
Traditional pit latrine with cement ground	
Pit latrine with slab	
Pit latrine with san plat	
Ventilated improved pit latrine	

Other(specify) _____

5.3 Is the pit latrine clean?

YES	
NO	

5.4 Is the hole of the pit latrine covered with a lid?

YES	
NO	

5.5 Is there a hand washing facility close by?

YES	
NO	

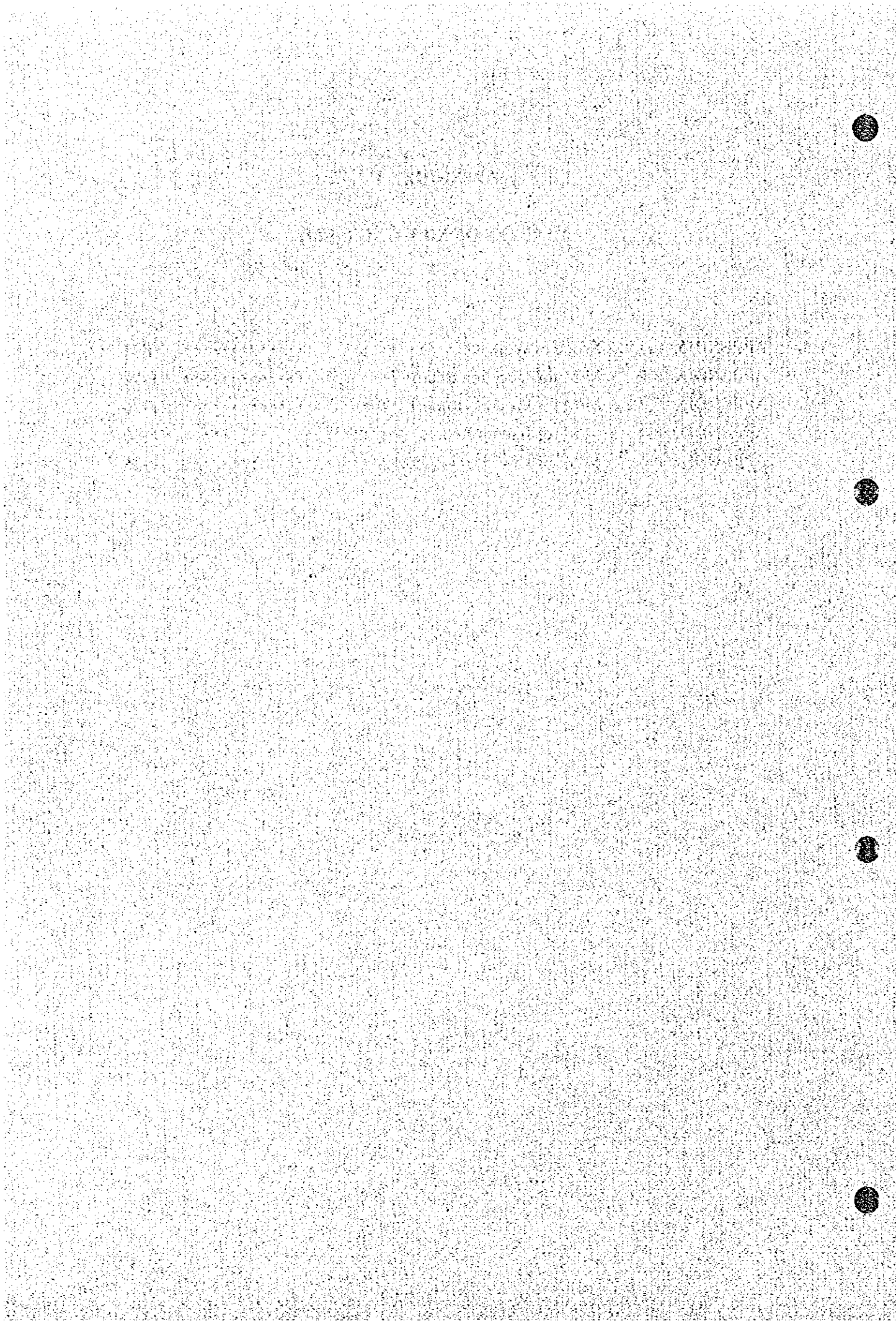
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APPENDIX F

MINUTES OF MEETING (M/M)

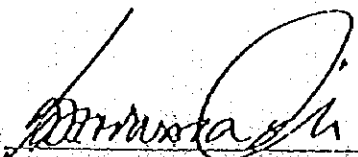
APPENDIX F-1	: Scope of Work	F- 1
APPENDIX F-2	: M/M for Inception Report	F-22
APPENDIX F-3	: M/M for Progress Report	F-26
APPENDIX F-4	: M/M for Interim Report	F-30
APPENDIX F-5	: M/M for Draft Final Report	F-35

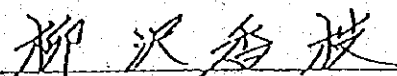


APPENDIX F-1 : Scope of Work

SCOPE OF WORK
FOR
THE STUDY
ON
RURAL WATER SUPPLY
IN
MPIGI, MUBENDE AND KIBOGA DISTRICTS
IN
THE REPUBLIC OF UGANDA
AGREED UPON BETWEEN
THE MINISTRY OF NATURAL RESOURCES
AND
JAPAN INTERNATIONAL COOPERATION AGENCY

Kampala, April 25, 1995


Mr. Ben Z. DRAMADRI
Permanent Secretary,
The Ministry of Natural Resources


Ms. Kae YANAGISAWA
Leader, Preparatory Study Team,
Japan International Cooperation
Agency

I. INTRODUCTION

In response to the request of the Government of the Republic of Uganda (hereinafter referred to as "the Government of Uganda"), the Government of Japan has decided to conduct the Study on Rural Water Supply in Mpigi, Mubende and Kiboga Districts in the Republic of Uganda (hereinafter referred to as "the Study") in accordance with the relevant laws and regulations in force in Japan.

Accordingly, the Japan International Cooperation Agency (hereinafter referred to as "JICA"), the official agency responsible for the implementation of the technical cooperation programs of the Government of Japan, will undertake the Study in close cooperation with the authorities concerned of the Government of Uganda.

The present document sets forth the Scope of Work with regard to the Study.

II. OBJECTIVES OF THE STUDY

The objectives of the Study are:

1. to evaluate potential of water resources in the Study area focusing on groundwater,
2. to formulate sustainable water supply plan (mainly using groundwater) for 300 villages including 6 trading centers to the year 2005, and
3. to pursue technology transfer to counterpart personnel in the course of the Study.

III. STUDY AREA

The Study will cover Mpigi, Mubende and Kiboga Districts.

