②　Survey Sheet

Surveyor:_____

O&M AND SANITAION SURVEY QUESTINNAIRE
(FOR DISTRICT)

The Study on Rural Water Supply in Mwanza and Mara Regions, JICA

1. Date: ……., 2006
2. District: ……
3. Region: Mwanza ☐ Mara ☐
6. Titles of Informants: District Executive Director (DED) ……
   District Planning Officer (DPLO) ……
   District Water Engineer (DWE) ……
   Water Technician ……..…
   District Health Officer (DHO) ……..……
   Others (Specify: ……..…)

1. District Water Sanitation Team (DWST)		
Question	*Answer*	*Memo*
1.1 Is DWST formulated and person assigned already?	1. Yes Month/Year: 2. No → **Go to 2**	
1.2 If 1.1 is Yes, who are members of the DWST?	1. 2. 3. 4. 5. 6.	
1.3 Does the district have budget for the DWST activities in FY 2005/06?	1. Yes 2. No	
1.4 If the DWST is already formed, tasks of each member stipulated/clarified?	1. Yes 2. No	
1.5 If the DWST is already formed, did regular meetings hold?	1. Yes : How often (e.g.: quarterly: ……..) 2. No	
1.6 If the DWST is already formed, were regular activities started?	1. Yes : 2. No	
1.7 If the activities of the DWST have already been started, what kind of activities were implemented?	1. 2. 3. 4.	
2. Water and Sanitation Activities and Health Status		
2.1 Top Five Disease (irrespective of water related diseases) of the district	1. Malaria 2. Bilharzias 3. Pneumonia 4. Respiratory diseases	

Surveyor:_____

	5. Dysentery 6. Diarrhea 7. Typhoid 8. Cholera 9. Intestinal parasite 10. Skin disease 11. Eye disease 12. Others (specify:) 13.	
2.2 Do water and sanitation (education) programs exit in the district?	1. Yes 1) HESAWA related 2) UNCEF supported 3) Others (Specify:) 2. No → **Go to 3**	
2.3 If 2.2 is Yes, do the Water and Sanitation Education Programs exist, are they active currently?	1. Yes 2. No	
3. Possibility to Allocate Budget for Water and Sanitation Promotion (Community Empowerment and O&M)		
3.1 Is budget for Water and Sanitation Promotion (Community Empowerment and O&M) allocated for such as the HESAWA follow-up or community support? (apart from budget for facility - physical improvement)	1. Yes _____ 1) From the central government subsidy 2) From the district revenue → **Finish** 2. No _____ → **Go to 3.2**	
3.2 If 3.1 is No, does the district have ideas to re-promote /activate Water and Sanitation in particular at village levels?	1. Yes 2. No	
3.3 If 3.2 is Yes, what are the ways to re-promote/activate Water and Sanitation in particular at village level? (open questions)	1. 2.	
3.4 If 3.1 is No, is it possible for the district to allocate budget for Re-promotion/activation of Water and Sanitation at the village level (such as the VWC/WUG revitalization) in the near future?	1. Yes _____ 1) From the central government subsidy 2) From the district revenue 2. No _____	

<Memo>

Surveyor:_____

WATER SUPPLY FACILITIES O&M STATUS SURVEY QUESTINNAIRE
(FOR 100 CANDIDATE VILLAGES)

The Study on Rural Water Supply in Mwanza and Mara Regions, JICA

1. Date: ……, 2006
2. Village: ……
3. Ward: ……
4. District: ……
5. Region: Mwanza ☐ Mara ☐
6. Informants: Village Chairperson ……
   Village Executive Officer ……
   Village Water Committee ……
   WUG Committee members ……
   Village Government member……..…
   Others ……

1. General Information of the Village		
Question	***Answer***	***Socio-Economic Survey Result***
1.1 Accessibility to the village from the district centre	1. Distance _____ KM 2. Road Condition 1) Paved 2) Not paved 3) Small feeder road 4) Others (specify:) 3. Is passable by car to the village in rainy season? 1) Yes 2) No 3) Sometimes No	
1.2 Is the village electrified by TANESCO?	1. Yes →Go to **1.4** 2. No →Go to **1.3**	
1.3 If electricity by TANESCO is not available, is community generator or battery which are used for communal purpose available?	1. Yes : Community generator ____ Battery ____ Other charger 2. No	
1.4 Numbers of commercial institutions (stores/restaurants etc)	1. More than 10 2. 5 to 10 3. Less than 5 4. Nil	
1.5 Religions (Please indicate the ranking by number 1, 2, 3 …as more followers to lesser in the village)	1. Christianity Catholic _____ 2. Christianity Protestant _____ 3. Islam _____ 4. Pagan _____ 5. Others (specify:)	
1.6 What kinds of public facilities exist in the village? (indicate number)	1. School (Primary) 2. School (Secondary) 3. Dispensary 4. Health Centre	

(indicate number)	5. Police 6. Others (specify:)	
1.7 What kinds of public organization exist in the village	1. Village Water Committee Y /N 2. Water User Groups Y /N 3. Women Group Y /N 4. Youth Group Y /N 5. Others (Specify: i.g., SACCOs)	
1.8 Are the shops selling small spare-parts for pumps (such as a bicycle shop) available in the village?	1. Yes 2. No	
1.9 Accessibility to the nearest Bank for keeping the water fund	1. Distance:_____ KM 2. Town name: _____ 3. Availability of public transportation means to the town 1) Yes 2) No	
2. Status of the Existing Water Sources and Water Supply Facilities		
2.1 Experience of water supply facility construction/activities by HESAWA/NGOs	1. Yes _____ →Go to **2.2** 1) By HESAWA_____ 2) By Others (Specify:_____) 2. No _____ →Go to **2.3**	
2.2 In case 2.1 is Yes, what kind intervention was implemented?	1. Wells with hand pumps _____ 2. Wells with motor pumps_____ 3. Protection of spring/pond_____ 4. Latrine construction _____ 5. Health and Sanitary education ___ 6. Others (specify:)	
2.3 Experience of water supply project(s) by the Government	1. Yes 2. No	
2.4 In case 2.3 is Yes, what kind of interventions by the Government were made?	1. Wells with hand pumps _____ 2. Wells with motor pumps_____ 3. Protection of spring/pond_____ 4. Latrine construction _____ 5. Hygiene education _____ 6. Others (specify:)	
2.5 Number of the existing water supply facilities	1. Well with hand pump _____ 2. Well with motor pump _____ 3. Communal tap _____ 4. Private tap _____ 5. Rain harvesting _____ 6. Others (specify:)	

2.6 Operational status of the water supply facilities (indicate number of function & non-functioning facilities)	F NF 1. Well with hand pump ____/____ 2. Well with motor pump ____/____ 3. Communal tap ____/____ 4. Private tap ____/____ 5. Rain harvesting ____/____ 6. Others (specify:)	
2.7 Adequacy (=volume) of water from the existing water sources	1) Rain Season Enough/ in Short 7. Deep well / 8. Shallow well / 9. Lake / 10. River / 11. Spring / 12. Pond / 13. Hand dug well / 14. Others (specify:) 2) Dry Season Enough/ in Short 1. Deep well / 2. Shallow well / 3. Lake / 4. River / 5. Spring / 6. Pond / 7. Hand dug well / 8. Others (specify:)	
2.8 Satisfaction of water quality from the existing water sources	1) Rain Season Good/ NG 1. Deep well / 2. Shallow well / 3. Lake / 4. River / 5. Spring / 6. Pond / 7. Hand dug well / 8. Others (specify:) 2) Dry Season Good/ NG 1. Deep well / 2. Shallow well / 3. Lake / 4. River / 5. Spring / 6. Pond / 7. Hand dug well / 8. Others (specify:)	
2.9 Timing of water supply from the existing water supply facilities (in general)	1. AM: to (hrs) 2. PM: to (hrs) 3. 24 hours 4. Others（specify:)	
3. O&M of the Water Supply Facilities		
3.1 Does Village Water Committee (VWC) exist?	1. Yes 2. No	
3.2 Do Water User Groups exist?	1. Yes (Number:) 2. No	

3.3 What is the main and most active organization for water supply facility management in the village?	1. Village Water Committee (VWC) 2. Water User Groups (WUGs) 3. Water User Association (WUAs) 4. None of them are not active/non-functioning 5. 5. Others (Specify:)	
3.4 Is Village Water Committee (VWC) active? **(Note: All the village is supposed to have the VWC)**	1. Yes →Go to **3.5** 2. No →Go to **3.7**	
3.5 If the VWC is active, how often the regular meeting of the VWC held?	1. Yes 2. No If Yes: how often is the meeting is held so far? (e.g., Once two months:)	
3.6 Are "by laws (=rules & regulations within the local group)" set up by the VWC ?	1. Yes →Go to **3.7** 2. No →Go to **3.8**	
3.7 Is the rules/regulations registered to the district water office?	1. Yes 2. No	
3.8 If the VWC is <u>not</u> active, what is major reason?	1. Poor financial management 2. Poor physical maintenance (scheme is not working/not repaired) 3. Poor implementation of rules/by-law 4. Poor leadership 5. Others (specify:)	
3.9 Are the Water User Groups (WUGs) active? **(Note: All the HESAWA water source is supposed to have the WUG)**	1. Yes →Go to **3.10** 2. No →Go to **3.11**	
3.10 What is legal application status of the WUGs in the village ?	1. Water right holder (already approved by MOWLD) 2. Already applied to water right through district water office but not yet approved 3. Never heard about legal application (and water right issues) 4. Not applied yet	
3.11 If the WUGs are <u>not</u> active, what is major reason?	1. Poor financial management 2. Poor physical maintenance (scheme is not working/not repaired) 3. Poor implementation of rules/by-law 4. Poor leadership 5. Others (specify:)	
4. Management of the O&M Fund for the Existing Water Supply Facilities		
4.1 Does the VWC collect the water fee?	1. Yes 2. No	
4.2 Does the VWC have the fund in the bank account ?	1. Yes <u>Tsh</u> 2. No	

4.3 Do the WUGs collect the water fee from the users?	1. All WUGs collect 2. Most of the WUG collect 3. Few collect 4. Not collected at all →Go to **4.7**	
4.4 If the water fee is collected, what is the existing modes of payment:	1. Monthly household contribution _____ Ths/HH 2. Per bucket _____ Ths/bucket 3. Annual collection/HH _____ Ths 4. Fines/Penalty 5. Ifoghongo (local traditional credit) is used for the Fund of O&M 6. Other means (specify)	
4.5 If the water fee is collected, by whom collection is done?	1. VWC: Treasurer 2. VWC: Secretary 3. VWC: Chairperson 4. WUG: Collectors/caretakers assigned 5. WUG: Treasurer 6. WUG: Secretary 7. WUG: Chairperson 8. Others (specify:)	
4.6 Do the WUGs keep the fund in the bank account currently?	1. Yes 1) Most of them have the funds in the bank 2) Few have the funds in the bank →Go to **Question 5** 2. No (no group has the bank account) →Go to **Question 5**	
4.7 If the WUGs do not collect the water fee from the users currently, what is the major reason?	1. Users don't want to pay 2. No collector assigned/hired 3. Poor financial management/no leadership to manage collection 4. Poor physical management (the scheme is not working/repaired) 5. Other (specify:)	
4.8 If the water fee is not collected) What is preferred mode of payment?	1. Monthly household contribution _____ Ths/HH 2. Per bucket _____ Ths/bucket 3. Annual collection/HH _____ Ths 4. Fines/ Penalty 5. Other means (specify) 6. Ifoghongo (local traditional credit) is used for the Fund of O&M	
5. Support from District Water Engineer Office(Water Department) /DC(District Council)		
5.1 How often did the DWE/Water Technicians visit the village to support/strengthen for water supply facility management? (please answer in case of 2005)	1. Once a year 2. Twice a year 3. less frequent 4. Never come 5. Others (Specify:)	

5.2 What kind of communication means do you have when you need to contact with DWE/District Council Administration staff?	1. Ground phone 2. Mobile phone 3. Go to the office directly 4. FAX 5. Others (specify)	
6. Experiences and Means of Repair		
6.1 Do you know where the spare parts for the pump and water supply facilities are available?	1. Yes →Go to **6.2** 2. No →Go to **6.3**	
6.2 When the water facilities (eg. Hand pump, ring well or etc.) are broken, where the village people get spare parts ?	1. WASAKO in Mwanza 2. Dar es Salaam or other big cities 3. Through District Water Office (entrust the office to procure the needy) 4. Commercial stores in Mwanza 5. Commercial stores within district 6. Others (specify)	
6.3 Do they know the cost of spare parts which could be frequently changed?	1. Yes 2. No If yes, how they become to know it?	
6.4 Does the village have experience of repair for the water supply facilities before?	1. Yes →Go to **6.5** 2. No →Go to **6.6**	
6.5 When broken down of water supply facility happened, who the water facility repaired?	1. Technician from District Water Office 2. Asked commercial/private artisan 3. Repair by the VWC/WUG members by themselves 4. Others (Specify:)	
6.6 Does the village have the trained personnel for repairing of the water supply facilities?	1. Yes (Number:) →Go to **6.7** 2. No →Go to **6.8**	
6.7 When, how, by whom the raining was provided?	1. What year: 2. By whom: 1) HESAWA 2) NGOs 3) Others (Specify:)	
6.8 Do you know where the spare parts for the pump and water supply facilities are available?	1. Yes →Go to **6.9** 2. No →Go to **6.10**	

7. Health/sanitary conditions & KAP (knowledge, attitude and practice) on Health/ Sanitation Related Water Use		
7.1 What are major 5 <u>water related diseases</u> among household members? **(give ranking)**	1. Diarrhea 2. Dysentery 3. Typhoid 4. Cholera 5. Malaria 6. Intestinal parasite 7. Bilharzias 8. Skin disease 9. Eye disease 10. Others	
7.2 Is private (HH) latrine commonly available in the village?	1. Yes →Go to **7.3** 1) All 2) Almost all 3) About 50% 4) Few 2. No →Go to **7.4**	
7.3 Do people clean the latrine regularly?	1. Yes 2. No	
7.4 Is private (at households) bath facilities commonly available in the area?	1. Yes 1) All 2) Almost all 3) About 50% 4) Few 2. No	
7.5 Is hand washing practiced?	1. Before meal 1) All 2) Almost all 3) About 50% 4) Few 5) Almost none	
	2. After meal 1) All 2) Almost all 3) About 50% 4) Few 5) Almost none	
	3. After excretion 1) All 2) Almost all 3) About 50% 4) Few 5) Almost none	
	4. After cleaning the house 1) All 2) Almost all 3) About 50% 4) Few 5) Almost none	

(7.5 Is hand washing practiced?)	5. After cleaning bottom of child 1) All 2) Almost all 3) About 50% 4) Few 5) Almost none	
	6. Before feeding child 1) All 2) Almost all 3) About 50% 4) Few 5) Almost none	
	7. Before preparing food 1) All 2) Almost all 3) About 50% 4) Few 5) Almost none	
7.6 Do the villagers boil water before drinking?	1. All 2. Almost all 3. About 50% 4. Few 5. Almost none 6. Others (Specify:)	
7.7 How do you feel about the environmental sanitation and health status in the village?	1. Good 2. Fair 3. Not good 4. Seriously poor	
7.8 What kind of improvement for health and sanitation do you hope?	1. Better health facilities 2. Mobile clinic 3. Water supply facilities improvement 4. Health and sanitation education program 5. Other (Specify:)	

<Memos on O&M status & progress>

Surveyor:_____

WATER SUPPLY FACILITIES O&M STATUS SURVEY QUESTINNAIRE
(FOR 17 PIPED SCHEMES)

The Study on Rural Water Supply in Mwanza and Mara Regions, JICA

District:_____ Village:_____ Date:_____2006

Name of Surveyor:_____

Names/Titles of Informants: _____

1. General Information of the O&M Status on water facilities

1.1 What kind of water facilities exist and have ever existed in the village?	Types	No. of Operation	No. of Non-Operation	No. of Partial Operation
	1. Piped Scheme			
	2. Hand Pump			
	3. Ring Well			
	4. Hand dug Well			
	5. Other			
If the piped scheme exists/existed in the village (Question 1.2-1.15)				
1.2 Numbers and name of Villages covered by the scheme	1._____ 2._____ 3._____ 4._____ 5._____			
1.3 If it is operational, what is a timing of water supply? *If it is not operational, what was a timing of water supply in the past?	1. Currently operational 2. Currently non –operational 1. AM: to 2. PM: to 3. 24 hours 4. Others (specify)			
1.4 If the piped scheme is non-operational, when was it broken?	_____			
1.5 If the piped scheme is non-operational, why was it broken?				
Water Supply Organizations for the piped scheme (Question 1.6-1.17)				
1.6 Are/Were Water Users Group (WUG) existing for the piped scheme?	1. Yes Number _____ 2. No			
1.7 Is/Was a Water Users Association (WUA) for the piped scheme?	1. Yes 2. No If yes, what is its name? _____ If no, GO TO QUSTION 1.16			
1.8 Is WUA/board active?	1. Yes 2. No			

1.9 Is regular meeting of the WUA/board held since the formulation of WUA/Board?	1. Yes 2. No If Yes: how often is the meeting is held so far? _____ (e.g. One two months)	
1.10 In case WUA is not active, why it is malfunctioning?	a. Poor financial management b. Poor physical maintenance (scheme is not working/not repaired) c. Poor implementation of rules/by-law d. Poor leadership e. Others (specify:)	
1.11 Was rules & regulations set up among the members of WUA/Board?	1. Yes 2. No If Yes: Is the rules/regulations registered to the district water office? 1. Yes 2. No	
1.12 If the WUA exists/existed, how many members in the committee?	Male_____ Female_____	
1.13 If the WUA exists/existed, who are a chair person (name, village) of the WUA?	Name: _____ Village: _____	
1.14 If the WUA exists/existed, how the chair and other key members of WUA/Board were selected?	1. Self-nominated 2. Assignment by District water office 3. Appointed by village water committees 4. Selected assembly of villagers 6. Others: (Specify)	
1.15 If the WUA exists/existed, what is legal application status of the scheme?	1. Water right holder (already approved by MOWLD) 2. already Applied to water right through district water office but not yet approved 3. Not applied yet 4. No idea on legal application	
1.16 In case WUA/board is not formulated, why?	1. Instruction/guidance to formulate the WUA was not given by DWE 2. Instruction/guidance to formulate the WUA was already informed by DWE but no initiative in the village 3. There is not initiative since the piped scheme is not functioning 4. There are alternative water sources, therefore it is not necessary to use the broken piped schemes 5. Others (specify:)	

1.17 If the WUA does/did not exist, does VWC exist for piped scheme facility management?	1. Yes 2. No	
Village Water Committee for the water facilities (Question 1.18-1.24)		
1.18 Is VWC active?	1. Yes 2. No	
1.19 Is regular meeting of the VWC held?	1. Yes 2. No If Yes, how often is the meeting is held so far? (e.g., Once two months:)	
1.20 In case VWC is not active, why is it malfunctioning?	a. Poor financial management b. Poor physical maintenance (scheme is not working/not repaired) c. Poor implementation of rules/by-law d. Poor leadership e. Others (specify:)	
1.21 Was rules & regulations set up among the members of VWC?	1. Yes 2. No If Yes, is the rules/regulations registered to the district water office? 1. Yes 2. No	
1.22 How many members in the VWC?	Male_____ Female_____	
1.23 Who is a chair person (name, village) of the VWC?	Name: _____ Village: _____	
1.24 What are the activities of the VWC?	1.Collection of regular water fee 2. Cleaning of facilities 3. Minor repair works 4.Other ( )	
2. Management of the O&M Fund for the Piped Scheme		
2.1 If the piped scheme existed in the village, was regular water fee collected?	1. Yes 2. No If No, GO TO QESTION 2.5	
2.2 If the regular water fee collected, what was the mode of payment?	1.Monthly household contribution _____ Ths/HH 2. Per bucket _____ Ths/bucket 3. Annual collection_____ Ths/HH 4. Fines/Penalty 5. Other means (specify) 6. Ifoghongo (local traditional credit) is used for the Fund of O&M	

2.3 Who was collecting the regular water fee?		
2.4 How was the regular water fee collected?	1. Water committee collect 2. Head of sub-village 3. Other ( )	
2.5 Why water fee was not collected regularly?	1. Don't want to pay 2. No collector assigned/hired 3. Poor financial management/no leadership to manage collection 4. Poor physical management (the scheme is not working/repaired) 5. Other (specify:)	
2.6 Is regular water fee collected currently?	1. Yes 2. No If No, GO TO QUESTION 2.13	
2.7 If fee collection is regularly practiced, what is the existing mode of payment?	1. monthly household contribution _____ Ths/HH 2. per bucket _____ Ths/bucket 3. Annual collection/HH _____ Ths 4. Fines/Penalty 5. Other means (specify) 6. Ifoghongo (local traditional credit) is used for the Fund of O&M	
2.8 Who is collecting the regular water fee?	_____	
2.9 How is the regular water fee collected?		
2.10 Is the fund is kept in bank account?	1. Yes _____ Tsh 2. No	
2.11 How far (distance) to the bank nearest?	Name of Town Distance _____ KM Transportation means: _____ Public transportation cost: _____ Tsh	
2.12 Is any other ways keeping the fund?	1. At home of key members (i.e., Treasurer, Secretary, Chair) _____ Tsh 2. Others: _____	
2.13 If fund management is not functioning well, what are reasons of malfunctioning?	1. Don't want to pay 2. No collector assigned/hired 3. Poor financial management/no leadership to manage collection 4. Poor physical management (the scheme is not working/repaired) 5. Other (specify:)	
2.14 In case that the regular water fee is not collected, what is preferred mode of payment?	2. monthly household contribution _____ Ths/HH 2. per bucket _____ Ths/bucket 3. Annual collection/HH _____ Ths 4. Fines/ Penalty 5. Other means (specify)	

	6. Ifoghongo (local traditional credit) is used for the Fund of O&M	
3. Support from District Water Engineer Office(Water Department) /DC(District Council)		
3.1 How often did the DWE/DC staff visit to the scheme to support? (please answer in cases of 2005)	1. Once a year 2. Twice a year 3. less frequent 4. Never come 5. Other ( )	
3.2 From which office the staff came to the piped scheme?	1. District Water Department (technician) 2. District Community Development Office 3. District Health Office 4. Others (specify:)	
3.3 What kind of communication means do you have in order to contact to DWE/DC staff?	1. Ground phone 2. Mobile phone 3. Public transportation (buses) 4. FAX 5. Others(specify)	
4. Experiences and Means of Repair		
4.1 When the water facilities (eg. Hand pump, ring well or etc.) are broken, where the village people get spare parts ?	1. WAKO in Mwanza 2. Dar es Salaam or other big cities 3. Through District Water Office (entrust the office to procure the needy) 4. Commercial stores in Mwanza 5. Commercial stores within district 6. Others (specify)	
4.2 Do they know the cost of spare parts which could be frequently changed?	1. Yes 2. No If yes, how they become to know it?	
If the piped scheme exists/existed:		
4.3 Does the village have somebody to repair facility who is trained?	1. Yes Number _____ 2. No If No, GO TO QUESTION4.5	
4.4 When, how, by whom the repair person(s) is/are trained?	What year:_____ How: _____ By whom: _____	
4.5 Does the village have experience of repair for the scheme facility?	1. Yes 2. No If no, GO TO QUESTION 5.1	

4.6 When and for what repair work was done?	What year:_____ What repair _____ _____	
4.7 Who did repair the facility?	1. District Water Technician 2. Villagers by themselves 3. Artisans (private/commercial) 4. Others(specify)	
5. Health/sanitary conditions & KAP (knowledge, attitude and practice) on Health/ Sanitation Related Water Use		
5.1 What is major water related disease among household members?	1. Diarrhea 2. Dysentery 3. Typhoid 4. Cholera 5. Malaria 6. Intestinal parasite 7. Schistosomiasis 8. Skin disease 9. Eye disease 10. Others	
5.2 Is private (HH) latrine commonly available in the area?	1. Yes 1)All 2) Almost all 3) Few 2. No If Yes, do people clean it? 1.Yes 2.No	
5.3 Is private (HH) shower/ bath facility commonly available in the area?	1. Yes 1) All 2) Almost all 3) Few 2. No	
5.4 Is hand washing practiced?	1. Before meal 1) All 2) Almost all 3) About 50% 4) Few 5) Almost none	
	After meal 1) All 2) Almost all 3) About 50% 4) Few 5) Almost none	
	After excretion 1) All 2) Almost all 3) About 50% 4) Few 5) Almost none	

	After cleaning house 1) All 2) Almost all 3) About 50% 4) Few 5) Almost none	
	After cleaning bottom of child 1) All 2) Almost all 3) About 50% 4) Few 5) Almost none	
	Before feeding child 1) All 2) Almost all 3) About 50% 4) Few 5) Almost none	
	Before preparing food 1) All 2) Almost all 3) About 50% 4) Few 5) Almost none	
5.5 Do villagers boil water before drinking ?	1) All 2) Almost all 3) About 50% 4) Few 5) Almost none 6)Others (Specify:)	
5.6 How do you feel about the sanitation status in the area?	1. Good 2. Fair 3. Not good 4. Seriously poor	
5.7 What kind of improvement for health and sanitation do you hope?	1. Better Health facilities 2. Mobile clinic 3. Water supply facilities improvement 4. Health and sanitation education program 5. Other (Specify:	

<Memos on O&M status & progress>

③ Supplementary Survey

Supplementary Survey Results of 100 Villages (1/10)

Seria	DISTRICT	Ward	No. by District	Village	Organisations in the village	Nearest Bank	HESAWA experience	Project experience	Main water source		Adequency of water	Satisfaction of water quality	Opening hours of water facility	Water supply organization	Frequency of meeting VWC	By laws	Water right holder	Water fee	Water fund collection	Village Water fund collected	VWC funds in bank	WUG funds in bank	Organisational problems	Water consumption	Frequency of Water Fetching	O&M cost	Preference of payment	Support from Water Department	Contact methods	Spare parts shop	Experience and means of repair	No of Trained persons
					VWC, WUGs, Women , Youth , SACCOs, Ifogongo (local revolving fund)	Distance to Bank, name of town, available transportation	Construction of shallow well (SW), borehole well (BH), improved traditional well (ITW) , improved pit latrines (IPL), rain water harveting (RWH), etc.	Kind of projects (CSPD = child care, maternal health, etc. ; PEDEP = primary education programme; DDP = secondary education projects; VI = agro-forestry project; LVEMP = Lake Victoria Environmental Management Project)	Rainy season (SW = shallow well with NIRA pump; HP = borehole well with hand pump; TW = traditional water sources)	Dry season (SW = shallow well with NIRA pump; HP = borehole well with hand pump; TW = traditional water sources;	Rain season Dry season	Rain season Dry season	AM, PM, 24 hours, other	VWC, WG at sub-village, WUG, etc. Specify if it is active or not.	once a month, twice a month, quarterly etc	VWC by laws or WUG by laws	Approved or not yet	Monthly, per bucket, Annual etc		Unit: Tsh	Unit: Tsh	Unit: Tsh		liter per person per day (lpd)		First acceptable amout from villagers	Specify reasons if any	Frequency of visit of District Water Technicians for water supply facility in 2005	Ground phone, Mobile, Go to office directly, FAX, Letter, etc	Names of shops or cost of spar parts		
1	MISUNGWI	Busongo	25	Busongo	VWC, WUG(1), Women(1), Youth(2), Ifogongo(each sub village)	40km, Misungwi, Bus	Yes, 1 BH(HP), IPL for some HHs	-construction of class rooms of primary and secondary school (PEDP)	BH (1), TW (HDW) (1)	BH(1), TWs (Hand dugged wells)(15), Rain water taps	Rain season: enough, Dry season: in short except for BH(1)	Rain season: Good for both, Dry season: Good for BH, NG for TW	24 hours	VWC, WUG(1) Both are active	VWC: 3 times a year	VWC by laws	×	×	× (Initial fund was collected before only once)	800,000 through Ifoghongo (Current: not sure)	×	×	WUG: Poor financial management/no leadership to manage collection	NIL	Rain season: 2 timesx 50%H, Dry season: 3-4 timesx 50%-40%5 H	700 Tsh/M/HH	700 Tsh/M/HH (every HH can pay Tsh 600 to meet the cost for BHs)	10 times	Go to office directly	Don't know (ask DWE staff)	Yes, done by VWC/WUG	2 (2002) by HESAWA
2	MISUNGWI	Mbarika	28	Ngaya	VWC, WUG(2), Women(4), Youth(2), Ifoghongo (15)	Misungwi, No public transport	Yes, 2 SW (HP) + IPL	-Maternal health education (CSPD) -School building (PEDP)	SW (2), TWs	SW (2), TWs	Rain season: in short, Dry season: in short	Rain season: Good for some TWs & Salty for SW , Dry season: NG for all	24 hours	VWC not active, WUG(2) is active	×	×	×	×	×	×	×	×	VWC: Poor leadership, WUG: Poor financial management/no leadership to manage collection & don't know about policies	NIL	Rain season: 3-4 timesx 1 H, Dry season: more than rain season (in serch of water)x 1-1.5 H	1050 Tsh/M/HH	1050 M/HH (acceptable as the cost for PS)	once	Go to office directly	WASAKO in Mwanza	Yes, done by VWC/WUG	4 (2002) by HESAWA
3	SENGEREMA	Sima	13	Sogoso	VWC, WUG(2), Women(2), Youth(7), SACCO(1), Ifogongo(8)	21km, Sengerema, Bicyle or daladala	none	-construction of HP (CSPD) -VEO office, Improved TWS (TANZAKESHO) -school building (CSPD)	Spring(3)	SW(1), ITWS(1), Spring(3), Dug well(9)	All season in short, Dry season only Spring(3) available	Whole year WQ is NG	24 hours	VWC, WUG(2), both are active	Quarterly	VWC by laws	×	×	○	80,000	×	×	WUG: Poor leadership to manage collection	100 lpd	Rain season 3 timesx 1H, Dry season 2 timesx 4 H	100 Tsh/M/HH	700 Tsh/M/HH	Twice a year	Go to office directly	Don't know	No	None
4	SENGEREMA	Tabaruka	18	Nyampande	VWC, WUG(1), Women(10), Youth(5), SACCO(1), Ifogongo(12)	21km, Sengerema, Bus	1 SW, School latrine construction (Primary& secondary), RWH, Hygiene education	-Phast training (CSPD, 2000) -AMREF (HIV/AIDS) just started -school building (PEDP) -construction of VEO office (TANZAKESHO)	Spring(15), Dug well(9), Rain harvesting	Lake, Dug well(1)	Rain season: enough, Dry: season in short	Whole year WQ is NG	none	VWC, WUG(1), both are active	Quarterly	VWC by laws	×	10Tsh per bucket	○	N/A during survey, but VEO knows the amount collected	×	1 WUG has a bank a/c	WUG: Poor leadership to manage collection	100 lpd	Rain season 3 timesx 1.5H, Dry season 1 timex 8H	3000 Tsh/M/HH	20 Tsh per bucket	Never	Go to office directly with letter	Don't know	Yes	4 (by Hesawa)
5	SENGEREMA	Busisi	24	Nyitundu	VWC, WUG(5), Women(3), Youth(3), Ifoghongo(2)	15km, Sengerema, Daladala	none	-Maternal health education (CSPD) -School building, teachers' house, latrine construction (PEDP)	Seasonal stream, Spring(15)	Lake, Spring(2)	Rain season: enough, Dry: season in short	Rain season: WQ is NG, Dry season WQ is good	none	VWC, WUG(5): Both active.VWC is more active	September to October: protection of TWs. DDS VWC annual meeting, WUGs meeting weekly	VWC and WUG by laws	×	Penalty is to be paid to Ifoghongo (not water purpose)	×	a/c is closed	×	×	No orientation or education to the village	100 lpd	Rain season 2 timesx 50%H, Dry season 4 timesx 1H to TW, 2 timesx 1.5H to Lake	70 Tsh/Day/HH	20 Tsh per bucket	Once a year	Go to office directly	Don't know	No	None
6	SENGEREMA	Busisi	26	Lubanda	VWC, WUG(5), Women(5), Youth(7), Ifoghongo(7)	10km, Sengerema, No bus link, bicycle daladala only	none	-Maternal health education (CSPD) -School building, teachers' house (PEDP) -Reproductive health, HIV AIDS (AMREF)	Seasonal stream(2), Spring(7)	Lake, Spring(2)	Rain season: enough, Dry: season in short	Rain season: WQ is NG, Dry season WQ is good	none	VWC, WUG(5): Both active.WUCs are more active	Every two months	VWC and WUG by laws	×	×	○	50,000	×	×	WUG: Poor physical management	100 lpd	Rain season 3 timesx 1H, Dry season 6 timesx 1H to TW, 1 timesx 3H to Lake	20 Tsh per bucket	20 Tsh per bucket	Never	Go to office directly	Don't know	No	None
7	SENGEREMA	Katunguru	30	Juma kisiwa	VWC, Women(1), Youth(3), FINCA(1)	32km, Sengerema, from Katunguru Daralara	none	-Maternal health education (CSPD) -School building (PEDP) -Reproductive health, HIV AIDS (AMREF and RENESO) -assisting orphans	Lake	Lake	All season enough water	All season WQ is NG	none	VWC only, not active	none	none	×	×	×	×	×	×	VWC: Poor leadership, WUG: don't know what to do	100 lpd	Rain season 2 timesx 1H, Dry season 4 timesx 1H	50 Tsh/Day/HH	10 Tsh per bucket	Never	Go to office directly, and write a letter	Don't know	No	None
8	SENGEREMA	Nyamazugo	37	Mwaliga	VWC, Women(3), Youth(1)	5km, Sengerema, Bicycle only	none	-Maternal health education (CSPD) -School building (PEDP)	Spring(12), Charco dam(1)	Spring(10), Charco dam(1)	All season enough spring water, Dry season Charco dam water in short	Rain season WQ is NG, Dry season WQ is better, but Charco is NG	none	only VWC. VWC is active	Once a month	×	×	×	×	×	×	×	VWC: only Springs available	100 lpd	Rain and Dry seasons: 3 timesx 1H	500 Tsh/M/HH	60 Tsh per day (1,800 Tsh per month)	Never	Go to office directly	Commercial stores in Sengerema	No	None
9	SENGEREMA	Chifunfu	44	Nyakahako	VWC, Sub-village WUG(8), Women(1), Youth(1), Ifoghongo (8)	28km, Sengerema, Bus	1 SW, School latrine construction (Primary& secondary), RWH, Hygiene education	-Maternal health education (CSPD) -School building, teachers' house, latrine (PEDP)	SW(1), Lake, Spring(2)	SW(1), Seasonal stream(3), Spring(5)	Rain season: enough, Dry: season in short	Rain season WQ is NG, Dry season WQ is better from June to July	none	VWC, Sub-village WUG(8). WUGs are active	Twice a year	VWC by laws	×	×	○	50,000	×	×	VWC was established recently September 05, activities not yet done	240 lpd	Rain and Dry seasons: 1 timex 1H	3600 Tsh/M/HH	10 Tsh per bucket	Once a year (water sampling of SW)	Go to office directly	Commercial stores in Sengerema and Mwanza	2 times (repaired by Hesawa trainees)	2 Hesawa trainees
10	SENGEREMA	Igalula	67	Sotta	VWC, Hesawa WUG(1), Women(3), Youth(3), Ifogongo(3)	32km, Sengerema, no bus link, bicycle only	1 BH, School and HH latrine constructions (Primary), Repairing training, Hygiene education	-Charco dam construction with villagers self-support -O&OD training (Opportunities and Obstacles Development) by CSPD (Jan 2006)	BH(1), Dug well(7), Charco dam	BH(1), Lake, Dug well(3), Charco dam	All season water is in short	All season WQ of BH is Good, Dug well: Rain NG but Dry season is better, Charco dam always NG	none	VWC, Hesawa WUG(1), Both are active	3 times a year	VWC by laws	×	200Tsh per Month/HH	○	194,500	×	×	none	120 lpd	Rain season 2 timesx 1H, Dry season 4 timesx 1H	200 Tsh/M/HH	Tsh 2,000 per month	Never	Go to office directly and Mobile phone	WASAKO in Mwanza	1 time (repaired by Hesawa trainees)	4 Hesawa trainees (trained in 2000)

