

付属資料 2 既存水源水質分析結果一覧表 (その1)

(出典: ルワンダ共和国東部及び中央地域地下水開発計画/ウタムラ県地方給水計画予備調査報告書)

No.	位置		採水日	水源の種類/周辺の地質	水温 ℃	色	濁り味	臭気PH	EC µs/cm	COD ppm	全硬度 ppm	塩化物 ppm	硝酸塩 ppm	亜硝酸塩 ppm	アンモニウム ppm	全鉄 ppm	マンガン ppm	フッ素 ppm	一般細菌 個/L	大腸菌群 個/L	備考
	District	Secteur																			
1	Rukiri	Rusenge	04.07.03	S(崖壁) Rr	23.0	透明	無し	有り 5.53	181	7	45	75	5	0.02	0.5	50	0.5	0.1	多い	多い	流量2.5l/sec
2		Ruzinga I	04.07.03	BH Rr	22.7	透明	無し	無し 5.54	218	3	50	50	5	0.02	0.5	50	0.2	0.2	無し	無し	
3	Kibungo	上水(水源)	04.07.09	暗渠 Nm	20.1	透明	若干	無し 5.55	130	1	45	25	5	0.02	0.2	50	0.2	0.5	0	若干	別流記載
4		処理後上水	04.07.09	暗渠 Bi	21.0	透明	無し	無し 5.99	159	1	65	125	5	0.02	0.2	50	0.2	0.5	0	無し	無し
5	Kigarama	Rinkese	04.07.10	BH Bi	21.5	透明	無し	無し 5.52	358	2	95	150	2	0.02	0.2	50	0.2	0.5	0.1	無し	無し
6		Nyamada	04.07.10	DW	*27.0	茶濁	強 苦い	有り 6.34	459	8	300	150	20	1	0.8	50	0.2	0.5	0	非常に多い	非常に多い
7	Kibungo	Ndamira	04.07.10	P.S Nm	20.9	透明	無し	無し 5.37	192	1	60	175	5	0.02	0.2	50	0.2	0.5	0.1	非常に多い	若干
8		Kukarengel	04.07.10	S(崖壁) Ho	*20.5	透明	無し	無し 4.56	204	6	105	75	5	0.02	0.5	50	0.2	0.5	0	非常に多い	非常に多い
9	Cyanubare	Mbarara	04.07.11	P.S Ho	21.9	透明	無し	無し 5.77	266	2	125	150	5	0.02	0.2	50	0.2	0.5	0	非常に多い	非常に多い
10		Mbarara	04.07.11	BH Nm (Ho)	22.8	透明	無し	無し 5.60	343	3	125	175	1	0.02	0.5	50	0.2	0.5	0	非常に多い	若干
11	Ruvonza	Gitwa	04.07.11	P.S	*23.4	透明	無し	無し 5.24	280	2	150	150	10	0.02	0.2	50	0.2	0.5	0	無し	無し
12	Rwamagar	Kigarama	04.07.12	河川	17.4	茶濁	若干 不味し	有り 6.23	331	5	155	175	3	0.02	0.2	50	0.2	0.5	0	非常に多い	非常に多い
13		Gisanga	04.07.12	P.S Cb, Ng(湖岸)	22.5	透明	無し	無し 5.26	282	1	50	125	10	0.02	0.2	50	0.2	0.5	0	無し	無し
14	Muhazi	Karambi	04.07.12	P.S Cb	22.7	透明	無し	無し 5.48	341	1	105	200	10	0.02	0.2	50	0.2	0.5	0	無し	無し
15		Shabarondo	04.07.12	P.S Cb	22.5	透明	無し	無し 5.41	179	1	75	75	10	0.02	0.2	50	0.2	0.5	0.1	無し	無し
16	Mirenge	Bukokoza	04.07.13	P.S Cb, Ng(湖岸)	22.2	透明	無し	無し 5.20	128	1	35	50	10	0.02	0.2	50	0.2	0.5	0	多い	非常に多い
17		Nandama	04.07.13	湖水	25.1	茶濁	有り 不味し	有り 8.30	394	8	100	25	1	0.02	0.2	50	0.3	0.5	0	非常に多い	非常に多い
18		Ruzarama	04.07.13	湖水	24.5	茶濁	有り 不味し	有り 8.24	354	8	110	25	1	0.02	0.2	50	0.2	0.5	0	非常に多い	非常に多い
19		Karaba	04.07.13	PS(ハイブ)	23.2	透明	無し	無し 5.59	151	2	30	75	12	0.02	0.2	50	0.2	0.5	0	非常に多い	無し
20	Rukira	Gituku	04.07.14	P.S Gi	20.8	透明	無し	無し 5.17	43.1	1	10	25	2	0.02	0.2	50	0.2	0.5	0	若干	
21		Gituku	04.07.14	河川	24.5	白濁	若干	有り 6.62	66.8	8	25	25	1	0.02	0.2	50	0.2	0.5	0.1	非常に多い	非常に多い
22		Mushikili	04.07.14	河川	25.2	茶濁	不味し	有り 6.92	116	8	40	25	1	0.02	0.2	50	0.2	0.5	0	非常に多い	非常に多い
23		nyagazoi	04.07.14	河川	23.0	茶濁	有り 不味し	有り 6.80	206	8	60	25	1	0.02	0.2	50	0.3	0.5	0.1	非常に多い	非常に多い
24	Nyanubuye	Murundi	04.07.15	DW	17.8	茶濁	有り 不味し	有り 6.80	293	5	10	25	1	0.02	0.5	50	0.7	2	0	非常に多い	非常に多い
25		Nyabitare	04.07.15	池(DW)	28.1	茶濁	強 不味し	有り 6.85	282	8	90	25	1	0.03	0.2	50	1	0.7	0	非常に多い	非常に多い
26	Rusumo	Rubango	04.07.15	P.S Rr	21.7	透明	無し	無し 5.61	220	1	55	125	7	0.02	0.2	50	0.2	0.5	0	無し	無し
27		Nyamyanza	04.07.15	P.S Rr?	*23.0	透明	無し	無し 5.57	159	6	35	25	4	0.02	0.2	50	0.2	0.5	0	非常に多い	若干
28		Chuniji	04.07.15	BH Rr (Ho)	21.4	透明	無し	無し 6.57	393	3	205	150	1	0.02	0.2	50	0.2	0.5	0	若干	無し
29	Chanubare	Nvankora	04.07.16	BH Rr	24.8	透明	無し	無し 6.46	274	6	85	125	2	0.07	0.2	50	0.2	0.5	1	多い	無し
	WHOガイドライン値							6.5-8.5			500	250	10			400	0.3		1.5		

BH: 深井戸, PS: 保護湧水, S: 湧水, DW: 手掘り井戸 注: *は家庭のタンクより採水

既存水源水質分析結果一覽表 (その2)

(出典：ルワンダ国キブongo県地方開発プログラム策定支援プロジェクト形成調査最終報告書)