IV. SCOPE OF THE STUDY

Stage I: Basic Study

1. Collection and analysis of existing data and information on:
 - a. natural conditions including
 - (a) meteorological conditions
 - (b) geological and topographical conditions
 - (c) hydrological and hydrogeological conditions
 - b. social and economic conditions
 - c. conditions of health and hygiene
 - d. environmental conditions
 - e. plans and policies on water resources development and water supply services
 - f. legal and institutional arrangements of water resources development and water supply plans
 - g. ongoing and planned projects relevant to the Study and trends of external assistance
2. Preliminary survey on actual conditions of water resources through:
 - a. aerial photos analysis
 - b. geological reconnaissance
 - c. hydrological investigation
 - d. geophysical survey

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- e. water quality tests of existing wells and surface water
- 3. Survey on village / trading centers inventory and actual conditions of water supply:
 - a. village / trading centers inventory survey
 - a) social and economic conditions
 - b) conditions of water use
 - c) conditions of sanitation and health / hygiene education
 - d) conditions of community development and people's awareness
 - b. survey on existing water supply facilities
 - a) water sources and their capacity
 - b) conditions of water supply facilities and their operation and maintenance
- 4. Study on institutional aspects
 - a. organization and operations of central government, district governments and villages
 - b. financial performance of each level of organization
- 5. Evaluation of present conditions and identification of problems with emphasis on:
 - a. physical conditions
 - b. operation and maintenance
 - c. organizational arrangements
 - d. financial performance
- 6. Identification of potential areas for groundwater development and plan for detailed field survey
 - a. identification of high potential areas for groundwater development
 - b. selection of areas for detailed field survey
 - c. initial environmental examination (IEE)

Stage II: Detailed Study

- 1. Detailed survey in potential areas
 - a. geophysical and geological survey
 - b. groundwater table measurements
- 2. Pilot study on community development and hygiene education and evaluation of its effectiveness
- 3. Analysis and evaluation of potential of groundwater and other water resources
 - a. topographical and geological analysis
 - b. hydrological and water balance analysis
 - c. evaluation on groundwater / surface water potential
- 4. Water demand projection
- 5. Classification of villages / trading centers by size, potential water source, easiness of community development and other factors

Stage III: Formulation of a Water Supply Plan

- 1. Formulation of basic policies and strategies of water supply plans
 - a. target coverage rate

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- b. target level of services in terms of quantity, quality and accessibility
- c. choice of technology
- 2. Water supply plan for each type of villages / trading centers
 - a. plan for water source
 - b. preliminary design of water supply facilities
 - c. guideline for the rehabilitation of existing facilities
 - d. facility and equipment plan
- 3. Plan for community development and dissemination of hygiene education
- 4. Guideline for providing sanitation facilities.
- 5. Operation and maintenance plan
- 6. Monitoring plan of groundwater level and water quality
- 7. Cost estimation and financial management plan
- 8. Evaluation
 - a. financial evaluation
 - b. institutional and technical evaluation
 - c. economic and social evaluation
 - d. environmental impact assessment(EIA)
- 9. Formulation of a implementation program
 - a. project packaging
 - b. prioritization

V. SCHEDULE OF THE STUDY

The Study will be carried out in accordance with the tentative schedule as attached herewith

VI. REPORTS

JICA shall prepare and submit the following reports in English to the Government of Uganda.

1. Inception Report:

Twenty (20) copies at the commencement of the first field study in the Republic of Uganda. This report will contain the basic approach and outline of the Study as well as schedule and methodology.

2. Progress Report :

Twenty (20) copies at the end of Stage I. This report will contain the details and analysis of the Study, including information collected, methodology used and areas selected for Stage II.

3. Interim Report:

Twenty (20) copies at the end of the first field study in the Republic of Uganda. This report will describe the findings and analysis in both Stages I and II. It will also include basic policies, strategies and technologies chosen for water supply in the study area.

4. Draft Final Report:

Twenty (20) copies at the end of Stage III.

The Government of Uganda shall submit to JICA its comments within one (1) month after receiving the Draft Final Report.

5. Final Report:

Fifty (50) copies within one (1) month after JICA has received the comments on the Draft Final Report.

VII. UNDERTAKINGS OF THE GOVERNMENT OF THE REPUBLIC OF UGANDA

1. To facilitate the smooth conduct of the Study, the Government of Uganda will take necessary measures:

- (1) to secure the safety of the Japanese study team (hereinafter referred to as "the Team"),
- (2) to permit the members of the Team to enter, leave and sojourn in the Republic of Uganda for the duration of their assignment therein, and exempt them from foreign registration requirements and consular fees,
- (3) to exempt the members of the Team from taxes, duties, fees and any other charges on equipment, machinery, and other materials brought into the Republic of Uganda for the conduct of the Study,
- (4) to exempt the members of the Team from income tax and charges of any kind imposed on or in connection with any emoluments or allowances paid to the members of the Team for their services in connection with the implementation of the Study,
- (5) to provide necessary facilities to the Team for remittances as well as the utilization of funds introduced into the Republic of Uganda from Japan in connection with the implementation of the Study,
- (6) to secure permission for the Team to enter into private properties or restricted areas for the implementation of the Study, if necessary,
- (7) to secure permission for the Team to take all data and documents including photographs and maps related to the Study out of the Republic of Uganda to Japan, and
- (8) to provide medical services in case of necessity. Its expenses will be chargeable to the members of the Team.

2. The Government of Uganda shall bear claims, if any arises, against the members of the Team resulting from, occurring in the course of, or otherwise connected with, the discharge of their

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duties in the implementation of the Study, except when such claims arise from gross negligence or willful misconduct on the part of the member of the Team.

3. The Ministry of Natural Resources shall act as a counterpart agency to the Team and also as a coordinating body in relation with other governmental and non-governmental organizations for the smooth implementation of the Study.

4. The Ministry of Natural Resources shall, at its own expense, provide the Team with the following, in cooperation with other organizations concerned:

- (1) available data and information related to the Study,
- (2) additional survey related to the Study, if necessary,
- (3) counterpart personnel and supporting staff,
- (4) suitable office space with necessary furniture in Kampala, and
- (5) credentials or identification card.

VIII. UNDERTAKINGS OF JICA

For the implementation of the Study, JICA shall take the following measures:

1. to dispatch, at its own expense, the Study Team to the Republic of Uganda, and
2. to pursue technology transfer to counterparts personnel in the course of the Study.

IX. CONSULTATION

JICA and the Ministry of Natural Resources shall consult with each other in respect of any matter that may arise from or in connection with the Study.