Supplementary Survey Results of 100 Villages (2/10)

Seria	DISTRICT	Ward	No. by District	Village	Organisations in the village	Nearest Bank	HESAWA experience	Project experience	Main water source		Adequency of water	Satisfaction of water quality	Opening hours of water facility	Water supply organization	Frequency of meeting VWC	By laws	Water right holder	Water fee	Water fund collection	Village Water fund collected	VWC funds in bank	WUG funds in bank	Organisational problems	Water consumption	Frequency of Water Fetching	O&M cost	Preference of payment	Support from Water Department	Contact methods	Spare parts shop	Experience and means of repair	No of Trained persons
					VWC, WUGs, Women , Youth , SACCOs, Ifogongo (local revolving fund)	Distance to Bank, name of town, available transportation	Construction of shallow well (SW), borehole well (BH), improved traditional well (ITW) , improved pit latrines (IPL), rain water harveting (RWH), etc.	Kind of projects (CSPD = child care, maternal health, etc. ; PEDEP = primary education programme; DDP = secondary education projects; VI = agro-forestry project; LVEMP = Lake Victoria Environmental Management Project)	Rainy season (SW = shallow well with NIRA pump; HP = borehole well with hand pump; TW = traditional water sources)	Dry season (SW = shallow well with NIRA pump; HP = borehole well with hand pump; TW = traditional water sources;	Rain season Dry season	Rain season Dry season	AM, PM, 24 hours, other	VWC, WC at sub-village, WUG, etc. Specify if it is active or not.	once a month, twice a month, quarterly etc	VWC by laws or WUG by laws	Approved or not yet	Monthly, per bucket, Annual etc		Unit: Tsh	Unit: Tsh	Unit: Tsh		liter per person per day (lpd)		First acceptable amout from villagers	Specify reasons if any	Frequency of visit of District Water Technicians for water supply facility in 2005	Ground phone, Mobile, Go to office directly, FAX, Letter, etc	Names of shops or cost of spar parts		
11	SENGEREMA	Buyagu	69	Isole	VWC, Hesawa WUG(2), Women(4), Youth(4), Ifogongo(11)	30km, Sengerema, no bus link, bicycle only	1 SW and1 BH, School latrine construction (Primary& secondary), Hygiene education	-Maternal health education (CSPD) -School building, latrine construction (PEDP) -four milling machines	SW(1), BH(1), River(1), Spring(4), Dug well(1), Lake few people use	BH(1), Lake	Rain season: BH and SW in short, Springs and dug well enough Dry:Lake water is enough, but BH in short (long que)	Rain: BH and SW is Good, but others NG, Dry: BH is Good, Lake is NG	none	VWC, Hesawa WUG(2). Both are active	Village Water and Sanitation Committee: Quartely meeting, Hesawa WUGs monthly	VWC by laws	×	×	○	50,000	○	×	none	240 lpd	Rain season 3 timesx 50%H, Dry season 1 timex 3H	100 Tsh/Day/HH	3000 Tsh/M/HH	Once a year (Hesawa follow up)	Go to office directly by bicycle	WASAKO in Mwanza	1 time (repaired by District Techinicia n)	2 Hesawa trainees (trained in 2000) 2 were married and left village
12	SENGEREMA	Buyagu	73	Mlaga	VWC, Sub-village WUG(4), Women(4), Youth(4), Ifoghongo (6)	35km, Sengerema, no bus link, bicycle only	none	-Maternal health education (CSPD) -School building, teachers' house, latrine construction (PEDP) -village library	Dug well(2)	Lake, Dug well(1)	Rain season water is enough, but Dry season in short	All season WQ is NG	none	VWC, Sub-village WUG(4). Both active. WUGs are more active	Quarterly	VWC by laws	×	×	×	×	×	×	Poor education	100 lpd	Rain season 1 timex 3H, Dry season 5 timesx 2H	3000 Tsh/M/HH	20 Tsh per bucket	Never	Go to office directly with letter	Don't know	No	None
13	SENGEREMA	Nyanzenda	75	Buswelu	VWC, Women(3), Youth(2), Ifoghongo (1)	30km, Sengerema, no bus link, bicycle only	none	-1 BH (SIDA, LEADEP) -Maternal health education (CSPD) -School building (PEDP) -Reproductive health, HIV AIDS (UMATI) -VEO office (TANZAKESHO)	BH(1), River, Spring(6)	BH(1), River, Spring(6)	All season BH water in short. Rain: River and Spring enough. Dry: all water sources in short	All season WQ is NG	none	VWC not active. No WUGs	none	×	×	×	×	×	×	×	WUG: Poor physical management	100 lpd	Rain and Dry seasons: 3 timesx 1H	1500 Tsh/M/HH	10 Tsh per bucket	Twice a year (in 2002)	Go to office directly	Don't know	Once (2002)	None
14	SENGEREMA	Kalebezo	83	Busekeseke	VWC, Hesawa WUG(1), Women(4), Youth(1), Ifogongo(5)	59km, Sengerema, No bus link, Bus available from Kalebezo	1 SW (6m depth), School and HH latrine constructions, Repairing training, Hygiene education	-construction of HP (Sengerema District) - school building (PEDP) -maize production (FAO)	SW(1), Spring(5), Pond	SW(1), buying from Water vendor 150-200Tsh/bucket	All season in short	Rain: SW and Spring Good, Pond NG. Dry: SW Good WQ	**Rain: 7am-2pm, 4-6pm. Dry: 6-10am, 3-6pm (Dry season 2 buckets in AM and PM)**	VWC, WUG(1). WUG is active	VWC: once a year	×	×	Regular user pays monthly (TSh 50)	Tsh100/HH (for once only) collected by sub-village level	×	×	×	VWC: just started working	100 lpd	Rain season 2 timesx 1.5H, Dry season 2 timesx 6H (long que)	600 Tsh/M/HH	600 Tsh/M/HH	more than 5 times for follow up	Go to office directly with letter	Through District Water Office	No	Supposed to be 4 (not yet fully trained by Sengerema DC: M2, F2, 2005)
15	SENGEREMA	Kalebezo	84	Katoma	Hesawa Sanitation and Health Committee(1), Sub-village WUG(8), Women(2), Youth(4), Ifoghongo (2)	68km, Sengerema, No bus link, Bus available from Kalebezo	1 SW (5m depth)	-Maternal health education (CSPD) -School building, teachers' house, latrine construction (PEDP) -Ring well in 1970s (REDP) -Dispensary	Ring well(1), SW(1), Spring(1)	Ring well(1) only for washing and bathing, SW(1), Spring(4)	Rain: Water is enough, Dry: All in short	All season WQ is NG	**7-9am and 3-6pm**	WUG(4 TWs and 1 SW). WUG is active	Each sub-village takes care of own WS	×	×	×	×	Only cleaning, no fund collected	×	×	Lack of education, No orientation made to date. Technician promised, but didn't come back for training yet.	100 lpd	Rain season 4 timesx 1H, Dry season 2 timesx 3H (long que)	600 Tsh/M/HH	700 Tsh/M/HH	more than 5 times for follow up	Go to office directly with letter	Through District Water Office	yes, but 1970s HP was broken but not repaired. Training should be arranged.	Supposed to be 3 (not yet fully trained by Sengerema DC: M1, F2, 2005)
16	SENGEREMA	Kalebezo	86	Magulukeng	WUG Ifofongo(1) Women(1), Youth(2), SACCO(1), Ifoghongo(6, one is related to water fee)	40km, Sengerema, Bus	1 SW	-School building, latrine (PEDP) -construction of village government office	SW(1), Spring(1), River(3)	Spring(1)	Rain: SW in short, Rivers and spring enough	Rain: SW, River, Spring, Dry: Spring water is good	none	Ifoghongo for Water is available	Dry season some meetings held	×	×	**Ifoghongo credit is paid for water (Tsh3,000/HH)**	×	×	×	×	Poor physical management	100 lpd	no limitation	500 Tsh/M/HH	700 Tsh/M/HH	3 times for Hesawa activities	Go to office directly and Mobile phone	Don't know	No	Supposed to be 4 (not yet fully trained by Hesawa Sengerema DC: M2, F2, 2005)
17	SENGEREMA	Nyakaliro	93	Bukokwa	VWC, Women(3), Youth(4), Ifoghongo(5)	30km, Sengerema, Bus	none	-Maternal health education (CSPD) -School building, teachers' house, (PEDP)	Spring(5), Private dug well(1)	Spring(3), Lake	Rain: Spring water is enough, Dry in short	Rain: Water is NG, Dry: Lake water NG, but springs are better	none	VWC not active. No WUGs	Once in establishment June 2005	VWC by laws	×	×	×	×	×	×	Poor physical management	120 lpd	Rain season 5 timesx 50%H, Dry season 5 timesx 1H	10 per bucket	10 per bucke	Once a year	Go to office directly	Don't know	No	None
18	SENGEREMA	Kagunga	96	Nyanchech	VWC, WUG (3 Hesawa WUGs, 4 TW WUGs)	21km, Sengerema, Bus	3 SWs, School and HH latrine constructions, RWH of Dispensary, Protection of springs Repairing training, Hygiene education	-Maternal health education (CSPD) -School building, teachers' house, (PEDP) -village libary	3 SW, River, Dug well(25)	Dry season: All sources dry up. Ask for help to next village	Rain: Water is enough, Dry: All in short	Rain: WQ is NG, Dry season July and August water is clean	none	VWC, 3 Hesawa WUGs, 4 TW WUGs. WUGs are active	Once a month	VWC by laws	×	**Ifoghongo credit is paid for water Tsh 500 every 2 months**	1 WUG is collecting water fund	1. Ifoghongo credit 2. Charco dam Joint fund under Nyanchenche and Nyanzumura villages	×	1. Ifoghongo credit 1.8M Tsh (Mar 2006) 2. Joint-a/c is available	none	100 lpd	Rain season 5 timesx 50%H, Dry season 3 timesx 2H	10 per bucket	10 per bucket (1500 Tsh/M)	Twice a year	Go to office directly and Mobile phone	Commercial stores in Sengerema	Yes	Sengerema DC skipped the training for a year. They supposed to have M2, F2 trainees.
19	SENGEREMA	Nyakasasa	99	Nyamiswi	VWC, WUG, Women(4), Youth(1), Ifoghongo(5)	55km, Sengerema, Ferry	none	-Maternal health education (CSPD) -School building (PEDP) -Reproductive health, HIV AIDS (UMATI at Ward level)	Spring(10)	Spring(5)	Rain: Water is enough, Dry: All in short	Rain: SW, River, Spring are all NG, Dry: Spring water is relatively good but not safe	none	VWC, sub-village WUGs(5). Both are active	Quarterly	VWC by laws	×	×	They are collecting fund at sub-village level 200 Tsh/HH.	×	×	×	Poor physical management	100 lpd	Rain season 4 timex 50%H, Dry season 3 timesx 1H	500-1000Tsh	1700 Tsh/M/HH	Never	Go to office directly and Mobile phone	Don't know	No	None
20	SENGEREMA	Nyakasasa	100	Nyakasasa	VWC, WUG(9), Women(3), Youth(3), Ifoghongo(3)	87km, Sengerema, Ferry	none	-Maternal health education (CSPD) -Reproductive health, HIV AIDS (UMATI at Ward level)	Spring(10), Lake, Dug well(2)	Spring(3), Lake, Dug well(2)	Rain: Water is enough, Dry: All in short	Rain: Lake, spring and dug well are all NG, Dry: Spring and dug well water is good	none	VWC, sub-village WUGs(9). Both are active	Once a month	VWC by laws	×	100 TSh/ M/HH (Caretaking fee Tsh5,000 each sub-vil)	×	×	×	They pay for caretaking only, so far this is enough	200 lpd	Rain season 3 timex 1H, Dry season 2 timesx 3H	500 Tsh/M/HH	600 Tsh/M/HH	Once a year	Mobile phone and go to office directly	Don't know	No	1 (Catholic church program)

Supplementary Survey Results of 100 Villages (3/10)

Seria	DISTRICT	Ward	No. by District	Village	Organisations in the village	Nearest Bank	HESAWA experience	Project experience	Main water source		Adequency of water	Satisfaction of water quality	Opening hours of water facility	Water supply organization	Frequency of meeting VWC	By laws	Water right holder	Water fee	Water fund collection	Village Water fund collected	VWC funds in bank	WUG funds in bank	Organisational problems	Water consumption	Frequency of Water Fetching	O&M cost	Preference of payment	Support from Water Department	Contact methods	Spare parts shop	Experience and means of repair	No of Trained persons
					VWC, WUGs, Women , Youth , SACCOs, Ifogongo (local revolving fund)	Distance to Bank, name of town, available transportation	Construction of shallow well (SW), borehole well (BH), improved traditional well (ITW) , improved pit latrines (IPL), rain water harveting (RWH), etc.	Kind of projects (CSPD = child care, maternal health, etc. ; PEDEP = primary education programme; DDP = secondary education projects; VI = agro-forestry project; LVEMP = Lake Victoria Environmental Management Project)	Rainy season (SW = shallow well with NIRA pump; HP = borehole well with hand pump; TW = traditional water sources)	Dry season (SW = shallow well with NIRA pump; HP = borehole well with hand pump; TW = traditional water sources;	Rain season Dry season	Rain season Dry season	AM, PM, 24 hours, other	VWC, WC at sub-village, WUG, etc. Specify if it is active or not.	once a month, twice a month, quarterly etc	VWC by laws or WUG by laws	Approved or not yet	Monthly, per bucket, Annual etc		Unit: Tsh	Unit: Tsh	Unit: Tsh		liter per person per day (lpd)		First acceptable amout from villagers	Specify reasons if any	Frequency of visit of District Water Technicians for water supply facility in 2005	Ground phone, Mobile, Go to office directly, FAX, Letter, etc	Names of shops or cost of spar parts		
21	SENGEREMA	Lugata	104	Lugata	Each sub-village(8) WUGs, Women(6), Youth(3), Ifoghongo(6)	56km, Sengerema, Ferry	none	-Maternal health education, family plannig (CSPD) -School building (PEDP) -Reproductive health, HIV AIDS (UMATI at Ward level)	SW(2, 1 is private), Lake, Spring(5), Dug well(3)	Lake, Spring(5)	Rain: Water is enough, Dry: All in short	Rain: All is NG, Dry: Spring and SW water is good	none	8 sub-village WUGs are active. No VWC.	Once a month	VWC by laws	×	×	×	×	×	×	No orientation or education to the village	160 lpd	Rain and Dry seasons 5 timesx 1H	1000 Tsh/M/HH	1700-2000 Tsh/M/HH	Never	Go to office directly	Commercial stores in Sengerema	No	None, but they can call tech from next village
22	SENGEREMA	Kazunzu	106	Lushamba	Women(2), Elderly (2), Ifoghongo(2)	78km, Sengerema, Bicyle daladala only	none	-School building, latrine (PEDP) -village libary	Individual SW(2), Lake, Dug well(4), Spring(3)	Lake, spring(3)	All season: Spring and Dug well in short	Rain: All is NG, Dry: All is good	none	No VWC, no WUG	×	×	×	×	×	×	×	×	Poor physical management	100 lpd +Lake bathing no limitation	Rain season 5 timex 1H, Dry season 1 timesx 1.5H(to fetch only for drinking)	Tsh 20 per bucket (equivalent of Tsh3000)	20 Tsh per bucket	Twice a year	Go to office directly	Commercial stores in Sengerema and Mwanza	One villager can repair	1 (Catholic church program)
23	SENGEREMA	Kazunzu	108	Bulyaheke	VWC, Sub-village WUG(9), Women(3), Youth(2), Ifoghongo (9, each sub-village)	73km, Sengerema, Bus	none	-School building (PEDP) -Maternal health education (CSPD)	Spring(4), Dug well(4), Lake	Dug well(4), Lake	All season: Spring and springs in short	All season WQ is NG	none	VWC, sub-village WUGs (9): VWC is not active, sub-village WUG is active and collecting fund	×	×	×	×	×	not yet collected, but the goal is 900,000 Tsh. Still under collection	×	×	No orientation or education to the village	100 lpd	Rain and Dry seasons 3 timesx 2H	500 Tsh/M/HH	2200 Tsh/M/HH	Twice a year	Go to office directly	Don't know	No	None, but they can call District technician who was born in the village
24	SENGEREMA	Kazunzu	110	Ilyamchele	VWC, Women(7), Youth(1), Elderly(1)	60km, Sengerema, No bus link	none	-Maternal health education (CSPD) -School building (PEDP) -Reproductive health, HIV AIDS (UMATI at Ward level)	Spring(7)	Spring(3)	Rain: Spring water is enough, Dry in short	Rain: Spring water is NG, Dry: Spring water is Good	none	VWC: Not active, No WUG	×	VWC by laws	×	×	×	×	×	×	Poor physical management	100 lpd	Rain and Dry seasons 2 timesx 0.1-1H	50 Tsh/M/HH	2124/M/HH but poor family can't pay	Once a year	Go to office directly with letter	Don't know	No	None
25	SENGEREMA	Kazunzu	114	Luharanyon	VWC, Hesawa WUG(5), Women(6), Youth(4), Ifoghongo (25)	21km, Sengerema, from Nyehunge Bus is available	5 SWs, Protection of springs Repairing training, Hygiene education	-Maternal health education (CSPD) -School building (PEDP) -Reproductive health, HIV AIDS (UMATI at Ward level)	SW(5), Spring(1), Dug well(10)	SW(5), Spring(1)	Rain: Water is enough, Dry: All in short	Rain: all water source NG, Dry: Spring water is only Good	none	VWC, Hesawa WUGs(5), WUGs are active	×	VWC by laws	×	×	×	×	×	×	There is one sub-village which has no SW while the other sub-village has two SWs. There is a conflict between them.	160 lpd	Rain and Dry seasons 3 timesx 3.5H	1500 Tsh/M/HH	1657 Tsh/M/HH	Never	Go to office directly	Commercial stores in Sengerema	Hesawa trainees fixed it.	M10, F10 (M2, F2)x 5 SWs
26	SENGEREMA	Kazunzu	115	Isengeng'he	VWC, Sub-village WUG(5), Women(2), Youth(1), Ifoghongo (16)	56km, Sengerema, Bus	none	-Maternal health education (CSPD) -School building (PEDP) -Reproductive health, HIV AIDS (UMATI at Ward level)	Spring(9)	Spring(3)	Rain: Spring water is enough, Dry in short	All season WQ is NG	none	No VWC, Sub-village WUG(5) not active	×	×	×	×	×	×	×	×	Each sub-village takes care of own WS. Sub-village appointed villagers to oversee WS.	120 lpd	Rain season 6 timex 1H, Dry season 6 timesx 1.5H	Annual collection in June or July, the cost no idea	1900 Tsh/M/HH	Never	Go to office directly	Don't know	No	None
27	KWIMBA	Hungumalwa	22	Hungumalwa	VWC, WUG(8), Women(10), Youth(1) Ifoghongo(2)	30 km, Nguru, Public transport (Bus)	Yes, 8 SW (HP) : 7 functioning, IPL, Sanitation education	-School building (PEDP) -Saving credit	SW (6), TWs, River, Rain water	SW (7), River, Rain water	Rain season: enough, Dry season: in short	Rain season: Good for SW but NG for TWs, Dry season: Good for SW but NG for TWs	24 hrs	VWC, WUG(8), Both are active	Quarterly	VWC by law	×	×	○ (both VWC, WUGs)	○ (183,000Tsh)	○	△ Out of 8, 3 have the bank account (around Tsh200,000 kept by treasurer	As for Water fee, users do not want to pay before	NIL	Rain season: more than 3 timesx 50LH, Dry season: 3 timesx 2-3 H	900 for PS (BH)	More than 900 M/HH (every HH can pay Tsh 600 to meet the cost for PS)	Twice	Mobile, Go to office directly	They know: in Kwimba DWE Office and know about the costs for some parts	Yes, done by VWC/WUG	8 (2001)
28	KWIMBA	Nugullla	71	Mhulya	VWC, sub-village WUG(6), Women, Youth, Ifoghongo	15km, Sumvi, No public transport	no	-Primary school building. Dispensary (PEDP)	TWs(HDW): taken care of sub-villages	TWs(HDW)(3): yield is very small taken care by sub-villages	Rain season: in short, Dry season: in short	Rain season:NG, Dry season: NG	–	VWC is not strgon. Sub-village chair persons manage for TWs (main)	Semi-annual	×	×	×	○ (by sub-village wise: 100,000-300,000 because all SVs want respective water source)	×	×	×	VWC is weak at present while sub-villages are relatively active for water management	NIL	Rain and Dry: 2 times x 1H	700 for BH	700 M/HH (every HH can pay Tsh 600 to meet the cost for PS)	Never come	Go to office directly	Don't know	–	None
29	MAGU	Mkula	75	Kijereshi	VWC, WUG(2), Ifoghongo(5)	6 km, Mkuwa Village (Sacco Bank), no public transport	Yes, 1 BH(HP), 1 SW (HP), Dispensary construction, IPL	-school building (PEDP) -Maternal health education, dispensary construction (CSPD)	BH (1), SW (1), TWs (8), Charco dam, Rain water	BH (1), SW (1), TWs, River, Charco dam	Rain season: enough, Dry season: in short except for BH(1)	Rain season: NG for all, Dry season: Good for BH, SW but NG for TWs, River	AM: 6:00-12:00, PM: 4:00-6:00	VWC is active. WUG(2) only for cleaness, not active	Monthly	VWC by law	×	×	× (only emergency time, collected)	×	×	×	Users don't want to pay (neglect)	NIL	Rain season: 2 timesx 1H, Dry season: 3-6 times (depending on the family size) x 1H	500 for medium BH	Max 500 M/HH (every HH can pay Tsh 600 to meet the cost for Medium BHs)	3 times	Go to office directly	They know: in Mwanza & Bunda but don't know about the costs	Yes, done by VWC/WUG	3 (2002) by HESAWA
30	GEITA	Nzera	3	Idosero	VWC (Feb 06), Women(1), Youth(1), SACCO(1), Ifoghongo(7), Elderly(1)	60km, from Nzera there is bus link	no	-school building (PEDP) -Maternal health education, dispensary construction (CSPD) -Village govt office construction	Spring(18), Dug well(10)	Spring(4), Dug well(some)	Rain season enough, Dry season all in short	All season WQ is NG	NIL	VWC (Feb 06) instructed by District, is active. No WUG.	(Planning) Once a month	×	×	×	○	220,000	×	×	VWC is just formed and not active yet	NIL	NIL	600 Tsh/M/HH	20 Tsh per bucket	4 times	Go to office directly	Don't know	None	None

Supplementary Survey Results of 100 Villages (4/10)

Seria	DISTRICT	Ward	No. by District	Village	Organisations in the village	Nearest Bank	HESAWA experience	Project experience	Main water source		Adequency of water	Satisfaction of water quality	Opening hours of water facility	Water supply organization	Frequency of meeting VWC	By laws	Water right holder	Water fee	Water fund collection	Village Water fund collected	VWC funds in bank	WUG funds in bank	Organisational problems	Water consumption	Frequency of Water Fetching	O&M cost	Preference of payment	Support from Water Department	Contact methods	Spare parts shop	Experience and means of repair	No of Trained persons
					VWC, WUGs, Women , Youth , SACCOs, Ifogongo (local revolving fund)	Distance to Bank, name of town, available transportation	Construction of shallow well (SW), borehole well (BH), improved traditional well (ITW) , improved pit latrines (IPL), rain water harveting (RWH), etc.	Kind of projects (CSPD = child care, maternal health, etc. ; PEDEP = primary education programme; DDP = secondary education projects; VI = agro-forestry project; LVEMP = Lake Victoria Environmental Management Project)	Rainy season (SW = shallow well with NIRA pump; HP = borehole well with hand pump; TW = traditional water sources)	Dry season (SW = shallow well with NIRA pump; HP = borehole well with hand pump; TW = traditional water sources;	Rain season Dry season	Rain season Dry season	AM, PM, 24 hours, other	VWC, WG at sub-village, WUG, etc. Specify if it is active or not.	once a month, twice a month, quarterly etc	VWC by laws or WUG by laws	Approved or not yet	Monthly, per bucket, Annual etc		Unit: Tsh	Unit: Tsh	Unit: Tsh		liter per person per day (lpd)		First acceptable amout from villagers	Specify reasons if any	Frequency of visit of District Water Technicians for water supply facility in 2005	Ground phone, Mobile, Go to office directly, FAX, Letter, etc	Names of shops or cost of spar parts		
31	GEITA	Nzera	4	Lwenzera	VWC (Aug05), Sub-village WUG (4), Women(2), Youth(3), SACCO(1), Ifoghongo(3)	50km, from Nzera there is bus link to Geita	no	-school building (PEDP) -Maternal health education, dispensary construction (CSPD) -Village govt office construction	Spring(4), Dug well using ropes (5)	Spring(2)	Rain season enough, Dry season all in short	All season WQ is NG	NIL	VWC(Aug 05), Sub-village takes care of own WS. Both are active. VWC is more active.	Once a month	VWC by law	×	×	○	100,000	×	×	VWC is just formed and not active fully	NIL	NIL	500 Tsh/M/HH	850 Tsh/M/HH	Once a year	Go to office directly	Don't know	None	None
32	GEITA	Senga	6	Buligi	VWC, Women(2), Youth(3), Ifoghongo(3)	62km, Geita, public transport	no	-school building (PEDP) -Village govt office construction	TWs(19)	TWs, Lake (try not to consume water DDS)	All season Spring water is enough	Rain: WQ is NG, Dry: WQ is good	NIL	VWC is active (follow-up of TWs to clean),	Once three months	VWC by law	×	×	○	120,000 (use bank when it reaches 40,000)	×	×	NIL	NIL	NIL	500 Tsh/M/HH	1700 Tsh/M/HH	Once a year	Go to office directly	Don't know	None	None
33	GEITA	Senga	8	Kakubilo	VWC, Women (3), Men (7), Youth (3), Ifoghongo(1)	53km, Geita, public transport	no	-saving credit -school building (PEDP) -Maternal health education)CSPD)	Tws (Ponds (27))	Tws (Ponds)	Rain season: enough, Dry season: in short	Rain season: NG, Dry season: NG	_	VWC: active	Monthly	VWC by law	×	× (fine is collected)	Fine is collected	86,000Tsh kept by the WUG Treasure	×	×	_	NIL	Rain: 4time sx 0.25H, Dry: 4times x1.5H	2,000 M/HH	2,000 M/HH (every HH can pay Tsh 600 to meet the cost for PS)	Twice	Mobile	Don't know	None	None
34	GEITA	Senga	9	Nyabalasa	VWC (Mar06), Women (1), Youth (2), Ifoghongo(4)	60km, Geita, public transport	no	-school building -maternal health education (CSPD)	Tws (Springs(2))	Tws (Ponds)	Rain season: enough, Dry season: in short	Rain season: NG, Dry season: NG	_	VWC is not active (just formed March 06)	×	×	×	×	×	×	×	×	VWC is new and not active yet	NIL	NIL	20 per bucket: easier to collect than monthly charge.	20 per bucket	Twice	Go to office directly	Don't know	None	None
35	GEITA	Senga	10	Kaseni	VWC, Sub-village WUG(3), Women (2), Youth (1), Ifoghongo(2)	71km, Geita, public transport	no	-school building -village projects (construction of a secondary school and village govt office)	Tws (Lake, HDWs(11))	Tws (Lake, HDWs(3))	Rain season: enough, Dry season: in short for HDWs	Rain season: NG, Dry season: NG	_	VWC: active (upkeeping of TWs is done by sub-villages)	Monthly	×	×	×	×	×	×	×	Due to unprotected water, villagers are not motivated for water issues	NIL	NIL	20 per bucket: easier to collect than monthly charge.	20 per bucket	Once	Go to office directly	Don't know	None	None
36	GEITA	Kagu	17	Bugulala	VWC, Women (11), Youth (3), Ifoghongo(1) , Beekeeping (1)	25km, Geita, public transport	no	-school building, library (PEDP)	Tws (Spring (7))	Tws (HDWs)	Rain season: enough, Dry season: in short for HDWs	Rain season: NG, Dry season: Good for spring	_	VWC: active (upkeeping of TWs).	Monthly	VWC by law	×	×	○	Tsh 379,000 (200Tsh/HH)	×	×	_	NIL	NIL	20 per bucket: quick to collect than monthly charge.	20 per bucket	Twice	Go to office directly	Don't know	None	None
37	GEITA	Kagu	18	Kasota	VWC, Sub-village WUG(6), Women (1), Youth (1), Ifoghongo(2)	25km, Geita, public transport	no	-school building, library (PEDP)	Tws (9) (Springs(9))	Tws (4) (Springs(4))	Rain season: enough, Dry season: in short	Rain season: Good, Dry season: Good	_	VWC: active (TWs are managed by sub-villages) WUG not active	Monthly	VWC by law	×	×	×	×	×	×	_	NIL	Fill later by SES	20 per bucket: quick to collect than monthly charge.	20 per bucket	Twice	Go to office directly or mobile	Don't know	None	None
38	GEITA	Kagu	19	Nyamilongo (Nyamilango)	VWC, Women(2), Youth(2), Ifoghongo(7)	29km, Geita, Bus	none	-School facilties (PEDP) -Environmental conservation	Spring(7)	Dug well(6), Spring(less 6)	Rain: TWs are enough. Dry all in short	Rain: WQ is not good. Dry: Spring water is good.	none	VWC, Sub-village WUG. VWC is active.	×	VWC by law	×	×	Each sub-village collected 25,000. Treasurer keeps it. No upkeeping done.	25,000	×	×	Poor physical management	NIL	NIL	100-500 TSh/M/HH	600 Tsh/M/HH	Once a year	Go to office directly	Don't know	None	None
39	GEITA	Kamena	22	Kamena	VWC (May05 est.) Women(4), Youth(6), Ifoghongo(1)	34km, Geita, Bus	none	-School facilties (PEDP) -road -market	Spring(11), Pond(3)	Spring(3), Ponds	All season water is enough	Rain: WQ is good. Dry: WQ is NG	none	VWC is active. TW maintenance. No WUG.	Monthly	VWC by laws	×	×	Cash crop levies is used for the fund from the middleman.	100,000	×	×	Poor physical management	NIL	NIL	500 TSh/M/HH	600 Tsh/M/HH	Once a year	Go to office directly and Mobile phone	Don't know	None	None
40	GEITA	Kamena	23	Busisi (Bushishi)	VWC, Women(1), Youth(1), Local SACCOs, Working , Local militalia	35km, Geita, Bus	none	-School facilties (PEDP) -Road construction	Dug well(7), Charco(1)	Pond(1)	Rain: TWs are enough. Dry all in short	Rain: WQ is not good. Dry: Pond water is good.	none	VWC, just formed 2 months ago by WB initiatives. Not active	Monthly	×	×	×	×	Planning to collect 100,000	×	×	Just started, they need more orientation	NIL	NIL	300 TSh/M/HH	500 TSh/M/HH	Once a year	Go to office directly	Don't know	None	None
41	GEITA	Kamena	24	Ndelema	VWC (Oct.05), Women(6), Youth(11), Ifoghongo(31), Local SACCOs	35km, Geita, Bus	none	-Primary education development (PEDP) -Road construction	Spring(6), Pond(5), Dug well(31)	Spring(6), Pond(5), Dug well(31) Dry season some dry up	Rain: TWs are enough. Dry all in short	Rain: WQ is not good. Dry: Pond and dug well water is NG, but spring water is clean.	none	VWC (Oct 05) is active. No WUG. Facilitation of cleaning TWs	Monthly	×	×	×	Cash crop levies is used for the fund from the middleman.	100,000	×	×	Poor physical management	NIL	NIL	500 TSh/M/HH	500 TSh/M/HH	Three times	Mobile phone	Don't know	None	None
42	GEITA	Kamena	25	Nyashishim	VWC (Jan 05), Women(7), Youth(5), Ifhoghongo	45km, Geita, Bus	none	-Primary education development (PEDP) -Maternal health education	Spring(3), Charco(1)	Spring(3), Charco(1)	All season water is enough	Rain: WQ is good. Dry: WQ is NG	none	VWC (Jan 05) is active. No WUG. Collecting contribution from HHs.	Twice a month	VWC by laws	×	×	○	50,000 (200 Tsh//HH)	×	×	Poor physical management	NIL	NIL	500 TSh/M/HH	600 Tsh/M/HH	Three times	Go to office directly	Don't know	None	None

Supplementary Survey Results of 100 Villages (5/10)