番号	郡水源地		Cell	緯度	経度	Altitude(m)	水源地の形態	地形・地質	水質	pH	外観・臭気	電気伝導率 EC(µs/cm)	NH ₄ (mg/l)	アモニア	硝酸態窒素 NO ₃ (mg/l)	全窒素 (mg/l)	フッ素 (mg/l)	全硬度 (mg/l)	塩化物 (mg/l)	大腸菌群 Coliform	備考
	District	Sector																			
1	RWAMAGANA						雨水		21.8	7.54	無色・無臭	47.4	0.2>	1>	0.02>	0.2>	0	5	25>		排水
2	BYUNGO	Sakara	Kuhambizi				自然湧水		22.0	5.5	茶色・無臭	22.2	0.2>	10	0.02>	0.2>	0	60	75		
3	BYUNGO	Sakara	Nyagubye				自然湧水		22.4	5.67	無色・無臭	176	0.2>	10	0.02>	0.2>	0	55	100		
4	RWAMAGANA						水運水		27.1	7.87	無色・無臭	569	0.2>	1>	0.02>	0.2>	0	32.5	150		水運水
5	RWAMAGANA	Mwulite	Gisanga				湧水		23.2	5.32	無色・無臭	290	0.2>	20	0.02>	0.2>	0	65	100		
6	RWAMAGANA	Sovu	Kabuya				湧水		23.0	5.67	無色・無臭	293	0.2>	20	0.02>	0.2>	0	80	100		
7	RWAMAGANA	Ruronde	Ginga				湧水		22.9	6.08	無色・無臭	354	0.2>	30	0.02>	0.2>	0	110	150		
8	CYARUBARE	Kadindimihi	Cyabwira	S1°57'65"	E30°35'373"	1,370	井戸(ハンドポンプ)	沖積低地	27.1	5.2	少し臭い	273	0.2>	1>	0.02>	0.2>	0				
9	CYARUBARE	Rusaga	Nyakamazi	S2°05'354"	E30°35'172"	1,400	保護湧水	谷奥斜面・岩層	24.3	5.61	無色・無臭	307	0.2>	10	0.02>	0.2>	0	95	75		多い
10	CYARUBARE	Rusaga	Nyama	S2°03'238"	E30°35'796"	1,450	保護湧水	幅広い谷奥斜面	26.4	5.72	無色・無臭	242	0.2>	2	0.02>	0.2>	0.4	80	80		非常に多い
11	CYARUBARE	Suyuma	Fusuye	S1°39'294"	E30°34'78"	1,380	湧水	小丘表面	28.5	5.6	少し臭い	355	0.2>	2	0.02>	0.2>	0	120	100		非常に多い
12	CYARUBARE	Mukoyoyo		S1°54'524"	E30°40'762"	1,330	井戸(ハンドポンプ)	谷間・沖積地	22.1	6.2	無色・無臭	252	0.2>	1	0.02>	0.2>	0	80	75		多い
13	BARONDO	Nyanga	Murashyamba	S2°22'167"	E30°25'552"	1,350	井戸(ハンドポンプ)	沖積低地	21.6	5.2	少し臭い	380	0.2>	8	0.02>	0.2>	0	75	75		
14	BARONDO	Suzovu	Bumoso	S2°00'853"	E30°32'733"	1,420	保護湧水	山裾斜面	23.3	5.37	無色・無臭	213	0.2>	10	0.02>	0.2>	0	60	50		非常に多い
15	BARONDO	Esarondo		S1°59'524"	E30°34'154"	1,440	井戸(ハンドポンプ)	山裾斜面	21.9	5.6	無色・無臭	260	0.2>	10	0.2>	0.2>	0	105	75		
16	BYUNGO	Mabunga	Akabira	S2°12'747"	E30°23'630"	1,330	湧水	沖積表層土中	26.6	5.5	白濁	131	0.2>	2	0.02>	0.2>	0	65	75		非常に多い
17	BYUNGO	新倉		S2°11'887"	E30°22'846"	1,360	保護湧水		24.4	5.8	無色・無臭	126	0.2>	5	0.02>	0.2>	0	55	75		少ない
18	BYUNGO	Nyama	Bibokozwa	S2°11'789"	E30°25'201"	1,350	保護湧水	沖積地田圃	22.3	5.3	無色・無臭	120	0.2>	20	0.02>	0.2>	0	50	50		多い
19	MUHAZI	Kabare				1,470	ハンドポンプ		26.4	8.0	多少臭い	553	0.2>	1>	1.0	0.2>	0	80	25>		
20	MUHAZI	Musha	Babubura	S1°55'706"	E30°21'392"	1,470	保護湧水	崖斜面	27.3	5.5	無色・無臭	417	0.2>	1.5	0.02>	0.2>	0	165	125		少ない
21	MUHAZI	Mukaranga	Cyuru				井戸		22.3	5.67	無色・無臭	253	0.2>	5	0.02>	0.2>	0	90	75		ハンドポンプ
22	MUHAZI	Murambi	Karumbi				保護湧水		22.0	5.48	無色・無臭	302	0.2>	45<	0.02>	0.2>	0	105	100		ハンドポンプ
23	NYARUBUYE			S2°09'552"	E30°48'891"	1,500	湧水	崖斜面	26.7	6.8	無色・有臭	164									
24	NYARUBUYE			S2°12'883"	E30°45'246"	1,460	湧水	Nyaburwa 川	29.2	6.94	濁り	268									
25	RUKWA	Rurama	Gashi	S2°11'702"	E30°30'777"	1,460	湧水	Rwanabagaza 川	24.0	6.84	無色・無臭	165	0.2	2	0.02>	0.2>	0	60	50		
26	RUKWA	Giruku		S2°07'311"	E30°39'077"	1,680	保護湧水	山裾斜面	27.0	5.2	無色・無臭	260	0.2>	1>	0.02>	0.2>	0	35	25>		多少あり
27	RUKWA	Ruranga II		S2°15'249"	E30°32'987"	1,380	湧水	谷間・沖積地	23.2	5.8	無色・無臭	190	0.2>	5	0.02>	0.2>	0	70	50		
28	RUKWA	Ruranga I		S2°15'249"	E30°32'987"	1,380	湧水	谷間・沖積地	23.7	5.5	無色・無臭	195	0.2>	3	0.02>	0.2	0	60	75		多い
29	RUSUMU	Kurehe	Nyobokoro	S2°17'319"	E30°39'480"	1,410	新湧水	Segame 川	24.1	5.67	無色・無臭	164	0.2>	1>	0.02>	0.5	0				
30	RUSUMU	Kurehe	Ruranga	S2°15'853"	E30°38'101"	1,500	湧水	谷奥・表層土	25.5	5.61	無色・無臭	240	0.2>	1>	0.02>	0.2>	0				
31	RUSUMU	Canosa	Cyuzuzi	S2°12'274"	E30°34'991"	1,540	井戸(ハンドポンプ)	山裾斜面	25.3	5.1	無色・無臭	413	0.2>	1>	0.02>	0.2>	0	80			
32	RUSUMU	Figina	Maruzi				保護湧水		22.2	6	無色・無臭	216	0.2>	5	0.02>	0.2>	0	110	100		
33	RUSUMU	Canosa	Cyuzuzi				井戸(ハンドポンプ)		22.4	6.57	無色・無臭	365	0.2>	1	0.02>	0.2>	0	210	150		

WHOガイドライン

既存水源水質分析結果一覧表 (その3)

(出典：ルワンダ共和国地方給水計画基本設計調査報告書)

湧水

District	Sector	Water Source	Altitude (m)	UTM-x	UTM-y	Yield (l/s)	Water quality											
							pH	Conductivity (µS/cm)	Turbidity (NTU)	Fe (ppm)	Mn (ppm)	As (ppb)	NO2 (ppm)	NO3 (ppm)	F (ppm)	NH4 (ppm)	Detection of colony	
Kibungo	Nyamugonda	Ndamira	1,476	562668	9781110	0.8	5.0	276.0	0.0	<0.2	<0.05	<4	<0.02	5	0.2	<0.2	NO	
		Sakara					1.1	5.5	281.0	0.0	<0.2	<0.05	<4	<0.02	2	0.0	<0.2	YES
		Kubaya					0.9	4.9	223.0	0.0	<0.2	<0.05	<4	<0.02	5	0.2	<0.2	NO
Rwagomani	Ruhororo	Caababaya	1,480	564489	9766150	1.1	5.5	281.0	0.0	<0.2	<0.05	<4	<0.02	2	0.0	<0.2	YES	
		Nyakagazi	1,427	564079	9767088	0.9	4.9	223.0	0.0	<0.2	<0.05	<4	<0.02	5	0.2	<0.2	NO	
		Mwama	1,388	547027	9781404	1.3 + 3.0	5.3	202.0	0.0	<0.2	<0.05	<4	<0.02	2	0.2	<0.2	NO	
		Sovu	1,382	547326	9781789	0.3	5.6	198.0	0.0	<0.2	<0.05	<4	<0.02	10	0.2	<0.2	NO	
Cyanubare	Gashanda	Rutonde	1,390	560471	9783021	0.7	5.7	330.0	0.0	<0.2	<0.05	<4	<0.02	10	0.2	<0.2	YES	
		Nyanzira	1,377	574640	9786343	2.0	6.2	271.0	0.0	<0.2	<0.05	<4	<0.02	1	0.8	<0.2	-	
		Shyamba	1,411	566352	9772906	2.3	6.1	227.0	0.0	<0.2	<0.05	<4	<0.02	2	0.2	<0.2	YES	
Kabarondo	Gitoki	Murawa Dist. Office	1,419	566214	9769016	2.3	5.5	298.0	0.0	<0.2	<0.05	<4	<0.02	5	0.2	<0.2	NO	
		Bisenga	1,419	566214	9769016	2.3	5.5	298.0	0.0	<0.2	<0.05	<4	<0.02	5	0.2	<0.2	NO	
		Ruyanza	1,560	557567	9790099	1.1 + 0.5	5.7	265.0	0.0	<0.2	<0.05	<4	<0.02	5	0.2	0.2	YES	
Kigama	Kagoma	Ruramba	1,447	556133	9753113	3.8	5.2	122.0	0.0	<0.2	<0.05	<4	<0.02	5	0.4	<0.2	YES	
		Bare	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
		Fukiwe	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
		Gashanda	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Mironzo	Karambi	Karamba	1,400	559608	9771923	1.4	5.6	256.0	0.0	<0.2	<0.05	<4	<0.02	5	0.2	<0.2	YES	
		Mbuye	1,326	544663	9745969	0.7	5.5	88.0	0.0	<0.2	<0.05	<4	<0.02	2	0.2	<0.2	YES	
		Murwa	1,582	548735	9757120	3.5	5.1	125.0	0.0	<0.2	<0.05	<4	<0.02	5	0.2	<0.2	YES	
		Ruyama	1,380	550584	9764003	2.1	4.6	104.0	0.0	<0.2	<0.05	<4	<0.02	2	0.2	<0.2	YES	
Muhazi	Karambi	Karambi	1,357	549273	9761040	3.2	5.2	89.2	0.0	<0.2	<0.05	<4	<0.02	1	0.4	<0.2	YES	
		Muramba	1,435	551586	9792583	0.14	5.5	106.0	0.0	<0.2	<0.05	<4	<0.02	10	0.2	<0.2	YES	
		Nyanubuye	1,568	561836	9761116	2.0	5.4	62.7	0.0	<0.2	<0.05	<4	<0.02	2	0.4	<0.2	YES	
		Nyabibare	1,567	561091	9760796	3.3	6.2	279.0	0.0	<0.2	<0.05	<4	<0.02	2	0.4	<0.2	YES	
Rusumo	Muguruka	Muguruka	1,553	577964	9747536	1.1	6.1	190.0	0.0	<0.2	<0.05	<4	<0.02	5	0.2	<0.2	NO	
		Nyamugali	1,492	582619	9750390	3.4	5.9	137.0	0.0	<0.2	<0.05	<4	<0.02	<1	0.4	<0.2	NO	
		Nyakagazi-Mayoni	1,503	561729	9743341	0.5	5.5	29.1	0.0	<0.2	<0.05	<4	<0.02	<1	0.4	<0.2	YES	
		Cyanyanziruzi	1,567	561216	9750785	1.3	5.8	71.5	0.0	<0.2	<0.05	<4	<0.02	2	0.2	<0.2	YES	
Gashamba	Samuko	Karambi	1,513	578433	9747292	1.8	5.7	58.0	0.0	<0.2	<0.05	<4	<0.02	2	0.2	<0.2	YES	
		Gasebura	1,352	559261	9744183	3	5.4	204.0	0.0	<0.2	<0.05	<4	<0.02	5	0.2	<0.2	NO	
		Rubona	1,340	557667	9742096	3	5.5	171.0	0.0	<0.2	<0.05	<4	<0.02	2	0.4	<0.2	NO	
		Gahara	1,348	563168	9740828	1.2	5.6	245.0	0.0	<0.2	<0.05	<4	<0.02	<1	0.2	<0.2	YES	
WHO guidelines for drinking water quality (2004)							-	-	-	0.4	10	0.2	50	1.5	-	No colony / 100 ml		