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The Study on
Rural Water Supply in Mpigi, Mubende
and Kiboga Districts in the Republic of Uganda

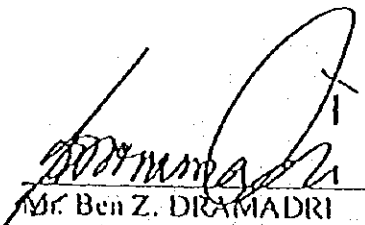
TENTATIVE SCHEDULE


MONTH DESCRIPTION	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th
WORK IN UGANDA												
WORK IN JAPAN												
REPORT PRESENTATION												
PHASE												

NOTE ICR : Inception Report
 P/R : Progress Report
 IT/R : Interim Report
 DF/R : Draft Final Report
 F/R : Final Report

MINUTES OF MEETING
FOR
THE STUDY
ON
RURAL WATER SUPPLY
IN
MPIGI, MUBENDE AND KIBOGA DISTRICTS
IN
THE REPUBLIC OF UGANDA
AGREED UPON BETWEEN
THE MINISTRY OF NATURAL RESOURCES
AND
JAPAN INTERNATIONAL COOPERATION AGENCY

Kampala, April 25, 1995


Mr. Ben Z. DRAMADRI
Permanent Secretary,
The Ministry of Natural Resources


Ms. Kae YANAGISAWA
Leader, Preparatory Study Team,
Japan International Cooperation
Agency

Based on the official request of the Government of the Republic of Uganda (hereinafter referred to as "the Government of Uganda"), the Government of Japan, through the Japan International Cooperation Agency (hereinafter referred to as "JICA"), has agreed to conduct The Study of Rural Water Supply in Mpigi, Mubende and Kiboga Districts in the Republic of Uganda (hereinafter referred to as "the Study").

The JICA preparatory study team, headed by Ms. Kae YANAGISAWA, Visited the Republic of Uganda from April 17th to 25th, 1995. During its visit, the preparatory study team held a series of meetings with the Directorate of Water Development, Ministry of Natural Resources (hereinafter referred to as "DWD") and other authorities concerned of the Government of Uganda. The list of participants is shown in the Appendix 1.

Consequently, both sides agreed to the Scope of Work which defines the terms and conditions of the Study, and in addition to the Scope of Work, they confirmed the following:

1 Study area

The Study area shall cover 300 villages including 6 trading centers in Mpigi, Mubende and Kiboga Districts. The selected 6 trading centers are in the Study area and are as desperate for water supply as other villages. The list of the villages and trading centers is shown in Appendix 2.

In principle, the Study will cover 100 villages in each district. However, the number may be adjusted among the three districts in the course of the Study, according to the strategy and priority of water supply.

Since the preparatory study team was not able to acquire maps which show the location of villages, exact location of villages should be shown to the Study Team at an early stage of the Study.

2 Target year

The target year of the Study is 2005 so the water supply plan will cover a 10 year period.

3 Basic approach to the Study

- (1) The Ugandan side explained that the target of the national water supply strategy is to provide the

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rural population with safe water of at least 20 liters per capita per day within a maximum distance of 1.5 km. The Japanese side agreed to follow the strategy in the Study although detailed plans will be formulated based on the actual condition of individual villages.

- (2) The Study will basically examine the possibility of constructing boreholes (wells of approximately 60 m to 90 m depth) in each candidate village, but other water sources and low cost technologies will also be considered when they are found applicable, less costly and more sustainable.
- (3) The water supply plan will deal with water for humans; water for animals will be excluded from the planning.
- (4) The Study will be conducted by participatory planning methodology so that the water supply plan can reflect local needs and technology transfer can be done effectively. The Study will involve organizations at various levels from DWD at the top to villages at the bottom.
- (5) Existing WATSAN schemes will be the core for the Study. WATSAN schemes will be utilized especially for the formulation of village inventory and the conduct of the pilot study on community development and hygiene education.

4 Scope of the Study

Considering the importance of integrating water supply and sanitation, proper means of sanitation will also be examined in the Study and a guideline for sanitation facilities will be formulated.

5 Schedule of the Study

Based on the request of the Ugandan side, the tentative Study period has been shortened to 11 months.

6 Undertaking of the Government of Uganda

- (1) DWD and the three districts will organize a counterpart team. The list of potential members is shown in Appendix 3.
- (2) DWD will act as a coordinating body of the

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counterpart team. It is also responsible for providing specialists in geology and hydrogeology.

- (3) DWD will provide its drilling rigs, if necessary, for test drilling during in the Study. The spare parts for the machinery will be provided by DWD. The Study Team will provide necessary consumables. Otherwise, the work will be contracted out.
- (4) District governments are responsible for providing specialists in water supply, health and community development.
- (5) District governments will collaborate with the Japanese Study Team in the formulation of village inventory by instructing lower levels of RCs (Resistance Committees) to prepare required data and district people accompanying the Study Team to each village. Likewise, they will take initiative in the conduct of the pilot study.
- (6) District governments will provide office space with furniture. It is preferable that radio communication equipment and portable generators are arranged by the Japanese side.
- (7) DWD will take necessary measures to acquire allocation of frequency for radio communication.
- (8) Considering the limited counterpart budget of DWD, JICA will prepare vehicles for the use of the Study Team.
- (9) DWD will organize a steering committee at the commencement of the Study. The committee will be composed of members from the Ministry of Finance and Economic Planning, Ministry of Health, Ministry of Gender, Community Development, Ministry of Local Government and the Ministry of Natural Resources..

7 Counterpart training

The Ugandan side requested that technology transfer would be realized through training in Japan, too. Japanese side replied that one candidate for the Japanese fiscal year 1995 shall be selected in consultation with the Japanese Study Team and official application shall be submitted to the JICA Kenya Office.