Seria	DISTRICT	Ward	No. by District	Village	Organisations in the village	Nearest Bank	HESAWA experience	Project experience	Main water source		Adequency of water	Satisfaction of water quality	Opening hours of water facility	Water supply organization	Frequency of meeting VWC	By laws	Water right holder	Water fee	Water fund collection	Village Water fund collected	VWC funds in bank	WUG funds in bank	Organisational problems	Water consumption	Frequency of Water Fetching	O&M cost	Preference of payment	Support from Water Department	Contact methods	Spare parts shop	Experience and means of repair	No of Trained persons
					VWC, WUGs, Women , Youth , SACCOs, Ifogongo (local revolving fund)	Distance to Bank, name of town, available transportation	Construction of shallow well (SW), borehole well (BH), improved traditional well (ITW) , improved pit latrines (IPL), rain water harveting (RWH), etc.	Kind of projects (CSPD = child care, maternal health, etc. ; PEDEP = primary education programme; DDP = secondary education projects; VI = agro-forestry project; LVEMP = Lake Victoria Environmental Management Project)	Rainy season (SW = shallow well with NIRA pump; HP = borehole well with hand pump; TW = traditional water sources)	Dry season (SW = shallow well with NIRA pump; HP = borehole well with hand pump; TW = traditional water sources;	Rain season Dry season	Rain season Dry season	AM, PM, 24 hours, other	VWC, WC at sub-village, WUG, etc. Specify if it is active or not.	once a month, twice a month, quarterly etc	VWC by laws or WUG by laws	Approved or not yet	Monthly, per bucket, Annual etc		Unit: Tsh	Unit: Tsh	Unit: Tsh		liter per person per day (lpd)		First acceptable amout from villagers	Specify reasons if any	Frequency of visit of District Water Technicians for water supply facility in 2005	Ground phone, Mobile, Go to office directly, FAX, Letter, etc	Names of shops or cost of spar parts		
43	GEITA	Bukoli	26	Bogogo	VWC, Women(2), Youth(4), SACCO(1)	45km, Geita, Bus	1 SW, ITWS(3)	-Primary education development (PEDP) -Reproductive health and HIV/AIDS (AMREF)	SW(1), Spring(3)	SW(1), Spring(3)	Rain: SW enough water. Dry all in short	All season WQ is NG	none	VWC (2002), VWC: active and cleaning WS. No WUG, no instruction by Hesawa coordinator.	×	VWC by laws	×	×	×	×	×	Poor leadership	NIL	NIL	10 Tsh/bucket	600 Tsh/M/HH	Once a year	Go to office directly	Don't know	Repaired by VWC member	4 trained in 2002
44	GEITA	Bukoli	27	Ikina	VWC, Wome(1), Youth(1), SACCOs(1)	44km, Geita, Bus	none	-Primary education development, school building (PEDP)	River, spring, pond (2 each)	River, spring, pond (2 each)	Rain: water is enough. Dry all in short	Rain: all water is NG, Dry: Clean	none	VWC, No WUG. VWC is active.	Monthly	VWC by laws	×	×	×	×	×	Poor physical management	NIL	NIL	20 Tsh/bucket	600 Tsh/M/HH	Twice a year	Go to office directly and Mobile phone	Don't know	None	2 trained by MOW
45	GEITA	Bukoli	29	Ntono	VWC (Jan 05), Women(11), Youth(3), Ifoghongo(1)	55km, Geita, Bus	none	-health (CSPD) -school facilities (PEDP) -village library	TW(26), 2-20 using bucket ropes	Spring(6)	Rain: water is enough. Dry all in short	Rain: Spring water is NG, Dry: Spring water is Good	none	VWC, No WUG. VWC is not active.	×	×	×	×	○	40,000 (initial plan: each sub-vil 20,000)	×	×	No clear instruction given	NIL	NIL	more than 7,000 a year	600 Tsh/M/HH	Never	Go to office directly and Mobile phone	Don't know	None	None
46	GEITA	Bukoli	30	Ihega	VWC (Jan 06), Women(1), Youth(3), Ifoghongo with other village	48km, Geita, Bus	none	-health (CSPD) -school facilities (PEDP) -village library	Spring (6), Bucket rope (1) by religious organisation	Spring (6), Bucket rope (1) by religious organisation	Rain: water is enough. Dry all in short	Rain: Spring w	none	VWC, No WUG. VWC is not active.	×	VWC by laws	×	×	×	×	×	×	No clear instruction given	NIL	NIL	10 Tsh/bucket	500 Tsh/M/HH	Never	Go to office directly	Don't know	None	None
47	GEITA	Nyarugusu	32	Nyaruyeye	VWC (Feb 05), Sub-vil WUG, Women(3), Youth(1), Irrigation agri	50km, Geita from another town to take bus	none	-health (CSPD) -school facilities (PEDP)	River(2), Spring(4)	Most springs dry up. River(2)	Rain: water is enough. Dry all in short except river water	All season WQ	none	VWC, No WUG. but sub-vil takes care of WS. VWC is not active, just established.	×	VWC by laws	×	×	×	×	×	×	VWC is not given clear responsibility	NIL	NIL	20 Tsh/bucket (But 3000 Ths/M seems too high for them)	500 Tsh/M/HH	Once a year	Go to office directly	Don't know	None	None
48	GEITA	Katoro	42	Ibondo	VWC (Oct.05), Women(12), Youth(7), Ifoghongo(3), SACCOs	53km, Geita, Bus to Katoro	none	-health, Dispensary (CSPD) -school facilities (PEDP)	River, Spring, Indian Dug well(20)	River, spring(7), Dug well(some)	Rain: water is enough. Dry all in short	Rain: Dug well water is clean (cared), river and springs NG. Dry: River NG, but Springs and dug wells are good.	none	VWC, sub-village WUGs (7): VWC is not active, 1 sub-vellage available.	Supposed to be Monthly	VWC by laws	×	×	1 sub-village only	100,000	×	×	Roles are not clear to VWC.	NIL	NIL	500 Tsh/M/HH	500 Tsh/M/HH	Once a year	Go to office directly	Don't know	None	None
49	GEITA	Nyachiluluma	53	Kasangwa	VWC (Aug05), Women(3), Youth(4), ifoghongo(8)	60km, Geita, Bus	none	-health (CSPD) -school facilities (PEDP)	Lake, Spring(9)	Lake	Rain: water is enough. Dry all in short	Rain: Lake and spring water is NG, Dry: Lake water NG but Spring water is Good	none	VWC: active, Village Social Service Committee takes care of water. (VWC is new)	Once a month. Village Social Service and VWC working together.	VWC by laws	×	×	○	700,000	×	×	VWC is still new. More orientation is needed.	NIL	NIL	10 Tsh/bucket	850 Tsh/M/HH	Twice a year	Go to office directly	Don't know	None	None
50	GEITA	Nyachiluluma	54	Isima	VWC (Dec05)	50km, Geita, Bus	none	-health (CSPD) -school facilities. library (PEDP)	Dug well(14), River	Dug well(7), Lake 20km away	Rain: water is enough. Dry all in short	Rain: Dug well is good, but river NG. Dry: Dug well NG	none	VWC is active. Opened bank a/c.	×	VWC by laws	×	×	Cash crop levies is used for the fund from the middleman.	175,000	×	×	VWC is still new. More orientation is needed.	NIL	NIL	300 Tsh/M/HH	1600 Tsh/M/HH	Once a year	Go to office directly	Don't know	None	None
51	UKEREWE	Bukanda	12	Namasabo	VWC, Sub-village WUG(3), Women(15), Youth(3)	2km, Muhura, Bus	none	-SW and Latrine construction (RIDEP) -Local SACCOs (credit services)	SW(1), Lake, River, Spring(1), Dug well(1)	SW(1), Lake, River, Spring(1), Dug well(1)	SW water in short all season. Rain: other WS enough. Dry: all in short	Rain: SW and dug well water is good, others NG. Dry: except River, SW, Lake Spring, Dug well water is Good. Lake changes into green	none	VWC: not active, WUGs(3).	×	×	×	×	×	×	×	×	Poor leadership. No roles given. They don't know what to do.	120 lpd	Rain and Dry seasons 2 timesx 2H	5000 Tsh/Year	850 Tsh/M/HH	Once a year	Communicate with village Hesawa animator (letter)	WASAKO in Mwanza	None	M2, F2 trained by Hesawa
52	UKEREWE	Ilangala	38	Masonga	VWC (M7, F7)	45km, Nansio, Bus	none	-School building (PEDP) -construction of a secondary school	SW(4), Ring well(1), Dug well(40), Lake	SW(4), Ring well(1), Dug well(40), Lake	NIL	NIL	none	VWC (M7, F7) is active	Three times a year	×	×	150 Tsh/M/HH	○	60,000	×	×	NIL	NIL	NIL	150 TSh/M/HH	600 Tsh/M/HH	Less frequent	Go to office directly	WASAKO in Mwanza	NIL	None
53	BUNDA	Mcharo	33	Mcharo	VWC, WUG(1), Women (3), Youth (3), Ifogongo (2)	8.5 km, Bunda, Public transportation	Yes, 3 SW (HP): 1 functioning, IPL at dispensary (now not functioning), sanitary education	-PEDP	SW (1), TWS (HDW) (2), River (1)	SW (1), TWSs (HDW) in other villages	Rain season: enough for river, TWS, but in short for SW, Dry season: all in short	Rain season: NG for all, Dry season: NG for all SW: salty water	AM: 8:00-10:00, PM: 4:00-5:30	VWC, WUG(1) Both are not active	Every 2 months	VWC by law	×	○ (200Ths/HH/M but many HHs do not pay)	○ (by VWC)	○ (30,000Tsh kept by VWC treasurer)	×	×	VWC's financial management is not transparent	NIL	Rain season: 1 timex 50%-1.5H, Dry season: 3 timesx 1.5 H	200-500 Tsh/M/HH	600 Tsh/M/HH(All HHs can pay Tsh 600 to meet the cost for BH)	Never come	Go to office directly	no	None	4 (1999)

Supplementary Survey Results of 100 Villages (6/10)

Seria	DISTRICT	Ward	No. by District	Village	Organisations in the village	Nearest Bank	HESAWA experience	Project experience	Main water source		Adequency of water	Satisfaction of water quality	Opening hours of water facility	Water supply organization	Frequency of meeting VWC	By laws	Water right holder	Water fee	Water fund collection	Village Water fund collected	VWC funds in bank	WUG funds in bank	Organisational problems	Water consumption	Frequency of Water Fetching	O&M cost	Preference of payment	Support from Water Department	Contact methods	Spare parts shop	Experience and means of repair	No of Trained persons
					VWC, WUGs, Women , Youth , SACCOs, Ifogongo (local revolving fund)	Distance to Bank, name of town, available transportation	Construction of shallow well (SW), borehole well (BH), improved traditional well (ITW) , improved pit latrines (IPL), rain water harveting (RWH), etc.	Kind of projects (CSPD = child care, maternal health, etc. ; PEDEP = primary education programme; DDP = secondary education projects; VI = agro-forestry project; LVEMP = Lake Victoria Environmental Management Project)	Rainy season (SW = shallow well with NIRA pump; HP = borehole well with hand pump; TW = traditional water sources)	Dry season (SW = shallow well with NIRA pump; HP = borehole well with hand pump; TW = traditional water sources;	Rain season Dry season	Rain season Dry season	AM, PM, 24 hours, other	VWC, WC at sub-village, WUG, etc. Specify if it is active or not.	once a month, twice a month, quarterly etc	VWC by laws or WUG by laws	Approved or not yet	Monthly, per bucket, Annual etc		Unit: Tsh	Unit: Tsh	Unit: Tsh		liter per person per day (lpd)		First acceptable amout from villagers	Specify reasons if any	Frequency of visit of District Water Technicians for water supply facility in 2005	Ground phone, Mobile, Go to office directly, FAX, Letter, etc	Names of shops or cost of spar parts		
54	BUNDA	Butimba	51	Buzimbwe	VWC	35km, Bunda, Public transport	No for well, it was surveyed but not constrcuted. Only IPL for primay school was constrcuted.	-construction of school -tree planting -livestock keeping	Lake, TWs (ponds)	Lake	Rain season: enough, Dry season: in short for pond	Rain season: good for lake water but NG for pond, Dry season: NG for Lake (sometime there are algae in water)	_	VWC is active	NIL	VWC by law	×	×	○ (by VWC)	○ (230,000Tsh/1,000Tsh/HH)	○	×	__	NIL	Rain season: 3 timex 1H, Dry season: 6 timesx 1-2 H	500 Tsh/M/HH	2,100M/HH (All HHs can pay Tsh 2,100 to meet the cost for PS)	Never come	Go to office directly	Don't know	None	no
55	BUNDA	Igundu	88	Namalama	Sub-village WUG) (6), Women(10), Youth(7), Ifoghongo(7)	18km, Kisoria (SACCOs), Bus	none	-SW construction(IFAD) -TASAF, DDP, PEDP, CSPD	Lake, TW5	Lake	All season Lake water is enogh	Rain: Lake water NG, Dry: Lake water is good	none	No VWC, Sub-village WUGs are active	Once a month (Sub-village WUGs)	Sub-village WUGs by laws	×	×	○	250,000 (latest), Goal is 750,000	×	×	Poor physical management	NIL	NIL	500 Tsh/M/HH	950 Tsh/M/HH	Three times	Ground phone or letter	Commercial stores in Mwanza	None	2 technicians can repair
56	MUSOMA	Nyamimange	6	Sirorisimba	Hesawa WUG(1)	21km, Musoma, Bus	1 BH construction (1995-2003)	-Maternal health education (CSPD) -School building (PEDP)	BH(1), River	BH(1)	All season in short	All season BH water is Good, Rain season river WQ is NG	6.00-12.00am, 2.00-6.00pm	No VWC, Hesawa WUG(1) acts as VWC, which is active	Twice a month	Hesawa WUG by laws.	×	200 Tsh/M/HH (Hesawa WUG), 20,000 Tsh/M paid for a watchman.	○	30,000 (opened a/c on 20 January 2006)	○	○	NIL	120 lpd	NIL	1000 Tsh/M/HH	1000 Tsh/M/HH	Once a year	Go to office directly and a letter	Through District Water Office	None	M2, F2 trained by Hesawa in 1995, Village fundis.
57	MUSOMA	Bwiregi	8	Ryamisang	Wome(4), WUA(1), Environmentals(3)	40km, Musoma, Bus	4 SW construction in 1985	-Dispensary construction (PEDP) -WWF conservation of Mara River Basin (LVEMP) -Maternal health education (CSPD) -WWF	Individual RWH (3), RWH in Primary school(1), River, Spring(3), Pond, Dug well	River 8km from village, Spring(3)	Rain: Water is enough except pond. Dry: River and spring water is enough	All season WQ is NG	6.00-10.00am, 2.00-6.00pm	WUA available but not active	from 2004, only once meeting was held	WUA by laws	○	×	○	100,000	○	○	They have VWA but they don't have water source to operate.	NIL	4 times a day	1000 Tsh/M/HH	1000 Tsh/M/HH	Less frequent	Go to office directly with letter	Nairobi-Kenya	No, but the village technician used to purchase windmill spares.	Men(2) was trained in 1985, but moved to town.
58	MUSOMA	Butuguri	21	Kisamwene	VWC, WUG(6), FINCA(1), Agriculture (1),Tailoring (1)	27km, Musoma, Bus	none	-CBR(Community Based Rentonal) -Maternal health education (CSPD) -Construction of dispensary (TASAF) -school building (PEDP)	Spring(6), River(5), Dug well(7)	Dug well (7), River	All season water is in short	All season WQ is NG	none	VWC, WUG(4). VWC is active	Once a month	VWC by laws	×	×	○	10,000	×	×	Poor leadership. No roles given. They don't know what to do.	100 lpd	5 times a dayx 1H. Dry: 1 timex 4H	3000 Tsh/M/HH	3000 Tsh/M/HH	Once a year	Mobile phone and go to office directly	Through District Water Office	None	None
59	MUSOMA	Bukabwa	24	Mmazami	VWC, WUG(3), Women, Youth, SAWATA (Elderly)	16km, Musoma, Bus	ITW, Latrine construction, Health and sanitation education	-3 HP construction (Mara-FIP=Mara Farmers Initiative Project) -Maternal health education (CSPD) -school building (PEDP)	SW(1)	TW(2)	All season water is in short	Rain: SW water is NG, Dry: TW water is good	none	VWC, WUG(3). None is active	×	×	×	×	×	×	×	×	Poor leadership. No roles given. They don't know what to do.	100 lpd	5 timesx 1H	500 Tsh/M/HH	600 Tsh/M/HH	Less frequent	Mobile phone and go to office directly	Don't know	None	M3 F3 trained by MARAFIP in 1998
60	MUSOMA	Suguti	31	Chirorwe	VWC, Women(4), Youth(1), Elderly called ZEZE(1)	65km, Musoma, Bus	none	-Maternal health education (CSPD) -School building (PEDP) -Agriculture (MARA FIP)	Spring(8)	Spring(8)	Rain: enough, Dry: not enough	All season WQ is NG	none	VWC only, not active	×	×	×	×	×	×	×	×	No clean water source to take care.	120 lpd	3 timesx 1H	1000 Tsh/M/HH	2000 Tsh/M/HH	Once a year	Go to office directly	Don't know	None	2 techs in the village. One used to wrok DWO, the other used to work Ubungo,
61	MUSOMA	Nyambono	33	Bugoji	VWC, WUG(9), Women(8), Youth(8), SACCO(1), Elderly(1)	150km, Musoma, Bus	none	-PEPD, CSPD -4 SW constructed by Government water project in 2005	SW(4), Spring(3), Dug well(3)	SW(4), Spring(3), Dug well(3)	Rain: enough, Dry: not enough	Rain: SW water is salty. Other WS not Good. Dry: Spring and Dug well water is good	7.00-12.00am 2.00-6.00pm 9 watchmen are available	VWC(M9 F9), WUG(9), VWC is active	Once a month	VWC by laws, they are registered to DWO	Applied but not yet approved	200 Tsh/M/HH	○	45,000	○	○	NIL	100 lpd	6 timesx 1H	200 Tsh/M/HH	1000 Tsh/M/HH	Twice a year	Go to office directly	Don't know	None	None
62	MUSOMA	Nyambono	35	Saragana	VWC, WUGs, Women(16), Youth(10), SAWATA(1)	65km, Musoma, Bus	none	-1 BH construction (MARA FIP) -2 Spring protections (Red Cross) -fish pond construction	Spring(2)	Spring(2)	Rain: enough, Dry: not enough	All season WQ is NG	none	VWC(M9 F9), WUGs and VWC is active	Once a month	×	×	×	○	×	×	×	BH spareparts were robbed. No fund to replace. Poor leadership.	100 lpd	5 timesx 1H	200 Tsh/M/HH	1000 Tsh/M/HH	Once a year	Go to office directly	Don't know	Broken but not repaired at all	None
63	MUSOMA	Nyambono	36	Kaburabura	VWC(M3 W2), Women(5), Youth(2), Ifoghongo(1)	75km, Musoma, Bus	none (only survey was done)	-PEDP, school building -1 SW	Spring(7)	Spring(4), Lake	Rain: Spring water is enough, Dry in short	All season WQ is NG	none	VWC(M3 F2) only and is active	Three times a month	VWC by laws, they are registered to DWO	×	×	○	10,000	×	×	Poor water source to operate.	100 lpd	total 6 hours a day	200-500 Tsh/M/HH	600 Tsh/M/HH	Twice a year (for Charco dam)	Go to office directly with letter	Don't know	None	None
64	MUSOMA	Nyankanga	54	Nyabekwa	VWC, WUG(4), Women4), Youth(2), Elderly(1)	10km, Musoma, Bus	none	-School building (PEDP) -Maternal health education (CSPD)	Dug well(4), Spring(3), River	Lake 10km from village, River, Dug well(4)	Rain: TWs are enough. Dry all in short	All season WQ is NG. (They will clean Dug well during dry season)	none	VWC, WUG(4). None is active	×	VWC by laws, they are registered to DWO	×	×	×	×	×	×	User don't want to pay for natural water source.	NIL	total 5 hours a day	200 Tsh/M/HH	600 Tsh/M/HH	Once a year	Mobile phone and go to office directly	Don't know	None	None

Supplementary Survey Results of 100 Villages (7/10)

Seria	DISTRICT	Ward	No. by District	Village	Organisations in the village	Nearest Bank	HESAWA experience	Project experience	Main water source		Adequency of water	Satisfaction of water quality	Opening hours of water facility	Water supply organization	Frequency of meeting VWC	By laws	Water right holder	Water fee	Water fund collection	Village Water fund collected	VWC funds in bank	WUG funds in bank	Organisational problems	Water consumption	Frequency of Water Fetching	O&M cost	Preference of payment	Support from Water Department	Contact methods	Spare parts shop	Experience and means of repair	No of Trained persons
					VWC, WUGs, Women , Youth , SACCOs, Ifogongo (local revolving fund)	Distance to Bank, name of town, available transportation	Construction of shallow well (SW), borehole well (BH), improved traditional well (ITW) , improved pit latrines (IPL), rain water harveting (RWH), etc.	Kind of projects (CSPD = child care, maternal health, etc. ; PEDEP = primary education programme; DDP = secondary education projects; VI = agro-forestry project; LVEMP = Lake Victoria Environmental Management Project)	Rainy season (SW = shallow well with NIRA pump; HP = borehole well with hand pump; TW = traditional water sources)	Dry season (SW = shallow well with NIRA pump; HP = borehole well with hand pump; TW = traditional water sources;	Rain season Dry season	Rain season Dry season	AM, PM, 24 hours, other	VWC, WG at sub-village, WUG, etc. Specify if it is active or not.	once a month, twice a month, quarterly etc	VWC by laws or WUG by laws	Approved or not yet	Monthly, per bucket, Annual etc		Unit: Tsh	Unit: Tsh	Unit: Tsh		liter per person per day (lpd)		First acceptable amout from villagers	Specify reasons if any	Frequency of visit of District Water Technicians for water supply facility in 2005	Ground phone, Mobile, Go to office directly, FAX, Letter, etc	Names of shops or cost of spar parts		
65	MUSOMA	Buruma	55	Isaba	VWC(M6 F6), WUG(6 including Hesawa 2), Women, Youth, SAWATA	18km, Musoma, Bus	2 SW (functioning in rainy season)	-School latrine, school committee education (PEDP) -Mama and children (CSPD)	Spring(3), SW(2)	Dug well (10), SW(2)	Rain: Water is enough, Dry: All in short	Rain: SW water is Good, Dry: SW is not Good.	8 hours open. Locked and watched voluntary	VWC(M6 F6), WUG(6). Both active. WUGs are more active	×	VWC by laws	×	×	×	×	×	×	Poor leadership	NIL	NIL	7500 Tsh/Yr/HH	7500 Tsh/Yr/HH	Quarterly	Go to office directly	Through District Water Office	None	M1 F1 trained by Hesawa in 1998
66	MUSOMA	Buruma	56	Songora	WUG(8), SAWATA	36km, Musoma, Bus	none	-1 BH(Mara FIP) -Secondary, Dispensary and those latrin construction (PEDP)	BH(1), River	BH(1)	All season BH water is not enough	Rain: WQ is NG, Dry: BH WQ is Good	none	VWC: not active, WUG(8). WUGs are active	×	×	×	×	×	×	×	×	Poor leadership	NIL	4 times a day	600 Tsh/M/HH	600 Tsh/M/HH	Once a year	Go to office directly	Through District Water Office	Pump attendant repaired the breakdown	M1 F1 trained by Mara FIP (District Techinician)
67	MUSOMA	Murangi	65	Musanja	VWC(M6 F6), WUG(4), Women(4), Youth(1)	75km, Musoma, Bus	none	-school construction (PEDP) -maternal health education (CSPD) -agroforestry (VI)	10km to Lake, TW(7)	10km to Lake, TW(7)	Water is enough, but very far to fetch it	All season WQ is NG	none	VWC(M6 F6) is active, WUG(4) is not active	Once a month	VWC by laws, they are registered to DWO	×	×	○	150,000	○	○	NIL	NIL	9 hours a day	500 Tsh/M/HH	1000 Tsh/M/HH	Twice a year	Go to office directly	Don't know	None	None
68	MUSOMA	Bukima	67	Butata	VWC, WUG(1), Women(4), Youth(1), SAWATA(1), VIFAFI	70km, Musoma, Bus	none	-1 SW (VODP) -Maternal health education (CSPD) -Primary and secondary classroom building (PEDP)	SW(1), Lake, Spring	SW(1), Lake, Spring	All season SW is enough, Spring water in short	All season SW is enough, Spring water in short	none	VWC, WUG(1) formulated in 1996, active	Once a month	NIL	×	20 Tsh/M/HH	×	×	×	keeping the fund in the safe box in WUG office	NIL	NIL	9 hours a day	1800 Tsh/M/HH	1800 Tsh/M/HH	Once a year	Go to office directly	Don't know	None	Male(4) trained by VODP
69	MUSOMA	Bukima	69	Rusoli	VWC(M6 F6), WUG(6), Women(2), Youth(2), Elderly(1)	78km, Musoma, Bus	none	-school building (PEDP) -Agroforestry (VI) -Agriculture (VIFAFI) -Maternal health education (CSPD)	Lake, Dug well (6), Personal RWH(1)	Lake, some Dug well dry up	Rain: enough, Dry: not enough	Rain: Lake water NG but Dug well water is good. Dry: Lake and DW is NG	none	VWC(M6 F6), WUG(6). Both active. VWC is more active	Once a month	×	×	×	○	×	They will open a/c on 1 May 2006.	×	NIL	NIL	4 hours a day	Per bucket, but no more idea	2000 Tsh/M/HH	Twice a year	Go to office directly	Through District Water Office	None	None
70	MUSOMA	Bukumi	72	Bukumi	WUG(2), Women(3), Youth(1), Elderly(1)	90km, Musoma, Bus	none	-school building (PEDP) -Agroforestry (VI)	Lake, Springs(some), Dug well(2)	Lake, Dug well(2)	Rain: Water is enough, Dry: All in short	All season WQ is NG	none	WUG(2) for TWs. Kamatiya Afya takes care also. Both are not active	×	×	×	×	×	×	×	×	Poor implementation of rules/by lawas	120 lpd	6 times a day	1000 Tsh/M/HH	1500 Tsh/M/HH	Once a year	Go to office directly	Through District Water Office	None	None
71	MUSOMA	Etaro	92	Mkirira	VWC, WUG(4), Women(4), Youth(1), Elderly(1)	8km, Musoma, Bus	none	-UMABU(Umoja wa Maendeleo Bukwaya) -VI agroforestry -school constructions (PEDP) -construction of secondary school	Only spring(4)	Only spring(4)	Rain: Water is enough, Dry: All in short	Rain: Spring water is NG, Dry: Spring water is Good	none	VWC is not active. WUG(4) are active	×	4 WUGs have own rules.	×	Tsh 50/M/HH. Revolving fund's interest is paid for watchman.	×	a/c is closed	Revolving fund of 100,000	×	NIL	NIL	once a day to fech water	Tsh 50 per HH/M.	2000 Tsh/M/HH	Twice a year	Go to office directly with letter	Don't know	Repaired by WUG member	No training but from experience
72	MUSOMA	Nyakatende	97	Kiemba	VWC(M5 F4), Women(2), Youth(4)	20km, Musoma, Bus	none	-UMABU(Umoja wa Maendeleo Bukwaya) -school building (PEDP) -beach management -agroforestry (VI)	TW(6), Lake, River	Lake, TWs(some)	Rain: Water is enough, Dry: All in short	Rain: All Water source NG, Dry: TWs is only Good	none	VWC(M5 F4) is active	Once a month	VWC by laws	×	×	○	100,000	×	×	No water facility to operate.	100 lpd	2 timesx 2H	1000 Tsh/M/HH	2000 Tsh/M/HH	Twice a year	Go to office directly	Don't know	None	3 technicians
73	MUSOMA	Nyakatende	98	Kigera	VWC(M4 F3), Women(5), Youth(4)	12km, Musoma, Bus	none	-UMABU(Umoja wa Maendeleo Bukwaya) -school building (PEDP) -furniture workshop (VODO) -maternal health education (CSPD)	TW(3), and Rain harvesting	Lake water only	Rain: TWs are enough. Dry all in short	Rain: TW is not good. Dry: Lake water is NG	none	VWC(M4 F3) is not active	×	×	×	×	×	×	×	×	Poor leadership	200 lpd	Rain: 5 times x50%H, Dry: 2 times x2H	less 500 Tsh/M/HH	1000 Tsh/M/HH	Twice a year	Go to office directly	Don't know	None	None
74	MUSOMA	Kiriba	103	Kiriba	VWC, WUG(1), Women(4), Youth(1)	34km, Musoma, Bus	none	-1 SW construction (Mara FIP) -school building (PEPD) -Maternal health education (CSPD) -Agroforestry (VI)	SW(1), Lake, Dug well(7)	SW(1), Lake, Dug well(4)	Rain: All water is enough, Dry all in short	Rain: All water is NG, Dry Lake and Dug well (for washing and bathing) NG, SW is good	none	VWC, WUG(1).Both are active. WUG is more active	×	40 members rotate and lock SW volunteerly 10.00-16.00 (open hours)	○	×	○	400,000	The a/c is suspended. They want to open again.	×	Poor physical management	100 lpd	3-4 times a day	200 Tsh/M/HH	700 Tsh/M/HH	Once a year	Go to office directly with letter	Don't know	Mara-FIP tech came to repair and trained villagers	1 was trained by Mara-FIP in 1997
75	TARIME	Turwa	8	Magena	VWC, WUG(6), Women (1)	5km, Tarime, Public transport	4 SW (HESAWA): 3 functioning, IPL at school, Sanitary education, 2SW (IFAD): 1 functioning	-2 IFAD SW: 1 functioning -school construction (PEDP) -construction of dispensary (CSPD)	SW (5), River	River 3km)	Rain season: enough, Dry season: in short for SWs	Rain season: good for SWs but NG for river, Dry season: good for river (but not safe)	24 hours	VWC, WUG(6): none of them active	did not ask	×	×	×	×	×	×	×	Poor leadership, poor physical management, misuse of fund, (villagers say) no monitoring from DWE Office	NIL	NIL	2,000M/HH	2,000M/HH (All HHs can pay to meet the cost for BH)	Never come	Go to office directly	Yes, Tarime, They don't know the costs	Yes, done by VWC/WUG	2 (1986)
76	TARIME	Nyakonga	22	Kebweye	VWC, Women (2), Youth (1)	20km?, Tarime, No public transport	no	-school construction (PEDP)	11 TWSs (spring), 2 rivers	8 TWSs (spring)	Rain season: enough, Dry season: in short	Rain season: NG for all, Dry season: good for spring but NG for river	–	VWC: not active	×	×	×	×	×	×	×	×	Poor leadership of village gov't	NIL	Rain season: 3 timex 1H, Dry season: 1 timex 2H (by using donkey in dry season)	200 Tsh/M/HH	600M Tsh/M/HH (All HHs can pay to meet the cost for BH)	Twice	Go to office directly	Don't know	no	none

Supplementary Survey Results of 100 Villages (8/10)

Seria	DISTRICT	Ward	No. by District	Village	Organisations in the village	Nearest Bank	HESAWA experience	Project experience	Main water source		Adequency of water	Satisfaction of water quality	Opening hours of water facility	Water supply organization	Frequency of meeting VWC	By laws	Water right holder	Water fee	Water fund collection	Village Water fund collected	VWC funds in bank	WUG funds in bank	Organisational problems	Water consumption	Frequency of Water Fetching	O&M cost	Preference of payment	Support from Water Department	Contact methods	Spare parts shop	Experience and means of repair	No of Trained persons
					VWC, WUGs, Women , Youth , SACCOs, Ifogongo (local revolving fund)	Distance to Bank, name of town, available transportation	Construction of shallow well (SW), borehole well (BH), improved traditional well (ITW) , improved pit latrines (IPL), rain water harveting (RWH), etc.	Kind of projects (CSPD = child care, maternal health, etc. ; PEDEP = primary education programme; DDP = secondary education projects; VI = agro-forestry project; LVEMP = Lake Victoria Environmental Management Project)	Rainy season (SW = shallow well with NIRA pump; HP = borehole well with hand pump; TW = traditional water sources)	Dry season (SW = shallow well with NIRA pump; HP = borehole well with hand pump; TW = traditional water sources;	Rain season Dry season	Rain season Dry season	AM, PM, 24 hours, other	VWC, WC at sub-village, WUG, etc. Specify if it is active or not.	once a month, twice a month, quarterly etc	VWC by laws or WUG by laws	Approved or not yet	Monthly, per bucket, Annual etc		Unit: Tsh	Unit: Tsh	Unit: Tsh		liter per person per day (lpd)		First acceptable amout from villagers	Specify reasons if any	Frequency of visit of District Water Technicians for water supply facility in 2005	Ground phone, Mobile, Go to office directly, FAX, Letter, etc	Names of shops or cost of spar parts		
77	TARIME	Kibesuka	24	Nyankungu	VWC	35km, Tarime, Public transportation (bus)	no	-Rehabilitation of schoo building (PEPD) -Maternal health education (CSPD) -Agroforestry (VI) -LVEMP	Springs, River	Springs	Rain season: enough, Dry season: in short	Rain season: good for springs but NG for river, Dry season: good for spring	_	VWC is active	not regular (so far once)	VWC by law	×	×	○	10,000 Tsh	×	Sub-village is collecting contribution.	NA	NIL	Rain season: more than 3 timex 50KH, Dry season: 2 timesx 3.5H (by using donkey in dry season)	1,000 Tsh/M/HH	1,000 Tsh/M/HH	Twice	Go to office directly with a letter	Don't know	no	none
78	TARIME	Matongo	41	Matongo	VWC, Women (1), Youth (3)	About 80km, Tarime, Public transportation (mini-bus)	no	-school construction (PEDP)	River(2), Spring(2)	River(water volume is low)	Rain season: enough, Dry season: in short	Rain season: NG for all, Dry season: NG for river	_	VWC (new and not active yet), village government manages water issues	×	×	×	×	×	×	×	×	VWC was formed in October 2005 and is not yet active	NIL	NIL	200 Tsh/M/HH	600 Tsh/M/HH (all HHs can pay to cover the cost of BH)	Never come	Go to office directly	Don't know	no	none
79	TARIME	Kemange	44	Kiwanja	VWC, Women (3), Youth (1)	72km, Tarime, Public transportation	no	-school construction (PEDP)	Springs(6), River(1), rain tap(150HHs)	Springs	Rain season: enough, Dry season: in short	Rain season: NG for all, Dry season: Good for spring	_	VWC (not active), village government manages water issue)	×	×	×	×	×	×	×	×	VWC was formed in August 2005 and is not yet active	NIL	NIL	2,000 Tsh/M/HH: : decided already in the village assembly	2,000 Tsh/M/HH (all HHs can pay to cover the cost of BH):	once	Go to office directly or Sending letter	Don't know	no	none
80	TARIME	Sirari	50	Ng'ereng'er	SACCO (1)	4km, Shrari, public transport	Yes, 2 SW (HP), Protection of 6 TWs, IPL(more than 100HHs), sanitary education	-school construction (PEDP) -maternal health education (CSPD)	SWs(2), springs(6)	SWs(scarce), Springs	Rain season: enough, Dry season: in short	Rain season: NG for all, Dry season: Good for all	24 hours	none	×	×	×	×	×	×	×	×	VWC is nor formulated yet and none organization is active for water	NIL	Rain season: 4 timex 1H, Dry season: more than 10 timesx 0.2-1H (by using donkey in dry season)	500 Tsh/M/HH	600 Tsh/M/HH (all HHs can pay to cover the cost of BH due to	Never come	Go to office directly	Don't know	no	2 (1997) by HESAWA
81	TARIME	Susuni	59	Kikomori	VWC, Youth (1)	22km, Tarime, Public transport(small bus)	no	-school construction (PEDP) -maternal health education (CSPD) -agroforesty (VI)	Springs, Rivers	Springs, Rivers	Rain season: enough, Dry season: in short	Rain season: NG for all, Dry season: Good for all	_	VWC is active	Quarterly	×	×	×	×	×	×	×	VWC holds meetng but is not active.	NIL	NIL	500 Tsh/M/HH	600 Tsh/M/HH (all HHs can pay to cover the cost of BH)	once	Go to office directly	Don't know	no	none
82	TARIME	Nyandoto	64	Nkerege	Women (1)	About 50km	No, but there is 1 privately constructed well (water vendor) and 1 Government well	-school construction (PEDP) -construction of village government office	Spring(3)	Spring(1)	Rain season: enough, Dry season: in short	Rain season: NG, Dry season: NG	_	None	×	×	×	×	×	×	×	×	No VWC and none of organization takes care of water.	NIL	NIL	200 Tsh/M/HH	**500 Tsh/M/HH but not all family can pay.**	once	Go to office directly	Don't know	no	none
83	TARIME	Manga	69	Sombanyas	VWC, Sub-village WUG(1), Women (1), Youth (1)	18km, Tarime, Public transport	Yes, 1SW, IPL at School and 25 HHs, Sanitary education	-school construction (PEDP) -construction of village government office	SW(1), 4 Springs	SW(1), Springs	Rain season: enough, Dry season: in short	Rain season: Good for SW while NG for springs, Dry season: NG for all (dirty water in SW)	_	VWC: active, WUG: not active	weekly	VWC by law	×	×	○	139,000Tsh collected by Sub-village base(300Tsh/HH)	×	× (WUG used to collect the fund)	VWC is relatively new and sub-villages are more active for water activities currently	NIL	NIL	300 Tsh/M/HH	600 Tsh/M/HH(all HHs can pay to meet the cost of BH)	Never come	Go to office directly	Shop in Tarime, but do not know the costs	Yes, done by WUG	1 (1999)
84	TARIME	Manga	71	Bisarwi	VWC, WUG(1)	50km?, Tarime, Public transport	Yes, 1BH	-cattle dipping (IFAD) -school building (PEDP)	BH(1), Spring(4), Dam(1)	BH(1), Springs, Dam(1)	Rain season: enough, Dry season: enough for BH while in short for springs, dams	Rain season: Good for BH while NG for springs & Dam, Dry season: Good for BH while NG for springs & Dam	AM:7:00-11:00, PM: 3:00-6:00	VWC(not active), WUG(1)(has all power on water)	×	×	×	△ (100Ths/M/HHs collected during dry season)	○ (by VWC)	80,000Tsh kept by the VWC treasurer	×	×	VWC is a little active only the dry season for collection, and WUG has all power on water.	NIL	Rain season: 3 timesx 50%H, Dry season: 3 timesx 0.7H (including waiting time)	200-500 Tsh/M/HH	500 Tsh/M/HH(all HHs can pay to meet the cost of BH)	Never come	Go to office directly	Don't know	Yes, done by Water technician & VWC/WUG	2 (1995)
85	TARIME	Kisumwa	94	Kisumwa	VWC, WUG(2), Women (1), youth (1), Elder (1)	35km, Tarime, Public transport	No, but there is 1 IFAD supported BH controlled by the individual (owner)	-school construction (PEDP) -maternal health education (CSPD) -agroforesty (VI)	BH(1), TWSs (7) (Spring(2), HDWs(5))	BH(1), TWSs (Spring, HDWs)	Rain season: In short except for springs , Dry season: in short for all	Rain season: Good for BH while NG for springs & Dam, Dry season: Good for BH while NG for springs & Dam	AM:7:00-12:00 (for BH)	VWC:active, WUG(2): active	Quarterly	×	×	20 Tsh/M/HH	○ (Besides annual HH contribution, livestcok levies are used)	From ivestock levies+4,000 HH/annual contribution	1.4 million Tsh	×	WUG is not active and no rule	NIL	NIL	4,000 Tsh/annual/HH	6,000 Tsh/annual/HH (all HHs can pay to meet the cost of BH)	Once	Go to office directly + writing letters	Yes, Musoma, They don't know the costs	no	none
86	TARIME	Nyahongo	112	Nyankonge	VWC, Women (1)	70-75km, Tarime, No public transportation (transport from Shirari: 6-7km)	Yes, 1 BH(HP)	-school construction (PEDP) -maternal health education (CSPD)	BH(1), River(1), TWs(hand dug wells)(3), Springs	BH(1), Lake (8km)	Rain season: enough except for spring, Dry season: in short for BH due to high demand to yield (high consentration)	Rain season: Good for BH while NG for river & springs, Dry season: Good for BH while NG for springs	24 hours	VWC: active	Monthly	VWC by law	×	×	○	In dry season: 100 HH/weekly contribution	100,047Tsh	×	NA	NIL	NIL	500 Tsh/M/HH	600 Tsh/M/HH (all HHs can pay to meet the cost of BH)	Once	Go to office directly, Mobile	Don't know	Yes, by Water technitian	0 (1 tarined but passed away)
87	TARIME	Nyahongo	113	Omoche	VWC, Women (1), Youth (3)	30km?, Tarime, Public transportation	Yes, 1 SW (not used due to salty water)	-school construction (PEDP) -agroforesty (VI)	TWs (Springs)(9)	SW(1), TWs(Springs) (4)	Rain season: enough, Dry season: in short	Rain season: NG for all (SW: salty), Dry season: NG for all	24 hours (because yield of water is not enough to demand)	VWC, WUG(1), none is active	×	×	×	×	×	×	×	×	Poor implemetation of rules/by-law	NIL	NIL	500 Tsh/M/HH	600 Tsh/M/HH(all HHs can pay to meet the cost of BH)	Never come	Go to office directly	Don't know	no	none