既存井戸

District	Sector	Cell	Pumping Station Coordination			Yield (l/s)	Water quality										
			Altitude (m)	UTM-x	UTM-y		pH	Conductivity (µS/cm)	Turbidity (NTU)	Fe (ppm)	Mn (ppm)	As (ppb)	NO2 (ppm)	NO3 (ppm)	F (ppm)	NH4 (ppm)	Detection of colony
Cyanubare	Cyaboya	Gihinga	1,406	566147	9786809	0.2	5.5	215.0	0.0	<0.2	<0.05	<4	<0.02	5	0.2	<0.2	YES
		Cyaboya	1,373	564605	9782824	0.0	5.0	238.0	0.0	<0.2	<0.05	<4	<0.02	5	0.2	<0.2	NO
		Mbarara	1,390	564469	9781562	0.7	5.7	373.0	0.0	<0.2	<0.05	<4	<0.02	5	0.2	<0.2	YES
		Mbarara	1,400	564292	9780699	0.8	5.6	301.0	0.0	<0.2	<0.05	<4	<0.02	5	0.2	<0.2	NO
Kabarondo	Mataba	Mukoyoyo (Nyanzira)	1,377	574640	9786343	2.0	6.2	271.0	0.0	<0.2	<0.05	<4	<0.02	1	0.8	<0.2	-
		Mataba*	1,333	546548	9771789	5.5	5.5	123.5	0.0	<0.2	<0.05	<4	<0.02	5	0.2	<0.2	YES
Muhazi	Ruzinza I	Ruzinza I	1,354	560409	9778699	3.5	5.6	42.5	0.0	<0.2	<0.05	<4	<0.02	5	0.2	<0.2	YES
		Cyanyanziruzi	1,470	557909	9786899	3.5	5.5	400.0	11.8	>10	-	<4	<0.02	1	0.6	-	-
Rukira	Ruzinza I	Ruzinza I	1,368	561416	9751699	5.0	5.0	196.0	0.0	<0.2	<0.05	<4	<0.02	1	0.2	<0.2	NO
		Ruzinza I	1,368	561416	9751699	5.0	5.0	196.0	0.0	<0.2	<0.05	<4	<0.02	1	0.2	<0.2	NO
WHO guidelines for drinking water quality (2004)							-	-	-	0.4	10	0.2	50	1.5	-	No colony / 100 ml	

注：検査は調査団員がリフテクトを使用しました。
*：住民からの聞き取りによると塩分が高くなっていないとのこと。また、表裏に示すとおり高い量のアンモニア化合物が検出された。

付属資料 3 東部県 7 郡における CDF プロジェクト・リスト(2002-2007 年)

(※グリーン部分のセルは給水プロジェクト)

PROVINCE	BENEFICIARY DISTRICT	BENEFICIARY DISTRICT	NAME OF PROJECT	Budget year	Amount Granted by CDF(FRW)	Contractual Amount/Montant du Marche	1st transfer Amount (FRW)	2nd transfer Amount (FRW)	3rd transfer Amount (FRW)	4th Transfer Amount (FRW)	5th Transfer	TOTAL	Balance to be disbursed
EASTERN PROVINCE													
EASTERN	BUGESERA	BUGESERA	Travaux d'aménagement des fosses anti-érosifs et de plantation des agro-forestiers et herbes fixatrices sur une superficies de 300Ha dans les secteurs Rweru,Mayange et Kamabuye		76,859,880	76,859,880	15,371,976	30,743,952	30,743,952			76,859,880	0
EASTERN	Nyamata	BUGESERA	Exploitation rationnelle d'un marais de 12 ha à Karugenge-Kanzenze		9,720,000	9,720,000	2,916,000	2,916,000	3,888,000	0	0	9,720,000	0
EASTERN	Nyamata	BUGESERA	Projet de plantation des arbres bord des pistes des secteurs Mwogo,Murama,Muyenzi,Kanazi,Musenyei,Gicaca,Rulindo Mayange, Nyagihunika,Maranyundo,Kayumba,Kanzenze,Ntarama et Kibungo (PDL-HIMO)		117,744,444	117,744,444	58,872,222	58,872,222				117,744,444	0
EASTERN	Nyamata	BUGESERA	Projet de telecommunication en milieu rural dans le secteur Mwogo		7,118,869	7,118,869	7,118,869	0	0	0	0	7,118,869	0
EASTERN	Ngenda	BUGESERA	Projet d'extension du marché de Ruhuha		27,279,612	24,668,460	4,091,942	4,091,942	8,183,884	8,300,692		24,668,460	0
EASTERN	Nyamata	BUGESERA	Réhabilitation de l'abattoir de Nyamata		1,346,850	1,410,000	404,055	942,795				1,346,850	63,150
EASTERN	Gashora	BUGESERA	Réhabilitation et extension de la guest house de GASHORA		46,467,683	54,879,759	9,293,537	18,587,074				27,880,611	26,999,148
EASTERN	Gashora	BUGESERA	Telecommunication en milieu rural à Kabuka dans le secteur Rweru		8,180,869	8,180,869	8,180,869	0	0	0	0	8,180,869	0
EASTERN	Gashora	BUGESERA	Ligne électrique (30 kv) de NYABAGENDWA - GASHORA	2005	198,464,297	295,144,086	177,086,452					177,086,452	118,057,634
EASTERN		BUGESERA	Projet de silo de stockage et TUVUGANE dans le cadre d'UBUDEHE	2006	3,756,000	3,756,000	3,756,000					3,756,000	0
EASTERN		BUGESERA	Projet de collect et pasteurisation de lait (UBUDEHE)	2006	7,244,000	7,244,000	7,244,000					7,244,000	0
EASTERN		BUGESERA	Travaux de reboisement dans le secteur de NGERUKA et NYARUGENGE	2006	34,274,000	34,274,000	13,709,600	6,854,800				20,564,400	13,709,600
EASTERN		BUGESERA	Travaux de reboisement dans le secteur de JURU	2006	35,788,000	35,788,000	14,315,200	7,157,600				21,472,800	14,315,200
EASTERN		BUGESERA	Construction du bureau du secteur RWERU	2006	23,688,900	26,321,000	4,737,780	9,475,560	4,737,780			18,951,120	7,369,880
EASTERN		BUGESERA	Projet de mise en place des dispositifs anti - érosifs dans les secteurs RILIMA, NGERUKA et NYAMATA	2006	77,974,678	77,974,678	46,784,807	15,594,935				62,379,742	15,594,936
EASTERN		BUGESERA	Construction du bureau du secteur NGERUKA	2006	23,376,600	25,974,000	4,675,320	9,350,640	4,675,320			18,701,280	7,272,720
EASTERN		BUGESERA	Construction du bureau de secteur KAMABUYE	2006	23,866,740	26,518,600	4,773,348	9,546,696				14,320,044	12,198,556
EASTERN		BUGESERA	Construction du bureau de secteur MUSENYI	2006	23,376,600	25,974,000	4,675,320	9,350,640	4,675,320			18,701,280	7,272,720
EASTERN		BUGESERA	Purchasing of Grainpro cacoons 50mt capacity, 3m high complete with 1 unit (20 cancoons)	2006	60,000,000	60,000,000	60,000,000					60,000,000	0
EASTERN		BUGESERA	Construction du bureau de secteur MWOGO	2006	26,321,000	26,321,000	14,213,340	4,737,780				18,951,120	7,369,880
EASTERN		BUGESERA	Electrification par energie solaire des secteurs RILIMA, JURU, MAYANGE et NTARAMA	2006	27,994,000	27,994,000	16,796,400	5,598,800	5,598,800			27,994,000	0
EASTERN		BUGESERA	Electrification par energie solaire des secteurs SHYARA, NYARUGENGE, MAREBA et KAMABUYE	2006	27,994,000	27,994,000	16,796,400	5,598,800				22,395,200	5,598,800
					888,837,022	1,001,859,645	495,813,437	199,420,236	62,503,056	8,300,692	0	766,037,421	235,822,224
EASTERN	Ngarama	GATSIBO	Electrification du bureau de District de Ngarama par energie solaire		13,900,457	13,900,457	13,287,266					13,287,266	613,191
EASTERN	Humure	GATSIBO	Construction de l'abattoir à Mugera		6,420,645	7,693,170	963,097	963,097	1,926,194	2,568,257		6,420,645	1,272,525
EASTERN	Humure	GATSIBO	Construction des petits ponts Ruboroga et Rubonobono		8,907,525	10,462,741	1,187,670	3,563,010	4,156,845	0	0	8,907,525	1,555,216
EASTERN	Ngarama	GATSIBO	Construction du bureau de secteur Gatsibo		9,998,136	9,998,136	2,499,534	3,499,348				5,998,882	3,999,254
EASTERN	Ngarama	GATSIBO	Construction du bureau de secteur Gitinda (NYAGIHINGA)		9,488,984	9,488,984	2,372,246					2,372,246	7,116,738
EASTERN	Ngarama	GATSIBO	Construction du marché de NGARAMA	2004	48,505,937	47,874,937	14,362,481	14,362,481	12,000,000	7,149,972		47,874,934	3
EASTERN	Kahi	GATSIBO	Construction of Kabarore-Gatoki road (6.4 km)		45,866,600	40,651,000	4,720,005	4,319,940	3,155,355	24,390,600	0	36,585,900	4,065,100
EASTERN	Murambi	GATSIBO	Construction of Rwagitima market	2003	28,701,923	31,891,025	4,115,475	4,115,475	11,480,769			19,711,719	12,179,306
EASTERN	Kahi	GATSIBO	Construction of Rwagitima-Nyakayaga road (5.2 km)	2005	35,738,879	39,709,865	7,941,973	14,295,551	7,147,775			29,385,299	10,324,566
EASTERN	Humure	GATSIBO	Installation des équipements d'electrification du Bureau de District par energie solaire		20,301,424	20,301,424	16,926,424	3,375,000	0	0	0	20,301,424	0
EASTERN	Humure	GATSIBO	Projet de telecommunication au Bureau de District		7,118,869	7,118,869	7,118,869	0	0	0	0	7,118,869	0
EASTERN	Murambi	GATSIBO	Travaux d'extension d'un marché couvert de Kiramuruzi-Murambi		37,210,436	37,210,436	7,442,087	26,047,305	3,721,044			37,210,436	0
EASTERN	Rwamiko	GATSIBO	Travaux supplémentaires au marché couvert de Gasange(Rwamiko)		15,165,875	16,994,650	9,177,111	5,988,764	0	0	0	15,165,875	1,828,775
EASTERN	Rwamiko	GATSIBO	Réhabilitation (26 km) et extension (8 km) du reseau d'eau dans les 4 secteurs (Kabira, Gatara, Kome et Kigabiro)		33,640,245	30,398,300	5,046,037	10,092,074	10,092,074			25,230,185	5,168,115
EASTERN	Rwamiko	GATSIBO	Construction du marché de GASANGE		34,193,729	37,848,081	6,838,746	13,677,492	13,547,035			34,063,273	3,784,808
EASTERN	Ngarama	GATSIBO	Construction et aménagement du site touristiques (Rocher) de Ngarama		32,011,180	32,011,180	6,402,236	12,804,472				19,206,708	12,804,472
EASTERN		GATSIBO	Construction du bureau du secteur de KAGEYO	2006	24,041,250	26,712,500	4,808,250	9,616,500	6,143,875			20,568,625	6,143,875
EASTERN		GATSIBO	Construction du bureau du secteur de REMERA	2006	24,746,100	27,496,100	4,949,298	9,898,596				14,847,894	12,648,206
EASTERN		GATSIBO	Construction des ponts MBURAMAZI et NYAKAYIRA	2006	28,693,232	31,881,369	5,738,646	11,477,293				17,215,939	14,665,430
EASTERN		GATSIBO	Construction d'une salle polyvalente du District	2006	70,195,743	77,995,270	14,039,149	28,078,297	15,599,054			57,716,500	20,278,770
EASTERN		GATSIBO	Aménagement, stabilisation et viabilisation des terrasses radicales dans le secteur de NGARAMA (25ha)	2006	24,620,200	24,620,200	9,848,080	9,848,080				19,696,160	4,924,040
EASTERN		GATSIBO	Aménagement, stabilisation et viabilisation des terrasses radicales dans le secteur de MURAMBI (50ha)	2006	48,839,000	48,839,000	19,535,600	19,535,600	9,767,800			48,839,000	0