April 24, 1995

ATTENDANTS LIST

UGANDAN SIDE

1. Mr. Patrick Kahangire
Director of Directorate of Water Development
2. Mr. Moses Gava
Ag. Commissioner, Rural Water Department
3. Mr. Pantaleo Kabateraine
Ag. Principal Hydrogeologist
4. Mr. Nathan Mujere
District Water Officer, Mubende
5. Mr. Fred Muliabya
District Health Inspector, Kiboga
6. Mr. Fred Kato Ssemugera
District Health Inspector, Mpigi

JAPANESE SIDE

1. Ms. Kae Yanagisawa
Team Leader, Preparatory Study Team
2. Mr. Yasuo Mukai
Groundwater Development, Preparatory Study Team
3. Mr. Satoshi Kimura
Study Planning, Preparatory Study Team
4. Mr. Satoshi Nakamura
Hydrogeology, Preparatory Study Team
5. Mr. Hiroatsu Narita
Rural Water Supply, Preparatory Study Team
6. Mr. Yoshiharu Yamada
Assistant Resident Representative, JICA Kenya Office

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PROPOSED BOREHOLES FOR MUBENDE DISTRICT

<u>COUNTY</u>	<u>SUBCOUNTY</u>	<u>AREA</u>
BUSUJJU:	Maanyi Sub County:	1. Serinya
		2. Nabale
		3. Maanyi S/C Hqrs.
		4. Mpongo
		5. Misimba
		6. Kimuli
		7. Kabele
		8. Buwala
	Butayunja Sub County:	1. Bekina P.S.
		2. Kkande P.S.
		3. Kitongo S/Disp.
		4. Nakaziba P.S.
		5. Kitebere P.S.
		6. Watuba
	Kakindu Sub County:	1. Nabwiri
		2. Bukundugulu
		3. Bannanze
		4. Kalama
		5. Ngugulo
		6. Mwera
		7. Kakindu P.S.
		8. Mawanda P.S.
	Malangala Sub County:	1. Kiwawu Town
		2. Magonga P.S.
		3. Lulumbu
		4. Kasalaga
KASSANDA:	Kassanda Sub County:	1. Kassanda T/C 1,800
		2. Namabale
		3. Kyabalanzi
		4. Kamuli P.S.
		5. Ageyongedde
		6. Kalwana
		7. Kalama
		8. Kikandwa Disp.
NYANZI:	Nyanzi Sub County:	1. Bulyamagunju
		2. Kampiri
		3. Milembe
		4. Kalama
		5. Kyakasengula
		6. Kibanyi-Kabagala
		7. Wamala (Bukoba)
		8. Kambojja
		9. Kyawatuba/Gambwa
		10. Kasana

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Kiganda Sub County:

1. Kalagi
2. Kamusenene
3. Manyogaseka
4. Kasawo
5. Lwenyange
6. Mbale

Bukuya Sub County:

1. Mabubi
2. Kalongo
3. Kitumbi
4. Kanoga

MITYANA:

Busimbi Sub County:

1. Kikumbi
2. Nakaseta
3. Nanyeso/Kabuwambo
4. Bugabo/Kabuwambo
5. Katakala P.S.
6. Magongola
7. Nakibanga

Busimbi Sub County:
Mityana Town Council:

1. Busimbi S/C Hqrs.
2. Works Camp Old
Mubende Road
3. Forestry Office

Bulera Sub County:

1. Kalangalo T.C
2. Buyambi S.S.S.
3. Namutamba T.T.C.
4. Namutamba Disp.

MITYANA:

Sekanyonyi S/C

1. Kasikombe P.S.
2. Katungulu
3. Budimbo
4. Kisamba
5. Kawolongojjo P.S.
6. Namungo H/Centre
7. Sekanyonyi
H/Centre

Kikandwa Sub County:

1. Nakwaya Parish
2. Kabulamuliro P.S.
3. Bambula

BUWEKULA: Kitenga Sub County:

1. Kisambwa
2. Kilangwa
3. Kyengeza
4. Budibaga
5. Bwakaggo

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Bagezza Sub County:

1. Kalingo
2. Mugungulu
3. Busale P.S.
4. Kyamukona
5. Kyeguliso
6. Bakijulula
- 7.
8. Kabowa
9. Kababu

Kasambya Sub County:

1. Kabbo
2. Nakawala
3. Lwegula
4. Nakasaga
5. Kisongola
6. Kasambya T/C 1,500

Madudu Sub County:

Kikoma P.S.
Madudu T.C.

Kiyuuni Sub County:

1. Katoma P.S.

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PROPOSED BOREHOLES FOR KIBOGA DISTRICT

<u>PLACE</u>	<u>PARISH</u>	<u>SUB-COUNTY</u>	<u>POPULA:</u>
1 Kateera-Bikira		Bukomero	337
2 Katwe	Katwe	Bukomero	356
3 Kayunga (C.U)		Bukomero	295
4 Masiriba		Bukomero	357
5 Kabamba	"		56
6 Kalangala			102
7 Nabwendo (C.U) Nabwendo	Nabwende	Muwanga	156
8 - do (RC)	- do -	- do -	261
Nakasozzi Public	Nakasozzi	- do -	302
10 Muyenje		Bukomero	338
11 Nakasengere	Biko	Muwanga	178
12 Bukomero T/C	Bukomero	Bukomero	3,000
13 Huboma		Bukomero	83
14 St. Kizito Ndiraweru		Muwanga	152
15 Kagogo	Kagogo	Bukomero	206
16 Muwanga	Muwanga	Muwanga	220
17 Sinde	Lunya	Lwamata	226
18 Mwezi	Mwezi	Bukomero	274
19 Bikoma			259
20 Bisika		Butemba	202
21 Kayunga R/C			295
22 Kikonda	Kikonda	Nsambya	140
23 Kyankwanzi	Kyankwanzi	Butemba	249
24 Kigando Public	Kigando	Nsambya	147
25 St. Jude Kigando	Kigando	Masodde	125
26 Kyabajoyo		Butemba	93
27 Kyakabuga		Nsambya	107
28 Bamusuuta	Bamusuuta	Masodde	291
29 Masodde	Masodde	- do -	414
30 Vvumba	Luwawu	Masodde	612
31 Kasega	Kasega	Kibiga	207
32 Kiboga DAS	Kiboga Town	Kibiga	569
33 Kiyombya	Wattuba	Masodde	216
34 Kyekumbya	Kyekumbya	Kibiga	300
35 Mulagi	Kigando	Masodde	314
36 Kagobe	Kagobe	Kibiga	77
37 Kambugu	Nkandwa	Kibiga	405
38 Katoma	Katoma	Kibiga	165
39 Kibiga Sch.	Kibiga	Kibiga	284
40 Kiwanguzi	Kiwanguzi	Masodde	182
41 Kiboga St. Andrew	Kiboga Town	Kibiga	312
42 Bukasa	Kibale	Kibiga	195
43 Kabamba	Mwezi	Bukomero	56
44 Kambugu		Ntwetwe	175
45 Kawawa	Lwamata	Lwamata	312
46 Lukuli		Lukuli	190