Supplementary Survey Results of 100 Villages (9/10)

Seria	DISTRICT	Ward	No. by District	Village	Organisations in the village	Nearest Bank	HESAWA experience	Project experience	Main water source		Adequency of water	Satisfaction of water quality	Opening hours of water facility	Water supply organization	Frequency of meeting VWC	By laws	Water right holder	Water fee	Water fund collection	Village Water fund collected	VWC funds in bank	WUG funds in bank	Organisational problems	Water consumption	Frequency of Water Fetching	O&M cost	Preference of payment	Support from Water Department	Contact methods	Spare parts shop	Experience and means of repair	No of Trained persons
					VWC, WUGs, Women , Youth , SACCOs, Ifogongo (local revolving fund)	Distance to Bank, name of town, available transportation	Construction of shallow well (SW), borehole well (BH), improved traditional well (ITW) , improved pit latrines (IPL), rain water harveting (RWH), etc.	Kind of projects (CSPD = child care, maternal health, etc. ; PEDEP = primary education programme; DDP = secondary education projects; VI = agro-forestry project; LVEMP = Lake Victoria Environmental Management Project)	Rainy season (SW = shallow well with NIRA pump; HP = borehole well with hand pump; TW = traditional water sources)	Dry season (SW = shallow well with NIRA pump; HP = borehole well with hand pump; TW = traditional water sources;	Rain season Dry season	Rain season Dry season	AM, PM, 24 hours, other	VWC, WC at sub-village, WUG, etc. Specify if it is active or not.	once a month, twice a month, quarterly etc	VWC by laws or WUG by laws	Approved or not yet	Monthly, per bucket, Annual etc		Unit: Tsh	Unit: Tsh	Unit: Tsh		liter per person per day (lpd)		First acceptable amout from villagers	Specify reasons if any	Frequency of visit of District Water Technicians for water supply facility in 2005	Ground phone, Mobile, Go to office directly, FAX, Letter, etc	Names of shops or cost of spar parts		
88	TARIME	Bukura	119	Thabache	Sub-village WUG, Women (2)	90km, Tarime, Public transportation (Mini bus)	Yes, 1 SW (not used since 1999 because pump was stolen)	-school construction (PEDP) -maternal health education (CSPD)	TWs (River, Springs(3), Dam(1))	Lake(9km)	Rain season: enough for river while in short for springs & dam, Dry season: enough for river while in short for springs & dam	Rain season: NG for all, Dry season: NG for all	–	VWC(not active)(sub-villages manage TWs)	×	×	×	×	× (WUG colleted water fee before)	×	×	×	Both VWC and WUG are not active: poor financial and physical management, and sub-villages manage TWs currently.	NIL	NIL	500 Tsh/M/HH	1,700Tsh/M/HH (possible to pay)	once	Go to office directly & writing letters	Don't know	no	no
89	TARIME	Kirogo	128	Radienya	VWC, Women (2), Youth (1), Elder	51km, Tarime, No public transprtation(Bus from mainroad: 4km)	no	-school construction, teachers' house (PEDP) -Dispensary construction (CSPD)	Spring(4), TWs(HDWs)(1)	Spring(1), TWs(HDWs)(1)	Rain season: enough for all, Dry season: in short for all	Rain season: NG for all, Dry season: NG for all	–	VWC: active, new. village government is main organization for water management)	×	VWC by law	×	×	×	×	×	×	VWC is still new and not active yet, therefore village government still controls water issues	NIL	NIL	500 Tsh/M/HH	1,700Tsh/M/HH (possible to pay)	Twice	Go to office directly & Mobile	Don't know	no	no
90	TARIME	Kirogo	129	Masike	VWC	27km, Tarime, no public transport (from Kirogo: 6-7km)	Yes, 1 BH: not functioning	-school construction, teachers' house (PEDP) -District Road Project (Tarime DC) -construction of BH well: Not successful (REDEP)	TWs (Spring(5), HDWs(2), River(2))	TWs (Spring(4))	Rain season: enough for all, Dry season: in short for all	Rain season: NG for all, Dry season: NG for all	–	VWC(not active)	×	×	×	×	○ (30,000Tsh : each sub-village: 5,000Tsh)	○ (30,000Tsh kept by the VWC treasurer)	×	×	VWC is new and not active yet, and general villagers have question on leadeship and transparency of fund management	NIL	NIL	500 Tsh/M/HH	600Tsh/M/HH (possible to pay)	4 times	Go to office directly	Don't know	no	none
91	TARIME	Kirogo	131	Bukama	VWC, Women (2), Youth (2)	53km, Tarime, Public transport	Yes, 1 SW: not functioning, IPL at school, sanitary education at school	-school construction, teachers' house (PEDP) -cattle dipping (IFAD) -secondary school construction	TWs (Spring(5), River(2), HDWs(5))	TWs (Spring(4), River(1))	Rain season: enough for all, Dry season: in short for all	Rain season: NG for all, Dry season: NG for all	–	VWC(not active), village government manages water issues	×	×	×	×	○ (40,000Tsh: 1000Tsh/HH)	○ (for dam construction 30,000Tsh kept at the Bank)	×	×	VWC is not active, and general villagers have question on the misues of the VWC fund.	NIL	NIL	500 Tsh/M/HH	600Tsh/M/HH (possible to pay)	Twice	Go to office directly	Don't know	no	none
92	TARIME	Nyamtinga	137	Nyarombo	VWC, Women (2), Youth (1)	40km, Tarime, Public transport(small bus)	No, HESAWA drilled a well but did not set a ring.	-school construction (PEDP) -maternal health education (CSPD)	TWs (8) (river(2), Spring(6))	TWs (HDWs, Lake: 20km by bicycle)	Rain season: enough for all, Dry season: enough for Lake, HDWs while in short for spring, river	Rain season: NG for all, Dry season: NG for all	–	VWC: new and not active yet	×	×	×	×	×	×	×	×	VWC is new and not active yet, and none of organization take care of water sources	NIL	NIL	500 Tsh/M/HH	600Tsh/M/HH (possible to pay)	Never come	Go to office directly	Don't know	no	none
93	TARIME	Nyamtinga	138	Rwang'enyi	VWC, Women (1), Youth (3)	60-70km, Tarime, Public transport	no	-school construction (PEDP) -maternal health education (CSPD) -construction of dispensary (LVEMP)	Tws (Spring(7), Lake)	Tws (Spring(2), Lake)	Rain season: enough for all, Dry season: enough for Lake, HDWs while in short for spring	Rain season: NG for all, Dry season: NG for all	–	VWC: not active	×	×	×	×	×	×	×	×	Poor implementation of rules	NIL	NIL	500 Tsh/M/HH	600Tsh/M/HH (possible to pay)	Once	Go to office directly	Don't know	no	None
94	TARIME	Rabour	144	Oliyo	VWC, WUG(2), Women (4), Youth (5)	49km, Tarime, Public Transport	Yes, 3 SWs (HP):1 functioning, 1 BH: functioning IPL at school, sanitary education by HESAWA	-construction of dispensary (LVEMP) -school construction (PEDP)	BH (1), SW (3), TWs (Spring(2))	BH (1), SW (3), TWs (Spring(1))	Rain season: enough for BH, Spring while in short for SWs, Dry season: enough for Spring while in short for BH, SW	Rain season: NG for BH(salty) SW while good for spring, Dry season: NG for BH(salty) SW while good for spring	24 hours in rainy season and in the dry season, there is a time table as AM: 6:00-7:00, PM: 4:00-6:00	VWC: active, WUG(2): not active	Monthly	VWC by law	×	×	×	○ (1,000Tsh/HH: total Tsh 300,000 kept by the VWC teasurer)	×	×	Poor physical maintenance	NIL	NIL	20 Tsh per bucket, easy to collect	20 Tsh per bucket, easy to collect	4-5 times	Go to office directly	Don't know	Yes, done by Water Technitian	3 (1999)
95	TARIME	Mirare	151	Ryagoro	VWC	23km, Tarime, Public Transport	no	-school construction (PEDP)	TWs (River(1), Springs(5))	TWs (River(1))	Rain season: enough for all, Dry season: in short for all	Rain season: NG for all, Dry season: NG for all	–	VWC (not active)	×	×	×	×	×	×	×	×	Poor finacial management	NIL	NIL	1,500 Tsh/M/HH	1,500 Tsh/M/HH: amount was already decided by the village assembly	Never come	Go to office directly	Yes, in Mwanza & Musoma, but don't know about the cost	no	none
96	TARIME	Goribe	155	Nyamsi	Women (1)	30KM?, Tarime, No public transportation	no	-school construction (PEDP) -maternal health education (CSPD)	TWs (River(1), Springs(8))	TWs (Spring(1))	Rain season: enough for all, Dry season: in short for all	Rain season: NG for all, Dry season: NG for all	–	none	×	×	×	×	×	×	×	×	No VWC and none of organization takes care of water.	NIL	NIL	1,000 Tsh/M/HH	1,000 Tsh/M/HH	Once	Go to office directly	Don't know	no	none
97	TARIME	Goribe	157	Tatwe	VWC, Women (2), Youth (1)	20km, Tarime Public transport	No	-school construction (PEDP) -construction of vocational training centre (Roman catholic church)	TWs (16) (Springs(15), River(1))	TW (Dam(1))	Rain season: enough for all, Dry season: in short for all	Rain season: Good for river while NG for springs, Dry season: NG for dam	–	VWC(new and not active yet), village govenemnt involves water issues	×	×	×	×	○	○ (500Tsh/HH : total Tsh 10,000 currently)	×	×	VWC is just formed and not active yet	NIL	NIL	500M/HH (to cover OM cost for BH)	500M/HH (All HHs can pay to meet the cost for BH)	Once	Go to office directly	Don't know	no	none

Supplementary Survey Results of 100 Villages (10/10)

Seria	DISTRICT	Ward	No. by District	Village	Organisations in the village	Nearest Bank	HESAWA experience	Project experience	Main water source		Adequency of water	Satisfaction of water quality	Opening hours of water facility	Water supply organization	Frequency of meeting VWC	By laws	Water right holder	Water fee	Water fund collection	Village Water fund collected	VWC funds in bank	WUG funds in bank	Organisational problems	Water consumption	Frequency of Water Fetching	O&M cost	Preference of payment	Support from Water Department	Contact methods	Spare parts shop	Experience and means of repair	No of Trained persons
					VWC, WUGs, Women , Youth , SACCOs, Ifogongo (local revolving fund)	Distance to Bank, name of town, available transportation	Construction of shallow well (SW), borehole well (BH), improved traditional well (ITW) , improved pit latrines (IPL), rain water harveting (RWH), etc.	Kind of projects (CSPD = child care, maternal health, etc. ; PEDEP = primary education programme; DDP = secondary education projects; VI = agro-forestry project; LVEMP = Lake Victoria Environmental Management Project)	Rainy season (SW = shallow well with NIRA pump; HP = borehole well with hand pump; TW = traditional water sources)	Dry season (SW = shallow well with NIRA pump; HP = borehole well with hand pump; TW = traditional water sources;	Rain season Dry season	Rain season Dry season	AM, PM, 24 hours, other	VWC, WC at sub-village, WUG, etc. Specify if it is active or not.	once a month, twice a month, quarterly etc	VWC by laws or WUG by laws	Approved or not yet	Monthly, per bucket, Annual etc		Unit: Tsh	Unit: Tsh	Unit: Tsh		liter per person per day (lpd)		First acceptable amout from villagers	Specify reasons if any	Frequency of visit of District Water Technicians for water supply facility in 2005	Ground phone, Mobile, Go to office directly, FAX, Letter, etc	Names of shops or cost of spar parts		
98	SERENGETI	Busawe	37	Busawe	VWC, WUG(1)	60km, Mugumu, no public transport (from Shirorishimba 15km)	No, 1 SW was drilled but pump was not installed.	WWF (NGO for environmental conservation: Mara river protection/ conservation) -school construction (PEDP)	TWs(HDWs 5, Spring 3)(8)	TWs(HDWs 2, Spring 2)(4)	Rain season: enough, Dry season: in short for spring	Rain season: Springs and HDWs are good excepting 1 salty spring and 1 salty HDW. Dry season: Good for river but NG for hand dug wells.	_	VWC, WUG(1): Both are active	Quarterly	×	×	× (no protected source)	×	×	×	×	VWC disussed to collect 1,000@HH, but not collected.	NIL	Rain season: 3 timesx 0.7H, Dry season: 6 timesx 0.7H	500M/HH (to cover OM cost for BH)	600M/HH (All HHs can pay to meet the cost for BH)	Once	Mobile phone, Go to office directly	Don't know	no	no
99	SERENGETI	Kibanchabancha	66	Nyansurura	VWC, Women (2), Youth (2), livestock keeping (1)	32km, Mugumu, Public transport	Yes, 3 SW (HP) but all dried up since 2004, 8 holes of IPL at school	-school construction (PEDP)	TWs(11) (HDWs 7, Springs 3)	Digged holes near River (3), TWs(HDWs)(7)	Rain season: enough, Dry season: in short for all sources	Rain season: HDWs are good but NG for river. Dry season: NG for digged sources.	_	VWC: not active	×	×	×	× (in the past it was collected for HESAWA SWs)	×	×	20,000Tsh (collected during HESAWA, and not used for long)	×	Poor leadership. No incentive/motive for upkeeping water facility due to dried wells.	NIL	NIL	20 per bucket: easier to collect than monthly charge.	1,000M/HH is acceptable for all HHs	Twice	no idea	Don't know	no	1 (1998)
100	SERENGETI	Kibanchabancha	67	Kebanchab	VWC, WUG(2), Women (4), Youth (4)	28km, Mugumu, no public transport	Yes, 4 SWs (HP):1 functioning, Water Tank at school, IPL at school, sanitary education by HESAWA, 2 BHs by Mara Agricultural Development Program/IFAD	-IFAD: 2BHs (1999) both functioning -Maternal health education (CSPD) -school construction (PEDP) -house construction for a staff of dispensary (DDP)	BH(2), SW(1), Spring	BHs: low yield, springs in other villages	Rain season: enough, Dry season: in short for all	Rain season: good for BH, SW but NG for springs. Dry season: good for BH, SW.	AM:7:00-12:00, PM: 4:00-6:00 by wacthman	VWC, WUG(2): Both are active. WUGs are more active.	×	VWC by law	×	× (in the past it was collected)	×	×	×	×	Users do not want to pay, Low awareness of villagers	NIL	Rain season: 2 timesx 2H, Dry season: 1 timex 3H	500M/HH	600M/HH (All HHs can pay to meet the cost for BH)	4 times	Go to office directly	Don't know	Yes, done by Water technician	1 (2000 for SW by HESAWA)

Health/ Sanitary Data on 100 Villages (1/8)

Serial No.	DISTRICT	Ward	No. by District	Village	% of Private latrine	% of Private bath	Hand Washing Practice							Water boiling practice	Environmental self-assessment	Project in need in the village
					1=All, 2=Almost all, 3= 50%, 4=Few, 5= Almost none, 6=None	1=All, 2=Almost all, 3= 50%, 4=Few, 5= Almost none, 6=None	Before eating	After eating	After Toilet	After cleaning the house	After cleaning bottome of child	Before feeding child	Before preparing food	1=All, 2=Almost all, 3= 50%, 4=Few, 5= Almost none	Good, Fair, Not good, Seriouly bad	Health centre Mobile clinic Water Health and sanitation education other
1	MISUNGWI	Busongo	25	Busongo	Almost All	Almost All	All	All	Almost All	Almost All	Few	Almost All	Almost None	Few	Fair	1. Water & Health/sanitation education program (the same ranks)
2	MISUNGWI	Mbarika	28	Ngaya	Almost All	Almost All	All	All	Few	Almost None	Almost All	Almost All	Almost None	Few	Fair	1. Health and sanitation education
3	SENGEREMA	Sima	13	Sogoso	50%	Almost All	All	All	Few	Few	Few	Few	Few	Few	Fair	1. Water 2. Health and sanitation education 3. Health centre 4. Mobile clinic
4	SENGEREMA	Tabaruka	18	Nyampande	Almost All	Almost All	All	All	50%	Almost All	Almost All	50%	Almost All	50%	Fair	1. Water 2. Health centre 3. Health and sanitation education 4. Mobile clinic
5	SENGEREMA	Busisi	24	Nyitundu	Almost All	All	All	All	Few	Few	Few	50%	Few	Few	Fair	1. Water 2. Health centre 3. Health and sanitation education 4. Mobile clinic
6	SENGEREMA	Busisi	26	Lubanda	All	Almost All	All	All	Few	Few	Few	Almost All	Almost None	Few	Good	1. Water 2. Health centre 3. Health and sanitation education 4. Mobile clinic
7	SENGEREMA	Katunguru	30	Juma kisiwani	Almost All	Few	All	All	Almost None	Few	Few	Almost All	Almost None	Few	Fair	1. Water 2. Mobile clinic 3.Health centre 4. Health and sanitation education
8	SENGEREMA	Nyamazugo	37	Mwaliga	Almost All	All	All	All	Few	Few	Few	Few	Few	Few	Fair	1. Water 2. Health centre 3. Mobile clinic 4. Health and sanitation education
9	SENGEREMA	Chifunfu	44	Nyakahako	Almost All	Almost All	All	All	Almost None	50%	50%	50%	Almost None	Few	Fair	1. Water 2. Health centre 3. Mobile clinic 4. Health and sanitation education
10	SENGEREMA	Igalula	67	Sotta	50%	Almost All	All	All	Almost None	Almost None	Almost None	Few	Almost None	Few	Fair	1. Water 2. Health centre 3. Health and sanitation education 4. Mobile clinic
11	SENGEREMA	Buyagu	69	Isole	Almost All	Almost All	All	All	50%	Few	50%	50%	Almost None	Few (Hesawa BH water is clean for drinking)	Seriously poor	1. Water 2. Health centre 3. Health and sanitation education 4. Mobile clinic
12	SENGEREMA	Buyagu	73	Mlaga	Almost All	Almost All	All	All	Few	Almost None	Almost None	50%	Few	Few	Seriously poor	1. Water 2. Health and sanitation education 3. Health centre 4. Mobile clinic
13	SENGEREMA	Nyanzenda	75	Buswelu	Almost All	Almost All	All	All	Few	Almost None	All	Few	Few	Few	Fair	1. Water 2. Health centre 3. Mobile clinic 4. Health and sanitation education

Health/ Sanitary Data on 100 Villages (2/8)

Serial No.	DISTRICT	Ward	No. by District	Village	% of Private latrine	% of Private bath	Hand Washing Practice							Water boiling practice	Environmental self-assessment	Project in need in the village
					1=All, 2=Almost all, 3= 50%, 4=Few, 5= Almost none, 6=None	1=All, 2=Almost all, 3= 50%, 4=Few, 5= Almost none, 6=None	Before eating	After eating	After Toilet	After cleaning the house	After cleaning bottome of child	Before feeding child	Before preparing food	1=All, 2=Almost all, 3= 50%, 4=Few, 5= Almost none	Good, Fair, Not good, Seriouly bad	Health centre Mobile clinic Water Health and sanitation education other
14	SENGEREMA	Kalebezo	83	Busekeseke	Almost All	Almost All	All	All	Few	Few	Few	All	Few	Almost All	Fair	1. Water 2. Health and sanitation education 3. Health centre 4. Mobile clinic
15	SENGEREMA	Kalebezo	84	Katoma	Almost All	Almost All	All	All	Few	Few	Few	Almost All	Few	Few	Fair	1. Water 2. Health centre 3. Health and sanitation education 4. Mobile clinic
16	SENGEREMA	Kalebezo	86	Magulukenda	Almost All	Almost All	All	All	Few	Few	Few	Almost All	Few	Few	Fair	1. Water 2. Health centre 3. Health and sanitation education 4. Mobile clinic
17	SENGEREMA	Nyakaliro	93	Bukokwa	50%	Almost All	All	All	Few	Few	Almost All	Almost All	Few	Few	Fair	1. Water 2. Health centre 3. Mobile clinic 4. Health and sanitation education
18	SENGEREMA	Kagunga	96	Nyancheche	All	Almost All	All	All	Few	Almost All	Few	Few	Almost None	Few	Good	1. Water 2. Health and sanitation education 3. Mobile clinic 4. Health Centre
19	SENGEREMA	Nyakasasa	99	Nyamiswi	Almost All	Almost All	All	All	Few	Few	Few	Few	Almost None	Few	Fair	1. Water 2. Health and sanitation education
20	SENGEREMA	Nyakasasa	100	Nyakasasa	50%	50%	All	All	Few	Few	Few	Few	Few	Almost None	Fair	1. Water 2. Health centre 3. Health and sanitation education 4. Mobile clinic
21	SENGEREMA	Lugata	104	Lugata	Few	Few	All	All	Few	Few	Almost All	Almost All	Few	Few	Fair	1. Water 2. Health centre 3. Mobile clinic 4. Health and sanitation education
22	SENGEREMA	Kazunzu	106	Lushamba	Few	Few	All	All	Few	Few	Few	Few	Few	Almost None	Fair	1. Water 2. Health centre 3. Mobile clinic 4. Health and sanitation education
23	SENGEREMA	Kazunzu	108	Bulyaheke	Almost All	Almost All	All	All	Few	Few	Few	Few	Few	Few	Fair	1. Water 2. Health centre 3. Health and sanitation education 4. Mobile clinic
24	SENGEREMA	Kazunzu	110	Ilyamchele	Almost All	50%	All	All	Few	Few	50%	50%	Few	Almost None	Fair	1. Health centre 2. Mobile clinic 3. Water 4. Health and sanitation
25	SENGEREMA	Kazunzu	114	Luharanyonde	Almost All	All	All	All	Few	Almost None	Almost All	Almost All	Few	Few	Seriously poor	1. Water 2. Health centre 3. Mobile clinic 4. Health and sanitation education

Health/ Sanitary Data on 100 Villages (3/8)

Serial No.	DISTRICT	Ward	No. by District	Village	% of Private latrine	% of Private bath	Hand Washing Practice							Water boiling practice	Environmental self-assessment	Project in need in the village
					1=All, 2=Almost all, 3= 50%, 4=Few, 5= Almost none, 6=None	1=All, 2=Almost all, 3= 50%, 4=Few, 5= Almost none, 6=None	Before eating	After eating	After Toilet	After cleaning the house	After cleaning bottome of child	Before feeding child	Before preparing food	1=All, 2=Almost all, 3= 50%, 4=Few, 5= Almost none	Good, Fair, Not good, Seriouly bad	Health centre Mobile clinic Water Health and sanitation education other
26	SENGEREMA	Kazunzu	115	Isengeng'he	Almost All	Almost All	All	All	Few	Almost None	Few	Almost All	Almost None	Few	Fair	1. Water 2. Health centre 3. Mobile clinic 4. Health and sanitation education
27	KWIMBA	Hungumalwa	22	Hungumalwa	Almost All	All	All	All	Almost All	Almost All	Almost All	Few	Few	Few	Fair	1. Water improvement
28	KWIMBA	Nugullla	71	Mhulya	Almost All	Almost All	All	All	Almost None	Almost None	Few	Almost None	Almost None	Few	Fair	1. Water improvement 2. Other: IPL construction (=better toilet)
29	MAGU	Mkula	75	Kijereshi	Almost All	Almost All	All	All	Few	50%	Almost All	Almost All	50%	Few	Fair	1. Health/ sanitation education program
30	GEITA	Nzera	3	Idosero	Almost All	Almost All	All	All	Few	Almost All	All	Almost All	Almost All	Few	Fair	1. Water 2. Health centre 3. Health and sanitation education
31	GEITA	Nzera	4	Lwenzera	Almost All	Almost All	All	All	Few	Few	Few	50%	Few	Few	Fair	1. Water 2. Health centre 3. Health and sanitation education
32	GEITA	Senga	6	Buligi	Almost All	Almost All	All	All	Few	50%	Almost All	Almost All	Few	Few	Fair	1. Water 2. Health centre
33	GEITA	Senga	8	Kakubilo	Almost All	All	All	All	Few	Almost None	Few	Almost None	Almost None	Few	Fair	1. Water 2. Health centre 3. Health and sanitation education
34	GEITA	Senga	9	Nyabalasana	Few	Almost All	All	All	Few	50%	50%	Few	Few	Few	Seriously poor	1. Water 2. Mobile clinic 3. Health centre 3. Health and sanitation education
35	GEITA	Senga	10	Kaseni	Almost All	All	All	All	Few	Almost All	Almost All	50%	Few	50%	Good	1. Water 2. Health centre 3. Health and sanitation education
36	GEITA	Kagu	17	Bugulala	50%	Almost All	All	All	Few	Almost All	50%	50%	Few	Few	Fair	1. Water 2. Health centre 3. Health and sanitation education
37	GEITA	Kagu	18	Kasota	Almost All	Almost All	All	All	Few	Almost All	50%	Almost All	Almost All	Few	Fair	1. Water 2. Health centre 3. Health and sanitation education
38	GEITA	Kagu	19	Nyamilongo (Nyamilango)	Almost All	Almost All	All	All	Few	50%	Few	50%	Few	50%	Fair	1. Water 2. Health centre 3. Health and sanitation education
39	GEITA	Kamena	22	Kamena	50%	Almost All	All	All	Few	Few	Few	Few	Few	Few	Fair	1. Water 2. Health centre 3. Health and sanitation education

Health/ Sanitary Data on 100 Villages (4/8)

Serial No.	DISTRICT	Ward	No. by District	Village	% of Private latrine	% of Private bath	Hand Washing Practice							Water boiling practice	Environmental self-assessment	Project in need in the village
					1=All, 2=Almost all, 3= 50%, 4=Few, 5= Almost none, 6=None	1=All, 2=Almost all, 3= 50%, 4=Few, 5= Almost none, 6=None	Before eating	After eating	After Toilet	After cleaning the house	After cleaning bottome of child	Before feeding child	Before preparing food	1=All, 2=Almost all, 3= 50%, 4=Few, 5= Almost none	Good, Fair, Not good, Seriouly bad	Health centre Mobile clinic Water Health and sanitation education other
40	GEITA	Kamena	23	Busisi (Bushishi)	Almost All	Almost All	All	All	Few	Almost None	Almost None	Few	Almost None	Few	Fair	1. Water 2. Health centre 3. Health and sanitation education
41	GEITA	Kamena	24	Ndelema	50%	Almost All	All	All	Few	Few	Few	Almost All	Few	Few	Fair	1. Water 2. Health centre 3. Health and sanitation education
42	GEITA	Kamena	25	Nyashishima	Few	Almost All	All	All	Few	Almost None	Few	50%	Few	Few	Seriously poor	1. Water 2. Health centre 3. Mobile clinic
43	GEITA	Bukoli	26	Bogogo	Almost All	Almost All	All	All	Few	Few	Few	Few	Few	Few	Seriously poor	1. Water 2. Health centre 3. Mobile clinic
44	GEITA	Bukoli	27	Ikina	Almost All	All	All	All	All	Few	Few	Almost All	Few	Few	Good	1. Water 2. Health centre 3. Mobile clinic 4. Health and sanitation education
45	GEITA	Bukoli	29	Ntono	Almost All	Almost All	All	All	Few	Few	Almost All	50%	Almost All	Few	Fair	1. Water 2. Health centre 3. Health and sanitation education 4. Mobile clinic
46	GEITA	Bukoli	30	Ihega	Almost All	50%	All	All	Few	Few	Few	50%	Few	50%	Fair	1. Water 2. Health and sanitation education 3. Mobile clinic
47	GEITA	Nyarugusu	32	Nyaruyeye	Almost All	Almost All	All	All	Few	Few	Few	Few	Few	Almost None	Fair	1. Water 2. Health and sanitation education 3. Health centre
48	GEITA	Katoro	42	Ibondo	Almost All	Almost All	All	All	Few	Few	Few	Almost All	Few	Few	Fair	1. Water 2. Health centre 3. Health and sanitation education
49	GEITA	Nyachiluluma	53	Kasangwa	50%	Almost All	All	All	Few	Few	Few	All	Few	Almost None	Fair	1. Water 2. Health and sanitation education 3. Mobile clinic
50	GEITA	Nyachiluluma	54	Isima	Almost All	Almost All	All	All	Few	Few	Few	All	Few	Few	Fair	1. Water 2. Health centre 3. Mobile clinic
51	UKEREWE	Bukanda	12	Namasabo	Almost All	Almost All	All	All	Few	Almost All	All	50%	Few	Few	Fair	1. Water 2. Health centre 3. Health and sanitation education 4. Mobile clinic
52	UKEREWE	Ilangala	38	Masonga	Almost All	Almost All	All	All	Few	Few	Few	Almost None	50%	Few	Fair	1. Health centre 2. Water 3. Health and sanitation education
53	BUNDA	Mcharo	33	Mcharo	Almost All	50%	All	All	Few	Almost None	Few	Few	Almost All	Few	Seriously poor	1. Water improvement 2. Better health facilities 3. Mobile clinic

Health/ Sanitary Data on 100 Villages (5/8)

Serial No.	DISTRICT	Ward	No. by District	Village	% of Private latrine	% of Private bath	Hand Washing Practice							Water boiling practice	Environmental self-assessment	Project in need in the village
					1=All, 2=Almost all, 3= 50%, 4=Few, 5= Almost none, 6=None	1=All, 2=Almost all, 3= 50%, 4=Few, 5= Almost none, 6=None	Before eating	After eating	After Toilet	After cleaning the house	After cleaning bottome of child	Before feeding child	Before preparing food	1=All, 2=Almost all, 3= 50%, 4=Few, 5= Almost none	Good, Fair, Not good, Seriouly bad	Health centre Mobile clinic Water Health and sanitation education other
54	BUNDA	Butimba	51	Buzimbwe	Almost All	Few	All	All	Few	Almost None	Few	All	Almost None	Almost None	Seriously poor	1. Health and sanitation education 2. Water 3. Health centre 4. Mobile clinic (currently they have mobile clinic services)
55	BUNDA	Igundu	88	Namalama	Almost All	Few	All	All	Few	Few	Almost All	Almost All	Few	Few	Fair	1. Water
56	MUSOMA	Nyamimange	6	Sirorisimba	Few	Few	All	All	Few	Few	Few	All	50%	Few	Seriously poor	1. Water 2. Health centre 3. Health and sanitation education
57	MUSOMA	Bwiregi	8	Ryamisanga	Few	Few	All	All	Few	Few	Few	50%	Few	Few	Fair	1. Water 2. Health centre 3. Health and sanitation education
58	MUSOMA	Butuguri	21	Kisamwene	Few	Few	Almost All	Almost All	Few	Few	Almost All	Almost All	Almost None	Almost None	Seriously poor	1. Health and sanitation education 2. Water 3. Health centre
59	MUSOMA	Bukabwa	24	Mmazami	Few	Few	All	All	Almost None	Few	Almost None	Almost All	Few	Few	Fair	1. Health centre 2. Water 3. Health and sanitation education
60	MUSOMA	Suguti	31	Chirorwe	Few	Few	All	All	Few	Few	Few	All	All	Few	Fair	1. Water 2. Health centre 3. Health and sanitation education
61	MUSOMA	Nyambono	33	Bugoji	Almost All	Almost All	All	All	Few	Almost None	Almost All	Almost All	Almost All	Few	Fair	1. Water 2. Health centre 3. Health and sanitation education 4. Mobile clinic
62	MUSOMA	Nyambono	35	Saragana	Few	50%	All	All	Few	Almost None	50%	50%	50%	Few	Fair	1. Water 2. Health centre 3. Health and sanitation education 4. Mobile clinic
63	MUSOMA	Nyambono	36	Kaburabura	Few	Few	All	All	Few	Few	Few	Few	Few	Few	Fair	1. Health centre 2. Water 3. Health and sanitation education
64	MUSOMA	Nyankanga	54	Nyabekwabi	Few	Few	All	All	Almost None	Few	Few	Few	Few	Almost None	Fair	1. Health and sanitation education 2. Health centre 3. Water 4. Mobile clinic
65	MUSOMA	Buruma	55	Isaba	Few	Few	All	All	Few	Few	Few	Few	50%	Few	Fair	1. Health centre 2. Water 3. Health and sanitation education
66	MUSOMA	Buruma	56	Songora	None	Few	All	All	Few	Few	Few	Few	Few	Almost None	Fair	1. Health and sanitation education 2. Water
67	MUSOMA	Murangi	65	Musanja	Few	Few	All	All	Few	Few	Few	50%	50%	Few	Fair	1. Water 2. Health centre 3. Health and sanitation education

Health/ Sanitary Data on 100 Villages (6/8)

Serial No.	DISTRICT	Ward	No. by District	Village	% of Private latrine	% of Private bath	Hand Washing Practice							Water boiling practice	Environmental self-assessment	Project in need in the village
					1=All, 2=Almost all, 3= 50%, 4=Few, 5= Almost none, 6=None	1=All, 2=Almost all, 3= 50%, 4=Few, 5= Almost none, 6=None	Before eating	After eating	After Toilet	After cleaning the house	After cleaning bottome of child	Before feeding child	Before preparing food	1=All, 2=Almost all, 3= 50%, 4=Few, 5= Almost none	Good, Fair, Not good, Seriouly bad	Health centre Mobile clinic Water Health and sanitation education other
68	MUSOMA	Bukima	67	Butata	Few	Few	All	All	Few	Few	All	Few	Few	Few	Fair	1. Water 2. Health centre 3. Health and sanitation education
69	MUSOMA	Bukima	69	Rusoli	Few	Few	All	All	Few	Few	50%	All	All	Few	Fair	1. Water 2. Health centre 3. Health and sanitation education 4. Mobile clinic
70	MUSOMA	Bukumi	72	Bukumi	Few	Few	All	All	Few	Few	Few	Few	Few	Few	Fair	1. Water 2. Health centre 3. Health and sanitation education 4. Police station
71	MUSOMA	Etaro	92	Mkirira	Few	Almost All	All	All	Few	Almost None	Few	Few	Few	Few	Fair	1. Water 2. Health centre 3. Health and sanitation education
72	MUSOMA	Nyakatende	97	Kiemba	Almost All	50%	All	All	Few	Almost None	Few	50%	Few	Few	Fair	1. Water 2. Health centre 3. Health and sanitation education 4. Mobile clinic
73	MUSOMA	Nyakatende	98	Kigera	Few	Few	All	All	Almost None	Almost None	Almost None	Few	Almost None	Few	Fair	1. Water 2. Health centre 3. Health and sanitation education 4. Mobile clinic
74	MUSOMA	Kiriba	103	Kiriba	Few	Few	All	All	Almost None	Almost None	Few	All	Few	Almost None	Fair	1. Water 2. Health centre 3. Health and sanitation education 4. Mobile clinic
75	TARIME	Turwa	8	Magena	50%	Few	All	All	Few	Few	Few	Few	Few	Few	Fair	1. Water 2. Health centre 3. Health and sanitation education
76	TARIME	Nyakonga	22	Kebweye	Few	Few	All	All	Few	All	Few	Few	50%	Few	Fair	1. Mobile clinic 2. Water 3. Health and sanitation education
77	TARIME	Kibesuka	24	Nyankunguru	Few	Few	All	All	Almost None	Few	Few	Few	Few	50%	Fair	1. Health centre 2. Water 3. Health and sanitation education 4. Mobile clinic
78	TARIME	Matongo	41	Matongo	Few	6	All	All	Few	Few	Few	Few	Few	Few	Seriously poor	1. Water 2. Health centre 3. Mobile clinic
79	TARIME	Kemange	44	Kiwanja	Few	Few	All	All	Few	Few	Few	All	Almost None	50%	Seriously poor	1. Water 2. Health and sanitation education 3. Health centre
80	TARIME	Sirari	50	Ng'ereng'ere	50%	Few	All	All	Few	Few	Few	Almost All	Almost None	Few	Fair	1. Water 2. Health and sanitation education 3. Health centre