PROVINCE	BENEFICIARY DISTRICT	BENEFICIARY DISTRICT	NAME OF PROJECT	Budget year	Amount Granted by CDF(FRW)	Contractual Amount/Montant du Marché	1st transfer Amount (FRW)	2nd transfer Amount (FRW)	3rd transfer Amount (FRW)	4th Transfer Amount (FRW)	5th Transfer	TOTAL	Balance to be disbursed
EASTERN		GATSIBO	Aménagement, stabilisation et viabilisation des terrasses radicales (Lot III) dans le secteur de KIZIGURO (25ha)	2006	24,111,725	24,111,725	9,644,690					9,644,690	14,467,035
EASTERN		GATSIBO	Construction du Centre de santé de GASANGE	2006	126,987,589	141,097,321	25,397,512	25,397,518				50,795,030	90,302,291
EASTERN		GATSIBO	Silo de stockage "Cancoons"	2006	45,000,000	45,000,000	45,000,000					45,000,000	0
EASTERN		GATSIBO	Construction et réhabilitation de la route NJUME-GASANGE	2006	124,424,915	138,249,906	24,884,983	49,769,966				74,654,949	63,594,957
EASTERN		GATSIBO	Surveillance des travaux de construction et réhabilitation de la route NJUME-GASANGE	2006	24,900,000	24,900,000	9,960,000					9,960,000	14,940,000
					953,730,598	1,004,456,646	284,207,465	280,725,859	98,737,820	34,108,829	0	697,779,973	306,676,673
EASTERN	Kabarondo	KAYONZA	Construction du marché de Kabarondo-Phase I		50,568,697	53,235,450	9,582,381	19,164,762	19,164,762			47,911,905	5,323,545
EASTERN	Rukara	KAYONZA	Electrification par energie solaire de centres de sante de Ryamanyi et Nyakabungo		26,820,279	24,311,540	21,880,386	0	0	0	0	21,880,386	2,431,154
EASTERN	KAYONZA	KAYONZA	Environmental protection in the sectors, Kabare and Ndego (Former Cyarubare District)		76,924,200	76,924,200	15,384,840	30,769,680	30,769,680			76,924,200	0
EASTERN	Cyarubare	KAYONZA	Extension of potable water to SHYANDA, BISENGA & MURAMA sectors		51,703,391	51,703,391	15,511,017	15,511,017	18,657,966	0	0	49,680,000	2,023,391
EASTERN	Cyarubare	KAYONZA	Projet de telecommunication au Bureau de District		7,118,869	7,118,869	7,118,869	0	0	0	0	7,118,869	0
EASTERN	Rukara	KAYONZA	Réhabilitation de la route Karubamba-Kimodoka (7 km)		31,405,500	22,960,000	4,132,800	8,265,600	8,265,600	0	0	20,664,000	2,296,000
EASTERN	Rukara	KAYONZA	Travaux de fourniture et d'installation des équipements d'électrification par énergie solaire du bureau de District de Rukara	2005	9,900,000	8,651,447	1,730,289	6,921,158				8,651,447	0
EASTERN	Muhazi	KAYONZA	Projet de construction du marché de Kayonza (Phase I)		39,410,808	39,410,808	5,911,621	5,911,621	18,319,748			30,142,990	9,267,818
EASTERN	Muhazi	KAYONZA	Projet de construction du marché de Kayonza (Phase II)		33,756,651	38,937,903	6,751,330	13,502,660	13,502,661	0	0	33,756,651	5,181,252
EASTERN	Muhazi	KAYONZA	Construction de l'école secondaire de RWINKWAVU	2005	30,058,843	33,398,714	6,011,769	13,359,486				19,371,255	14,027,459
EASTERN		KAYONZA	Aménagement des terrasses radicales dans le site de RUYONZA	2006	20,882,767	23,203,075	8,713,107	8,353,107	4,640,615			21,706,829	1,496,246
EASTERN		KAYONZA	Aménagement des terrasses radicales dans le site de KAYONZA	2006	23,442,552	23,442,552	8,353,107	4,219,660	4,688,510			17,261,277	6,181,275
EASTERN		KAYONZA	Aménagement des terrasses radicales dans le site de KANYEGANYEGE	2006	23,442,552	23,442,552	8,439,319	4,219,660	4,688,510			17,347,489	6,095,063
EASTERN		KAYONZA	Aménagement des terrasses radicales dans le site de SHYOGO	2006	24,203,075	24,203,075	8,439,319	4,356,554	4,840,615			17,636,488	6,566,587
EASTERN		KAYONZA	Finissage de 7 anciens secteurs du District de KAYONZA (Participation locale)	2006	16,241,146	16,241,146	16,241,146					16,241,146	0
EASTERN		KAYONZA	Création de 14.2km de route en terre dans le District de KAYONZA	2006	257,000,000	257,000,000	51,400,000					51,400,000	205,600,000
EASTERN		KAYONZA	Surveillance des travaux de création de 14.2km de route en terre dans le District de KAYONZA	2006	12,120,000	12,120,000	2,424,000					2,424,000	9,696,000
EASTERN		KAYONZA	Projet de silo de stockage "Cancoons"	2006	60,000,000	60,000,000	60,000,000					60,000,000	0
					794,999,330	796,304,722	258,025,300	134,554,965	127,538,667	0	0	520,118,932	276,185,790
EASTERN	Rukira	KIREHE	Construction de citernes d'eau de pluies de 20m3 chacune-secteur Mushikiri et deux autres pour captage d'eau de pluie-secteur Rurenge		6,810,997	7,352,520	1,323,454	2,646,907				3,970,361	3,382,159
EASTERN	Rusumo	KIREHE	Construction d'une adduction d'eau GATORE par pompage		49,964,060	88,853,600	9,992,812	19,985,624	19,985,624	0	0	49,964,060	38,889,540
EASTERN	Rusumo	KIREHE	Construction of Cyunuzi-Rwabutazi-Nganda road (18km)		45,625,464	46,478,938	12,485,681	14,889,597	18,250,186			45,625,464	853,474
EASTERN	Nyarubuye	KIREHE	Exécution de travaux de construction de trois (3) salles de classe et une citerne de 30M3 a l'école secondaire de Nyarubuye	2005	16,924,208	17,297,450	3,384,842					3,384,842	13,912,608
EASTERN	Rusumo	KIREHE	Projet de telecommunication rural dans le secteur Masaza		8,180,869	8,180,869	8,180,869	0	0	0	0	8,180,869	0
EASTERN	Nyarubuye	KIREHE	Rehabilitation de la route NYARUTUNGA-RUGARAMA		54,803,271	60,571,750	10,960,654	21,921,308				32,881,962	27,689,788
EASTERN	Rukira	KIREHE	Supply of potable water to Ntaruka sector		1,904,120	1,904,120	571,236	830,514				1,401,750	502,370
EASTERN	Rukira	KIREHE	Supply of potable water to Rugarama sector		1,904,120	1,904,120	571,236	830,514				1,401,750	502,370
EASTERN	Rukira	KIREHE	Travaux de réhabilitation de la route Kyigufi-Mahama, Nyamugali (14km)	2006	155,149,000	155,149,000	31,029,800					31,029,800	124,119,200
EASTERN	Nyarubuye	KIREHE	Électrification par énergie solaire d'un bâtiment administratif du Ex-District de Nyarubuye		17,857,692	17,877,000	17,857,692					17,857,692	19,308
EASTERN		KIREHE	Surveillance et contrôle technique de réhabilitation de la route KIGUFI - MAHAMA - NYAMUGARI	2006	5,620,340	5,620,340	1,124,068	2,248,136	2,248,136			5,620,340	0
EASTERN		KIREHE	Aménagement, stabilisation et viabilisation des terrasses radicales dans le secteur de KIREHE - Site KIREHE	2007	38,400,000	38,400,000	15,360,000	7,680,000	7,680,000			30,720,000	7,680,000
EASTERN		KIREHE	Aménagement, stabilisation et viabilisation des terrasses radicales dans le secteur de NYAMUGARI - Site NYAMUGARI	2007	28,800,000	28,800,000	11,520,000	5,760,000	5,760,000			23,040,000	5,760,000
EASTERN		KIREHE	Aménagement, stabilisation et viabilisation des terrasses radicales dans le secteur de GATORE (30ha)	2007	29,985,180	29,985,180	11,994,072					11,994,072	17,991,108
EASTERN		KIREHE	Construction du bureau du secteur de NYAMUGALI	2005	35,030,460	35,030,460	6,305,483	12,610,965	16,114,011			35,030,459	1
EASTERN		KIREHE	Construction du bureau du secteur de KIGINA	2006	30,335,184	33,705,760	6,067,037	12,134,074	15,504,649			33,705,760	0
EASTERN		KIREHE	Construction du bureau du secteur de KIREHE	2007	28,403,163	31,559,070	5,680,633	11,361,265	14,517,172			31,559,070	0
EASTERN		KIREHE	Extension de l'adduction d'eau de GATORE	2005	25,947,094	28,830,105			10,378,838			10,378,838	18,451,267