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47	Lunnya	Lunnya	Lwamata	202
48	Bukoboobo	Nsala	Lwamata	192
49	Kijumagwa	Kasejere	Lwamata	308
50	Ndibata	Ntwetwe	Ntwetwe	217
51	Bugomolwa	Ntwetwe	Ntwetwe	250
52	Kirinda	Kirinda	Lwamata	284
53	Kilemeera		Ntwetwe	98
54	Kyamulalama		Gayaza	168
55	Lubuga		Ntwetwe	140
56	Kyakabuga		Nsambya	107
57	Bulagwe		Ntwetwe	353
58	Butambuka		Gayaza	182
59	Magala Memorial			353
60	Nkandwa Moslem		Ntwetwe	272
61	Nakalama St. Kizito		Ntwetwe	69
62	Kikajo	Nsambya	Ntwetwe	104
63	Kiryamukoke		Ntwetwe	179
64	Gogonya		Kibiga	250
65	St. Kizito Nkandwa	Nkandwa	Kibiga	90
66	Kiboga Islamic	Kiboga Town	Kibiga	354
67	Nyamiringa	Namiringa	Kibiga	39
68	Nsanje		Lwamata	220
69	Kibooba		Kiriga	104
70	Kigando Mixed		Nsambya	147
71	Kiribodda		Lwamata	31
72	Kiryajjobyo		Gayaza	102
73	Nkandwa St. Joseph		Kibiga	90
74	Kiboga St. Paul	Kiboga Town	Kibiga	159
75	Byerima		Butemba	100
76	Kitagenda		Lwamata	206
77	Buguluma		Butemba	144
78	Kiboga Hospital	Kiboga Town	Kibiga	500
79	Senior Quarter	Kiboga	Kibiga	100
80	Kalagi Markets	Luwawa	Hasadde	200
81	Kabutemba	Bamusuuta	Lwamata	200
82	Nakakabala		Nsambya	300
83	Kigande		Nsambya	250
84	Mujunza	Kigando	Nsambya	110
85	Bananywa	Bananywa	Nsambya	1439
86	Nsambya T/C	Sub-county Hqtrs		130
87	Ntwetwe T/C		Nsambya	2000
88	Ntwetwe/Gayaza Rd. Towards Kanangalo		Ntwetwe	200
89	Lwanjalo		Ntwetwe	300
90	Gayaza S/H/H/U	Gayaza	Gayaza	190
91	Kasambya Market	Kijungute	Gayaza	200
92	Luwuna	Luwuna	Gayaza	400
93	Kisala	Luwuna	Gayaza	350
94	Kyerere	Kiyuni	Gayaza	1000
95	Nkondo		Gayaza	460
96	Kagalama		Butemba	310
97	Kayonza		Butemba	350
98	Kigandi 11		Butemba	225
99	Kiboga UWESO School		Kibiga	135
100	Kirinda	Kirinda	Kibiga	450

PROPOSED BOREHOLES FOR MPIGI DISTRICT

GOMBA COUNTY

<u>PLACE</u>	<u>PARISH</u>	<u>SUB-COUNTY</u>	<u>POPULATION</u>
1 Kyabagamba	Kyabagamba	Haddu	1730
2 Kabale	"	"	?
3 Kigayaza	"	"	?
4 Katwe	Kigezi	"	716
5 Makukuru	"	"	?
6 Kyambogo	"	"	460
7 Luhonda	"	"	465
8 Kyamabale	Haddu	"	689
9 Kasambya	"	"	378
10 Kamemengo	Degeya	"	436
11 Kirasi	"	"	1494
12 Nakitembe	"	"	522
13 Buyanja	"	"	856
14 Kagongero	Ntalagi	"	503
15 Kabwire	"	"	537
16 Kyetume	Kyayi	"	480
17 Kyengera	"	"	387
18 Kirimanjaga	"	"	?
19 Nakaseeta	"	"	?
20 Nabugayo	"	"	366
21 Nalwanga	Kalwanga	Kabulaasoke	301
22 Lubale	Butiti	"	379
23 Nkokonjeru	?	"	?
24 Lusongodde	Bulwadda	"	250
25 Luzira P/S	"	"	405
26 Kawoko P/S	Kisozi	"	305
27 Kiryanongo	Kalwanga	"	?
28 Kakubansiri P/S	Kalwanga	"	502
29 Bulwadda	Bulwadda	"	620
30 Luggaaga P/S	Lugaaga	"	308
31 Nakulamudde P/S	Hawuki	Kabulasoke	404
32 Hawuki T/C	"	"	706
33 Kiriri	Sabaddu	Mpenja	751
34 Kpopo P/S	Mut. I	"	406
35 Mpenja S.S.S	Kakono	"	500
36 Ngeye P/S	Nkoma	"	450
37 Busolo	Hpogo	"	498
38 Haseruka	Haseruka	"	1292
39 Kanzira P/S	Kanzira	"	777
40 Ngomanene	Ngomanene	"	899
41 Buyinjabutoole	Mut. I	"	500
42 Kyetume P/S	Golola	"	988

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PLACE	PARISH	SUB-COUNTY	POPULATION
1 Wamirango P/S	Wamirongo	Kyambogo	598
2 Busukuma	Busukuma	"	452
3 Kasambya	Kikoko	"	302
4 Kikoko	"	"	384
5 Seeta	Susukuma	"	371
6 Kijjude P/S	Sabaddu	"	450
7 Magigyö	Magigyö	"	603
8 Kiwenda P/S	Kiwenda	"	349
9 Kiwenda T/C	"	"	727
10 Nabitato P/S	"	"	491
11 Buso P/S	Kabumba	"	681
12 Menvu T/C	Sugo	"	588
13 Kasozi Disp.	"	"	935
14 Lugo Comm. Centre	"	"	780
15 Bulesa P/S	Guluddene	"	593
16 Kasangati T/C	Kasangati	Nangebo	2,000

1 Seta Village	Muluka A
2 Magera	Wampewo
3 Kide D.B. School	Muluka A
4 Kiwalimu	Muluka B
5 Kiti	Sabagabo
6 Manyangwa P.S	Musale
7 Malyangonja	"
8 Seta C/U & Mosque	Muluka A
9 Kito Village	"

BUTAMBALA COUNTY:

Bulunga P/S	Sugali	Ngando	450
Ngando Disp.	Ngando	"	766
3 Kitagobwa S.S.S	Kasozi	"	427
4 Bwetyaba P/S	Kasozi	"	475
5 Lugali Village	Sugali	"	699
6 Kisoba	"	"	624
7 Butende P/S	Butende	"	591
8 Bukesa	Bukesa	"	662
9 Bukesa C/U	"	"	848
10 Tufube Village	Sugali	"	523
11 Kitagobwa T/C	Kasozi	"	600
12 Bogobango T/C	Bukesa	"	1086

BUSIRO COUNTY:

1 Kyengeza P/S	Kyengeza	Kiziba	603
2 Wabiyinja	Swemwedde	"	494
3 Nakikungube	Nakikungube	"	588
4 Masulita	Masulita	"	872

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5	Kyanuna T/C	Kyanuna	Namayumba	738
6	Kyampisi	Kyampisi	"	486
7	Manangata P/S	Musaale B	"	563
8	Bugimba P/S	Kanziro	"	700
9	Muguluka P/S	Bukondo	"	506
10	Gamba T/C	Mut. I A	"	920
11	Kyasa P/S	Kyasa	Namayumba	652
12	Bemba T/C	Bbemba	"	981
13	Namayumba S/C.Hqrs.	Munyuka A	"	713
14	Busaka	Nsituse	"	782
15	Buwambo P/S	Kitayita	"	331
16	Kasengejje P/S	Kasengejje	Wakiso	583
17	Mende UHEA S.S.S	Mende	"	698
18	Bukasa T/C	Bukasa	"	1334
19	Wakiso T/C	Kisimbiri	//	2,000

HAWOKOTA COUNTY:

1	Kituntu T/C	Kituntu	Kituntu	945
2	Mpigi U.H.E.A.P/S	T/Council	Mpigi	500
3	Nabusanke E/P/S	Nabusanke	Nkozi	858

K.Y.

LIST OF POTENTIAL COUNTERPART TEAM

1. DWD

- (a) Mr. Moses Gava, Ag. Commissioner (RWD)
- (b) Mr. Kabateraine Pantaleo, Ag. Principal, Hydrogeologist
- (c) Mr. Disan Ssozi, Senior Engineer

2. Mpigi

- (a) Ms. Marion Tukahurira, ADES
- (b) Mr. Fred Kato-Ssemugera, DHI
- (c) Mr. Haruna Mwasampijja
Ag. District Water Officer
- (d) Mr. Tonny Mwanje, DCDO

3. Mubende

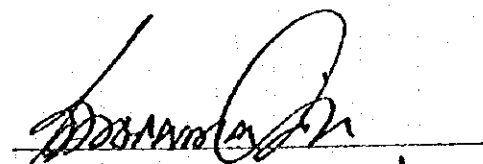
- (a) Mr. Isaac Mudoi, District Executive Secretary
- (b) Mr. Nathan Mujere, District Water Officer
- (c) Mr. Eribankya Muhonge, District Health Inspector
- (d) Mr. Emmanuel Nsubuga, Ag. District Community Development Officer

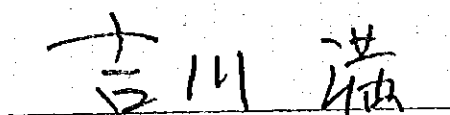
4. Kiboga

- (a) Mr. Peter Gahafu
District Executive Secretary (D.E.S)
 - (b) Mr. Fred Mulabya
District health Inspector (D.H.I)
 - (c) Mr. Philebert Odong
Ag. District Water Officer (Ag. D.W.O)
 - (d) Mr. Michael Nyakhwashye
District Community Development Officer
(D.C.D.O)
- K. J.*

MINUETS OF MEETING
CONCERNING
THE INCEPTION REPORT
FOR
THE STUDY
ON
RURAL WATER SUPPLY
IN
MPIGI, MUBENDE AND KIBOGA DISTRICTS
IN
THE REPUBLIC OF UGANDA
AGREED UPON BETWEEN
THE MINISTRY OF NATURAL RESOURCES
AND
THE JICA STUDY TEAM,

In Kampala, 11th September, 1995


Mr. Ben Z. DRAMADRI
Permanent Secretary,
The Ministry of Natural Resources


Mr. Mitsuru YOSHIKAWA
Leader of the Study Team,
Japan International Cooperation Agency
(JICA)

Based on the Scope of Work agreed upon between the Ministry of Natural Resources and the Preparatory Study Team of Japan International Cooperation Agency (hereinafter referred to as "JICA") in April, 1995, JICA organized another study team (hereinafter referred to as "JICA Study Team") and dispatched it to Uganda in September 1995 to conduct the Study on Rural Water Supply in Mpigi, Mubende and Kiboga Districts in the Republic of Uganda (hereinafter referred to as "the Study").

At the commencement of the Study, the JICA Study Team submitted 20 copies of the Inception Report of the Study to the Directorate of Water Development (hereinafter referred to as "DWD") on 3rd September, 1995. The meeting for explanation and discussion on the contents of the Inception Report of the Study was held on 6th to 8th of September, 1995 at the headoffice of DWD. The list of attendants is given in Appendix- 1.

The JICA Study Team explained the contents of the Inception Report in detail to DWD side, namely the background and objectives of the Study, the Study Area, scope of the Study, plan of approach, plan of operation and implementation plan of the Study. DWD side agreed on these subjects.

Major issues of the discussion were as below:

- (1) In connection with the undertakings by the Government of Uganda, DWD side replied as follows:

a) Steering Committee

DWD will organize a steering committee at the commencement of the Study. The committee will be composed of members from the Ministry of Finance and Economic Planning, Ministry of Health, Ministry of Gender, Community Development, Ministry of Local Government and the Ministry of Natural Resources. DWD will coordinate with central government and any other relevant agencies related to the Study.

[Handwritten signature] *[Handwritten initials]*

b) Counterpart Personnel of DWD are ;

Mr. Moses Gava,

Ag. Commissioner (RWD)

Mr. Pantaleo Kabateraine,

Ag. Principal Hydrogeologist

Mr. Disan Ssozi,

Senior Engineer

c) Office Space in Kampala and Districts

The office space with six (6) desks and chairs for the Study Team will be provided within DWD Office in Kampala. DWD side emphasized that a diesel generator (5KVA) is to be provided by the Study Team if they desire stable electricity supply in each District offices.

d) Acquisition of Frequency Allocation for Radio Communication

The application of frequency license is now underway from the Ministry of Works, Transport and Communication and UPTC.

(2) In connection with the counterpart training in Japan, the Study Team suggested to DWD to make prompt application to JICA Kenya Office.

(3) In connection with the water supply facility to six (6) Trading Centers, DWD side suggested to examine soft energy systems such as solar or wind powered systems in the Study.