Health/ Sanitary Data on 100 Villages (7/8)

Serial No.	DISTRICT	Ward	No. by District	Village	% of Private latrine	% of Private bath	Hand Washing Practice							Water boiling practice	Environmental self-assessment	Project in need in the village
					1=All, 2=Almost all, 3= 50%, 4=Few, 5= Almost none, 6=None	1=All, 2=Almost all, 3= 50%, 4=Few, 5= Almost none, 6=None	Before eating	After eating	After Toilet	After cleaning the house	After cleaning bottome of child	Before feeding child	Before preparing food	1=All, 2=Almost all, 3= 50%, 4=Few, 5= Almost none	Good, Fair, Not good, Seriouly bad	Health centre Mobile clinic Water Health and sanitation education other
81	TARIME	Susuni	59	Kikomori	Few	Few	All	All	Few	Few	Few	Few	50%	Few	Fair	1. Water 2. Health and sanitation education 3. Health centre
82	TARIME	Nyandoto	64	Nkerege	Few	Few	All	All	Almost None	Few	Almost None	All	All	Few	Seriously poor	1. Water 2. Health and sanitation education 3. Health centre
83	TARIME	Manga	69	Sombanyasoko	50%	Almost All	All	All	Few	Few	Few	All	All	Few	Fair	1. Water 2. Health centre 3. Health and sanitation education
84	TARIME	Manga	71	Bisarwi	Few	Few	All	All	Few	Few	Few	All	Few	Few	Fair	1. Water 2. Health centre 3. Health and sanitation education
85	TARIME	Kisumwa	94	Kisumwa	Few	Few	All	All	Few	Few	Few	All	All	Few	Fair	1. Water 2. Health and sanitation education 3. Health centre
86	TARIME	Nyahongo	112	Nyankonge	Few	Few	All	All	Few	Few	All	All	50%	50%	Fair	1. Water 2. Health centre 3. Health and sanitation education
87	TARIME	Nyahongo	113	Omoche	Few	None	All	All	Few	Few	Few	All	Few	Few	Seriously poor	1. Water 2. Health and sanitation education 3. Health centre
88	TARIME	Bukura	119	Thabache	Few	Few	All	All	Almost None	Few	Almost None	50%	Few	Few	Seriously poor	Women: 1. Health and sanitation education Men: 1. Water
89	TARIME	Kirogo	128	Radienya	50%	50%	All	All	Few	Almost All	50%	All	Few	Few	Fair	1. Health centre 2. Water 3. Health and sanitation education
90	TARIME	Kirogo	129	Masike	Few	Few	All	All	Almost None	Almost None	Few	All	Few	Few	Seriously poor	Women: 1. Health and sanitation education 2. Health centre 3. Water Men: 1. Water 2. Mobile clinic 3. Health and sanitation education
91	TARIME	Kirogo	131	Bukama	Few	Few	All	All	Few	Almost None	Few	All	Almost None	Few	Fair	1. Water 2. Health and sanitation education 3. Better health
92	TARIME	Nyamtinga	137	Nyarombo	Few	Few	All	All	Few	Almost None	Few	Almost None	All	Few	Fair	1. Water 2. Health and sanitation education 3. Better health
93	TARIME	Nyamtinga	138	Rwang'enyi	Few	Few	All	All	Few	Few	Few	Few	Few	Few	Seriously poor	1. Health and sanitation education 2. Water 3. Better health
94	TARIME	Rabour	144	Oliyo	Few	Few	All	All	Few	Almost None	Few	All	Few	Few	Fair	1. Water 2. Better health 3. Mobile clinic 4. Health and sanitation education

Health/ Sanitary Data on 100 Villages (8/8)

Serial No.	DISTRICT	Ward	No. by District	Village	% of Private latrine	% of Private bath	Hand Washing Practice							Water boiling practice	Environmental self-assessment	Project in need in the village
					1=All, 2=Almost all, 3= 50%, 4=Few, 5= Almost none, 6=None	1=All, 2=Almost all, 3= 50%, 4=Few, 5= Almost none, 6=None	Before eating	After eating	After Toilet	After cleaning the house	After cleaning bottome of child	Before feeding child	Before preparing food	1=All, 2=Almost all, 3= 50%, 4=Few, 5= Almost none	Good, Fair, Not good, Seriouly bad	Health centre Mobile clinic Water Health and sanitation education other
95	TARIME	Mirare	151	Ryagoro	Few	Few	All	All	Few	Few	Few	Few	Few	Few	Seriously poor	1. Health and sanitation education 2. Water 3. Better health
96	TARIME	Goribe	155	Nyamsi	Few	Few	All	All	Almost None	Almost None	Almost None	Few	Few	Few	Seriously poor	1. Health and sanitation education 2. Water 3. Better health
97	TARIME	Goribe	157	Tatwe	Few	Few	All	All	Few	Few	Few	Few	Few	Few	Seriously poor	1. Water 2. Health and sanitation education 3. Health centre
98	SERENGETI	Busawe	37	Busawe	Few	Few	All	All	Few	Almost None	Few	Few	Almost None	Few	Fair	1. Health and sanitation education 2. Water 3. Health centre
99	SERENGETI	Kibanchabancha	66	Nyansurura	Few	Few	All	All	Almost None	Few	Almost All	Almost All	Almost None	Almost None	Seriously poor	1. Health and sanitation education 2. Water 3. Health centre
100	SERENGETI	Kibanchabancha	67	Kebancha	Few	All	All	All	Few	Few	Few	Few	Almost None	Few	Fair	1. Water 2. Health and sanitation education 3. Health centre

Supplementary Survey Results of 17 Existing Piped Schemes (1/4)

1. General Information of the Piped Scheme O&M															2. Management of the O&M Fund for the Piped Scheme									3. Experience and Means of Repair				
SERIAL No	District	Piped Scheme	Village	Existence of Facility	Type of Facility	WUG for Piped Scheme	WUA	Reason for no WUA	VWC for Piped Scheme	Activeness of VWC	Regular meeting of VWC	Frequency of regular meeting of VWC	Rules of VWC	Registration of VWC	Water fee collection	Water fee collected by VWC	Mode of payment for Water fee collection by VWC	Amount of Water fee collection by VWC	Collector of water fee by VWC	Methods of water fee collection by VWC	Water fund collection by VWC	Amount of Water fund by VWC	Availability of Repair person	Number of Repair person	Experience of Repair person	Type of Repair	RP_WHO
																	hh=household											
1	Misungwi	Usagala	Usagara	●	13					○	○	1/month	○			○	Annually/hh	1,500			○	400,000	✕		○	repair of pipe lines of the piped scheme	1
2			Nyang'homango		13											○	Annually/hh	1,000				200,000					
3			Fella		13											○	Annually/hh	1,000				109,400					
4		Ukiriguru	Mwalogwabagole	●	9																	400,000					
5			Ngudama	●	9	○	✕		○	✕	✕					○	Annually/hh	1,000			○	138,000					
6			Nyang'holongo	●	9	✕	✕			✕	○	1/month				○	Annually/hh	200-500			○	unknown					
7			Buganda	●	9	○	✕		○	✕					○	When the facility was operational, water fee was regularly collected for the payment to UARI.	Monthly/hh	Monthly Tsh 20,000 was collected at each water point, which is about Tsh 200/hh. Totally Tsh 60,000 (20,000*3points) was collected monthly	Chairmen of water committees in sub-villages collect fee and bring them to Ukiriguru Agricultural Research Institute	House to House with receipt	○	90,000	When the facility was operational, the village had technical support from UARI	1	○		Technician from UARI
8			Mwagala		9					○(WC)	○(WC)	1/month				○	When necessary	200/hh				1,273,000	✕		○		2
9			Nyamatala		9				○		○	4/year				○	Annually/hh	5,000				2,000,000					
10	Sengerema	Sima	Sima	●	13	○	✕			○	○	1/2months	○	○	✕	○	Monthly/hh		VWC leaders	House to House with receipt	○	140000 (used for repairing village office)			○		The piped scheme was repaired by District Water Technician
11		Luchili	Luchili	●	12					○	○	1/month	○	○		○	When necessary		VWC leaders	House to House with receipt	○	30,000	✕		✕		
12			Nyakasungwa	●	12	✕	✕		✕	○	○	3/year	○	✕	✕	○	Fine/Penalty	500	Water security of sub-village		✕		✕		○		
13			Nyanzenda	●	12	○	✕			○	○	1/2months	○		✕	✕					✕		✕		✕		
14			Migukulama		12	✕				○	○	3/year	○	○		○	When necessary (opening bank account)	300	Heads of Sub-village	House to House with receipt	○	80,000	✕		✕		
15		Lugasa	Nyakaliro	●	12	○	✕	Water was provided only with a health center	✕	✕					✕	○ (WUG)	When necessary (different system in WUGs)	(1) 350 (2)150			✕				○		The piped scheme was repaired by District Water Technician
16	Kwinba	Mantare	Mantare	●	13	○	✕		✕	○	○	4/year	○	○	✕	○	Tsh 1,000 /hh per every two months (Tsh 500 /month)		Treasure of ?	House to House with receipt	○	110,000	○	2	○	Replacement of rubber	2
17			Isingisha	●	13	○	✕		✕	○	○	1/month	○	✕	✕			1000-3000			○	80,000	○	60	○	deepening the height and replacing the pump	2
18	Magu	Kabila/ Ndagulu	Kabila	●	13	village learders were responsible	✕			○	○	1/week	✕		✕	✕							○		○	piston	2
19			Ndagalu	●	13	✕				✕			✕		✕	○	Fine/Penalty	500				60,000	○	2	○	pump rod	2
20			Kayenze B		13	✕				○	○	1/month	○	✕	✕	○	Tsh 1,000/hh as a revolving fund				✕	450,000	○	6	○	Replacement of bolts	2
21			Ng'washepi (Mwashepi)		13	✕				○(WC)	○ (WC)	1/month	○	✕		○	Tsh 1,000/hh as a revolving fund					150,000	○	1	○	Replacement of pump	1
22			Nyamtukuza	●	9					○	○	1/month	○	✕		○	When necessary (2003)	1,500	VWC leaders	House to House with receipt	○	120,000	○	2	○	Taping	2
23			Kakora	●	9					○	○	4/year				○	Annually/hh	300				60,000					

Supplementary Survey Results of 17 Existing Piped Schemes (2/4)

1. General Information of the Piped Scheme O&M															2. Management of the O&M Fund for the Piped Scheme									3. Experience and Means of Repair				
SERIAL No	District	Piped Scheme	Village	Existence of Facility	Type of Facility	WUG for Piped Scheme	WUA	Reason for no WUA	VWC for Piped Scheme	Activeness of VWC	Regular meeting of VWC	Frequency of regular meeting of VWC	Rules of VWC	Registration of VWC	Water fee collection	Water fee collected by VWC	Mode of payment for Water fee collection by VWC	Amount of Water fee collection by VWC	Collector of water fee by VWC	Methods of water fee collection by VWC	Water fund collection by VWC	Amount of Water fund by VWC	Availability of Repair person	Number of Repair person	Experience of Repair person	Type of Repair	RP_WHO
																	hh=household											
24	Geita	Karumwa/ Masalala	Kharumwa	●	9					○	○	1/month																
25			Nyarubele	●	9					○	○	1/month																
26			Ikangala	●	12																							
27			Kitongo	●	9					○	○	1/month	○	○		×						164,394	×		○	replacement of water tap parts	Technician from KAHAMA goldmine repaired by using repair fee collected by villagers
28			Kabiga	●	9					○	○	1/month	○	×		○	Annually/hh	300	Heads of Sub-village	Secretary of sub-village collects money and hands it to treasure of VWC.	○ (sub-village)	135,000	○	4	×		
29			Izunya	●	9					○	○	1/month																
30			Kayenze	●	9																							
31			Bukwimba	●	9					○	○	1/month				○	Monthly/hh	50				12,000						
32			Nyang'holongo		9	○	×	No initiative since no facility		○	○	1/month	○	Don't' remember		○	When necessary	200/hh	VWC leaders	House to House with receipt	×	25,000	○	4	○	replacement of rubber; piston, and bush?	1
33			Bukungu		9	×	×	No initiative since no facility	×	○	○	2 /month during dry season	○	×		×					×		×		○	replacement of cylinder and riser rod	1
34			Bumanda		9	× (There are WUGs for KAHAMA water points)	×			×					×	○	When necessary (for repairing a KAHAMA water point, totally Tsh 16,000 was collected)	100	WUG leaders	House to House with receipt	○	180,000	○ (KAHAMA water point)	3	○	parts of water tap	2
35		Nzera	Nzera	●	11	×	×			○	○	1/month	○	×		○	When necessary (for JICA)	(1)600 (JICA) (2)1000	VWC leaders	House to House with receipt	○ (for JICA)	(1)410,000 (2)350,000	○	28	○	replacement of rubber parts, piston, and ring	2
36			Sungusila		11		×			○	○	2/year	○	×		○	When necessary (for JICA)	500/hh	Heads of Sub-village	House to House with receipt	○ (for JICA)	400,000	×		×		
37			Nyamboge		11																							
38		Nyang'hwale	Nyang'hwale	●	13					○	○	2/month	○	○	×	○ (WC)	When necessary (only necessary)	500	Heads of Sub-village	House to House with receipt	○	100,000	○	2	○	concrete cracking; putting grease on cock	2
39			Ibambila	●	13					○	○	1/month																
40			Nyaruguguna		13					○	○	3/month	○	×	×	○ (WC)	When necessary (only necessary)	200	WUG leaders	House to House with receipt	○	30,000	○	3	○	handle of tap; rubber; concrete cracking	2
41			Kaseme		13																							
42			Kabugozo		11					○	○	1/month	○	×		○	Monthly/hh	20				19,000						
43			Chigunga		11										×	○	Ifoghongo			Collect contribution from water users Tsh 1,000/HH, and revolve the fund with 10% interest rate per month. If the fund was used for repair of the facility, no repayment.								
44			Chikobe	●	11			No initiative since no facility	×	○	○	1/month	○	○		○	2	10	Heads of Sub-village	2 WC at sub-villages members stay at the water points of SW during 7-10am & 4-6pm, and collect water fee everyday. (no salary)	×	12,440					
45			Nyakagomba	●	11	×	×	No initiative since no facility	○	○	○	4/year	○	×	×	○	Annually/hh	3,100	VWC leaders	House to House with receipt	○	9,300					

Supplementary Survey Results of 17 Existing Piped Schemes (3/4)

1. General Information of the Piped Scheme O&M														2. Management of the O&M Fund for the Piped Scheme								3. Experience and Means of Repair				
SERIAL No	District	Piped Scheme	Village	Existence of Facility	Type of Facility	WUG for Piped Scheme	WUA	Reason for no WUA	VWC for Piped Scheme	Activeness of VWC	Regular meeting of VWC	Frequency of regular meeting of VWC	Rules of VWC	Registration of VWC	Water fee collection	Water fee collected by VWC	Mode of payment for Water fee collection by VWC	Amount of Water fee collection by VWC	Collector of water fee by VWC	Methods of water fee collection by VWC	Water fund collection by VWC	Amount of Water fund by VWC	Availability of Repair person	Number of Repair person	Experience of Repair person	Type of Repair	RP_WHO
																	hh=household										
46		Nyakagomba	Kitigiri	●	11					○	○	1/month	○	✕		✕											
47			Chankorongo	●	11	✕	✕	No initiative since no facility	✕	○	○	2/month	○	○		✕											
48			Busaka	●	11																						
49			Bukondo	●	11					○	○	1/2months															
50			Nyamwililelwa	●	11					○	○	1/month										150,000					
51			Mwenegeza (Mwenegeza)		11	✕	✕	No initiative since no facility	✕	○ (started Feb 2006)	✕		✕	✕		✕											
52			Isima		11																						
53		Gallu	Gallu	●	12	✕	✕	No instruction from DWE	✕	○	○	4/year	○	✕	✕	○	When necessary	200/user	WUG leaders	House to House with receipt	✕		○	24	○	checking water quality	2
54			Nakamwa		12					○	○	1/month	○	✕		○	When necessary	1000/user	VWC leaders	House to House with receipt	○	10,700	○	20	○	replacement of water pump	2
55			Busangu		12	✕		no pipe scheme		○	○	1/month	○	✕	✕	○ (WUG)	When necessary (various means by WUGs)		WUG leaders	Users come to pay	○	180,650	○	24	○	replacement of rubber parts	2
56			Murutilima		12					no VWC						✕					✕		○		○	bottom alve was broken	2
57			Masonga		12					○	○	3/year	○	✕		○	Monthly/hh	150	Heads of Sub-village		○	50,000					
58		Muriti	Muriti	●	12	✕	✕		×	○	○	1/month	○	○	✕	○	Fine/Penalty	500-2000	WUG leaders	Fined users bring money to secretary of WUG	○	40,000	○	20	○	replacement of rubber parts	2
59			Itira	●	12	○	✕			no VWC					✕	3	water fee 1,500/hh/year was collected in 1996 in order to repair breakdown of HP	1,500					✕		✕		DWE was responsible for repair of the piped scheme
60			Bugula		12					○	○	2/year	○	✕		○	Annually/hh	50-60	Treasure of sub-committee of VWC	Annually Ths 50,000 is collected at each wells by treasure of well, and handed to WC members to save money in the bank	○	50,000	○		○	repair of bottom valve	2
61			Igongo		12					✕			✕			✕	When necessary (different system in WUGs)				✕		✕		✕		
62			Kameya		12					○	○	2/year	✕			✕					✕		○	2	○	replacement of sleeve breaking	2
63			Ihebo	●	12	○	✕			✕					✕	○	Annually/hh	6,000	WUG committee		○	120,000	○	4	○	repair of bottom valve	2
64	Ukerewe	Kagunguli /Bukindo	Bukindo	●	12	✕	✕	No instruction from DWE	✕	✕			✕		✕	○ (WUG)	When necessary 1000/hh for construction; 500/hh for new user)		WUG leaders		○ (WUG)	9,000	✕		○	Concreting and laying pipes	4 (District Community Development)
65			Kagunguli	●	12	✕	✕	No instruction from DWE	✕	○	○	2/month	○	✕	○	✕	Monthly/hh (piped scheme)	20	Agent from missionary organization		✕		○		✕		
66			Buguza		12					✕						✕					✕						
67			Muhande		12					✕	✕					✕					✕						
68			Bugombe		12					✕	✕		✕			✕					✕						
69			Nansole		12					○	○	only emergency	○	○		Stopped in 2002	Monthly/hh	500			✕		○	12	○	Pump	2

Supplementary Survey Results of 17 Existing Piped Schemes (4/4)

1. General Information of the Piped Scheme O&M														2. Management of the O&M Fund for the Piped Scheme								3. Experience and Means of Repair				
SERIAL No	District	Piped Scheme	Village	Existence of Facility	Type of Facility	WUG for Piped Scheme	WUA	Reason for no WUA	VWC for Piped Scheme	Activeness of VWC	Regular meeting of VWC	Frequency of regular meeting of VWC	Rules of VWC	Registration of VWC	Water fee collection	Water fee collected by VWC	Mode of payment for Water fee collection by VWC	Amount of Water fee collection by VWC	Collector of water fee by VWC	Methods of water fee collection by VWC	Water fund collection by VWC	Amount of Water fund by VWC	Availability of Repair person	Number of Repair person	Experience of Repair person	Type of Repair	RP_WHO
																	hh=household										
70			Bulamba		12					no VWC						○ (WC)	(1)Tsh 50 per hh per month (2)Tsh 200 per hh for construction (3)Tsh 500 per hh for new comers during dry season (4)Tsh 500 or 1000 per user for penalty (5)Tsh 100 per hh for construction			Fined users bring money to secretary of WUG	○ (WC)		○	16	○	replacement of rubber parts and riser	2
71		Bukonyo	Bukonyo	●	12	×	×	The piped scheme was managed by DWE.	×	○	○	1/month	○	○	×	○ (WC)	When necessary (monthly user contribution)	100	WUG leaders	House to House with receipt	○	51,000	○	4	○	riser, pump, replace of rubber parts	2
72			Kitangaza																								
73			Namilembe	●	12					○	○	4/year	○	×		○ (WC)	When necessary	1,000	Heads of Sub-village	House to House with receipt	○	70,000	○	5	○	replacement of water cog	2
74	Tarime	Nyamagaro	Nyang'ombe	●	12	×	Board		×						×	×							○	1	×		
75			Muharago	●	12	×		No instruction from DWE (but water committee for the scheme exists)	○	○ (WC)	○ (WC)	1/month		○ (WC)	○		Annually/hh (for charco dam)	2,500				95,000	×		×		
76			Manira		12					no VWC						×					×		×		×		
77			Rwang'enyi																								
78		Kyangasaga	Kyangasanga	●	12	○	×		○	×					×	×					×		×		○		1

Health/Sanitary Data on 17 Existing Piped Shceme (1/4)

Serial No.	District	Piped Scheme	Village	Existance of Facility	% of Private latrine	% of Private bath	Hand Washing Practice							Water boiling practice	Environmental self-assessment	Project in need in the village
							Before eating	After eating	After toilet	After cleaning the house	After cleaning bottom of child	Before feeding child	Before preparing food			1=Health Center; 2=Mobile clinic; 3=Water supply facilities; 4=Health & sanitation education; 5=Others
1	Misungwi	Usagala	Usagara	●	All	Few	All	All	All	Amost all	Amost all	All	Amost all	Amost all	Fair	3,4
2			Nyang'homango		na	na	na	na	na	na	na	na	na	na	na	na
3			Fella		na	na	na	na	na	na	na	na	na	na	na	na
4		Ukiriguru	Mwalogwabagole	●	Almost all	All	All	All	Almost none	All	Almost none	Almost none	Almost none	Few	Not good	1,2,3,4
5			Ngudama	●	All	All	All	All	Almost none	Almost none	All	Few	Few	Few	Good	3,4,1, improved VIP latrines
6			Nyang'holongo	●	Few	Few	All	All	All	All	All	All	All	Few	Fair	1,3,4
7			Buganda	●	All	All	All	All	All	All	All	Almost none	Almost none	Few	Good	3
8			Mwagala		Few	Few	All	All	Almost none	Almost none	Almost none	Almost none	Almost none	Few	Fair	3,4
9			Nyamatala		Few	Few	All	All	Few	Few	Few	Few	Few	Few	Not good	1,3,4
10	Sengerema	Sima	Sima	●	Almost all	Almost all	All	All	About 50%	About 50%	About 50%	Few	Few	About 50%	Fair	2,3,4
11		Luchili	Luchili	●		Almost all	All	All	Few	Few	About 50%	About 50%	Few	Few	Fair	2,3,4
12			Nyakasungwa	●	Almost all	All	All	All	Few	Few	Few	Few	Few	Amost all	Fair	1,3,4
13			Nyanzenda	●	Few	All	All	All	Few	Almost none	Few	Few		Few	Fair	2,4
14			Migukulama		All	All	All	All	About 50%	Few	Few	Few	Few	Few	Good	1,3,4
15		Lugasa	Nyakaliro	●	Few	Few	All	All	Few	Few	Amost all	Few	Amost all	Few	Fair	1,3,4
16	Kwinba	Mantare	Mantare	●	Few	Almost all	All	All	Amost all	Few	About 50%	About 50%		Amost all	Fair	1,3
17			Isingisha	●		Almost all	All	All	Few	Few	Few	Few	Few	Few	Fair	2,3,4
18	Magu	Kabila/ Ndagulu	Kabila	●	Few	All	All	All	Few	Few	Few	Few	Few	Few	Fair	1,3
19			Ndagalu	●	Almost all	Almost all	All	All	Few	Few	About 50%	Amost all	Few	Few	Fair	1,3 and ponds
20			Kayenze B		Few	Almost all	All	All	Few	Few	Few	About 50%	Few	Few	Fair	1,3,4
21			Ng'washepi (Mwashepi)		Almost all	Almost all	All	All	Few	Few	Few	Few	Few	Few	Not good	2,3,4
22		Karumwa/ Masalala	Nyamtukuza	●												
23			Kakora	●	All	All	All	All	Almost none	Almost none	Few	Almost none	Almost none	Few	Good	1,2,3,4
24			Kharumwa	●	Few	Almost all	All	All	Almost none	Almost none	Almost none	Almost none	Almost none	Few	Fair	1,3,4
25			Nyarubele	●	Few	Almost all	All	All	Almost none	Few	Almost none	Almost none	Almost none	Almost none	Not good	1,2,3,4
26			Ikangala	●	Almost all	Almost all	All	All	Almost none	Almost none	Almost none	Almost none	Almost none	Few	Not good	3

Health/Sanitary Data on 17 Existing Piped Shceme (2/4)

Serial No.	District	Piped Scheme	Village	Existance of Facility	% of Private latrine	% of Private bath	Hand Washing Practice							Water boiling practice	Environmental self-assessment	Project in need in the village
							Before eating	After eating	After toilet	After cleaning the house	After cleaning bottom of child	Before feeding child	Before preparing food			1=Health Center; 2=Mobile clinic; 3=Water supply facilities; 4=Health & sanitation education; 5=Others
27	Geita	Karumwa/ Masalala	Kitongo	●	Almost all	Almost all	All	All	Few	Almost none	Almost none	Almost none	Almost none	Few	Not good	3,1
28			Kabiga	●	Few	All	All	Amost all	Almost none	Almost none	Almost none	Almost none	Almost none	Almost none	Fair	3,1,2,4
29			Izunya	●	Few	All	All	All	Almost none	Almost none	Almost none	Almost none	Almost none	Few	Not good	3,1,2,3
30			Kayenze	●	Few	Few	All	All	Almost none	Almost none	Almost none	Almost none	Almost none	Few	Not good	3,1,2,4
31			Bukwimba	●	Almost all	All	All	All	Almost none	Almost none	Almost none	Almost none	Almost none	Almost none	Not good	3,4
32			Nyang'holongo		Few	All	All	All	Almost none	Almost none	Almost none	Almost none	Almost none	Almost none	Not good	3
33			Bukungu		Few	Almost all	All	All	Almost none	Almost none	Almost none	Almost none	Almost none	Almost none	Not good	3,4,1
34			Bumanda		Almost all	All	All	All	Few	Almost none	Almost none	Almost none	Almost none	Almost none	Not good	3
35		Nzera	Nzera	●	Few	All	All	All	All	Almost none	Almost none	Almost none	Almost none	Almost none	Not good	3,1,2,4
36			Sungusila		Few	All	All	All	Almost none	Almost none	Almost none	Almost none	Almost none	Almost none	Not good	3,1,4
37			Nyamboge		Almost all	All	All	All	Few	Few	Few		Almost none	Almost none	Fair	3,1,2,4 and Hospital
38		Nyang'hwale	Nyang'hwale	●	Few	All	All	All	Almost none	Almost none	Almost none	Almost none	Almost none	Almost none	Not good	3,1,2,4
39			Ibambila	●	Few	All	All	All	Almost none	Almost none	Almost none	Almost none	Almost none	About 50%	Not good	3,1,2,4
40			Nyaruguguna		Few	All	All	Almost none	Almost none	Almost none	Almost none	Almost none	Almost none	Few	Not good	1,2,3,4
41			Kaseme		Few	Few	All	All	Almost none	Almost none	Almost none	Almost none	Almost none	Almost none	Not good	3,1,2,4
42		Nyakagomba	Kabugozo		Almost all	Almost all	All	All	Few	Few	Amost all	Few	Amost all	Almost none	Fair	3,4
43			Chigunga		Few	All	All	All	Almost none	Almost none	Almost none	Almost none	Almost none	Almost none	Not good	3,4
44			Chikobe	●	Almost all	All	Amost all	About 50%	Amost all	About 50%	Amost all	Few	Few	Few	Good	4
45			Nyakagomba	●	Almost all	Few	All	All	Few	Few	Few	Few	Few	Few	Fair	1,3,4
46			Kitigiri	●	Few	Few	All	All	Few	Few	About 50%	Few		Few	Fair	1,2,3,4
47			Chankorongo	●	Few	Few	All	All	Almost none	Almost none	Almost none	Almost none	Almost none	Almost none	Not good	3,4,1
48			Busaka	●	Few	Almost all	All	All	Almost none	Almost none	Almost none	Almost none	Almost none	Almost none	Not good	3,4,1
49			Bukondo	●	Almost all	Almost all	All	All	Few	About 50%	Few	Almost none	About 50%	Few	Fair	1,3,4
50			Nyamwililelwa	●	Almost all	Few	All	All	Few	Few	Few	Few	Amost all	About 50%	Fair	1,2,3,4
51			Mwenegeza (Mwenegeza)		Few	All	All	Almost none	Almost none	Almost none	Almost none	Almost none	Almost none	Almost none	Not good	4
52			Isima		Few	Few	All	All	Almost none	Almost none	Almost none	Almost none	Almost none	Almost none	Not good	4

Health/Sanitary Data on 17 Existing Piped Shceme (3/4)

Serial No.	District	Piped Scheme	Village	Existance of Facility	% of Private latrine	% of Private bath	Hand Washing Practice							Water boiling practice	Environmental self-assessment	Project in need in the village
							Before eating	After eating	After toilet	After cleaning the house	After cleaning bottom of child	Before feeding child	Before preparing food			1=Health Center; 2=Mobile clinic; 3=Water supply facilities; 4=Health & sanitation education; 5=Others
53	Ukerewe	Gallu	Gallu	●	Almost all	Almost all	All	All	Almost none	Almost none	Almost none	Almost none	Almost none	Few	Fair	3,1,4
54			Nakamwa		Almost all	Few	All	All	Almost none	Almost none	Almost none	Almost none	Few	Few	Fair	3,4
55			Busangu		Almost all	Few	All	All	Few	Almost none	Almost none	Almost none	Almost none	Few	Fair	3,14
56			Murutilima		All	Few	All	All	Few	About 50%	Few	Few	About 50%	About 50%	Fair	1,2,3,4 and 5 (Health center)
57			Masonga		Almost all	Almost all	All	All	Few	Amost all	Few	Few	Few	About 50%	Not good	1,2,3,4
58		Muriti	Muriti	●	Almost all	Few	All	All	Few	Few	Few	Few		Few	Fair	1,2,3,4
59			Itira	●	Almost all	Almost all	All	All	About 50%	Few	Few	Few	About 50%	About 50%	Fair	1,2,3,4
60			Bugula		Almost all	Almost all	All	All	Few	Few	Few	Few	Few	About 50%	Fair	1,2,3,4 and 5 (Road improvement)
61			Igongo		Almost all	Almost all	All	All	Few	Almost none	Almost none	Almost none	Almost none	Few	Fair	3,4
62			Kameya		Few	Few	All	All	Almost none	Almost none	Almost none	Almost none	Almost none	Few	Fair	3,4,1
63			Ihebo	●	Almost all	Few	All	All	Few	Almost none	Almost none	Almost none	Almost none	Few	Fair	3,4
64		Kagunguli /Bukindo	Bukindo	●	Few	Few	All	All	All	Few	Amost all	Amost all	Few	Few	Fair	4
65			Kagunguli	●	na	na	na	na	na	na	na	na	na	na	na	na
66			Buguza		Few	Almost all	All	All	Few	Few	Almost none	Almost none	Almost none		Fair	3,4,1
67			Muhande		Few	Few	All	All	Few	Few	Few	Almost none	Almost none	Few	Not good	3,4,1
68			Bugombe		Few	Few	All	All	Few	Almost none	Almost none	Almost none	Almost none	Almost none	Not good	3,4
69			Nansole		Almost all	Almost all	All	All	About 50%	About 50%	About 50%	Few	Few	About 50%	Fair	4
70			Bulamba		Almost all	Almost all	All	All	About 50%	Few	Few	Few	About 50%	About 50%	Fair	3
71		Bukonyo	Bukonyo	●	Few	Few	All	All	Almost none	Almost none	Few	Almost none	Almost none	Almost none	Not good	3,4,1
72			Kitangaza		Few	Few	All	All	Almost none	Almost none	Almost none	Almost none	Almost none	Almost none	Not good	3,4,1
73			Namilembe	●	Few	Almost all	All	All	Few	Almost none	Few	Almost none	Almost none	Few	Fair	3,4
74			Nyang'ombe	●	Few	Few	All	All	Almost none	Almost none	Almost none	Almost none	Almost none	Few	Not good	3,4

Health/Sanitary Data on 17 Existing Piped Shceme (4/4)

Serial No.	District	Piped Scheme	Village	Existance of Facility	% of Private latrine	% of Private bath	Hand Washing Practice							Water boiling practice	Environmental self-assessment	Project in need in the village
							Before eating	After eating	After toilet	After cleaning the house	After cleaning bottom of child	Before feeding child	Before preparing food			1=Health Center; 2=Mobile clinic; 3=Water supply facilities; 4=Health & sanitation education; 5=Others
75	Tarime	Nyamagaro	Muharago	●	na	na	na	na	na	na	na	na	na	na	na	na
76			Manira		na	na	na	na	na	na	na	na	na	na	na	na
77		Kyangasaga	Kyangasanga	●	na	na	na	na	na	na	na	na	na	na	na	na

11 Minutes of Discussion

Scope of Work
for
The Study on Rural Water Supply
in Mwanza and Mara Regions
in
the United Republic of Tanzania

Agreed upon between

Ministry of Water and Livestock Development
and
Japan International Cooperation Agency

Dar es Salaam, November 29, 2004

Mr. Vincent F. Mrisho
Permanent Secretary,
Ministry of Water and Livestock Development

PERMANENT SECRETARY
MINISTRY OF WATER AND
LIVESTOCK DEVELOPMENT

Ms. YAMAMOTO Keiko
Leader,
Preparatory Study Team,
Japan International Cooperation Agency

Witnessed by

Mr. Audifax A. Choma
Deputy Commissioner,
External Finance Department,
Ministry of Finance

For: PERMANENT SECRETARY
THE TREASURY

I. INTRODUCTION

In response to the official request of the Government of the United Republic of Tanzania (hereinafter referred to as "the Government of Tanzania") for the technical cooperation on the Study on Rural Water Supply in Mwanza and Mara Regions (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 programs of the Government of Japan, will undertake the Study in close cooperation with the authorities concerned of the Government of Tanzania.

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

II. OBJECTIVES OF THE STUDY

The objectives of the Study are:

1. to formulate a water supply plan for selected villages in Mwanza and Mara Regions
2. to conduct a preliminary design on the priority projects for the target year of 2015
3. to develop the capability of counterpart personnel of Ministry of Water and Livestock Development (hereinafter referred to as "MoWLD") and other authorities concerned in the course of the Study.