PROVINCE	BENEFICIARY DISTRICT	BENEFICIARY DISTRICT	NAME OF PROJECT	Budget year	Amount Granted by CDF (FRW)	Contractual Amount/Montant du Marche	1st transfer Amount (FRW)	2nd transfer Amount (FRW)	3rd transfer Amount (FRW)	4th Transfer Amount (FRW)	5th Transfer	TOTAL	Balance to be disbursed
EASTERN		NYAGATAR	Aménagement des terrasses radicales dans le site de GISHORORO	2006	21,324,037	23,693,375	4,264,807					4,264,807	19,428,568
EASTERN		NYAGATAR	Aménagement des terrasses radicales dans le site de GAKIRAGE	2006	22,376,385	24,862,650	4,475,277					4,475,277	20,387,373
EASTERN		NYAGATAR	Réhabilitation des ponts sur la route GACUNDEZI - KABEZA (Lot 1) et NKERENKE - GACUNDEZI	2006	10,029,600	11,144,000	2,005,920	4,011,840	2,563,120	2563120		11,144,000	0
EASTERN		NYAGATAR	Electrification par énergie solaire de 4 bureaux des secteurs (KARAMA, KIYOMBE, RUKOMO et TABAGWE)	2006	34,034,693	34,034,693	34,034,693					34,034,693	0
EASTERN		NYAGATAR	Electrification par énergie solaire de 2 bureaux des secteurs (GATUMBA et MATIMBA)	2006	24,372,200	24,372,200	24,372,200					24,372,200	0
EASTERN		NYAGATAR	Construction du marché de NYAKIGANDO	2006	34,138,474	37,931,638	6,827,695	13,655,390	8,724,277	8724277		37,931,639	1
EASTERN		NYAGATAR	Aménagement des terrasses radicales - site KANYEGANYEGE - NYAKIGANDO	2006	24,862,650	24,862,650	9,945,060					9,945,060	14,917,590
EASTERN		NYAGATAR	Silo de stockage "Cancoons"	2006	60,000,000	60,000,000	60,000,000					60,000,000	0
EASTERN		NYAGATAR	Réhabilitation de la route KARANGAZI - KIREBE - KAMATE	2006	243,746,300	243,746,300	48,749,260					48,749,260	194,997,040
					768,601,827	791,015,045	314,573,791	98,305,275	66,862,656	24,483,634	0	504,225,356	286,789,689
EASTERN	Muhazi	RWAMAGA	Amanagement de 14 sources en eau potable dans 15 cellules		10,757,880	12,421,400	2,151,576	4,303,152	4,303,152	0	0	10,757,880	1,663,520
EASTERN	Bicumbi	RWAMAGA	Construction du marche moderne de Ntunga		54,934,511	56,897,671	12,801,976	17,922,766	20483162			51,207,904	5,689,767
EASTERN	Bicumbi	RWAMAGA	Construction d'un abattoir à Karengé		10,575,498	14,122,588	3,172,649	7,402,849				10,575,498	3,547,090
EASTERN	Rwamagan	RWAMAGA	Construction of a modern market at Rwamagana - PHASE III		33,701,277	32,741,089	10,110,383	10,110,383	12,520,323			32,741,089	0
EASTERN	Rwamagan	RWAMAGA	Construction of a modern market at Rwamagana - PHASE IV		56,065,740	71,996,450	11,213,148	22,426,296	22,426,296	15,930,710	0	71,996,450	0
EASTERN	Bicumbi	RWAMAGA	Réhabilitation de l'addiction d'eau par pompage dans la secteur Gahengeri, Rwamashyongoshyo et		25,301,852	27,856,858	7,590,556	7,590,556	10,120,740			25,301,852	2,555,006
EASTERN	Muhazi	RWAMAGA	Travaux de construction du bureau de secteur Gishari-Muhazi		13,050,574	13,050,574	2,610,115	5,220,230				7,830,345	5,220,229
EASTERN		RWAMAGA	Travaux de construction du bureau de secteur MUNYAGA	2006	23,780,970	26,423,300	4,756,194	9,512,388	6,077,209			20,345,791	6,077,509
EASTERN		RWAMAGA	Travaux de construction du bureau de secteur NYAKALIRO	2006	26,857,600	26,857,600	4,834,368	9,668,736	6,177,248			20,680,352	6,177,248
EASTERN		RWAMAGA	Travaux de construction du bureau de secteur RUBONA	2006	22,155,120	24,616,800	4,431,024	8,862,048	5,661,864			18,954,936	5,661,864
EASTERN		RWAMAGA	Construction du bureau du secteur MUHAZI	2006	24,920,400	24,920,400	4,485,672	9,968,000				14,453,672	10,466,728
EASTERN		RWAMAGA	Projet de silo de stockage "Cancoons"	2006	42,000,000	42,000,000	42,000,000					42,000,000	0
EASTERN		RWAMAGA	Marché Moderne de RWAMAGANA Phase V	2006	88,921,704	98,801,893	17,784,341	29,640,568				47,424,909	51,376,984
EASTERN		RWAMAGA	Construction d'un four de briques moderne	2007	5,782,200	5,782,200	5,782,200					5,782,200	0
					438,805,326	478,488,823	133,724,202	142,627,972	87,769,994	15,930,710	0	380,052,878	98,435,945
TOTAL EASTERN					5,337,299,725	5,661,386,042	2,045,803,470	1,152,612,640	661,195,946	92,948,708	0	3,952,560,764	1,708,825,278

付属資料 4 Preparatory Study(事前評価調査報告書)

G.Director	T. Director	Officer

Creation Date: 17 December, 2007

Reception Date:

1. Title of the Cooperation Project and Name of the Project Proponent

(1) Title of the Cooperation Project

The Study on Improvement of Rural Water Supply in the Eastern Province

(2) Name of the Project Proponent

Ministry of Land, Environment, Forestry, Water, and Mines
Eastern Province

2. Outline of the Project (Location, Project Description)

(1) Location

Eastern Province (Nyagatare, Gatsibo, Kayonza, Rwamagana, Bugesera, Ngoma and Kirehe Districts)

(2) Project Description

1) Objectives of the Study

- To formulate a Water Supply Plan in the Eastern Province for the target year of 2020
- To conduct a preliminary design on the priority projects selected from the Water Supply Plan for the target year of 2015

2) Outline of the Master Plan and Feasibility Study

Main items of master plan and feasibility study will consist of schematic lay-out plan of the water supply facilities including groundwater analysis, proposal for management policies and strengthening institutional capacity, and technical support for environmental and social consideration. The facilities will consist of upgrading and expansion of the existing facilities, construction of new water treatment plant and distribution facilities.

3. Legal Framework of Environmental and Social Considerations (Law, Competent Agency, Projects subject to EIA, Procedures, Information Disclosure and Stakeholders participation)

(1) Law

Present Rwandan laws related to Environment are as follows;

- 1) Organic Law N° 04/2005 of 08/04/2005
- 2) General Guidelines and Procedure for Environmental Impact Assessment (2006)

(2) Competent Agency

Rwanda Environment Management Authority (REMA)

(3) Project subject to IEIA or EIA

According to the Organic Law, article 67, “Every project shall be subjected to environmental impact assessment, before obtaining authorization for its implementation. This applies to programs and policies that may affect the environment. An order of the Minister having environment in his or her attributions shall determine the list of projects mentioned in this organic law”.

(4) Procedures

The Procedures are stipulated in the “General Guidelines and Procedure for Environmental Impact Assessment (2006)”, Part 2, which shown in Annex 1 to 4. EIA process involves the following four stages, namely: the Environmental Impact Initiation phase involving screening and scoping. Following this is the Impact Study Phase, which includes impact identification and analysis, development of mitigation measures and preparation of the report. The decision-making and authorization phase entails review of EIA reports and to either approve or disapprove a project. Lastly, environmental management and follow-up phase deals with monitoring aspects of the project during its implementation.

(5) Information Disclosure and Stakeholders participation

The “General Guidelines and Procedure for Environmental Impact Assessment (2006)” stipulates the provision for public participation and access to information in Part 6. While methods of public participation will depend on circumstances of each EIA, the following are considered appropriate:

- i) Public review of Environmental Impact Report,
- ii) Informal group meetings with local community groups and leaders,
- iii) Workshops,
- iv) Public displays or bulletin boards posted in communities,
- v) Public notification and calls for written comments on proposed project/activities,
- vi) Participation in scoping processes,
- vii) Survey of a groups or individuals who are representative of the various interests being affected by a proposal,
- viii) Consultation with focus groups to identify issues specific to certain stakeholders,
- ix) Comment and review of the EIA,
- x) Distribution of relevant documents to the interested members of the public.

4.Outline of the Location

(1) Population

The population in the Eastern Province is around 1.9 million. (Nyagatare: 328,658,

Gatsibo: 283,456, Kayonza: 234,106, Rwamagana: 255,630, Bugesera: 274,113, Ngoma: 271,585, Kirehe: 292,215)

(2) Race

Hutu: 84%, Tutsi: 15%, Twa: 1%

It is, however, inappropriate to classify people by ethnicity in Rwanda.