Appendix-1: List of Attendants in the Meeting

DWD side;

- | | |
|------------------------------|-----------------------------------|
| 1. Mr. Patrick Kahangire, | Director of DWD |
| 2. Mr. Moses Gava, | Ag. Commissioner, RWD |
| 3. Mr. Pantaleo Kabateraine, | Ag. Principal Hydrogeologist |
| 4. Mr. Disan Ssozi, | Senior Engineer |
| 5. Mr. Fred Kato-Ssemugera, | District Health Inspector, Mpigi |
| 6. Mr. Nathan Mujere, | District Water Officer, Mubende |
| 7. Mr. Fred Mulabya, | District Health Inspector, Kiboga |

JICA;

- | | |
|------------------------|---|
| 1. Mr. Satoshi Kimura, | Task Management, Second Development Study
Division, Social Development Study Department,
JICA |
|------------------------|---|

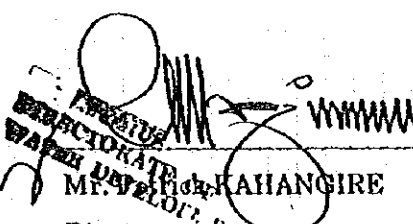
Study Team;

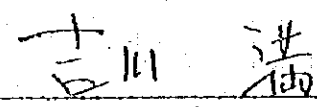
- | | |
|---------------------------|---|
| 1. Mr. Mitsuru Yoshikawa, | Team Leader/Groundwater
Development |
| 2. Mr. Haruhiko Nakamura, | Hydrogeology/Environment |
| 3. Dr. Pia Rockhold, | Social Environment/Villager's
Participation/Sanitary Promotion |
| 4. Mr. Akira Yamazaki | Geophysics/Water Quality/Well
Construction |
| 5. Mr. Masaki Miki | Coordinator |

12/11

MINUTES OF MEETING
CONCERNING
PROGRESS REPORT
FOR
THE STUDY
ON
RURAL WATER SUPPLY
IN
MPIGI, MUBENDE AND KIBOGA DISTRICTS
IN
THE REPUBLIC OF UGANDA
AGREED UPON BETWEEN
THE MINISTRY OF NATURAL RESOURCES
AND
THE JICA STUDY TEAM,

In Kampala, 28th November, 1995


DIRECTORATE OF WATER DEVELOPMENT
Mr. Peter KAHANGIRE
Director,
Directorate of Water Development,
The Ministry of Natural Resources


Mr. Mitsuru YOSHIKAWA
Leader,
The Study Team,
Japan International Cooperation Agency
(JICA)

Based on the Scope of Work agreed by and between the Ministry of Natural Resources (hereinafter referred to as "the Ministry") and the Preparatory Study Team of Japan International Cooperation Agency (hereinafter referred to as "JICA") in April, 1995, JICA organized another study team (hereinafter referred to as "the Study Team") and dispatched it to Uganda in September 1995 to conduct "the Study on Rural Water Supply in Mpigi, Mubende and Kiboga Districts in the Republic of Uganda" (hereinafter referred to as "the Study").

The Study Team conducted the Stage-One Study. Upon the termination of the Stage-One Study, the Study Team submitted 20 copies of the Progress Report to the Directorate of Water Development (hereinafter referred to as "DWD") of the Ministry on 24th November, 1995. The meeting for explanation and discussion on the contents of the Progress Report of the Study was held on 27th November, 1995 at the headoffice of DWD. The list of attendants is given in Appendix- 1.

The Study Team explained the contents of the Progress Report in detail to the DWD side, namely the findings by surveys and studies conducted during the Stage-One Study, the priority and pilot villages selected and the guideline for the further pilot study, and so forth.

Major issues in the discussion were as below:

- (1) The Study Team confirmed opinion and comment of the DWD side on the four priority and two pilot villages selected and proposed in the report.
The DWD side agreed on the selected villages in Mpigi and Mubende Districts. While, a counter proposal was placed to select villages in Massode Sub-county in Kiboga District by the DWD side instead of the villages in Lwamata Sub-county selected by the Study Team. However, in view from the criteria for the selection of villages which was set forth in the report, the DWD side finally agreed to select the villages in Lwamata Sub-county as originally proposed.
- (2) The DWD side required to the Study Team to correct the discrepancies and mis-spelling in the report.
The Study Team promised to correct those discrepancies and mis-spelling in the further interim report.

The major discrepancies pointed out by the DWD side are as follows:

- (a) As per the Paragraph 2.2.2 (Ethnic Group), the Langi group belongs to the third groups (Luo), not to the Atekerin groups in the northern Uganda.
 - (b) As per the paragraph 2.5.2 (Relevant Governmental Agency), the Ministry of Women In Development, Youth and Culture (MWDIYC) was replaced by the Ministry of Gender and Community Development (MGCD).
 - (c) As per the paragraph 2.5.4 (External Support), 98% of financial inputs from BSAs is to be 95% and one % of that by the government and NGOs to be 5%.
- (3) The DWD side requested the Study Team to consider the government request of supply of drilling equipment because their current stock is very old (more than 10 years). New drilling equipment will be retained by DWD.
- The Study Team replied it will examine the necessity of new drilling equipment for project implementation in the Study.

Appendix-1: List of Attendants in the Meeting

The Study Team:

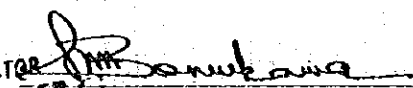
- | | |
|---------------------------|---|
| 1. Mr. Mitsuru Yoshikawa, | Team Leader/ Groundwater Development |
| 2. Mr. Haruhiko Nakamura, | Hydrology/Environment |
| 3. Mr. Kazuki Muta, | Water Supply Facilities/ Operation & Maintenance |
| 4. Dr. Pia Rockhold, | Social Environment/ User Participation/ Hygiene Promotion |
| 5. Mr. Akira Yamazaki | Geophysics/ Water Quality/ Drilling Superintendent |

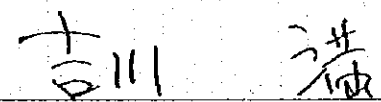
The DWD Side:

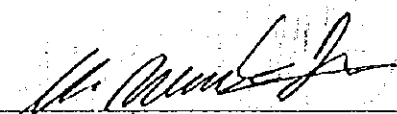
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|------------------------------|---------------------------------------|
| 1. Mr. Moses Gava, | Ag. Commissioner, RWD |
| 2. Mr. Disan Ssozi, | Senior Engineer |
| 3. Mr. Pantaleo Kabateraine, | Ag. Principal Hydrogeologist |
| 4. Mr. Fred Kato-Ssemugera, | District Health Inspector, Mpigi |
| 5. Mr. Nathan Mujere, | District Water Officer, Mubende |
| 6. Mr. Womugabe Geoffrey, | Borehole Maintenance Officer, Mubende |
| 7. Mr. Philbert Odong, | District Water Officer, Kiboga |
| 8. Mr. Fred Mulabya, | District Health Inspector, Kiboga |

MINUTES OF MEETING
CONCERNING
INTERIM REPORT
FOR
THE STUDY
ON
RURAL WATER SUPPLY
IN
MPIGI, MUBENDE AND KIBOGA DISTRICTS
IN
THE REPUBLIC OF UGANDA
AGREED BY AND BETWEEN
THE MINISTRY OF NATURAL RESOURCES
AND
THE JICA STUDY TEAM