III. STUDY AREA

The Study will cover the selected villages in 8 districts in Mwanza Region and 4 districts in Mara Region. 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
  (a) Socio-economic condition
  (b) Natural condition
  (c) Socio-economic development plan, and other development policies and plans
  (d) Existing legal framework for water resources development, water supply, and sanitation
  (e) Existing institutional framework for operation, maintenance and management
  (f) Existing database related to water supply

(2) Field Survey on Existing Water Supply System
  (a) Methodology of water intake, purification, pumping and distribution
  (b) Water quality
  (c) Operation and maintenance condition
  (d) Water tariff, management condition of water supply facilities
  (e) Social survey (condition of water use, access to water, people's awareness)

(3) Water Demand Projection

(4) Study on Groundwater Development Potential

(a) Topographical and geological survey
(b) Geophysical exploration, test boring, well logging, pumping test, groundwater level observation
(c) Surface water survey (volume of flow, usage conditions)
(d) Water quality analysis
(e) Meteorological and hydrological data analysis
(f) Compilation of hydro-geological map
(g) Water balance analysis
(h) Evaluation of groundwater potential

(5) Formulation of Water Supply Plan
(a) Water resource development plan
(b) Conceptual design of water supply system
(c) Operation, maintenance and management plan
(d) Improvement plans for institutional framework
(e) Community education plan
(f) Rough 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, social, and environmental)

(6) Selection of Priority Project(s)

PHASE II: Preliminary Design on Priority Project(s)

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

V. SCHEDULE OF THE STUDY

The Study will be carried out in the period of 18 months in accordance with the tentative schedule as attached in Annex II.

VI. REPORTS

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

1. Inception Report:

Twenty five (25) copies will be submitted at the commencement of the first

phase in Tanzania. This report will contain the schedule and methodology of the Study as well as outline of the field survey.

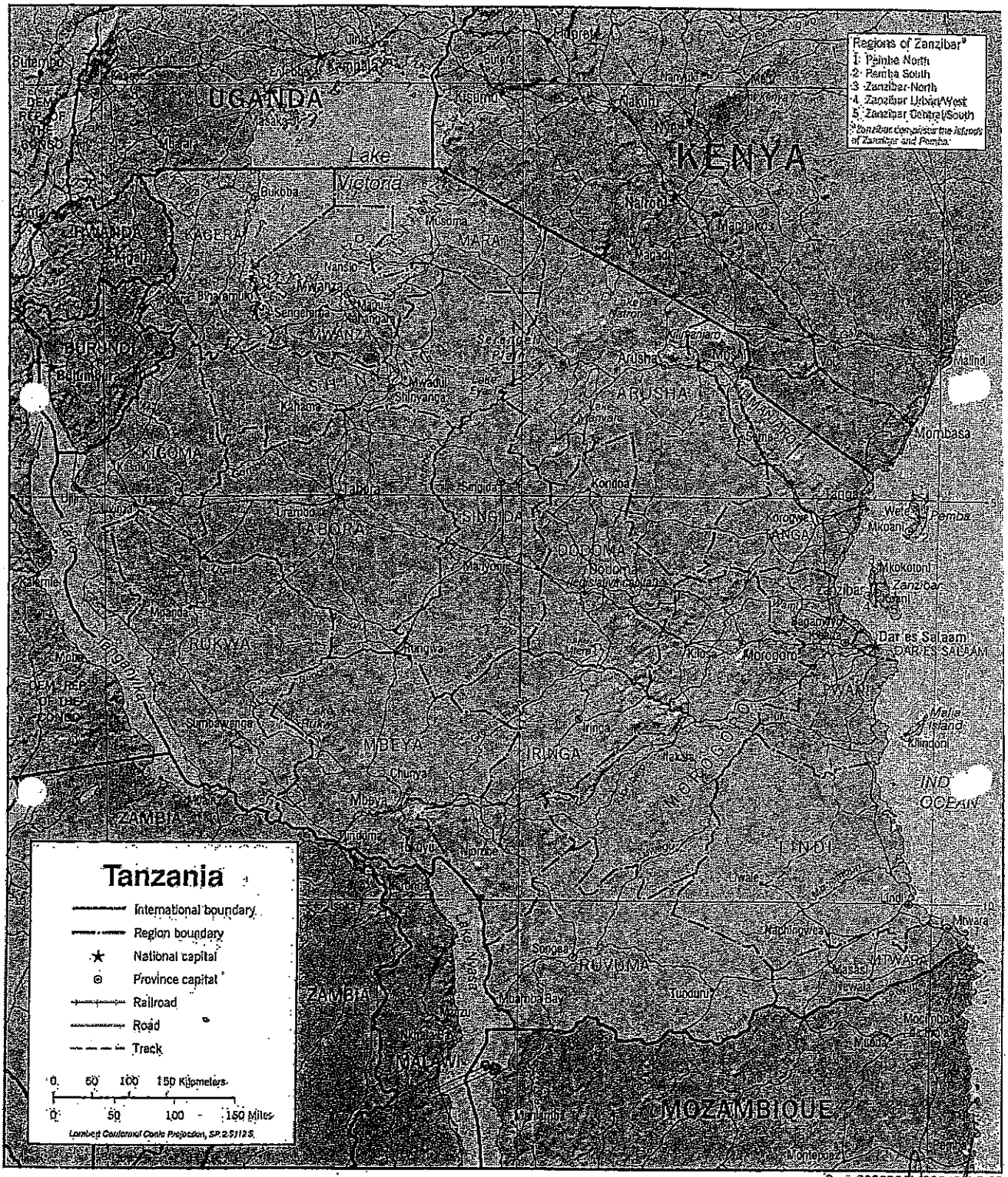
2. Progress Report:
   Twenty five (25) copies will be submitted during the first phase in Tanzania. The report contains the progress of the study, which will include the results of field survey and data analysis.
3. Interim Report:
   Twenty five (25) copies will be submitted at the end of the first phase in Tanzania. The report contains the interim progress of the study, which will include the selection of priority project(s).
4. Draft Final Report:
   Twenty five (25) copies will be submitted at the commencement of final survey in Tanzania. The report contains the outcome of the study, which will include the preliminary design on the priority project(s). The Government of Tanzania shall submit its comments within one (1) month after the receipt of the Draft Final Report.
5. Final Report:
   Fifty (50) copies will be submitted within one (1) month after the receipt of the comments on the Draft Final Report.

VII. UNDERTAKINGS OF THE GOVERNMENT OF TANZANIA

1. The Government of Tanzania 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 United Republic of Tanzania, signed on November 2, 2004.
2. The Government of Tanzania 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. MoWLD shall act as counterpart agency 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. MoWLD 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,
   (6) credentials or identification cards, and
   (7) appropriate numbers of vehicles with drivers.

VIII. CONSULTATION

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


Regions of Zanzibar*
1. Pemba North
2. Pemba South
3. Zanzibar North
4. Zanzibar Urban/West
5. Zanzibar Central/South
*Zanzibar comprises the islands of Zanzibar and Pemba.
Tanzania
International boundary
Region boundary
National capital
Province capital
Railroad
Road
Track
0 50 100 150 Kilometers
0 50 100 150 Miles
Lambert Conformal Conic Projection, SP 2 5 11 S.
UGANDA
KENYA
RWANDA
BURUNDI
ZAMBIA
MALAWI
MOZAMBIQUE
DEM. REP. OF THE CONGO
Lake Victoria
Lake Tanganyika
Lake Nyasa
Lake Rukwa
Kagera
Mara
Mwanza
Shinyanga
Kigoma
Arusha
Manyara
Tabora
Singida
Dodoma
Iringa
Mbeya
Rukwa
Ruvuma
Mtwara
Lindi
Morogoro
Tanga
Pwani
Dar es Salaam
Kilimanjaro
Tanga
Pemba
Mombasa
Malindi
Zanzibar
Malé Island
IND OCEAN
Base 802933AI 4-00 3-03

Annex II

Study on Rural Water Supply in Mwanza and Mara Regions

TENTATIVE SCHEDULE

Month	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Work Schedule	Phase I →																	
									Phase II →									
Report	▲ IC/R				▲ P/R			▲ IT/R								▲ DF/R		▲ F/R

<NOTE>

IC/R: Inception Report

P/R: Progress Report

IT/R: Interim Report

DF/R: Draft Final Report

F/R: Final Report

Minutes of Meetings
on
the Scope of Work
for
The Study on Rural Water Supply in Mwanza and Mara Regions
in
the United Republic of Tanzania

Agreed upon between

Ministry of Water and Livestock Development
and
Japan International Cooperation Agency

Dar es Salaam, November 29, 2004

Mr. Vincent F. Mrisho
Permanent Secretary,
Ministry of Water and Livestock Development

PERMANENT SECRETARY
MINISTRY OF WATER AND
LIVESTOCK DEVELOPMENT

Ms. YAMAMOTO Keiko
Leader,
Preparatory Study Team,
Japan International Cooperation Agency

Witnessed by

Mr. Audifax A. Choma
Deputy Commissioner,
External Finance Division,
Ministry of Finance

For: PERMANENT SECRETARY
THE TREASURY

In response to the official request of the Government of the United Republic of Tanzania (hereinafter referred to as "the Government of Tanzania"), the Japan International Cooperation Agency (hereinafter referred to as "JICA") dispatched the Preparatory Study Team (hereinafter referred to as "the Team"), headed by Ms. YAMAMOTO Keiko, to Tanzania from November 15 to December 21, 2004 to discuss the Scope of Work (hereinafter referred to as "the S/W") for the Study on Rural Water Supply in Mwanza and Mara Regions (hereinafter referred to as "the Study").

During the Study period, the Team held a series of meetings with Ministry of Water and Livestock Development (hereinafter referred to as "MoWLD") and other authorities concerned and conducted site survey on the Study. The list of those who attended these meetings is shown in the Annex.

As a result of the discussions, both sides came to an agreement on the S/W, which was signed on November 29, 2004.

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. Selection of the villages 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 villages selected with the criteria such as;

1) No service from urban water supplies,
2) No plans for development of water resource and supply by other donors,
3) No functioning water supply systems and so on.

The village selection will be done by the end of January 2005 based on the information collected from MoWLD and reviewed by the Team.

2. Target year for the preliminary design

Considering that implementation of the priority projects is expected to be completed by 2010, the Tanzanian side insisted that the design period should be 2020, giving a 10 year period for meeting the water demand. The Team suggested to MoWLD to set the design year as 2015, for a realistic implementation of rural water supply with emergency water need. The Tanzanian side expressed their concerns of setting the target year as 2015, however, they accepted to apply the suggested target year of the Japanese side. The Japanese side understood the concern of the Tanzanian side and agreed to re-examine the target year by the submission of the interim report.

3. Counterpart personnel

Both sides agreed that MoWLD would allocate the necessary number of counterpart personnel based upon the composition of the Study Team. JICA Tanzania Office will notify when the Study Team member is determined, and based on the number of personnel and field in charge, the Tanzanian side will submit the

counterpart member list to JICA Tanzania Office by the end of February 2005.

4. **Steering Committee**

Both sides agreed that the Tanzanian side would establish a Steering Committee, chaired by the Director of the Division of Rural Water Supply, MoWLD.

The committee will be comprised of the related organizations such as MoWLD (Director of Rural Water Supply, Director of Water Resource Assessment and Exploration, Director of Policy and Planning), each Water Engineer of both Regional Secretariats, each District Water Engineer, Lake Victoria Basin Water Officer and so on. The committee meetings will be held at least twice a year.

5. **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.

6. **Environmental and Social Consideration**

The Team explained the background and the present situation related to the revision of JICA's environmental and social consideration guidelines, and that the new guidelines for environmental and social consideration will be applied to the Study.

The government of Tanzania understood the policy of JICA's guidelines, and agreed in principle to the following responsibilities and requirements.

(1) Based on the guidelines, the Government of Tanzania shall be responsible for conducting Initial Environmental Examination (IEE) and Environmental Impact Assessment (EIA) in collaboration with JICA. The necessary activities required for IEE and EIA shall be carried out by MoWLD.
(2) JICA shall provide MoWLD with technical support in order to conduct IEE and EIA.
(3) In the course of conducting IEE and EIA, public consultation 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.

7. **Office Space**

MoWLD agreed to provide adequate office space, necessary office equipment and furniture at the base site of the Study, such as at Lake Victoria Basin Water Office in Mwanza.

8. **Vehicles**

MoWLD requested the Team that the Japanese side arranges the appropriate numbers of vehicles with drivers.

The Team would convey this request to JICA Headquarters.

Annex

ATTENDANCE LIST

TANZANIAN SIDE

Ministry of Water and Livestock Development (MoWLD)

Mr. Vincent Mrisho	Permanent Secretary
Dr. Charles W. Nyamrunda	Deputy Permanent Secretary
Mr. Christopher N. Sayi	Director, Division of Rural Water Supply (DRWS)
Mr. Reuben Kwigizile	Assistant Director, DRWS
Mr. John Mukumwa	Assistant Director, DRWS
Ms. Neema Siara	Exective Engineer, DRWS

Ministry of Finance

Mr. Audifax A. Choma	Deputy Commissioner, External Finance Division
Ms. Ngingite	Japan Desk

Mwanza Region

Mr. Wallace S. J. Nkanwa	RWE Mwanza
Mr. Henry Salala	DWE Magu
Mr. Rugalabamu H. Karugwa	DWE Kwimba
Mr. Daniel Petro	DWE Ukerewe, Acting
Mr. Wawa E. Nyonyoli	DWE Sengerema
Mr. Sulemani Kiyenze	DWE Misungwi
Mr. D. Makene	DWE Geita
Mr. Stanslaus Buluba	CWE Mwanza

Mara Region

Mr. Bion M. Nkwande	RWE Mara
Mr. Boniface Majaba	DWE Tarime
Mr. Josephat Ngondagula	DWE Serengeti
Mr. Felix Mboje	DWE Musoma R
Mr. Musafiri Nyandiga	DWE Bunda

Mr. Rayson Muhabuki	L. Victoria Basin Water Officer

JAPANESE SIDE

JICA Preparatory Study Team

Ms. Yamamoto Keiko	Leader
Mr. Haley H. Minakami	Member (Rural Water Supply Planning / Environmental and Social Consideration)
Mr. Takuya Yabuta	Member (Groundwater Development)
Mr. Hidetake Aoki	Member (Study Planning / Preparatory Evaluation)

JICA Tanzania Office

Ms. Kaori Matsushita	Assistant Resident Representative

MINUTES OF MEETING
ON
THE INCEPTION REPORT
FOR
THE STUDY ON RURAL WATER SUPPLY IN MWANZA AND MARA REGIONS
IN THE UNITED REPUBLIC OF TANZANIA

In response to the official request of the Government of the United Republic of Tanzania (hereinafter referred to as "the Government of Tanzania"), the Japan International Cooperation Agency (hereinafter referred to as "JICA") dispatched the Preparatory Study Team. The Japanese side and the Tanzanian side came to an agreement on the Scope of Work (hereinafter referred to as "S/W") and signed it on November 29, 2004.

JICA sent to Tanzania the JICA Study Team (hereinafter referred to as "the Team") for THE STUDY ON RURAL WATER SUPPLY IN MWANZA AND MARA REGIONS (hereinafter referred to as "the Study") from April 20, 2005. The Team held a series of meetings with the officials of Ministry of Water and Livestock Development (hereinafter referred to as "MoWLD") and other authorities concerned on the Study. The list of those who attended these meetings is shown in the Annex.

In the course of discussions, both sides confirmed the main items described on the attached sheets. The Team will proceed to further works until December 15, 2005.

Dar es Salaam, April 21, 2005

Mr. Toshiyuki MATSUMOTO
Team Leader,
Japan International Cooperation Agency,
Japan

Mr. Vincent Mrisho
Permanent Secretary,
Ministry of Water and Livestock
Development (MoWLD),
The United Republic of Tanzania

Attachment

1. Explanation of Inception Report (IC/R)

The Team submitted twenty five (25) copies of the Inception Report to the Division of Rural Water Supply (DRWS) on April 20, 2005 in accordance with the Implementing Arrangement agreed upon between the Government of Tanzania and JICA on November 29, 2004.

DRWS and the Team held a meeting on the Inception Report (IC/R) on April 20, 2005 (see ANNEX-1). Mr. Christopher N. Sayi of the Counterpart (C/P) Team chaired the meeting. The Team presented the basic concept, outline and scope of the study proposed in the IC/R, including the technology transfer program proposed in the Study. Technical discussions were conducted between the Team and the C/P Team on each of the study items, surveys and data required for the Study.

The contents of the IC/R have been agreed in principle by the Tanzanian side and the Tanzanian side accepted the IC/R and understood the study schedule, activities and methodology, and promised the closer cooperation with the Team in the Study.

Major issues and the contents regarding the IC/R are as follows;

1) For the question on selection criteria of 75 points for water quality tests from the various areas, the Team answered that the selection of the sampling sites will be decided after the survey of natural condition such as geology, topography and meteorology. The aim of the water quality survey is to understand the general quality of the water source in the different geomorphologic condition in both regions.

2) The Tanzanian side emphasized that the classification of the safe water is too complicated and the Team should take only one standard, so that the confusion on the safe water shall not arise. The Team answered that the WHO guideline is also important as it is referred to worldwide. The standard shall be considered not only for Tanzanian standard but in relation with the WHO guideline.

3) The Tanzanian side has asked not to mention the actual figure for the selection of the candidate villages for the Preliminary Study such as 100, so that the implementation of the water supply programme can be maintained for much longer period if it becomes more than 100. The Team answered that from the lessons of the development study in Lindi and Mtwara Regions, the number of the final candidate villages in the feasibility study was narrowed down to 64 villages among the selected 100 villages at the implementation stage. The Team would like to set the target around 100 to the effective implementation of the project in the technical and the budgetary point of view.

4) The Tanzanian side emphasized that the Team should carry out an assessment on the capacity building requirements for the district office and propose actions. The Team agreed to carry out the assessment and explained that suggested technical transfer shall be made through on the job trainings (OJT) and the workshop. The contents of the technological training shall not be expanded in the limited time frame, but the consideration by the Team will be made on request if necessary.

5) The Tanzanian side mentioned that the gender and sanitation issues are not included in the report. The Team explained that the issues will be covered in the field survey in relation with the socio-economic survey and operation and maintenance planning. Regarding the sanitation, the Team indicated the content of Sanitary Plan in IC/R.

6) The Tanzanian side mentioned that the World Bank project has not been implemented in the districts of Ilemela, Magu and Missungwi in the Mwanza Region.

2. Study area (villages) for the Water Supply Plan

The Team explained that the target villages would be selected for the field study to formulate the Water Supply Plan with the data of the water resources development plan and other information of each district.

The above data of some districts have not yet been submitted to the Japanese side. The Tanzanian side promised to submit them to the Team by May 6, 2005.

Both sides agreed to complete the selection of the target village by May 15, 2005.

3. Relationship with other organizations

The Tanzanian side explained about the organization related to the water supply among the government agencies and concerned LGA's. DRWS mentioned that RWE Office no longer exists. The Water Engineer in the Regional Administrative Secretariat's Office will be responsible for the duties concerning water development. BWO is in charge of management of the water resources.

4. Undertakings

The Government of Tanzania shall accord privileges, exemptions and other benefits to the Team in accordance with the Agreement on Technical Cooperation between the Government of Japan and the Government of Tanzania, signed on November 2, 2004.

Tanzanian side pointed out that in the Section of UNDERTAKINGS OF THE GOVERNMENT OF TANZANIA, D-7) the appropriate number of vehicles with drivers shall be the responsibility of the Team as discussed in the Minutes of Meeting on the S/W. The Team agreed and the sentence shall be deleted.

5. Other relevant issues

The Team accepted the members of the Steering Committee and the C/P Team for the Study. Lists of the members are shown in the ANNEX-2 and 3.

ANNEX-1 List of attendants of the Counterpart Meeting and the Joint Meeting of the Steering Committee
ANNEX-2 List of the members of the Steering Committee
ANNEX-3 List of the members of the Counterpart Team

ANNEX-1

List of attendants of the Counterpart Meeting and the Joint Meeting of the Steering Committee

<Tanzanian Side>

Ministry of Water and Livestock Development (MoWLD)

Vincent F. Mrisho	Permanent Secretary
Christopher N. Sayi	Director, Division of Rural Water Supply (DRWS)
Reuben Kwigizile	Assistant Director, DRWS
Rita Kilua	Engineer Design Section
F.C. Rweyemamu	Engineer
Salum M. Chusi	Engineer O&M
J.M. Mihayo	Assistant Director Water Resources
E.C. Mziray	Assistant Director O&M (Rural)
K.E. Olesaibul	Economist

Lake Victoria Basin Water Office

Rayson Muhabuki	Basin Water Officer

Mwanza Region

Wallace S. J. Nkanwa	WE (RAS) Mwanza
Rugalabamu H. Karugwa	DWE Kwimba
Wawa E. Nyonyoli	DWE Sengerema
Sulemani Kiyenze	DWE Misungwi
Abdalah Aklul	DWE Geita

Mara Region

Bulele M. Nkwande	ARAS (RAS) Mara
Sekro Mbaga	DWE Serengeti
Musafiri Nyandiga	DWE Bunda

<Japanese Side>

JICA

Hidetake AOKI	Staff/JICA Headquarter
Ezekiel Kiago	Programme Officer, JICA Tanzania

Study Team

Toshiyuki MATSUMOTO	Team Leader / Water Supply Planning
Kensuke ICHIKAWA	Hydrogeology / Groundwater Development Planning 1
Kazuyuki SUENAGA	Hydrology and Meteorology Analysis
Shoji MASUMURA	Socio-economic Survey
Taketoshi FUJIYAMA	Facility Design / Cost Estimation
Rie KAWAHARA	Operation and Maintenance Planning
Takeshi YOSHIKAWA	Team Coordination 1

ANNEX-2

List of the members of the Steering Committee

S/N	NAME	PROFESSION	INSTITUTION
1	C. Sayi	Principle Engineer (Civil)	Director of Rural Water Supply
2	B. Luhumbika	Senior Hydrologist	Director of Water Resources
3	G. T. Nyenza	Principle Economist	Director of Policy and Planning
4	B.M. Nkwande	Senior Engineer (Civil)	RAS Musoma
5	Wales Nkanwa	Principle Engineer (Civil)	RAS Mwanza
6	R.M. Muhabuki	Senior Hydrologist	Lake Victoria Basin Water Officer
7	Msafiri Ngandigo	Principal Water Technician	DED Bunda
8	Josephat Ngodagula	Senior Water Technician	DED Serengeti
9	Felix Mboja	Executive Engineer (Civil)	DED Musoma (Rural)
10	Boniface Majaba	Senior Water Technician	DED Tarime
11	Suleman Kiyenze	Senior Water Technician	DED Missungwi
12	Abdul Abdallah	Executive Engineer (Civil)	DED Geita
13	Wawa E. Nyonyoli	Senior Water Technician	DED Sengerema
14	R.H. Karugwe	Senior Water Technician	DED Kwimba
15	Henry Salala	Principle Water Technician	DED Magu
16	Daniel Petro	Senior Water Technician	DED Ukerewe
17	Subuka Buluba	Principle Water Technician	DED Ilemela

ANNEX-3

List of the members of the Counterpart Team

S/N	RESPONSIBILITY	NAME	PROFESSION	INSTITUTION
1	Team Leader Water Supply Plan	1.Wales Nkanwa 2. Felix Mbonje	Principal Engineer (Civil) Executive Engineer (Civil)	RAS Mwanza DED Musoma Rural
2	Hydrogeologist (A) Groundwater Development Plan (A)	1 Gosibert Rwegoshora 2. William Mabula	Hydrogeologist Hydrogeologist	Lake Victoria Basin Office Mwanza Lake Victoria Basin Office Musoma
3.	Hydrogeologist (B) Groundwater Development Plan (B)	1 Gosibert Rwegoshora 2. William Mabula	Hydrogeologist Hydrogeologist	Lake Victoria Basin Office Mwanza Lake Victoria Basin Office Musoma
4.	Hydrological /Meteorological	1.Rusekelo Mwambuli 2.Sariro Mwita	Hydrologist Hydrologist	Lake Victoria Basin Office Mwanza Lake Victoria Basin Office Musoma
5	GIS/Database	1.Faustini Songo	Senior Water Technician	Lake Victoria Basin Office Mwanza
6	Geophysical Exploration	1. Subuka Buluba 2. Dimoso Mmba .	Principle Water Technician Senior Water Technician	DED Ilemela Lake Victoria Basin Office Musoma
7.	Socio-economic Survey	1. J. Kyama 2. Edith Mjeme	Economist CDO	RAS Mwanza DED Musoma Rural
8.	Facility Design/Cost estimation	1. B. M. Nkwande 2. Abdul Abdallah	Senior Engineer (Civil) Executive Engineer (Civil)	RAS Musoma DWE Geita
9	O&M Plan	1. Mary Masanza 2. Daniel Mkale	CDO PLO	DED Bunda RAS Mwanza
10	Environmental/Social Consideration	1. Lucas Misana	Senior Laboratory Technician	Lake Victoria Basin Office Musoma

Minutes of Discussion

between

Ministry of Water and Livestock Development

and

JICA Study Team

May 12, 2005 Dar es Salaam

Christopher N. Sayi
Director, Division of Rural Water Supply
Ministry of Water and Live Stock Development

Toshiyuki Matsumoto
Team Leader,
JICA Study Team

At the beginning of the 1st stage of the Study on Rural Water Supply Study in Mwanza and Mara Regions, a meeting was held on the 10th of May, at the office of MoWLD, between Director of Rural Water Supply Division and JICA Study Team.

The team stated that the lists of the target village were finally submitted on the date of 3rd of May 2005 by the Districts in the each Region. The target villages were 929 in total. The team stated that the total number of the target village is too many and shall be reduced to the adequate number for the smooth operation of the study in the limited time frame. The team suggested the following criteria to the selection of the target village.

1. The villages supported by other donors and NGOs shall not be selected.
2. The villages of the served population of more than 50% shall not be selected.

In the addition to those criteria discussed in the inception report meeting, the team suggested additional criteria for the selection of the villages as follows.

1. The villages belong to the urban area with the reference of statistical data established by the government of the Tanzania, shall not be selected.
2. The villages covered by the functioning pipe scheme shall not be selected.
3. The villages that the served population will be more than 50% with additional one well, shall not be selected.
4. The villages which is very close to the Lake Victoria (within 1 km) shall not be selected
5. The villages which described inaccurate and/or no data available shall not be selected.

After the above criteria were applied, the total of the target village was reduced to the total of 470.

The issues discussed and the comments from the Tanzanian side are as follows;

Regarding number of target villages

No objection to the criteria which was applied by the JICA study team

Regarding criteria of the selection of the target village

No objection to the criteria which was applied by the JICA study team.

LIST OF PARTICIPANTS OF THE MEETING

(Tanzania side)

Mr. Christopher N. Sayi	Director, Division of Rural Water Supply (DRWS)

(Japanese Side)

JICA Study Team

Mr. Toshiyuki Matsumoto	Team Leader
Mr. Kensuke Ichikawa	Hydrogeologist

Minutes of Discussion

On the Criteria for the Prioritization of the Village

between

Ministry of Water and Livestock Development

and

JICA Study Team

September 6, 2005 Dar es Salaam

Christopher N. Sayi
Director, Division of Rural Water Supply
Ministry of Water and Live Stock Development

Toshiyuki Matsumoto
Team Leader,
JICA Study Team

1. Explanation on the Flow of Village Selection

At the end of the 1st stage of the Study on Rural Water Supply Study in Mwanza and Mara Regions (herein after the Study), a meeting was held on the 6th of September, at the office of Ministry of Water and Live Stock Development (herein after the MoWLD), between Director of Rural Water Supply Division (herein after the RWS) and JICA Study Team (herein after, the Team).

The Team stated that the total of 428 villages was selected for the formulation of Master Plan using the agreed criteria between the Team and the Tanzanian side, based on the discussion between the Team and the Counterpart Staff, Local Government Authorities and the RWSS, MoWLD. The Team proposed to prioritize the target village using the criteria explained and discussed in the Meeting on the Inception Report held on 20th of April 2005. The Team explained the flow by the flow chart presented in the ANNEX-1

The Team explained to the Tanzanian side that the criteria with some minor changes from that of the criteria suggested at the Meeting on the Inception Report, was applied to prioritization of the 200 villages. The reason of the selection of criteria, weighting and the scores are suggested as follows.

2. Selection of the criteria

The criteria applied to prioritize the village are summarized as follows;

1) Criteria on giving advantage for the village of lower access to the safe water

- Rate (percentage) of the served population in the village
- Absolute number of village population not having any access to the safe water
- The village which has no experience of the support by donors and NGO's and has no safe water source such as protected shallow well and borehole.

2) Criteria on effectiveness of project implementation

- Accessibility to the village
- Groundwater development potential

3) Criteria on willingness and/or availability to the water supply project

- Existence of Village Water Committee, Village Water Fund and/or Water Users Group.

3. Basic policies for the selection criteria

The importance of the criteria was set as follows

Priority A: the village of poor access or no access to the safe water

Priority B: effectiveness of project implementation

Priority C: willingness and/or availability to the water supply project

The weighting rate to the score is set as;

Priority A: Priority B: Priority C = 6:4:1

The minimum score (Priority C) is 4, therefore the total score in each prioritised criteria will be the rate of 24:16:4.

4. Scoring

Prioritisation is based on the scoring of each criteria tabulated in the following table.

Table 1 Criteria and Score for the Selection of Villages

Condition	Criteria	A	score	B	score	C	score	D	Score
1.Water Served	Served Population Rate (%)	0-29	10	30-49	5	-	-	-	-
	Absolute No of not served population	(Maximum –Minimum)/10 and range it from score of 1 to 10							
	No access to the safe water	4 points are given to the village with no safe source (SW, BH=0)							
2.Natural	Accessibility	Easy	6	Fair	4	Possible	2	Difficult	1
	Groundwater Development Potential	High	10	Slightly High	8	Medium	4	Low	1
3.Availability for Project	Existence of Village Water Committee	Yes	1	No	0	-	-	-	-
	Existence of Village Water Fund	Yes	2	No	0	-	-	-	-
	Existence of Water Users Group	Yes	1	No	0	-	-	-	-

Category for the natural condition was scored in accordance with the following definition.

1) Accessibility

A. Easy: The village along the main route (score **6**)

B. Fair: The village is easy to access from the main route, or along the branch route (score **4**)

C. Possible: Passable through the branch route (score **2**)

D. Difficult: Only small pass. Passable but difficult to access (score **1**)

2) Groundwater development potential

A. High: Based on plutonic, metamorphic rock or part of Neocene sediments and deposits, with

the good yield production well exists or existed at the vicinity. More than two clear lineaments are observed within 1km from the centre of the village (score **10**).

B. Slightly High: Based on plutonic, metamorphic rock or Neocene volcanic rock, clear lineament or more than two minor lineament can be found at the vicinity of the village (score **8**).

C. Medium: Based on plutonic or metamorphic rock, and clear or minor lineament are observed in the village (score **4**).

D. Low: Based on plutonic, metamorphic rock or sedimentary rock unit, without lineament or trace lineament can be found. Dry drilling hole or their records exist at the village (score **1**).

After the above criteria were applied, the total of 205 villages was selected as from the priority villages, and the village will be surveyed more detail both on natural condition of the water source and the socio-economical examinations. The list of 205 villages is presented in ANNEX-2

The issues discussed and the questions and comments from the Tanzanian side are as follows;

Regarding the selection criteria of the villages

1) The Tanzanian side questioned the meaning of defer the criteria of the served population rate and the absolute number of not served population. The Team answered that the served population rate indicates the rate of coverage by the individual village which represents the capability of water supply services in the village unit, while the absolute number of non served population indicates the total number of the population who are not served the water regardless of the served population rate. The Tanzanian side mentioned that they understood the meaning of the difference.

2) The Tanzanian side asked the reason of inclusion of the accessibility in the criteria. The Team answered that the prioritization shall be made on the bases of not only from the degree of the demand of water supply but also from the effectiveness of the project implementation. The Team mentioned that from the past experience on the rural water supply project, notable effort has been made to the transport of the heavy machinery and the materials to the village. Therefore it is inevitable to include the criteria of accessibility to demand the effective and smooth implementation of the project. The Tanzanian side agreed to add the accessibility to the criteria.

Regarding the prioritized village

1) The Tanzanian side agreed to the prioritization applying the criteria mentioned above. However, it is not agreed that the target village shall be narrowed down again by using additional criteria after the detail survey such as socio-economic survey and hydrogeological survey. They emphasized that if the final screening by the certain criteria, the number of total village shall be remained not to set the certain number such as 100 villages. The Team noted the comment, but mentioned that from the past experience on the project implementation, the limited budget allows the limited number of the villages to execute the project. While the Master Plan for the Rural Water Supply shall be prepared for 428 villages, the rest of the villages out of selected from the project implementation by Japanese Grant Aid can be follow up by the Government of Tanzania or other donors and NGO's. The Tanzanian side understands the situation, but the matter shall be discussed further.