(3) Economics

Major economic activities are livestock keeping and agriculture. The Eastern Province is home to the nation's milk-producing cattle keepers. Other livestock kept include sheep, goats, poultry, pigs, bees and fish.

Major crops grown include Rice, Maize, Beans, Sorghum, Cassava and Potatoes. The province intends to promote the cultivation and processing of, Cassava and Banana-based products. There is a variety of farm products cultivated in the higher altitude north and in the lower altitude central, east and southern parts of the province.

In areas with marshlands, they grow corn, vegetables, beans, soya, pepper, pineapple and rice. The priority is the growing of coffee, passion fruit, strawberry, and vanilla. It is worth noting here that the province is exposed to natural calamities especially drought in Bugesera and erosion in the north of the province

The power needs of the province are served by an electric power transitions line managed by Electrogaz. The distribution of power lines is moving at a good pace. With time all the whole districts will be served with electricity.

The Northern province engages in trade with other provinces and neighboring countries providing mostly milk, beans, bananas, sorghum, maize, beef, hides and skins, cheese, butter and honey in exchange for fruits and Irish potatoes from other provinces.

The greatest problem affecting the agricultural sector in the Province is seasonal drought.

(4) Education

The current educational indexes are as follows;

- 1) Adult (all aged 15+) literacy ratio(%)(2006): male 71.5, female 60.1
- 2) Net primary school enrollment ratio(%)(2005-2006): male 84.8, female 86.9
- 3) Net secondary school attendance(%)(2005-2006):male 10.6, female 9.5

(5) Land use

The Eastern Province is composed of seven districts. In general, most of land is cultivated with rice, casaba, banana, and Irish potato except small commercial area in the center of each district. Rush pasture can also be seen in some areas of Nyagatare and Gatsibo districts, where cattle breeding is a main business.

6) The Environment

The Eastern Provinces is fairly mountainous area with an altitude of 1,300m to 1,700m, and

some lakes, which are mainly used as a source for irrigation, are scattered in the Province. Deforestation results from uncontrolled cutting of trees for fuel, overgrazing, soil exhaustion, and soil erosion can be one of the biggest environmental issues in the Provinces.

The Eastern province is also home to Akagera National Park, shared by more than 500 species of bird, and animals including giraffe, elephant, rhino and hippopotamus. The National Park is located in the east of the Province along the Akagera River that is the natural border with Tanzania.

7) Existing Water Supply Facilities

Water coverage ratio in the Eastern Province is 49%, which is lower than the national average ratio of 72%. Although there is no inventory on water supply facilities in the Province, existing water supply facilities are hand pumps, piped water supply systems, dug well and spring(protected and unprotected).

5. Categorization and its Reason:

- (1) Categorization: This project is categorized as B.
- (2) Reasons
 - 1) As mentioned in the above 3. (3), EIA is imperative in Rwanda.
 - 2) Some environmental and social impacts will be prospective.

6. Provisional Scoping

(1) Adverse Impacts

Most significant adverse environmental impacts are:

- 1) Land acquisition for new water treatment plants and distribution facilities such as reservoirs, valve chambers on the pipeline and so on.
- 2) Hindrance to local populations such as noise, dust, vibration and traffic.
- 3) Increase of wastewater flow

(2) Envisioned Mitigation Measures

- 1) With regard to land acquisition, mitigation measures will be considered on the basis of MP study. Following mitigation measures will be considered on the site selection. Site selection shall be conducted on the basis whether the candidate sites have inhabitants and existing facilities or not. In case the site has inhabitants, Dialogue with inhabitants and disclosure of the information shall be executed. Priority shall be given to publicly-owned areas and areas with a few inhabitants.
- 2) With regard to hindrance to local populations, construction method and work execution plan, which mitigate the adverse impacts, will be considered. Following mitigation measures will be considered at the time of construction.
 - to select the construction methods which minimize the noise, dust and cordoning
 - to draw up the construction plan which minimize the cordoning and to explain the

plan to inhabitants in advance

- to adopt the safety measures during construction

3) With regard to increase of wastewater, adverse impact will be continuous.

Concerning the increase of wastewater, It is necessary to advocate the counter measure protecting the natural purification function of wet land and maintaining the natural environment balance.

4) With regard to sludge from water treatment plant(s), it is necessary to consider an appropriate treatment method (s) for the future plan. Most of existing water treatment plants in the Province has no sludge treatment process now. In case alternative plan for sludge treatment is considered, it is necessary to study in conjunction with the dumping or dealing methods.

(3) Alternatives

Enhancing the capacity of the existing water supply systems will be considered as an alternative plan. Following methods will be considered.

- to rehabilitate hand pumps
- to expand the distribution pipeline
- to expand the water reservoir
- to expand the treatment plant(s)

This alternative plan will sustain the existing water supply systems to some extent of years.

Director	T. Director	Officer

Environmental and Social Considerations Review (環境社会配慮審査)

Reviewed Date

1. Title of the Cooperation Project
The Study on Improvement of Rural Water Supply in the Eastern Province
2. Categorization: B
3. Procedures in accordance with JICA Guidelines: Yes or No
4. Areas, Categories and Rating System

1	Description of the project and local environmental and social conditions	Purpose, physical characteristics, scale and design of project; its land requirements; types and quantities of residuals (e.g. wastes) and methods or routes of their disposal; likely geographic extent of the affected environment	B
2	Identification of key impacts and idea of alternatives	Identification of potential impacts of the project; scoping of impacts; feasible alternatives planned, without project option and most environmentally and socially friendly option	B
3	Framework of environmental and social considerations	Legal framework of assessment; terms of reference; information disclosure and stakeholders consultation	B
		Overall assessment	B

A	Generally satisfactory and complete.
B	Can be considered just satisfactory.
C	Not satisfactory.
N/A	Not applicable.

5. Comments

Environment and Social consideration is still launching period in Rwanda. In fact, some discrepancies in opinion can be recognized even between MINITERE and REMA, and EIA has never been conducted towards water supply project in the country. It is, therefore, imperative to confirm the process of EIA in detail when the project is implemented.

付属資料 5 電気探査を実施する民間会社

「ル」国に事務所を置き、垂直電気探査を実施できる民間会社は、2社（Foraky、SABA）ある。

会社名	連絡先	担当者	備考
Foraky Africa Rwanda	Tel: 55117447, Mobile: 08301304, P.O.Box: 3356 Kigali e-mail: pcforaky@rwanda1.com	Carpentier Patrick (Directeur General)	井戸掘削、地質調査ボーリングを主体とする会社。電気探査はウガンダのサブコントラクターが実施するとの話。
SABA Engineering Private Limited Company	Tel/Fax: 572825, Mobile: 085052293, P.O.Box: 2991 Kigali e-mail: nyala_trad@yahoo.com	Mesfin Asfaw (Rwanda Representative)	エチオピア（アディズアベバ）に本社を持つ井戸掘削、地質調査ボーリング、建設工事なども行う会社。カナダ製電気探査機器を保有しているとのこと。 www.saba-engineering.com

*Scope of Work
for
The Study on Improvement of Rural Water Supply
in the Eastern Province*

Agreed upon between

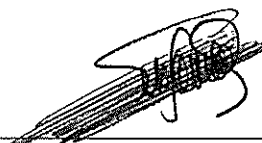
*Ministry of Land, Environment, Forestry, Water and Mines,
Eastern Province
and
Japan International Cooperation Agency*

Kigali, December 18, 2007



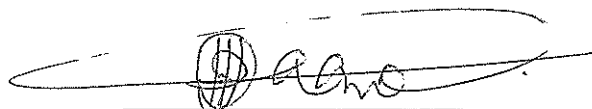
Mr. Takeo ISHIKAWA
Leader,
Preparatory Study Team,

Japan International Cooperation Agency



Mr. Emmanuel NSANZUMUGANWA
Secretary General,

Ministry of Land, Environment,
Forestry, Water and Mines,
Republic of Rwanda



Mr. Charles GASANA
Executive Secretary,
Eastern Province,
Republic of Rwanda

I. INTRODUCTION

In response to the official request of the Government of the Republic of Rwanda (hereinafter referred to as "the Rwandan Government") for the technical cooperation on the Development Study on Improvement of Rural Water Supply in the Eastern Province (hereinafter referred to as "the Study"), the Government of Japan decided to conduct the Study in accordance with 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 projects of the Government of Japan, will undertake the Study in close cooperation with the authorities concerned of the Rwandan Government.

The present document sets forth the scope of work with regard to the Study and will be valid after the approval by JICA Headquarters.

II. OBJECTIVES OF THE STUDY

The objectives of the Study are:

1. to formulate the Water Supply Plan in the Eastern Province for the target year of 2020.
2. to conduct the preliminary design on the priority projects selected from the Water Supply Plan for the target year of 2015.

III. STUDY AREA

The Study will cover all seven (7) Districts in the Eastern Province. Annex I shows the Study area.

IV. SCOPE OF THE STUDY

PHASE I: Formulation of Water Supply Plan

- (1) Collection and review of existing data and materials
 - (a) Socio-economic condition
 - (b) Natural condition
 - (c) Socio-economic development plans, other development plans, policies of national and local governments and cooperation planning of other related donor agencies.
 - (d) Existing legal framework for water resources development, water supply, and sanitation
 - (e) Existing institutional framework for rural water supply
 - (f) Existing database related to water supply
- (2) Survey on current water supply situation
 - (a) Existing water supply scheme (facility conditions, water quality, operation and maintenance, water tariff etc.)
 - (b) Survey on rural inhabitants (actual condition of water consumption, settlement structure)
 - (c) Situation on rural electrification and future plan
- (3) Water demand projection
- (4) Study on water resources potential
 - (a) Review and analysis of meteorological, hydrological, and hydro-geological data and information
 - (b) Ground water survey (reading of aero photograph/satellite imagery, hydro-geological field survey, geophysical exploration, and analysis of existing borehole data)
 - (c) Surface water survey (observation of spring discharge, analysis of river discharge data, analysis of lake water levels, and present state of water utilization)



- (d) Water quality analysis
- (e) Preparation of preliminary hydro-geological map
- (f) Water balance analysis
- (g) Evaluation of water potential
- (5) Formulation of Water Supply Plan
 - (a) Water resources development plan
 - (b) Development and rehabilitation plan of water supply schemes
 - (c) Recommendation to the operation, maintenance and management plan (*) .
 - (d) Recommendation to the improvement plans for institutional framework (*) .
 - (e) Recommendation to the hygiene and sanitation promotion plan (*) .
 - (f) Approximate estimation of project implementation cost
 - (g) Technical assistance on Initial Environmental Examination (IEE) for environmental and social consideration (including public consultation with communities and stakeholders, if necessary)
 - (h) Project evaluation (economic, financial, institutional, technical, social, and environmental)

Note *: For those Recommendations, the output of the JICA's "Technical Cooperation Project for Improvement of Water Supply and Sanitation in Southern Part of Eastern Province" will be used. The cooperation period spans from Apr.2007 to Dec. 2010.