In Kampala, 7th February, 1996


DIRECTOR
DIRECTORATE OF
WATER DEVELOPMENT
Patrick KAHANGIRE
Director,
Directorate of Water Development,
The Ministry of Natural Resources


Mr. Mitsuru YOSHIKAWA
Leader,
The Study Team,
Japan International Cooperation Agency
(JICA)


Yasuo MUKAI
Leader, Advisory Team,
Institute of International Cooperation,
JICA

Based on the Scope of Work agreed by and between the Ministry of Natural Resources (hereinafter referred to as "the Ministry") and the Preparatory Study Team of Japan International Cooperation Agency (hereinafter referred to as "JICA") in April, 1995, JICA organised another study team (hereinafter referred to as "the Study Team") and dispatched it to Uganda in September 1995 to conduct "the Study on Rural Water Supply in Mpigi, Mubende and Kiboga Districts in the Republic of Uganda" (hereinafter referred to as "the Study").

The Study Team conducted the Stage-One and -Two Studies. Upon the termination of the Stage-Two Study, the Study Team submitted 20 copies of the Interim Report to the Directorate of Water Development (hereinafter referred to as "DWD") of the Ministry on 2nd February, 1996. The meeting for explanation and discussion on the contents of the Interim Report of the Study was held on 5th and 6th February, 1996 at the headoffice of DWD. The list of attendants of the meeting is given in Appendix- 1.

The Study Team explained the contents of the Interim Report in detail to the DWD side, namely the findings by surveys and studies conducted during the Stage-Two Study, the process of the pilot study, the evaluation of water resources and environmental impact, the proposed allocation of water facilities to each community, the proposed criteria for planning and design and so forth.

Major issues in the discussion were as below:

- (1) As per the paragraph 3.4, the Study Team informed the DWD side that the sixth test borehole drilling in Mubende is cancelled due to the unexpected appearance of dry holes and the time constraint for further study.
The DWD side understood the matter.
- (2) As per the paragraph 4.3.2, the DWD side asked about the basis of borehole successful rate of 60% proposed to Mubende.
The Study Team replied that the rate was evaluated from the drilling records of DWD and the test drillings made by the Team inclusive of the effect by introducing the mud-drilling and improved siting technologies.
- (3) As per the paragraph 4.4, the DWD side enquired whether or not the rehabilitation/construction of unprotected springs and hand-dug wells would be

covered by Japanese grant aid.

The Team replied that it is subject to the decision of the Japanese Government.

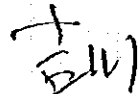
- (4) The DWD side requested the Team to pay specific consideration for the allocation of more valley tanks/dams to Mubende because of their cost-effectiveness given the low successful rate of boreholes in Mubende. In this respect, the DWD side requested the Team to pay special attention to construction of valley tanks/dams.

The Team replied that the those considerations would be made through the further study in Japan.

- (5) As per the paragraph 6.3, the DWD side agreed to the proposed strategy for intervention within the scope of the Japanese cooperation.

- (6) The Team requested the DWD side that it would kindly keep the equipment in custody, which were provided by JICA and brought into Uganda for the Study and listed in Appendix-2, until the next visit of the Team. The DWD side accepted the request.

Further, the DWD side requested that the said equipment be donated to DWD in order to use them for further activities related to the Study. The Team replied that the Team would inform the JICA Headquarters of the request.



Appendix-1:
List of Attendants in the Meeting

The Advisory Team:

Mr. Yasuo Mukai,

Leader/ Groudwater Development,
Institute of International Cooperation,
JICA

JICA Kenya Office:

Mr. Yoshiharu Yamada,

Assistant Resident Representative

The Study Team:

1. Mr. Mitsuru Yoshikawa,

Team Leader/ Groundwater Development

2. Mr. Haruhiko Nakamura,

Hydrology/ Natural Environment

3. Mr. Kazuki Muta,

Water Supply Facilities/ Operation
& Maintenance Plan

4. Dr. Pia Rockhold,

Social Environment/ Users Participation/
Hygiene Promotion Plan

5. Mr. Yoshiaki Ishizuka

Economy and Finance/
Project Evaluation

6. Mr. Masaki Miki

Coordination

The DWD Side:

1. Mr. Sottie Bomukama,

Commissioner, UIWD

2. Mr. Ian Arebahona,

Ag. Principal Engineer

3. Mr. Disan Ssozi,

Senior Engineer

4. Mr. Pantaleo Kabateraine,

Ag. Principal Hydrogeologist

5. Mr. Aaron Kabirizi,

Engineer, Drilling

6. Mr. Fred Kato-Ssemugera,

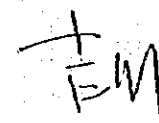
District Health Inspector, Mpigi

7. Mr. Nathan Mujere,

District Water Officer, Mubende

8. Mr. Philbert Odong,

District Water Officer, Kiboga



Appendix-2:

List of Equipment provided by JICA and brought into Uganda for the Study

1. Vehicles

1.1 Mitsubishi Pajero	; 2470CC, 9 seater	; 3 units
<u>Reg. No</u>	<u>Chassis No</u>	
US1045	CHNV340SJ00441	
US1046	CHNV340SJ00440	
US1047	CHNV340SJ00439	

1.2 Spare Parts for above

(1) Oil Filter	; 12 pcs
(2) Diesel Filter	; 9 pcs
(3) Air Cleaner	; 10 pcs
(4) Fan Belt	; 2 pcs
(5) PS Belt	; 2 pcs
(6) AC Belt	; 2 pcs
(7) Front Shock absorbers	; 2 pcs
(8) Stub Bar Bushes	; 6 pcs

2. Wireless Telephone System

21. Transceiver	; FT-80C	; 1 set
22. Power Supply	; FP-757HD	; 1 pc
23. Auto Antenna Tuner	; FC-1000	; 1 pc
24. Control Cable	; 30m	; 1 pc
25. Cable	; SD2V, 30m	; 1 pc
26. Antenna	; VSJRS	; 1 pc
27. Antenna Base	; AR-2	; 1 pc
28. Antenna Pole	; AP-6	; 1 pc
29. Antenna Stay Kit	; AY-120	; 1 set
210. Transceiver	; FT80C	; 3 sets
211. Auto Antenna	; FC-1000	; 3 pcs
212. Mobil Antenna	; YA007FG	; 3 pcs
213. Mobil Bucket	; MMB-38/41	; 3 pcs

3. Photocopy Machine ; Canon NP6010 ; 1 unit





5