LIST OF PARTICIPANTS OF THE MEETING

(Tanzania side)

Mr. Christopher N. Sayi	Director, Division of Rural Water Supply (DRWS)

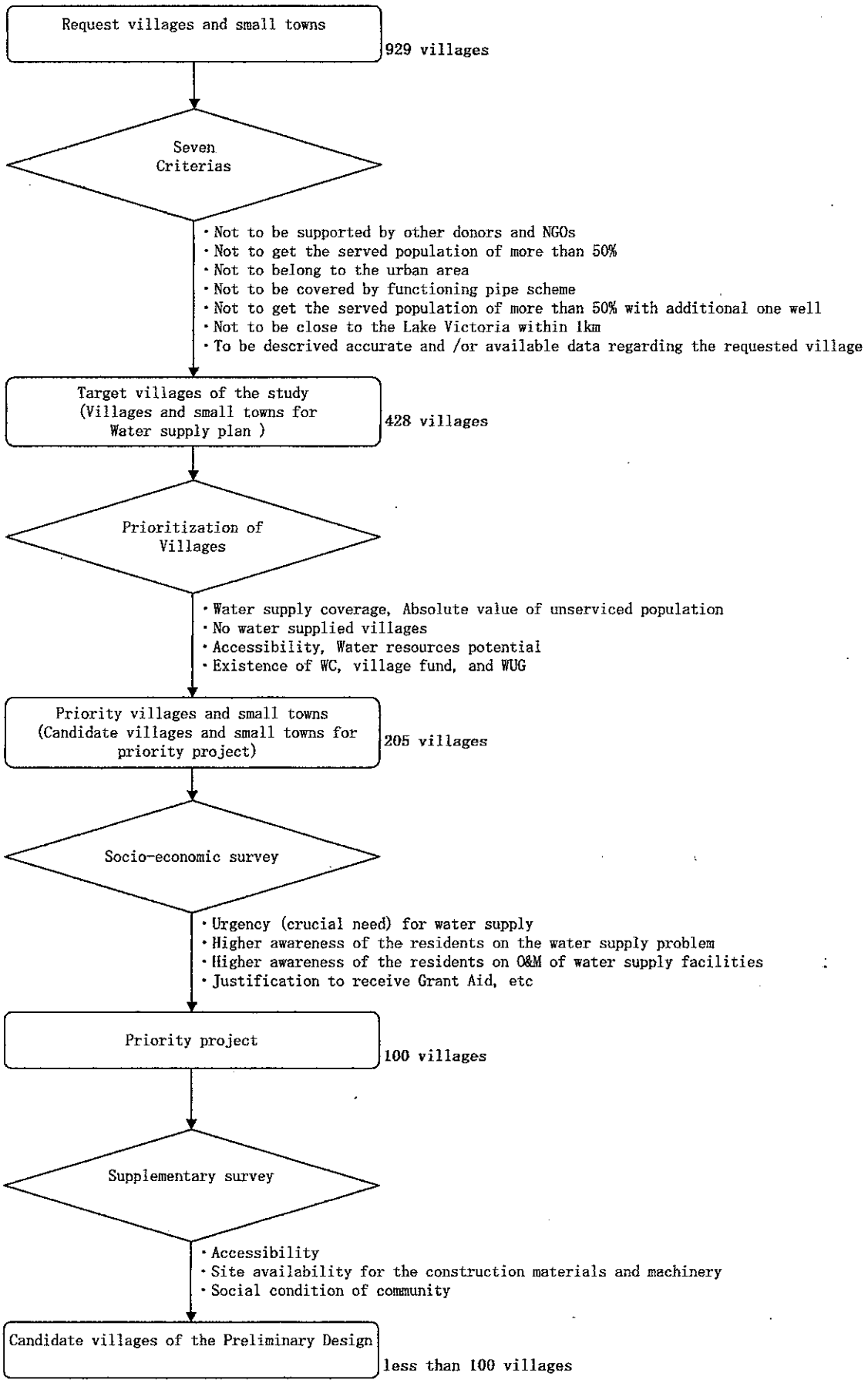
(Japanese Side)

JICA Study Team

Mr. Toshiyuki Matsumoto	Team Leader
Mr. Kensuke Ichikawa	Hydrogeologist

ANNEX-1 Flow Chart of the Selection of the Village
ANNEX-2 List of Prioritized 205 Villages

ANNEX-1 Flow Chart of the Selection of the Village



Flow Chart for Target Villages with Selection Criteria

ANNEX-2 List of Prioritized 205 Villages

LEGEND

Geology

Geological Map (Scale 1:125,000)

Ns	=	Alluvium	(Neogene Superfecias sand, gravel, silt and grey soils			
Ngr	=	Alluvium	(Talus and lateritic soils derived from granitic rocks)			
Nv	=	Volcanics Neogene	phnoliete		Nv	=
BO	=	Bukoban	sandstone shale and mud	——	B	=
V	=	Kavirondian	schist, congromerate, Quartzite	——	V	=
Zs	=	Volcanic Metasediment Group	schist, ironstone, rhyolite	}	Z	= Metasediment and Meta volcanic rocks
Zv	=	Basic Metavolcanics	metabasite, meta tuff, gneiss			
LGr	=	Late Orogenic Granites		}	G	= Ganite Group including part of weathered and talus deposits
Gr	=	Synorogenic Granites				
Ugr	=	Pre Nyanzanian Granites and Gneiss				

Geological Map (Scale 1:2,000,000)

N	=	Alluvium

Groundwater Development Potential

Topographical Feature = LV = Lake Victoria (distance from the lake (km))

Structure (Geological structure) Trace Linearment : weak linear identfied by the topo map

Minor Linearment : local linearment identified by topo map

Lineament (C-A) : Linearment identified by geological map (Clearness of linear (clear=A - weak=C))

Geological Boundary: Located close to the geological boundary

Fault : Along the fault indicated indicated in the geological map

Groundwater Development Potential

(Only identified by existing materials, data at 10 May 2005)

N = no potential for water development

L = low potential which the target exists at massive granite, drill data is not satisfactory

M = medium potential which has supporting data shows the potential of development

H = high potential from the past drilling record and geological feature

Access

A = On the major road

B = On the minor road or close to the major road

C = On the minor exsisting road but not clear

D = Trace road or not passable

Case1 200 Villages

Selection of the Villages (by Criteria) rev1

DISTRICT	Ward	No. by District	Village	Resistivity Sounding	Population in List (2004)	Population Served (%)	SCORE	Absolute Figure of non Served Population	SCORE	Existing Water Source						No safe watersource	SCORE	Access		SCORE	Geology	Groundwater Development Potential (at 10 May 2005. reference = Geological, Topographica)					Resistivity Sounding	Organization of Water use			SCORE	SUB-TOTAL of SCORE	PRIORITY
										Functional			Non Functional									Topographical Feature	Structure based on Geological Map	Linear ment	Existing Data	Potential			Availabity of W. Com.	VHF (T.Shs.)	Total No. WDC			
										SW	BH	Others	SW	BH				RANK																	
MISUNGWI	Igokelo	6	Mapilinga		2,423	11	10	2156	2	6	0		0	0	6		0	A	6	Ngr	Valley	-	MC2		M	8	RS	x	x		3	29	29
MISUNGWI	Buhingo	23	Kabale		3,527	7	10	3280	3	1	0		0	0	1		0	B	4	G	Lowland	-	-	96/117 (Q=2.4)	M	8		x			1	26	104
MISUNGWI	Busongo	25	Busongo		4,833	5	10	4591	4	0	1		0	0	1		0	B	4	G	Hillside	-	MC	26 (Q=9.1)	M	8	RS	x	x		3	29	30
MISUNGWI	Mbarika	27	Mbarika		2,874	17	10	2385	2	2	0		0	0	2		0	B	4	G	LV (2km)	-	MC3		M	8		x			1	25	138
MISUNGWI	Mbarika	28	Ngaya		3,816	13	10	3320	3	2	0		0	0	2		0	B	4	G	LV (2km)	-	C, MC3		M	8	RS			x	1	26	105
MISUNGWI	Usagara	30	Usagara		6,167	28	10	4440	4	7	0		2	0	9		0	A	6	G	Valley	-	Tr		L	4		x	x		3	27	74
MISUNGWI	Bulemeji	36	Mwalogwabagole		3,436	15	10	2921	3	2	0		0	0	2		0	A	6	G	LV (2km)	-	MC		L	4		x		x	2	25	139
SENGEREMA	Sengerema	5	Ibondo		5,011	5	10	4760	4	0	0		0	0	0	x	4	B	4	G	Valley	-	C		M	8					0	30	67
SENGEREMA	Sengerema	6	Busunganghole		2,072	0	10	2072	2	0	0		0	0	0	x	4	A	6	G	Valley	-	MC		L	4		x			1	27	75
SENGEREMA	Sima	8	Sima		4,430	16.9	10	3681	3	3	0		0	0	3		0	A	6	G	Valley	-	C, MC2		M	8		x			1	28	43
SENGEREMA	Sima	10	Igulumuki		4,891	0	10	4891	4	0	0		0	0	0	x	4	C	2	G	Lowland	-	MC		L	4	RS				0	24	171
SENGEREMA	Sima	11	Ijinga		1,676	0	10	1676	2	0	0		0	0	0	x	4	C	2	G	Hillside	-	C		M	8		x			1	27	76
SENGEREMA	Sima	13	Sogoso		3,344	0	10	3344	3	0	0		0	0	0	x	4	C	2	G	Hillside	-	MC, Tr		M	8		x			1	28	44
SENGEREMA	Tabaruka	14	Tabaruka		4,341	11.5	10	3842	3	2	0		0	0	2		0	A	6	G	Hillside	-	C		H	10					0	29	31
SENGEREMA	Tabaruka	18	Nyampande		2,732	9.2	10	2481	2	1	0		0	0	1		0	A	6	G	Hillside	-	C2		M	8				x	1	27	77
SENGEREMA	Busisi	23	Nyamasale		1,920	0	10	1920	2	0	0		0	0	0	x	4	A	6	G	LV (3km)	-	MC2		M	8					0	30	18
SENGEREMA	Busisi	24	Nyitundu		1,928	0	10	1928	2	0	0		0	0	0	x	4	A	6	G	LV (4km)	-	MC2		M	8					0	30	19
SENGEREMA	Busisi	26	Lubanda		2,220	0	10	2220	2	0	0		0	0	0	x	4	D	1	G	LV (3km)	-	MC		L	4		x	x		3	24	172
SENGEREMA	Katunguru	30	Juma kisiwani		1,813	0	10	1813	2	0	0		0	0	0	x	4	D	1	G	LV (1km)		MC2		M	8					0	25	136
SENGEREMA	Katunguru	31	Kasomeko		3,633	0	10	3633	3	0	0		0	0	0	x	4	C	2	G	LV (2km)	-	MC2		M	8		x			1	28	45
SENGEREMA	Nyamazugo	37	Mwaliga		1,235	0	10	1235	1	0	0		0	0	0	x	4	D	1	G	Hillside	-	MC		L	4		x	x	x	4	24	173
SENGEREMA	Nyamazugo	38	Kijuka		3,052	0	10	3052	3	0	0		0	0	0	x	4	C	2	G	LV (4km)	-	MC		L	4		x	x		3	26	105
SENGEREMA	Chifunfu	44	Nyakahako		4,921	0	10	4921	4	0	0		0	0	0	x	4	B	4	G	Lowland, LV (3km	-	MC		L	4		x			1	27	78
SENGEREMA	Bupandwa	59	Bupandwa		13,613	0	10	13613	10	0	0		0	0	0	x	4	B	4	Gr	Lowland, LV (3km	-	MC		L	4					0	32	2
SENGEREMA	Jgalula	67	Sotta		2,968	0	10	2968	3	0	0		0	0	0	x	4	D	1	Z	Hillside	-	MC	D (Q=4.7)	H	10		x	x		3	31	6
SENGEREMA	Buyagu	69	Isole		2,809	17.8	10	2309	2	2	0		0	0	2		0	C	2	G	LV (4km)	-	MC2	D (Q=0.7)	M	8		x	x		3	25	141
SENGEREMA	Buyagu	71	Bitoto		3,504	0	10	3504	3	0	0		0	0	0	x	4	C	2	G	-	-	MC2		M	8	RS				0	27	79
SENGEREMA	Buyagu	72	Kalangalanga		1,193	0	10	1193	1	0	0		0	0	0	x	4	C	2	G	Hillside	-	MC2		M	8		x			1	26	107
SENGEREMA	Buyagu	73	Mlaga		2,016	0	10	2016	2	0	0		0	0	0	x	4	B	4	G	LV (3km)	-	MC2		M	8			x		2	30	20
SENGEREMA	Nyanzenda	75	Buswelu		2,017	12.4	10	1767	2	1	0		0	0	1		0	C	2	Gr	Hillside	-	C, MC	182A (Q=2.3)	H	10		x			1	25	142
SENGEREMA	Nyehunge	79	Ruharanyonda		12,492	10	10	11243	9	5	0		0	0	5		0	B	4	Gr	Hillside	-			N	1					0	24	174
SENGEREMA	Nyehunge	80	Kayenze		4,311	23.2	10	3311	3	4	0		0	0	4		0	C	2	Gr	Valley	Fault (extention), G	C		M	8		x		x	2	25	149
SENGEREMA	Kalebezo	83	Busekeseke		2,576	0	10	2576	3	0	0		0	0	0	x	4	A	6	Gr	Valley	Lnr A		20 (D=79, Q=1.4)	M	8	RS				0	31	5
SENGEREMA	Kalebezo	84	Katoma		2,569	0	10	2569	3	0	0		0	0	0	x	4	C	2	Gr	Valley	GB, Lnr C			M	8					0	27	80
SENGEREMA	Kalebezo	86	Magulukenda		3,542	0	10	3542	3	0	0		0	0	0	x	4	A	6	Ns	Hillside	Lnr A, Gb	C		M	8	RS				0	31	7
SENGEREMA	Buzilasoga	87	Buzilasoga		2,340	10.7	10	2090	2	2	0		1	0	3		0	B	4	UGr	Valley	-	MC2		M	8					0	24	175
SENGEREMA	Buzilasoga	90	Kanyelele		1,724	0	10	1724	2	0	0		0	0	0	x	4	B	4	UGr	Hillside	-	MC		L	4		x			1	25	144
SENGEREMA	Nyakaliro	93	Bukokwa		5,348	0	10	5348	5	0	0		0	0	0	x	4	B	4	Ugr	LV (3km)	-	-		N	1					0	24	176
SENGEREMA	Kagunga	96	Nyancheche		4,298	0	10	4298	4	1	0		0	0	1		0	B	4	G	Valley	-	MC2		M	8	RS	x		x	2	28	46
SENGEREMA	Kagunga	97	Nyanzumla		3,494	0	10	3494	3	0	0		0	0	0	x	4	D	1	G	Hillside, Valley	-	MC2		M	8					0	26	108
SENGEREMA	Nyakasasa	99	Nyamiswi		3,925	0	10	3925	4	0	0		0	0	0	x	4	C	2	Ns	Hillside, LV (3km	-	MC		L	4					0	24	177
SENGEREMA	Nyakasasa	100	Nyakasasa		8,097	0	10	8097	7	0	0		0	0	0	x	4	D	1	G	Hillside, LV (3km	-	MC, Tr		L	4					0	26	109
SENGEREMA	Lugata	104	Lugata		9,303	0	10	9303	8	0	0		0	0	0	x	4	C	2	Ns	Hillside	-	Tr		N	1					0	25	145
SENGEREMA	Kazunzu	106	Lushamba		9,021	0	10	9021	8	0	0		0	0	0	x	4	B	4	Gr	LV (3km)	-	-		N	1				x	1	28	47
SENGEREMA	Kazunzu	108	Bulyaheke		6,361	0	10	6361	5	0	0		0	0	0	x	4	B	4	LGr	LV (2km)	-	Tr		N	1					0	24	178
SENGEREMA	Kazunzu	110	Ilyamchele		3,104	0	10	3104	3	0	0		0	0	0	x	4	B	4	Gr	Valley, LV (4km)	-	MC2		M	8				x	1	30	21
SENGEREMA	Kazunzu	115	Isengeng'he		1,603	0	10	1603	2	0	0		0	0	0	x	4	C	2	Ngr	Lowland	-	Tr		M	8	RS				0	26	110
KWIMBA	Hungumalwa	22	Hungumalwa		4,883	35	5	3174	3		7				7		0	A	6	G	Flatland	GB	Tr	D (Q=22.9)	H	10	RS	x	x	x	4	28	48
KWIMBA	Hungumalwa	25	Ilula		3,022	16	10	2538	2	1	1				2		0	A	6	G	Valley	-	MC		L	4		x	x		3	25	146
KWIMBA	Mwamala	34	Igumangobo		1,726	0	10	1726	2						0	x	4	C	2	G					L	4		x	x		3	25	147
KWIMBA	Mhande	44	Izizimba A		3,490	0	10	3490	3						0	x	4	B	4	G	Hillside	-	-		L	4					0	25	148
KWIMBA	Mhande	45	Izizimba B		2,616	0	10	2616	3						0	x	4	B	4	G	Hillside	-	-		L	4			x		2	27	81
KWIMBA	Fukalo	55	Sanga		3,145	0	10	3145	3						0	x	4	B	4	G	Flatland	-	Tr		L	4	RS				0	25	149
KWIMBA	Nugulila	69	Nyamatala		3,259	7	10	3031	3	1					1		0	C	2	Ngr/Gr	Hillside	GB	C, MC2		M	8	RS			x	1	24	179
KWIMBA	Nugulila	71	Mhulya		2,101	0	10	2101	2						0	x	4	C	2	Ns	Valley	-	MC2		M	8					0	26	111
KWIMBA	Mwabomba	72	Mwangika		1,936	13	10	1684	2	1					1		0	B	4	Ns/Gr	Valley	-	MC2		M	8		x			1	25	150

DISTRICT	Ward	No. by District	Village	Resistivity Sounding	Population in List (2004)	Population Served (%)	SCORE	Abusolute Figure of non Served Population	SCORE	Existing Water Source						No safe watersource	SCORE	Access		Geology	Groundwater Development Potential (at 10 May 2005, reference = Geological, Topographical)						Resistivity Sounding	Organization of Water use				SUB-TOTAL of SCORE	PRIORITY
										Functional			Non Functional															Availability of W. Com.	VHF (T.Sh.s.)	Total No. WDG			
										SW	BH	Others	SW	BH				RANK	SCORE		Topographical Feature	Structure based on Geological Map	Linearment	Existing Data	Potential	SCORE						
KWIMBA	Iseni	84	Nqwaswengele		2,413	0	10	2413	2						0	x	4	B	4	Gr	Valley	-	MC3		M	8					0	28	49
MAGU	Kisesa	38	Kitumba		5,274	14.2	10	4525	4			3			3		0	C	2	LGr	Flatland	-	MC	34/1-11 (Q=4.8)	H	10		x	x	x	4	30	22
MAGU	Mwamanyili	44	Bulima		6,138	24.4	10	4640	4			2			2		0	B	4	Ngr	Hillside, LV(2km)	-	Tr		L	4		x		x	2	24	180
MAGU	Shigala	50	Ihayabuyaga B		3,137	8	10	2886	3			1			1		0	A	6	Gr	Flatland	GB	MC		L	4	RS			x	1	24	184
MAGU	Mkula	75	Kijereshi		5,909	8.4	10	5413	5			2			2		0	C	2	Ngr/Ns	Flatland	GB	MC2		M	8	RS	x		x	2	27	82
GEITA	Nzera	2	Igate		6,050	12	10	5324	5	0	0		0	0	0	x	4	B	4	UGr	Valley	-			L	4					0	27	88
GEITA	Nzera	3	Idosero		6,025	13.1	10	5236	5	0	0		0	0	0	x	4	D	1	LGr	Valley	Lnr C, GB			M	8					0	28	50
GEITA	Nzera	4	Lwenzera		6,751	11.7	10	5961	5	0	0		0	0	0	x	4	A	6	UGr	LV (4km), Hillside	-	C		L	4					0	29	32
GEITA	Nzera	5	Nzera		8,643	20.2	10	6897	6	7	0		3	0	10		0	B	4	Ugr/Ngr	LV (4km), Hillside	-	MC		L	4					0	24	182
GEITA	Senga	6	Buligi		6,172	14.8	10	5259	5	0	0		0	0	0	x	4	B	4	Gr	Valley	GB			L	4					0	27	84
GEITA	Senga	8	Kakubilo		6,171	19	10	4999	4	0	0		0	0	0	x	4	C	2	UGr	Valley	Lnr C			M	8	RS				0	28	51
GEITA	Senga	9	Nyabalasana		5,090	16.3	10	4260	4	0	0		0	0	0	x	4	C	2	UGr	Hillside	GB	MC		M	8					0	28	52
GEITA	Senga	10	Kaseni		4,890	11.5	10	4328	4	0	0		0	0	0	x	4	B	4	Gr	LV (2km), Valley	-	MC		M	8					0	30	20
GEITA	Nkome	14	Nyamboge		7,248	17	10	6016	5	0	0		0	0	0	x	4	B	4	Ugr/Ngr	LV (3km), Valley	-	C		M	8					0	31	8
GEITA	Kagu	17	Bugulala		11,955	6.3	10	11202	9	0	0		0	0	0	x	4	B	4	Gr	LV (2km)	-	MC		M	8					0	35	1
GEITA	Kagu	18	Kasota		11,953	7.8	10	11021	9	0	0		0	0	0	x	4	B	4	Ngr/Gr	Hillside	GB	MC		L	4					0	31	9
GEITA	Kagu	19	Nyamilongo		11,958	19	10	9686	8	0	0		0	0	0	x	4	C	2	Ngr	Flatland		MC		L	4					0	28	56
GEITA	Kamena	22	Kamera		3,153	15.2	10	2674	3	0	0		0	0	0	x	4	C	2	Ngr	Hillside	-	MC		L	4				x	1	24	188
GEITA	Kamena	23	Busisi		3,154	16.7	10	2627	3	0	0		0	0	0	x	4	D	1	Ngr	Valley	-	MC2		M	8		x		x	2	28	54
GEITA	Kamena	24	Ndelema		3,301	13.2	10	2865	3	0	0		0	0	0	x	4	C	2	LGr	Valley	-	C		M	8					0	27	85
GEITA	Kamena	25	Nyashishima		3,053	15.7	10	2574	3	0	0		0	0	0	x	4	C	2	LGr	Hillside	-	MC, Tr		L	4		x	x	x	4	27	86
GEITA	Bukoli	26	Bogogo		5,314	13	10	4623	4	2	1		0	0	3		0	B	4	Ngr	Hillside	Lnr A	C, MC		M	8				x	1	27	87
GEITA	Bukoli	27	Ikina		4,114	23.9	10	3131	3	0	0		0	0	0	x	4	B	4	Ngr	Valley	Lnr A	MC2		M	8	RS				0	29	38
GEITA	Bukoli	29	Ntono		4,118	19	10	3336	3	0	0		0	0	0	x	4	C	2	Ngr	Valley	Lnr A	MC2		M	8		x			1	28	55
GEITA	Bukoli	30	Ihega		4,050	28.5	10	2896	3	0	0		0	0	0	x	4	B	4	LGr	Hillside	-	MC2		M	8					0	29	33
GEITA	Nyarugusu	32	Nyaruyeye		4,860	31	5	3353	3	0	0		0	0	0	x	4	B	4	Ngr	Valley	Lnr A, GB	MC2		M	8					0	24	162
GEITA	Nykamwaga	40	Kasungamile		3,682	29.5	10	2596	3	0	0		0	0	0	x	4	C	2	Ngr	Hillside	-	MC3		M	8				x	1	28	58
GEITA	Katoro	42	Ibondo		5,606	25.9	10	4154	4	0	0		0	0	0	x	4	D	1	UGr	Valley	-	C, MC		M	8					0	27	89
GEITA	Nyachilululuma	53	Kasangwa		3,416	15.5	10	2887	3	0	0		0	0	0	x	4	D	1	Ngr	LV (2km)	-	MC		M	8					0	26	102
GEITA	Nyachilululuma	54	Isima		4,231	19.5	10	3406	3	0	0		0	0	0	x	4	D	1	Ngr	LV (3km)	-	MC		M	8					0	26	103
GEITA	Kharumwa	63	Ikangala		2,546	19.6	10	2047	2	0	0		0	0	0	x	4	B	4	G	Flatland	-	MC2		M	8	RS	x		x	2	30	24
UKEREWE	Igalla	3	Bwasa		7,578	6.5	10	7085	6	2					2		0	C	2	LGr/Ngr	LV (<2km)	-			M	8					0	26	104
UKEREWE	Bukanda	12	Namasabo		2,546	0	10	2546	2						0	x	4	B	4	Ngr	-	GB	MC		M	8					0	28	57
UKEREWE	Muriti	14	Bugala		7,308	27.4	10	5306	5	8					8		0	C	2	LGr,Ngr	Valley, LV (3km)	-	MC		H	10		x		x	2	29	35
UKEREWE	Muriti	16	Ihebo		3,662	6.8	10	3413	3	1					1		0	B	4	Ngr	Valley, LV (3km)	-	MC2		M	8				x	1	26	105
UKEREWE	Ilangala	38	Masonga		5,578	5	10	5299	5	4					4		0	C	2	Ngr	LV (2km)				M	8				x	1	26	106
UKEREWE	Bukindo	51	Kweru		5,140	0	10	5140	5						0	x	4	D	1	Ngr/LGr	LV (<2km)				H	10					0	30	25
UKEREWE	Bukindo	58	Bulamba		4,661	0	10	4661	4						0	x	4	B	4	Ngr	Hillside		MC		L	4					0	26	108
UKEREWE	Ngoma	68	Nantare		1,944	0	10	1944	2						0	x	4	C	2	Lgr/Ngr	LV (2km)	-			H	10					0	28	56
UKEREWE	Ndulima	73	Buhima		5,280	0	10	5280	5						0	x	4	B	4	LGr/Ngr	Valley	-	MC2		M	8					0	31	10
NYAMANGA & ILEMI	Igoma	2	Kishili		6,285	25	10	4714	4	5			2		7		0	B	4	G	Valley	-	MC		M	8		x		x	2	28	59
BUNDA	Mugeta	18	Sanzate		2,849	17.6	10	2348	2	1			2		3		0	B	4	Ns/Ngr	Valley	-	MC2	D (Q=3.6)	H	10		x			1	27	89
BUNDA	Mugeta	19	Nyang'aranga		2,849	0	10	2849	3	2			2		4		0	B	4	Ns	Flatland	-	-	D (Q=2.5)	L	4		x	x	x	4	25	164
BUNDA	Sazira	26	Ligamba B		2,510	10	10	2259	2	1			1		2		0	B	4	Ngr	Hillside	-	MC2	D (Q=8.0)	H	10	RS	x			1	27	90
BUNDA	Mcharo	33	Mcharo		2,200	11.36	10	1950	2	1			1	1	3		0	B	4	LGr	Hillside	GB	Tr	D (Q=40.0)	H	10		x			1	27	91
BUNDA	Butimba	51	Buzimbwa		2,564	0	10	2564	3						0	x	4	A	6	Ngr	LV (3km)	GB	MC		L	4					0	27	92
BUNDA	Nansimo	84	Nafuba		2,775	0	10	2775	3						0	x	4	D	1	Zs	LV (2km), Nafuba	-	MC		H	10					0	28	60
BUNDA	Igundu	88	Namalama		1,412	0	10	1412	2						0	x	4	B	4	Ns	LV (2km), Hillside	-	MC		L	4					0	24	185
MUSOMA	Nyamimange	6	Sirorisimba		3,100	0	10	3100	3	3			1		4		0	B	4	Zv/Ugr	Hillside	Fault extention	MC2	D (Q=9.0)	M	8		x			1	26	110
MUSOMA	Bwiregi	8	Ryamisanga		3,414	18	10	2799	3	3	2		1	2	8		0	C	2	Ugr	Valley	-	MC2	D (Q=8.6)	M	8		x	x	x	4	27	93
MUSOMA	Buhemba	15	Magunga		3,368	0	10	3368	3	1			1		2		0	B	4	Ngr	Hillside	-	MC	D (Q=2.0)	M	8				x	1	26	109
MUSOMA	Butuguri	20	Busegwe		4,638	0	10	4638	4						0	x	4	B	4	Gr	Valley	-	Tr, MC		L	4					0	26	120
MUSOMA	Butuguri	21	Kisamwene		2,339	0	10	2339	2						0	x	4	B	4	LGr	Valley	-	C, Tr		M	8		x	x		3	31	11
MUSOMA	Bukabwa	23	Bukabwa		2,793	0	10	2793	3						0	x	4	B	4	Ugr	Valley	-	MC2		M	8		x			1	30	26
MUSOMA	Bukabwa	24	Mmazami		3,808	0	10	3808	3						0	x	4	A	6	LGr	Hillside	-	MC2	D (Q=2.4)	L	4		x			1	28	61
MUSOMA	Bukabwa	25	Kirumi		2,357	0	10	2357	2						0	x	4	B	4	Ugr/Ns	Valley	-	MC3		M	8				x	1	29	66

Case1 200 Villages

Selection of the Villages (by Criteria) rev1

DISTRICT	Ward	No. by District	Village	Resistivity Sounding	Population in List (2004)	Population Served (%)	SCORE	Absolute Figure of non Served Population	SCORE	Existing Water Source						No safe watersource	SCORE	Access		Geology	Groundwater Development Potential (at 10 May 2005. reference = Geological, Topographica)						Resistivity Sounding	Organization of Water use			SUB-TOTAL of SCORE	PRIORITY
										Functional			Non Functional					RANK	SCORE		Topographical Feature	Structure based on Geological Map	Linear ment	Existing Data	Potential	SCORE		Availabity of W. Com.	VMF (T-Sh+)	Total No. WUG	SCORE		
										SW	BH	Others	SW	BH																		
MUSOMA	Bukabwa	28	Bwaikumsoma		5,828	0	10	5828	5						0	x	4	C	2	Gr	LV (2km)	-	MC, Tr2		M	8	RS				0	29	37
MUSOMA	Suguti	31	Chirorwe		2,483	0	10	2483	2						0	x	4	C	2	Gr/Zs	Hillside	GB	MC2		M	8					0	26	121
MUSOMA	Nyambono	33	Bugoji		4,339	22	10	3384	3	4			1		5		0	B	4	Ns/Gr	Hillside	GB	C, MC2, Tr	D (Q=4.0)	M	8		x			1	26	122
MUSOMA	Nyambono	35	Saragana		3,557	9	10	3237	3	1					1		0	C	2	Ns	Lowland	GB	MC, Tr	295/2000 (Q=10.0)	H	10		x			1	26	123
MUSOMA	Nyambono	36	Kaburabura		1,711	0	10	1711	2						0	x	4	B	4	Ns	Flatland	GB	Tr		N	1		x	x		3	24	186
MUSOMA	Masaba	46	Nyasirori		2,694	21	10	2128	2	3			1		4		0	C	2	Zw/Nf	Flatland	-	MC2		M	8			x		2	24	167
MUSOMA	Kinyariri	47	Nyamikoma		4,045	27.5	10	2933	3	6			1		7		0	A	6	LGr	Hillside	-	MC		L	4			x		2	25	152
MUSOMA	Nyankanga	52	Nyarukoru		1,123	0	10	1123	1						0	x	4	D	1	LGr	Valley	-	MC2		M	8					0	24	168
MUSOMA	Nyankanga	53	Bisumwa		3,712	0	10	3712	3						0	x	4	B	4	LGr	Hillside	-	MC, Tr	D (Q=36.0)	H	10				x	1	32	8
MUSOMA	Nyankanga	54	Nyabekwabi		4,090	0	10	4090	4						0	x	4	B	4	LGr	Hillside	-	Tr		M	8				x	1	31	12
MUSOMA	Buruma	55	Isaba		3,024	20	10	2419	2	2					2		0	A	6	LGr	Valley	-	C, MC		M	8				x	1	27	94
MUSOMA	Buruma	56	Songora		3,024	20	10	2419	2	2					2		0	B	4	Gr	Valley	-	C3		M	8					0	24	169
MUSOMA	Buruma	58	Ryamugabo		2,100	0	10	2100	2						0	x	4	C	2	Gr/Ns	Valley	-	C, MC		M	8					0	26	124
MUSOMA	Murangi	65	Musanja		3,921	0	10	3921	4						0	x	4	C	2	Zw/Ns	Hillside	-	Tr		N	1		x	x	x	4	25	153
MUSOMA	Bukima	67	Butata		4,983	0	10	4983	4						0	x	4	B	4	Ns	LV (2km)	-	Tr	D (Q=2.0)	N	1		x			1	24	190
MUSOMA	Bukima	69	Rusoli		2,831	0	10	2831	3						0	x	4	D	1	Ngr	Valley, LV (3km)	GB	MC		M	8	RS	x		x	2	28	62
MUSOMA	Bukima	70	Kwikerege		970	0	10	970	1						0	x	4	D	1	Ngr	Valley	-	MC2		M	8		x			1	25	164
MUSOMA	Bukumi	72	Bukumi		2,915	0	10	2915	3						0	x	4	D	1	Ngr/LGr	Valley, LV (3km)	Lnr C			H	10					0	28	69
MUSOMA	Tegeruka	75	Tegeruka		2,236	28	10	1610	2	2	1			1	4		0	C	2	Gr	Valley	-	MC, C	D (Q=0.03)	M	8		x	x	x	4	26	125
MUSOMA	Makojo	84	Makojo		2,087	0	10	2087	2						0	x	4	C	2		Valley	-	MC, C		M	8					0	26	126
MUSOMA	Etaro	92	Mkirira		2,624	0	10	2624	3						0	x	4	B	4	LGr	Hillside	-	Tr	D (Q=2.5)	M	8		x			1	30	27
MUSOMA	Etaro	93	Rubuka		2,016	0	10	2016	2						0	x	4	C	2	Ns	Valley, LV (2km)	-	Tr		M	8					0	26	127
MUSOMA	Nyakatende	97	Kiemba		3,174	0	10	3174	3						0	x	4	C	2	Ns	LV (2km)	-	-		M	8					0	27	95
MUSOMA	Nyakatende	98	Kigera		7,077	0	10	7077	6						0	x	4	C	2	Ns/Gr	LV (2km)	-	Tr	D (Q=25.0)	M	8		x		x	2	32	4
MUSOMA	Kiriba	103	Kiriba		2,751	13	10	2393	2	1					1		0	C	2	Gr/Ns	LV (2km), Valley	GB	C		M	8	RS	x	x		3	25	155
TARIME	Turwa	7	Nkende		4,580	13.1	10	3980	4	5			3		8		0	A	6	Zv	Hillside		MC		L	4					0	24	191
TARIME	Turwa	8	Magena		2,428	24.7	10	1828	2	5			3		8		0	A	6	Nv	Hillside		MC2		M	8		x		x	2	28	64
TARIME	Nyarero	15	Kemakorere		3,119	0	10	3119	3						0	x	4	B	4	Nv	Valley	Fault	C2		M	8				x	1	30	28
TARIME	Nyarero	16	Nyarero		2,118	14.2	10	1817	2		1				1		0	B	4	Nv/SD	Valley	Along Fault line, GB	C2		M	8	RS			x	1	25	156
TARIME	Nyarero	17	Soroneta		2,340	0	10	2340	2						0	x	4	C	2	Zv	Hillside	Fracture	MC2		M	8					0	26	128
TARIME	Nyarero	18	Rosana		3,629	8.3	10	3328	3	1					1		0	B	4	Nv	Valley	Fault	C2		M	8					0	25	157
TARIME	Nyakonga	19	Magoto		3,680	0	10	3680	3						0	x	4	B	4	Gr	Hillside		C2		M	8					0	29	38
TARIME	Nyakonga	22	Kebweye		2,012	0	10	2012	2						0	x	4	C	2	Ns	Hillside	-	MC2		M	8					0	26	129
TARIME	Kibesuka	23	Nyarwana		3,915	0	10	3915	4		1			1	2		0	B	4	Nv/Ns	Valley	Fault, Fissure, Lnr C			H	10		x			1	29	39
TARIME	Kibesuka	24	Nyankunguru		3,105	0	10	3105	3						0	x	4	B	4	Gr/Nv	Valley	Fault, Fissure			H	10					0	31	13
TARIME	Kibesuka	25	Wegita		3,416	0	10	3416	3						0	x	4	B	4	Ns	Hillside	Fault			H	10					0	31	14
TARIME	Muriba	32	Nyantira		4,180	7.2	10	3879	4	3			2		5		0	C	2	Nv/LGr	Hillside	GB	C, MC2		M	8		x			1	25	158
TARIME	Nyanungu	33	Mangucha		6,409	4.7	10	6108	5	2			1		3		0	C	2	Nv	Valley	-	MC2		M	8					0	25	159
TARIME	Nyanungu	35	Kegonga		4,310	6.9	10	4013	4	2			1		3		0	C	2	Nv	Hillside	-	MC2		M	8					0	24	192
TARIME	Nyarukoba	37	Genkuru		5,349	0	10	5349	5	1			1		2		0	D	1	Nv	Valley	LNR C	MC		M	8					0	24	193
TARIME	Gorong'a	40	Masanga		3,250	0	10	3250	3						0	x	4	D	1	Nv	Valley	-	MC2		M	8					0	26	130
TARIME	Matongo	41	Matongo		4,970	0	10	4970	4						0	x	4	D	1	LGr	Flatland	Fissure,GB	MC		M	8					0	27	96
TARIME	Kemange	44	Kiwanja		2,501	24	10	1901	2	4			2		6		0	C	2	Mb	Valley	Lnr C, GB	MC2		M	8		x	x		3	25	160
TARIME	Sirari	50	Ng'ereng'ere		3,500	0	10	3500	3	3			3		6		0	A	6	LGr	Valley		C, MC		M	8					0	27	97
TARIME	Pemba	51	Getenga		2,127	0	10	2127	2	1			1		2		0	B	4	LGr	Hillside	Fault and its Fissure	MC		M	8	RS				0	24	194
TARIME	Pemba	55	Nyabisaga		2,717	0	10	2717	3	1			1		2		0	B	4	LGr	Valley	Fault, GB, Lineame	C, MC	Drill 32 (D=70 Q=8)	H	10	RS				0	27	98
TARIME	Susuni	57	Kiongera		2,865	0	10	2865	3						0	x	4	C	2	Gf	Valley		MC2		M	8					0	27	99
TARIME	Susuni	58	Nyabirongo		2,606	0	10	2606	3						0	x	4	C	2	LGr	Valley		MC		L	4		x			1	24	195
TARIME	Susuni	59	Kikomori		2,624	0	10	2624	3						0	x	4	C	2	Gf	Valley		MC2		M	8					0	27	100
TARIME	Susuni	60	Kubiterere		2,513	0	10	2513	2						0	x	4	B	4	Gr	Hillside	Fracture	C, MC		M	8					0	28	65
TARIME	Susuni	61	Korotambe		3,280	0	10	3280	3						0	x	4	B	4	Gf	Valley		MC2		M	8					0	29	40
TARIME	Susuni	62	Nyamhunda		2,419	0	10	2419	2						0	x	4	B	4	Gr	Hillside	GB	C, MC		M	8					0	28	66
TARIME	Nyandoto	64	Nkerege		1,989	0	10	1989	2	1			1		2		0	B	4	NGr/Nv	Valley	Fault	Tr2		M	8					0	24	196
TARIME	Nyandoto	65	Nyagisya		2,603	0	10	2603	3	1			1		2		0	D	1	Z	Hillside	GB	MC2		H	10					0	24	197
TARIME	Nyandoto	66	Gamasara		2,513	11.9	10	2214	2	1					1		0	B	4	V	Hillside	Lnr C, GB	MC		M	8					0	24	198
TARIME	Manga	69	Sombanyasoko		2,016	14.9	10	1716	2	2			1		3		0	C	2	Ns	Hillside		C, MC		M	8		x	x		3	25	161