- (6) Selection of Priority Project(s)

PHASE II: Preliminary Design on Priority Project(s)

- (1) Collection of supplemental data
- (2) Supplemental field surveys
- (3) Designing preliminary facilities
- (4) Formulation of construction plan
- (5) Formulation of operation, maintenance and management plan (*) .
- (6) Preliminary cost estimation
- (7) Technical assistance on Environmental Impact Assessment (EIA) (if necessary)
- (8) Project evaluation (economic, financial, institutional, technical, social, and environmental)
- (9) Formulation of project implementation plan (target year: 2015)

Note *: For (5), the output of the JICA's "Technical Cooperation Project for Improvement of Water Supply and Sanitation in Southern Part of Eastern Province" will be used. The cooperation period spans from Apr.2007 to Dec. 2010.

V. SCHEDULE OF THE STUDY

The Study will be carried out in the period of 15 months in accordance with the tentative schedule as attached in Annex II.

VI. REPORTS

JICA shall prepare and submit the following reports to the Rwandan Government.

1. Inception Report (English):
 - Fifteen (15) copies will be submitted at the commencement of the first phase in Rwanda. This report will contain the schedule and methodology of the Study as well as outline of the field survey.
2. Progress Report (English):

Fifteen (15) copies will be submitted during the first phase in Rwanda. The report contains the progress of the study, which will include the results of field survey and data analysis.

3. Interim Report (English):

Fifteen (15) copies will be submitted at the end of the first phase in Rwanda. The report contains the interim progress of the study, which will include Water Supply Plan and the selection of priority project(s).

4. Draft Final Report (English and French):

Fifteen (15) copies will be submitted at the commencement of final survey in Rwanda. The report contains the outcome of the study, which will include the preliminary design on the priority project(s). The Rwandan Government shall submit its comments within one (1) month after the receipt of the Draft Final Report.

5. Final Report (English and French):

Thirty (30) copies will be submitted within one (1) month after the receipt of the comments on the Draft Final Report.

VII. UNDERTAKINGS OF THE RWANDAN GOVERNMENT

1. The Rwandan Government shall accord privileges, exemptions and other benefits to the Japanese study team (hereinafter referred to as "the Team") in accordance with the Agreement on Technical Cooperation between the Government of Japan and the Government of the Republic of Rwanda, signed on January 14, 2005.
2. The Rwandan Government 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 duties in the implementation of the Study, except when such claims arise from gross negligence or willful misconduct on the part of the Team.
3. MINITERE and the Eastern Province shall act as counterpart agencies to the Team and also as coordinating body in relation with other governmental and non-governmental organizations concerned for the smooth implementation of the Study.
4. MINITERE and the Eastern Province shall, at its own expense, provide the Team with the following, in cooperation with other organizations concerned:
 - (1) security-related information on as well as measures to ensure the safety of the Team,
 - (2) information on as well as support in obtaining medical service,
 - (3) available data, information and studies related to the Study,
 - (4) counterpart personnel,
 - (5) suitable office space with necessary office equipment and furniture, and
 - (6) credentials or identification cards.

VIII. CONSULTATION

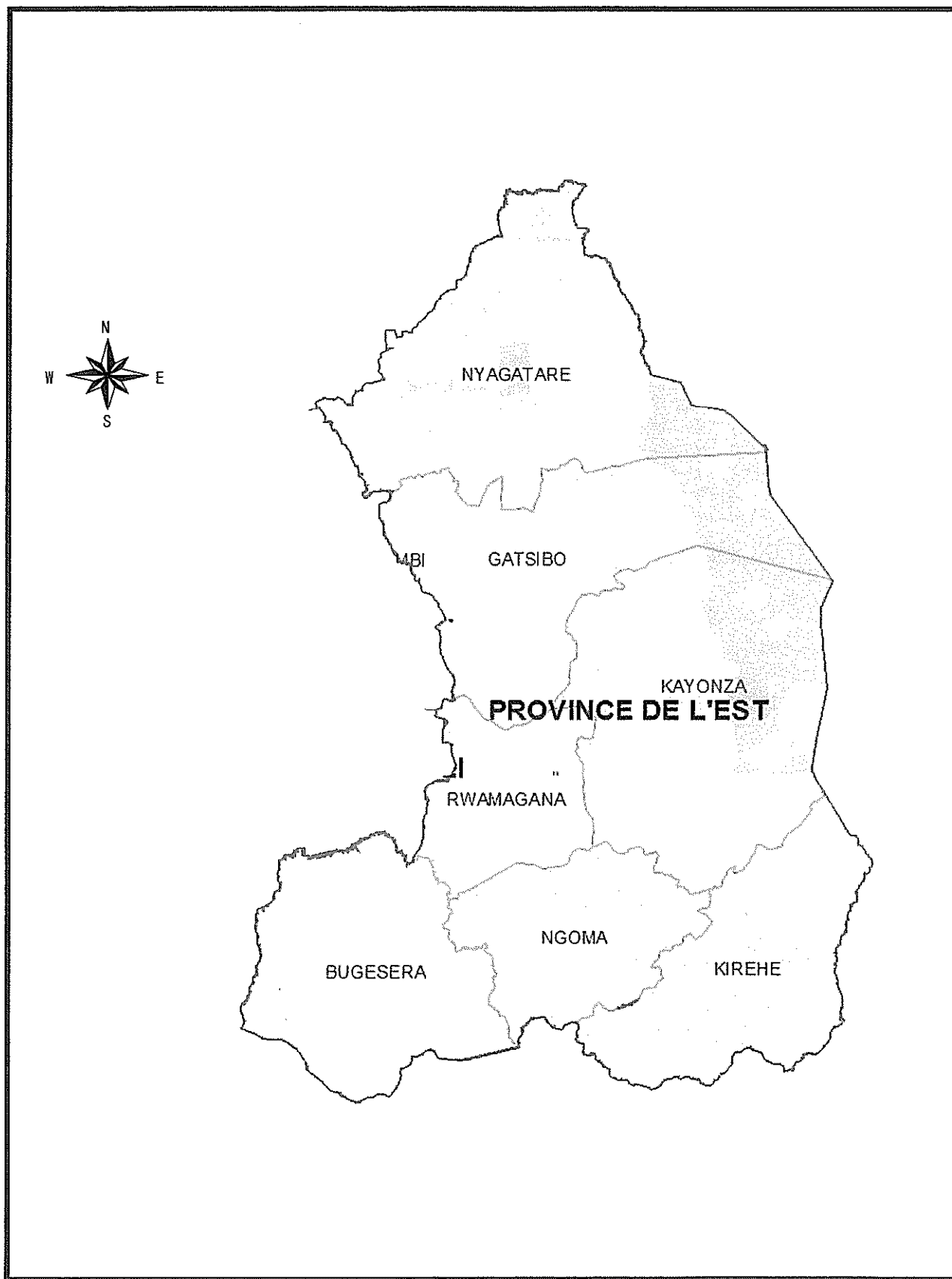
JICA, MINITERE, and the Eastern Province shall consult with each other in respect of any matter that may arise from or in connection with the Study.

ANNEX-1 Map of the Study Area

ANNEX-2 Tentative Schedule



ANNEX-1 Map of the Study Area



Annex-2 Tentative Schedule

Month	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Phase	← Phase 1 →								← Phase 2 →						
Working Period	■								□						
Report	IC/R					P/R		IT/R				DF/R		F/R	

IC/R=Inception Report
 P/R=Progress Report
 IT/R=Interim Report
 DF/R=Draft Final Report
 F/R=Final Report

□ working in Japan

■ working in Rwanda

(Handwritten marks and signature)

*Minutes of Meetings
on
the Scope of Work
for
The Study on Improvement of Rural Water Supply
in
The Eastern Province*

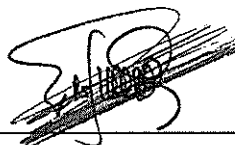
Agreed upon between

*Ministry of Land, Environment, Forestry, Water and Mines,
Eastern Province
and
Japan International Cooperation Agency*

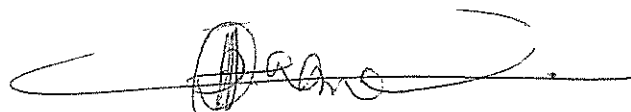
Kigali, December 18, 2007



Mr. Takeo ISHIKAWA
Leader,
Preparatory Study Team,
Japan International Cooperation Agency



Mr. Emmanuel NSANZUMUGANWA
Secretary General,
Ministry of Land, Environment,
Forestry, Water and Mines,
Republic of Rwanda



Mr. Charles GASANA
Executive Secretary,
Eastern Province,
Republic of Rwanda

In response to the official request of the Government of the Republic of Rwanda (hereinafter referred to as "the Rwandan Government"), the Japan International Cooperation Agency (hereinafter referred to as "JICA") dispatched the Preparatory Study Team (hereinafter referred to as "the Team"), headed by Mr. Takeo ISHIKAWA, to Rwanda from December 2 to December 20, 2007 to discuss the Scope of Work (hereinafter referred to as "the S/W") for the Development Study on Improvement of Rural Water Supply in the Eastern Province (hereinafter referred to as "the Study").

During its stay in Rwanda, the Team held a series of meetings with Ministry of Land, Environment, Forestry, Water and Mines (hereinafter referred to as "MINITERE"), the Eastern Province and its seven Districts and other authorities concerned and conducted site surveys.

As a result of the discussions, both sides came to an agreement on the S/W, which was signed on December 18, 2007.

The Minutes of Meetings have been prepared for the better understanding of the S/W. Both sides agreed and confirmed the following points for the smooth implementation of the Study.

1. Validity of the S/W

Both sides confirmed that the S/W would come into effect after the approval of the JICA Headquarters.

2. Areas for the Formulation of the Water Supply Plan

Both sides agreed that the Japanese side would conduct the survey for the formulation of the Water Supply Plan in the Areas selected with the criteria such as;

- 1) Areas where existing water supply schemes are not covering,
- 2) Areas where no development plans of water resources nor supplies are formulated by other donors,
- 3) Areas where existing water supply schemes are not functioning.

The area selection will be conducted based on the information collected from Rwandan Authorities and reviewed by the Study team.

Therefore, both sides also agreed that based on the official request issued by the Executive Secretary of the Eastern Province to the respective seven (7) Districts (Annex 1), the Eastern Province would submit the "Initial Inventory of current water supply" to JICA Rwanda office by **the end of January, 2008.**

3. Target Year for the Water Supply Plan and for the Preliminary Design

Both sides agreed that the target year for the Water Supply Plan would be year 2020 according to the Rwandan Policies (Vision 2020, EDPRS) and the target year for the Priority Projects would be 2015.

4. Tentative Criteria for the Selection of Priority Projects

Both sides agreed to the tentative criteria for the selection of Priority Projects as below. The



Criteria would be revised during the Phase 1, having consultation with Rwandan side.

- 1) scarcity of potable water
- 2) water resource potential
- 3) effectiveness to approach to poorer and socially vulnerable people
- 4) willingness to pay and feasibility of operation and maintenance.
- 5) environmental impact
- 6) no duplication with other projects related to the rural water supply, and
- 7) priority by the Districts

5. Utilization of the Outputs of the JICA's Technical Cooperation Project

Both sides agreed that as for elaboration of Recommendation to the operation, maintenance and management plan, Recommendation to the improvement plans for institutional framework and Recommendation to the hygiene and sanitation promotion plan as part of Water Supply Plan and Operation, maintenance and management plan as parts of Preliminary Design on Priority Projects, the output of the JICA's Technical Cooperation Project "Improvement of Water and Sanitation in the Southern Part of the Eastern Province" would be fully utilized in the Study.

6. Pre-Estimation of the Water Supply Plan

Both sides confirmed that the total cost and population to be served by the Water Supply Plan would be the one as shown in the Table-1. The figures shown in the Table are derived from very rough estimation by the Team and subject to be a full revision and re-calculation by the Study team.

Table-1 Pre- estimation of Water Supply Plan

District	Present Status			(ref:estimation by the mission)		Water Supply Plan (2010-2020)			
	Population (2007/ thousand)	Coverage Ratio (2007%)	Served population (thousand)	Coverage Ratio (2007%)	Served population (thousand)	Population (2020)	Population to be Served by the Projects	Coverage Ratio (2020)	Cost for Construction (thousand US\$)
Rwamagana	256	48.0%	123	54.1%	138	348	225	100%	12,439
Kayonza	234	49.9%	117	48.9%	114	319	202	100%	13,260
Ngoma	235	64.0%	150	26.0%	61	320	170	100%	9,511
Kirehe	292	38.0%	111	17.0%	50	398	287	100%	15,855
Gatsibo	283	38.0%	108	49.3%	140	386	278	100%	15,894
Nyagatare	329	46.0%	151	58.1%	191	447	296	100%	18,251
Bugesera	274	63.8%	175	69.4%	190	373	198	100%	12,156
TOTAL	1,903	49.1%	935	46.5%	884	2,590	1,656	100%	97,366

Remarks: DDPs DDPs estimated by the mission 2.4% per year based on the Rwandan unit cost

Note: The cost for rehabilitation is not included.

7. Availability of the Funds for the Implementation of the Water Supply Plan

Rwandan side confirmed that the total cost of US\$ 97 million in the period of 2010-2020 (US\$ 8.8 Million per year) necessary for the implementation of the Water Supply Plan would be affordable, and would take necessary measures to bring the donor funds, taking into consideration the total amount of RWF 16.9 Billion (US\$ 31 million) and RWF 22.1 Billion (US\$ 40.6 million) invested for the water supply in Rwanda in the fiscal year 2006 and 2007 respectively.

8. Rain Water Harvesting

Both sides confirmed that the Study would not treat rainwater as an alternative for potable water, although in some DDPs (District Development Plans) the possibility and plan of utilizing the rain water harvesting is mentioned.

9. Counterpart Personnel

Both sides agreed that MINITERE, the Eastern Province, and its each district would allocate the following number of engineers in charge of water as counterpart personnel before the end of January, 2008.

- MINITERE : Two or Three (2~3) Engineers
- Eastern Province : One (1) Engineer
- Each District : One (1) Engineer each

10. Seminars and Site Surveys

Both sides agreed that the counterparts would actively participate in the technical seminars to be held during the Study and also would actively accompany with the Study team in the site surveys, at their own expense, so that the progress and results will be shared by both sides.

11. Steering Committee

Both sides agreed that the Rwandan side would establish the Steering Committee, co-chaired by the Secretary General of MINITERE and Executive Secretary of the Eastern Province in order to share the results and to give feedbacks to the progress of the Study.

The committee will comprise MINITERE, the Eastern Province and its each District, and other related partners. The committee meetings will be held four (4) times during the Study Period as shown in the Annex 2 of the S/W.

12. Reports

Both sides agreed that the Final Report should be open to the general public in order to share the Study results with relevant organizations as many as possible.

13. Environmental and Social Consideration

The Team explained the JICA's Environmental and Social Consideration Guideline to be applied to the Study. The Rwandan Government understood the policy of JICA's guideline, and agreed in principle to the following responsibilities and requirements.

- (1) Based on the guideline, the Rwandan Government shall be responsible for conducting Initial Environmental Examination (IEE) and Environmental Impact Assessment (EIA) in accordance with environmental laws and regulations of the Rwandan Government, in collaboration with JICA.
- (2) JICA shall provide MINITERE with technical support in order to conduct IEE and EIA.
- (3) In the course of conducting IEE and EIA, public consultations with communities and stakeholders shall be included, if necessary.
- (4) The disclosure of information such as Study Reports is necessary to ensure the participation and dialogues with various stakeholders, in order to achieve appropriate environmental and social considerations.

14. Office Space

MINITERE and the Eastern Province agreed to provide adequate office space, necessary office equipment and furniture both at MINITERE in Kigali and at Rwamagana.

15. Provision of the Necessary Information

In accordance with the Article VII.4.(3) of the S/W, both sides confirmed that Rwandan side would provide the necessary information with the Study Team, including the following items ;

- a) Aero photograph of the target area
- b) Re-settlement Policy (Imidugudu Policy) in the Eastern Province
- c) Hydro-geological data conducted by PDRCIU projects.
- d) Progress on the sector reform on water supply
- e) Water supply projects to be conducted by the other donor funds and
- f) Financial status of the related organizations such as District.

16. Position of the Study in the National Policies

Both sides confirmed that the Study is consistent with the Policies such as Vision 2020, EDPRS and shall be utilized in order to concretize the District Development Plans (DDPs).

17. Vehicles

MINITERE requested the Team that the Japanese side would arrange an appropriate number of vehicles with drivers. The Team would convey this request to JICA HDQs.





ANNEX 1: Draft of the letter to be issued by the Eastern Province on the submission of "Initial Inventory of current water supply"

Logo of the Republic of Rwanda
with
Address of the Eastern Province

Pre-Inventory information for JICA Study on Rural Water Supply

To the District Mayors (all)

The Eastern Province in cooperation with Japan International Cooperation Agency (JICA) will conduct a development study on rural water supply Plan for the whole Province in order to attain the target, 100% of coverage ratio by year 2020.

For the efficient and smooth implementation, we would like to conduct pre-inventory survey before commencement of this Study.

Thus, we would like you to fill out the questionnaire attached, and send it back to us before the end of January, 2008.

Thanking you.

*yours faithfully,
Mutsindashyaka Théoneste,
Governor*



Form A (Initial Inventory JICA)

District: _____

Sector: _____

Cell	Population	Improved water supply scheme						Unimproved water source							
		Spring water (protected)		Hand-pump		Public water stand		River, swamp, back water, pond, lake		Shallow dig well (not protected)		Spring water (not protected)			
		No.	served population	No.	served population	No.	served population	No.	served population	No.	served population	No.	served population		

At
 Date:.....
 By: _____
 Signature: _____



Formulaire A (Inventaire Initial JICA)

District:

Secteur:

Cellule	Population	Sources d'eau potable						Source d'eau non potable					
		sources amenegees		puits de forrage (boreholes)		bornes fontaines publiques		Riviere, lac, marais, eau stagnante		Barrages collinaires		sources non-amenagees	
		Nombre	population deservie	Nombre	population deservie	Nombre	population deservie	Nombre	population deservie	Nombre	population deservie	Nombre	population deservie

Fait à
 Date:.....
 Par: 
 Signature: 

Form B(Initial Inventory JICA)

District:

Sector:

N°	Name of the Water source	Cell	year of construction	year of rehabilitation	Number of served household	Number of persons in those households	Quantity of the source (l/s)	Water Committee		Present Status of water facility
								Exists	(In case of existing) present status	
1										
2										
3										
4										
5										
6										

At

Date:.....

By:

Signature:




Y: Yes
 N: No
 AV: Active
 NA: Not Active
 VG: Very good
 G: Good
 F: Fair
 B: Bad

Formulaire B(Inventaire Initial JICA)

District:

Secteur:

N°	Nom de source de l'eau potable	Cellule	Année de construction	Année de réhabilitation	Nbre des ménages desservis	Nbre des personnes dans ces ménages	Q à la source (l/s)	Comité de gestion		Etat actuel du source d'eau
								en Place	(si comite en place) Etat actuel	
1										
2										
3										
4										
5										
6										

Fait à

Date:.....

Par:

Signature:

U: Oui
N: No
AV: Active
PA: pas Active
TB: Très bien
B: Bien
M: Moyen
MA: Mal