DISTRICT	Ward	No. by District	Village	Resistivity Sounding	Population in List (2004)	Population Served (%)	SCORE	Abusolute Figure of non Served Population	SCORE	Existing Water Source						No safe watersource	SCORE	Access		Geology	Groundwater Development Potential (at 10 May 2005, reference = Geological, Topographical)					Resistivity Sounding	Organization of Water use				SUB-TOTAL of SCORE	PRIORITY
										Functional			Non Functional					RANK	SCORE		Topographical Feature	Structure based on Geological Map	Linear ment	Existing Data	Potential	SCORE		Availability of M. Com.	VWF (T.Shs)	Total No. WUG	SCORE		
										SW	BH	Others	SW	BH																		
TARIME	Manga	71	Bisarwi		1,812	16.6	10	1511	2	2			1		3		0	B	4	Zv	Valley	Lnr C, GB	Tr		M	8					0	24	199
TARIME	Eumera	74	Kiterere		1,680	0	10	1680	2						0	x	4	B	4	V	Hillside	Fault	MC		M	8					0	28	67
TARIME	Koryo	81	Utegi		2,013	14.9	10	1713	2	3	1		2	1	7		0	A	6	Zv	Hillside	-	MC2		M	8					0	26	131
TARIME	Ikoma	92	Ikoma		1,750	0	10	1750	2						0	x	4	B	4	Gr	Hillside	-	MC2		M	8					0	28	68
TARIME	Kisumwa	94	Kisumwa		1,988	15.1	10	1688	2	2			1		3		0	C	2	Ngr	Flatland	-	-		M	8		x	x		3	25	102
TARIME	Kisumwa	95	Nyanchabakenye		2,480	12.1	10	2180	2	3			2		5		0	B	4	Gr	Valley	Fissure, Lineamen	Tr		H	10	RS				0	26	132
TARIME	Nyahongo	108	Lolwe		2,509	0	10	2509	2						0	x	4	B	4	LGr	Valley	-	C, MC		L	4					0	24	200
TARIME	Nyahongo	112	Nyankonge		1,980	0	10	1980	2						0	x	4	C	2	LGr/Gr	Valley	-	MC		M	8					0	26	135
TARIME	Nyahongo	113	Omoche		2,506	0	10	2506	2						0	x	4	B	4	LGr	Hillside	-	C		L	4					0	24	201
TARIME	Bukura	117	Kirongwe		1,760	0	10	1760	2						0	x	4	B	4	Gr	LV (2km), Flatlan	-	MC		M	8		x	x		3	31	15
TARIME	Bukura	119	Thabache		3,319	0	10	3319	3						0	x	4	B	4	Gr	Valley	-	C, MC		M	8					0	29	40
TARIME	Nyamagaro	120	Kyangasaga		3,850	0	10	3850	4						0	x	4	C	1	Gr/Ns	LV (2km), Valley		MC		M	8					0	27	104
TARIME	Nyamagaro	122	Muharago		3,619	0	10	3619	3						0	x	4	B	4	Gr	LV (5km), Valley	-	MC		L	4					0	25	168
TARIME	Kirogo	127	Bureta		1,413	0	10	1413	2						0	x	4	C	2	LGr	LV (2km), Lowlan	-	MC2		H	10					0	28	69
TARIME	Kirogo	128	Radienya		1,319	0	10	1319	2						0	x	4	B	4	Gr/LGr	LV (5km), Hillside	-	MC2		M	8					0	28	70
TARIME	Kirogo	129	Masike		987	0	10	987	1						0	x	4	C	2	LGr	Hillside	-	MC, C		M	8	RS				0	25	164
TARIME	Kirogo	130	Randa		1,018	0	10	1018	1						0	x	4	A	6	Gr	Valley	GB	MC2		M	8					0	29	42
TARIME	Kirogo	131	Bukama		1,350	0	10	1350	2						0	x	4	B	4	LGr	Valley	-	MC2		M	8					0	28	71
TARIME	Mkoma	133	Raranya		3,309	0	10	3309	3						0	x	4	C	2	LGr	Valley	Fault	C, MC		M	8	RS	x			1	28	72
TARIME	Nyamtinga	135	Busanga		2,141	0	10	2141	2						0	x	4	C	2	LGr	Valley	-	MC3		M	8					0	26	133
TARIME	Nyamtinga	136	Manira		1,983	0	10	1983	2						0	x	4	B	4	Gr/LGr	LV (5km), Hillside	-	MC2		M	8					0	28	73
TARIME	Nyamtinga	137	Nyarombo		2,808	10.7	10	2508	2		1				1		0	B	4	LGr	Hillside	GB	MC2		M	8		x			1	25	165
TARIME	Nyamtinga	138	Rwang'enyi		2,560	11.7	10	2260	2	1					1		0	ω	4	Gr/LGr	LV (5km), Hillside		MC2		M	8					0	24	202
TARIME	Rabour	144	Oliyo		5,088	0	10	5088	4	1			1		2		0	A	6	Ns/Gr	Flatland	GB	MC, Tr		M	8	RS	x	x		3	31	16
TARIME	Mirare	151	Ryagoro		3,065	0	10	3065	3						0	x	4	C	2	Zw	Hillside	-	MC2		M	8					0	27	103
TARIME	Mirare	152	Balongo		2,617	0	10	2617	3						0	x	4	B	4	Nf	Hillside	GB	MC2		L	4					0	25	166
TARIME	Mirare	154	Sudi		1,895	0	10	1895	2						0	x	4	C	2	LGr	Hillside	Fault			M	8					0	26	135
TARIME	Goribe	155	Nyamsi		2,450	0	10	2450	2						0	x	4	D	1	Gr	Hillside	GB	MC, C		M	8					0	25	167
TARIME	Goribe	156	Panyakoo		3,200	9.4	10	2899	3	2			1		3		0	B	4	Gr	Hillside	GB	MC2		M	8					0	25	168
TARIME	Goribe	157	Tatwe		2,701	0	10	2701	3						0	x	4	C	2	UGr	Hillside	-	MC, C		M	8					0	27	105
SERENGETI	Natta	5	Kono		948	0	10	948	1						0	x	4	D	1	Bo	Valley	Fissure	MC		M	8					0	24	205
SERENGETI	Ring'wani	35	Nyamitita		1,616	6.05	10	1518	2						0	x	4	D	1	Bo	Flatland	GB	MC		M	8					0	25	169
SERENGETI	Busawe	37	Busawe		1,173	0	10	1173	1						0	x	4	C	2	Bo	Hillside	Lnr C, GB	MC		M	8		x			1	26	133
SERENGETI	Kibanchabancha	66	Nyansurura		2,986	4.72	10	2845	3	2	1		2	1	6		0	B	4	BO/Bg	Hillside		MC2		M	8	RS				0	25	170
SERENGETI	Kibanchabancha	67	Kebancha		4,822	6.2	10	4523	4	4			3		7		0	C	2	Bo	Valley	-	C		M	8	RS		x		2	26	137
UKEREWE	Ndulima	72	Halwego		6,554	7.6	10	6056	5	2					2		0	C	2	Ngr	Hillside	-	-		L	4					0	21	301
MUSOMA	Masaba	45	Kwigutu		3,188	10	10	2869	3	1					1		0	C	2	Nz/Zs	Hillside	-	MC	D (Q=10.0)	L	4		x			1	20	330
																															35	
																															24	

Minutes of Discussion

between

Ministry of Water and Livestock Development

and

JICA Study Team

December 8, 2005 Dar es Salaam

Christopher N. Sayi
Director, Division of Rural Water Supply
Ministry of Water and Live Stock Development

Toshiyuki Matsumoto
Team Leader,
JICA Study Team

Series of discussions were held on 6th and 7th of December, 2005 between the Ministry of Water and Livestock Development (herein after referred to as the MoWLD) and the JICA Study Team on the Rural Water Supply Study in Mwanza and Mara Regions herein after referred to as the Study Team) on the outcome of the Draft of Interim Report. The main streams and issues discussed between both parties are summarized as follows.

The Study Team has explained the outline of the contents of the Draft of Interim Report. The MoWLD has already gone through with the document which was sent by the study team in advance, and they stated that outline of the contents were acknowledged. The detail explanation has been mainly made on the selection of the water source in the area, the water supply plan and its cost. Other issues on the socio economy, O& M and natural conditions are noted as no further comment on these items.

The explanations by the Study Team are as follows;

1. Water source which was used as the water supply in the project was Lake Victoria and groundwater. The other source was not included in the plan due to its risk on the water quality and unstable provision of the water throughout a year.
2. Total of 428 villages and 57 piped schemes were examined as water supply planning. The total numbers covered by the water supply plan was 619 as the village number, and 1,486 as the facilities including hand pump (1,366 units) and piped scheme (Number of 120).
3. The water supply plan was made in complying with the Tanzanian National Water Policy. The target was classified into the following three terms;
    1) Short term target on the year of 2015, to fulfill 100% for the high priority villages
    2) Mid term target on the year of 2020, to fulfill 100% of served population for the 428 villages and 57 piped schemes.
    3) Long term target on the year of 2025 to fulfill 90% of served population for the other requested villages out of 428 villages and 57 piped schemes.
4. The estimated total cost for the project implementation.

1. Water Resource

The MoWLD inquired about the possibility of use of river water. The Study Team explained that permanent river in the study area is only two, of which the water level tends to fluctuate throughout a year and the water quality is not suitable for drinking purpose. The purification plant and intake facility from the river shall be required. The construction cost for the river water intake shall be higher compared with the other water source. Therefore, the river water was not considered as the

reasonable water source for rural water supply in the study area. This opinion was acknowledged and agreed by the MoWLD.

The Study Team made further reference to the groundwater development potential, that the study area will be categorized into difficult area on its potential with respect to the discharge and water quality. The MoWLD has explained about the difficulties they encountered on recent practices in the difficult area. The MoWLD made inquiry about the possibility of executing further test drilling to ensure the yield and water quality at the candidate villages for Level 2 system. In reply to the inquiry, the Study Team stated that the additional test drilling shall be a practical study for determination of not only Level 2 site but also for understanding detail hydrogeological backgrounds. The Study Team mentioned that they cannot promise to execute the further drilling at this stage, but will seek possibility of drilling additional test holes.

2. Selection of the Villages

The MoWLD has expressed that the work flow of the selection and its criteria is understood. However, they mentioned that it is difficult to understand that further reduction will be made from prioritized 100 villages and 17 piped schemes. They also requested to make basic design to all of the prioritized villages and piped schemes without narrowing down. The Study Team has suggested that they cannot make any promise at this stage, but they shall try to do all as for the basic design. The MoWLD again stated that the study area includes 12 Districts and 2 Regions, the number of less than 100 is not satisfying their thought.

The MoWLD also mentioned on the imbalance of the number of selected villages among the districts. They expressed their concern about the complaints among those districts with few villages. The Study Team replied that the selection was made fairly based on the detail survey and the information in reference to the list submitted by the Districts. Therefore, the most critical villages for the water supply condition were selected. The Study Team emphasized that after the discussion with the counterpart members, they visited all districts to explain the result of selection. Even some district expressed disappointment on the number of selected villages, they finally accepted the criteria and the method of selection.

3. Water Supply Plan

The Study Team has explained about the work flow of target selection. The Study Team emphasized that total of 428 villages and 57 piped schemes are considered for the water supply plan. The process

of the selection of the candidate village is again explained.

The Study Team emphasized that for the achievement of Millennium target (90% of served population in 2025) and the concept of the National Water Policy 2002 (75% of served population in 2015) provided by the Tanzania Government, the water supply plan shall be classified into three phases; 1) Short term target (among 100 villages and 17 piped schemes), 2) Mid term Target (rest of the villages among 428 villages and 57 piped scheme excluded in the short term targeted villages) 3) Long term target (other villages out of 428 and 57 schemes).

The Study Team has suggested that the Short term target might be implemented by the grant aid project by the Japanese Government if the project would be approved by the Japanese Government. However, the water supply program for the rest of the villages (Mid term and Long term target) shall be implemented by the arrangement of Tanzanian Government with support from the donor countries.

The MoWLD expressed that the idea could be accepted, and appreciated that the work conducted by the Study Team. The MoWLD also mentioned that achievement of the target which is written in their policy is most critical issue, and the water supply plan for the 428 and 57 schemes shall be helpful to the achievements of the goal even it shall be implemented by their country.

4. The Financial Aspects for the Water Supply Plan

The Study Team has stated that the total estimated cost for the over all project shall be 149 million US dollars. The Study Team suggested the draft of financial allocation for the budgeting of the project by the actual spending and support from the donor countries referring to the past reports (ANNEX 1).

The MoWLD mentioned that the total of 149 million US dollars is not surprising amount considering the served population at the end of the project (87 USD per Capita).

The MoWLD explained the capability to prepare the budget by the Tanzanian Government using the example of several cases; 1) AfDB project costs 24 million dollars spending in 3 years for 18 villages (342 USD per Capita) 2) Shinyanga Project spending 176 million USD for 3 years. The MoWLD expressed their confidence to prepare such fund to achieve the Millennium target.

5. Served Population per Source

The Study Team mentioned that the population was calculated based on the potential exploitation of 288 persons per source from the possible discharge. The MoWLD expressed that the number shall cause the decrease of facility number with the comparison of 250 persons per source.

The policy of 250 persons per source has been decided based on the future increase of the population and the incurred future O&M and rehabilitation costs. Therefore, unless otherwise the Study Team should prepare the reasonable explanation that the source and facility can provide a longer life, so that the figure shall remain as 250 persons per source. The Study Team mentioned that the number will be modified into 250 instead of using 288 served population per source.

LIST OF PARTICIPANTS OF THE MEETING

(Tanzania side)

Mr. Christopher N. Sayi	Director, Division of Rural Water Supply (DRWS), Ministry of Water and Livestock Development
Mr. Reuben Kwigizile	Assistant Director, Division of Rural Water Supply (DRWS), Ministry of Water and Livestock Development

(Japanese Side)

JICA Study Team

Mr. Toshiyuki Matsumoto	Team Leader
Mr. Kensuke Ichikawa	Hydrogeologist

ANNEX 1

Financial Plan (Chapter 9.4 of the Interim Report)

9.4 Financial Plan

9.4.1 Government Budget for rural water supply

The government budget allocated for the development of the rural water supply increased from 8.9 million USD in fiscal year (FY) 2002/03 to 23 million USD in FY2004/05, including allocation of a development fund for Shinynanga/Kahama Water Supply Project. The trend of the government budget for the water sector during the three fiscal years is presented in the following table.

Table 9.4-1: Development Budget for MoWLD during the past three years

Items	FY2002/2003 Budget		FY2003/2004 Budget		FY2004/2005 Budget	
	Internal	External	Internal	External	Internal	External
Research, Planning, and Training	955,041	2,888,573	752,000	4,469,307	697,958	3,845,100
Urban Water Supply & Sewerage	1,075,902	17,904,342	4,285,714	12,368,571	27,033,333	42,000,901
Rural Water Supply	1,038,825	7,861,447	1,425,501	17,888,190	1,271,429	21,953,773
Veterinary Services	373,333	1,069,280	268,457	938,636	271,429	840,857
Animal Construction	153,919	2,746,150	418,667	4,663,238	437,143	1,238,095
Total	3,597,020	32,469,792	7,150,339	40,327,942	29,711,292	69,878,726
Grand Total		36,066,812		47,478,281		99,590,018

Note: FY = fiscal year
Source: MoWLD Unit: (USD)

As shown in the table above, the external budget is shown rising tendency from the year 2003, and it will be expected the internal budget hereafter for the water development also increases in accordance with the operation of NRWSSP.

9.4.2 Grant Allocation to Local Government Authorities

Grant allocation is made from the central government to local government authorities in the form of grant. Recurrent grant is allocated to cover operation and maintenance costs at the district level, which includes the cost of monitoring local access to safe water and the implementation of new water schemes. Development grant is also allocated for the development of social services including the water sector. Grant allocation to local governments in Mwanza and Mara regions is presented in the following table.

Table 9.4-2: Grant Allocation to Local Government Authorities for Water Sector in Mwanza and Mara Regions

Unit: Tsh (Tanzanian shillings)

City/District	Item	2002/2003	2003/2004	2004/2005 Estimate
Mwanza city	Recurrent	0	0	NA
	Development	2,500,000	5,000,000	NA
Ukerewe	Recurrent	2,500,000	5,000,000	38,456,800
	Development	4,000,490	4,563,400	NA
Sengerema	Recurrent	9,000,490	14,563,400	111,557,200
	Development	11,373,400	10,373,400	NA
Geita	Recurrent	29,374,380	39,500,200	52,456,600
	Development	24,373,400	25,000,000	NA
Kwimba	Recurrent	83,122,160	104,000,400	84,539,000
	Development	NA	Na	NA
Magu	Recurrent	166,244,320	208,000,800	105,967,400

	Development	10,000,000	10,000,000	NA
Misungwi	Recurrent	176,244,320	218,000,800	72,171,400
	Development	9,373,500	12,033,400	NA
Musoma	Recurrent	65,606,600	74,011,700	NA
	Development	NA	9,000,000	NA
Serengeti	Recurrent	73,778,600	85,954,300	NA
	Development	NA	NA	NA
Tarime	Recurrent	174,342,300	189,460,800	NA
	Development	NA	NA	NA
Bunda	Recurrent	199,175,300	215,871,600	NA
	Development	8,400,000	8,000,000	NA

Source: MoWLD

Note: (1) NA = data are not available. (2) Recurrent costs include such costs as basic salaries, per diem, travel, electricity, rural water supplies, water connection, spare parts, lubricant, petrol, etc.

9.4.3 Financial Sources for the Project

a. Project Costs

Project costs have been estimated on the basis of market prices as of October 2005. The Project costs comprise the costs for drilling works, construction of water supply systems (including water intake, water storage facilities, distribution lines, service pipes, public faucets, boreholes, hand-pumps and platforms), engineering services and administration.

Base costs of the Project amount to 114.97 million U.S. dollars (USD), and total project costs including engineering services, administration expenses and physical contingency amount to USD 149.4 million (refer to Section 9.2). Out of the total amount, cost estimation of hand pump, including protection spring is 23 million USD, that of newly piped scheme is 27 million USD, and the estimated cost of the rehabilitation and expansion of the existing schemes is 99 million USD.

b. Financial Sources

Financial resources for the Project will be derived from the government budget and financial assistance from foreign countries and/or international lending institutions. Although the funds from the government (central as well as local government authorities) and water charges collected from beneficiaries will not be sufficient to cover the major part of the capital costs, the latter (water charges to be collected) will contribute significantly to the recovery of operation and maintenance costs.

For instance, a sample of External Support Agency (ESA) is indicated in the Table 9.4-3 on the investment of a year 2004/2005. However, an external investment cost of approximately USD 19.5 million was utilized in the Phase 3 of Hai District Water Supply Project and the AfDB total project's budget is approximately 24 million USD.

Table 9.4-3: Major GOT-ESA Investment in RWSS-2004/2005 (NRWSSP)

No.	ESA	Name of Project	ESA Support (USD)
		New Projects	
1	IDA/World Bank	RWSSP (12 districts)	8,913,200
2	France(AFD)	Small Towns WSSP	179,400
		Expansion	
3	Japan (JICA)	Mtwara/Lindi WSS Project (8 districts)	2,735,400
4	Germany	Hai District WS Project (1 district)	936,300
		Rehabilitation	
5	AfDB	Monduli WS Project (1 district)	1,318,400
6	Netherlands	Shinyanga Rural WS Programme (7 districts)	3,139,000
7	Germany	East Kilimanjaro WS Project (2 districts)	1,636,000
	total		18,857,700

b.1 Financing of Capital Costs

It is the policy of the Government of Tanzania that the Government shall finance the capital costs of water supply programs under the condition that each local community concerned will be responsible for operation and maintenance costs of the water supply system.

In consideration of the size of the capital costs and the current financial status of the government of Tanzania, financial assistance from foreign sources will be indispensable to implement the proposed plan. External assistance in terms of grant aid or loans will be necessary to cover the entire foreign currency portion (about 75%) and a part of the local currency portion of the Project costs.

Although the annual disbursement schedule of the project costs has not been finalized yet, it is expected that annual budget allocation will be approximately 6 million USD for the cost of hand pump and newly piped scheme, and approximately 12 million USD for the cost of rehabilitation or expansion works for the existing piped schemes. The water supply plan could be achieved by securing those budgets. Therefore, at the initial years, the plan of hand pump and newly piped scheme will be executed and the plan of the existing piped scheme will be subsequently conducted in accordance with the availability of the required budget.

b.2 Government and Community Contributions

b.2.1 Budget Allocation for the Project

The Government will be responsible for financing a major part of the capital costs for the implementation of the Project. The budget allocation for the Project will be arranged by MoWLD in collaboration with relevant district councils in Mwanza and Mara regions.

b.2.2 Financing of Operation and Maintenance Costs

Relevant district councils in Mwanza and Mara regions and village governments in the target villages will be responsible for operation and maintenance costs of water supply facilities including water intake, reservoirs, borehole wells, pipelines and pumps.

Relevant district councils will give technical as well as financial assistance for the target villages through DWEs and CDOs (community development officers). Each village government of the target villages will establish a water tariff system and water supply organizations (e.g. water committee) at the village as well as sub-village level in order to recover the cost for operation and maintenance of the relevant water supply system.

Village water committees (VWCs) in the target villages will be responsible for operation and maintenance of the water supply system in the forms of water fee and voluntary labor.

b.2.3 Provision of Project Staff

District councils will provide technical and administrative staff necessary for implementation of the Project through DWE and CD offices. DWEs will take action to recruit some technical staff (e.g. hygiene education experts) from other departments when necessary.

Minutes of Meeting
on
Steering Committee
for
The Study on Rural Water Supply in Mwanza and Mara Regions
in
the United Republic of Tanzania

Agreed Upon between

Steering Committee Members

and

JICA Study Team

May 4, 2006 Mwanza

Christopher N. Sayi
Chairman of Steering Committee
Director, Division of Rural Water Supply
Ministry of Water

Toshiyuki Matsumoto
Team Leader,
JICA Study Team

The first Steering Committee for the year of 2006 was held on 4th May 2006, between the Steering Committee members and the JICA Study Team on the Rural Water Supply Study in Mwanza and Mara Regions (herein after referred to as the Study Team) on the outcome of the Study after the completion of supplementary survey in the 2nd Phase of the Study.

A program of the Steering Committee and a list of participants are attached in ANNEX 1 and ANNEX 2 respectively.

The main streams and issues discussed between both parties are summarized as follows.

The Study Team has explained the outline of the activities up to date, and the achievements through the supplementary survey made in the phase II. The detailed explanations have been made on mainly outcome of supplementary survey and a draft of selection of the candidate villages.

The explanations made by the Study Team are as follows;

1. Outline of the Study up to date.
2. Natural conditions and supplementary hydrogeological survey.
3. Results of operation and maintenance survey in 100 villages.
4. Selection of the Villages and piped schemes for priority project.

The explanations by the Team were understood and accepted by the members of the Steering Committee.

After the presentation of supplementary survey result, the following questions were made,

1. Has the survey on willingness to pay considered community contribution towards capital investment and operation and maintenance cost.
2. Why the analysis was made in Japan without considering the local resources of Tanzanian staff
3. Why have the river sources been not considered as there area a number of projects utilizing river water.
4. What is the background of setting 70 l/min for good yielding borehole.

The Study Team answered to the respective questions as follows;

For the question 1, the Team explained that the contribution from communities is included in survey on willingness to pay.

For the question why the analysis was made in Japan, the Study team explained that the consultation and the technical transfers were already made in Tanzania, and some of analyses weres made in

Japan in accordance with the project schedule.
For the question on utilizing of the river water, the Team repeated that the concept of selecting the water source is based on its sustainability (volume), availability (through a year) and safety (quality). From the analysis of the data of rivers in the study, the river water availability and quality was found to be a problem. Therefore the river water was not included.
For the question of the yield of 70l/min, the Study Team explained that the number has come from the water demand to provide around 3,000 people by a borehole through the motorized pump.

The Study Team explained that the final number of villages selected for the priority project is 45. About the remaining 55 villages, the Team explained that they cannot promise at this stage, but shall make effort to include specification for the village water supply. After explanation on the selection of the candidate village, the chairman asked each C/P leader about their comments on it.

Comments from Mwanza C/P Leader

1. So many times the number of villages has been reduced by criteria. He cannot agree on these frequent reductions considering that a community in the hundred villages has been sensitized and both Regional and Districts Administration have been informed that the hundred villages is financed through this program.
2. The Study Team should reconsider the use of other water sources besides lake water and groundwater.
3. There were several discrepancies on the figures between the Progress Report and Interim Report.

Comments from Mara C/P Leader

1. Request to include the shallow wells as the construction cost is not high.
2. Capacity building was narrowly done. The C/P expected to have more technical transfers.
3. Criteria of village accessibility and zero coverage for Mara villages should be reassessed.

The Study Team explained that the procedures of the selection were frequently explained to C/P personnel in every event. It was therefore expected that this procedures were known and acceptable to them. However due to budget constraints the number of villages for the priority project had to come down to 45 villages.

The other comment from the participants of steering committee was as follows;

1. Knowing that the Kwimba District has serious problem on the water, why few villages were

selected in Kwimba

The Team answered that the selection was made in accordance with the criteria which was agreed upon. The Team also mentioned that it is not acceptable to discuss about the concept of the selection of criteria at this stage, as the issue has been frequently discussed.

The chairman emphasized that members of the meeting should look at the way the concept has been developed to arrive at the proposed water sources.

2. There are a number of on going capacity building programs from regional to village level. It is suggested that the Team should utilize these programs.

The Team agreed on this suggestion.

The chairman asked further comments and suggestions to the presentations made by the Team. There were no further comments on these issues.

At the final presentation, the Study Team presented the further program for project which will be finalized in August 2006. The Team Leader asked the participants for further assistance and cooperation to the Study.

The Steering Committee members accepted the request from the Study Team.

The chairman announced the close of the meeting.

ANNEX 1

Programme

Steering Committee Meeting
for The Study on Rural Water Supply in Mwanza and Mara Regions in the United Republic of Tanzania

Date: 4 May, 2006
Kipepeo Hall, New Mwanza Hotel

Introduction

9:10～ 9:20	Opening Remarks	Mr C.N Sayi

Part 1: Results of Supplementary Survey

9:20～ 9:40	Speech from JICA Study Team and Outline of Study	Mr Matsumoto
9:40～ 10:10	Results of Natural Conditions	Mr Ichikawa
10:10～ 10:30	Results of Operation and Maintenance Survey in 100 Villages	Ms Imai
10:30～ 11:00	Tea Break	

Part 2: Analysis and Discussion

11:00～ 11:30	Selection of Villages and Piped Schemes for Priority Project	Mr Matsumoto
11:30～ 11:45	Comments of C/P in Mwanza Region	Mr W. Nkanwa
11:30～ 12:00	Comments of C/P in Mara Region	Mr Nkwande
12:00～ 13:00	Discussion	
13:00～ 14:00	Lunch	
14:00～ 14:10	Further Studies for Stage 2 and 3 for DF/R	Mr Matsumoto

Closing of meeting

14:10～ 14:20	Closing Remarks	Mr W. Nkanwa

ANNEX 2

Paticipant List of Steering Committee Meeting for Rural Water Supply Plan in Mwanza and Mara
Results of Supplementary Survey and Finalization of Priority Villages and Existing Piped Schemes

Thursday 4 May 2006 (Kipepeo Hall, New Mwanza Hotel 09:00-16:00)

List of Attendance			
No.	Name	Member	Institution
1	Mr. C.N. Sayi	SCM	Director of Rural Water Supply, MoW
2	Mr. L. Mpanda	SCM	Assitant Director of Water Resources, MoW (AC)
3	Mr. G.T. Nyenza	SCM	Director of Policy and Planning, MoW
4	Mr. R.N. Kwigizile	Observer	Assitant Director of Rural Water Supply, MoW
5	Mr. Jason Kababi	Observer	Enginner
6	Mr. B. M. Nkwande	SCM& C/P	RAS Mara
7	Mr. Wales Nkanwa	SCM& C/P	RAS Mwanza
8	Mr. Msafiri Nyandiga	SCM	DED Bunda
9	Mr. Josephat Ngodagula	SCM	DED Serengeti
10	Mr. Felix Mboje	SCM& C/P	DED Musoma (R)
11	Mr. Suleman Kiyenze	SCM	DED Misungwi
12	Mr. Tummimo Ieien	SCM	DED Geita(AC)
13	Mr. Thomas Mwenba	SCM	DED Sengerema(AC)
14	Mr. R. H. Karugwa	SCM	DED Kwimba
15	Mr. Henry Salala	SCM	DED Magu
16	Mr. Sumbuka Buluba	SCM& C/P	DED Illemela
17	Mr. Lusekelo Mwambuli	Mwanza C/P	LVBWO Mwanza
18	Mr. Faustini Songo	Mwanza C/P	LVBWO Mwanza
19	Mr. J. Kyamba	Mwanza C/P	RAS Mwanza
20	Mr. Daniel Mkare	Mwanza C/P	RAS Mwanza
21	Mr. William Mabula	Mara C/P	LVBWO Mara
22	Mr. Sariro Mwita	Mara C/P	LVBWO Mara
23	Mr. Dimoso Mmba	Mara C/P	LVBWO Mara
24	Ms. Edith Nyeme	Mara C/P	DED Musoma (R)
25	Ms. Mary Masenza	Mara C/P	DED Bunda
26	Mr. Lucas Misana	Mara C/P	LVBWO Musoma
27	Mr. Toshiyuki Matsumoto		JICA Study Team Leader
28	Mr. Kensuke Ichikawa		JICA Study Hydrogeologist
29	Ms. Risako Imai		JICA Study Team Sociologist
30	Ms. Oliva Ally		JICA Study Team Assistant

*SCM: Steering Committee Member
*C/P: Counterpart Personnel

MINUTES OF MEETING
ON
THE DRAFT FINAL REPORT
FOR
THE STUDY ON RURAL WATER SUPPLY
IN MWANZA AND MARA REGIONS
IN THE UNITED REPUBLIC OF TANZANIA

In response to the official request of the Government of the United Republic of Tanzania (hereinafter referred to as "the Government of Tanzania"), the Japan International Cooperation Agency (hereinafter referred to as "JICA") dispatched the Preparatory Study Team. The Japanese side and the Tanzanian side came to an agreement on the Scope of Work (hereinafter referred to as "S/W") and signed it on November 29, 2004.

JICA sent to Tanzania the JICA Study Team (hereinafter referred to as "the Team") for THE STUDY ON RURAL WATER SUPPLY IN MWANZA AND MARA REGIONS (hereinafter referred to as "the Study") from April 20, 2005. The Team held a series of meetings with the officials of Ministry of Water (hereinafter referred to as "MoW") and other authorities concerned on the Study, and conducted the site surveys.

In the course of discussions, both sides confirmed the main items described on the attached sheets.

Dar es Salaam, July 17, 2006

Mr. Christopher N. Sayi
Director,
Division of Rural Water Supply (DRWS),
Ministry of Water (MoW)
The United Republic of Tanzania

Mr. Toshiyuki MATSUMOTO
Team Leader,
JICA Study Team,
Japan

Attachment

1. **Explanation of Draft Final Report (DF/R)**

The Team submitted the Draft Final Report (Summary 25, Main 25, Supporting 11 and Data book 3 copies) to the Division of Rural Water Supply (DRWS) on June 28, to the Counterpart (C/P) in Mwanza on June 29 and to the C/P in Mara on July 3, 2006 in accordance with the Implementing Arrangement agreed upon between the Government of Tanzania and JICA on November 29, 2004.

The C/P and the Team held seminars on DF/R in Mwanza and Mara on July 12 and 14, respectively. The C/P and the Team shared an opportunity to explain the Study and the DF/R in the seminars. The participants and the presenters had discussion on their presentation.

The DRWS and the Team had a discussion on July 17, 2006 and the Team reported about the discussion in the seminars (see ANNEX1).

Major issues and the contents regarding the DF/R are as follows;

1) The Team explained that the Tanzanian side compiles and submits comments, questions and corrections on the DF/R to the Team within one month by the middle of August 2006. The Team will make clarifications on the comments, and reflects them in the Final Report (F/R).
2) Both sides agreed that JICA would also present comments on DF/R but the Team will explains the comments and modification to the Tanzanian side before editing the F/R.
3) The Team confirmed that no duplication of project villages was observed in both regions between the Priority Project and the National Rural Water Supply and Sanitation Programme (NRWSSP).

2. **Served population rate for water supply plan**

The Team explained on the service coverage rate both on the water supply plan and the priority project. The target rate was 75% in the year of 2015.

The Tanzanian side disagreed to this service coverage rate of 75%, and requested to make it 100% coverage.

The Team accepted to apply this rate, and agreed to make necessary amendments to the water supply plan and the plan for the priority project.

3. **Service coverage with hand pumps under the Priority Project and the Water Supply Plan**

The Team explain that the service coverage in the villages supplied with hand pumps under the priority project resulted in the range of 18 and 100 percent because sufficient drilling sites in Mwanza and Mara regions were not secured.

However, the Tanzanian side mentioned that the service coverage rate is too low for the villages and this figure is not acceptable. The coverage rate should be aimed at achieving 100% in those villages.

The Team emphasised that even though the service coverage is too low, it is worthwhile to execute the plan in the villages where there is no water source.

The Tanzanian side mentioned that the water supply should aim at achieving 100% service coverage to avoid further problem for the water source.

The Team mentioned that they will make effort to allocate more boreholes in the village to raise the coverage rate to more than 70%, with re-examination of the natural condition.

4. **Explanation of the F/R to other donors**

Both sides agreed that the Tanzanian side will explain the concept of the F/R to other donors for the further implementation and will allocate a proper amount of budget to the regions as described in NRWSSP.

The Team especially required that the Tanzanian side deliver a copy of F/R to the World Bank and explain the implementation schedule.

5. **Implementation schedule of Water Supply Plan**

The Team explained that it is impossible to complete the implementation of the water supply plan by 2015 considering the expected annual disbursement of 20 million USD for construction of water supply facilities. Therefore the Team suggested the implementation schedule of the water supply plan to achieve the coverage of 78% in 2025 in accordance with the annual disbursement for the project cost.

The Tanzanian side agreed with the implementation schedule of the water supply plan.

6. **Other relevant issues**

1) The Team asked to the Tanzanian side to request JICA for the procurement of equipments used in the study in earliest stage if it is required.
The Tanzanian side mentioned that they will do so.

ANNEX1 Discussion memo of the Counterpart Seminar on DF/R in Mwanza and Mara Regions, the attendance list and programme.

LIST OF PARTICIPANTS OF THE MEETING

(Tanzania side)

Mr. Christopher N. Sayi	Director, Division of Rural Water Supply (DRWS), Ministry of Water
Mr. Reuben Kwigizile	Assistant Director, Division of Rural Water Supply (DRWS), Ministry of Water

(Japanese Side)

JICA Study Team

Mr. Toshiyuki Matsumoto	Team Leader
Mr. Kensuke Ichikawa	Hydrogeologist
Mr. Shoji Masumura	Socioeconomist

ANNEX 1

The Discussions on the Draft Final Report

1-1 Seminar on Draft Final Report in Mwanza Region

The questions, suggestions and comments from the participants and answers from the JICA Study Team and the counterpart were as follows;

Q1: Is the amount of water fee of Tsh 10,000 per month affordable for the water users in the target villages as explained by the O&M expert?
Answer: The team replied that the water fee amount is not Tsh 10,000 but Tsh 1,000 per month, and the questioner admitted his misunderstanding.

Q2: All the relevant districts should form DWST and get the support from RWST.
Answer: All the participants agreed to this comments.

Q3: Why the total project life can be estimated until 2025 while the JICA expected to support only 3 years for the implementation?
Answer: The water supply plan was made based on the internal budget allocation and expenditure by the foreign donors in reference with the report provided by the RWSSP. Therefore, the water supply plan is the expectation of the study to be implemented by the Tanzanian government. It shall be emphasized by the LGUs to the central government to conduct the projects in accordance with the water supply plan formulated by the study. The study team will also inform the head of the Rural Water Supply and Sanitation Department of MOW to conduct the water supply plan as formulated in the study.

Q4: What kind of action can be taken for the JICA test wells? Can it be utilized by the villages?
Answer: The team replied that some of the test wells can be utilized by Tanzania side on the conditions that the letter from Tanzania side should be submitted for the request of release of property, and the notification would be issued on the amount of discharge and the water quality to inform weather the test wells can be further utilized by the Tanzanian side.

Q5: The spare parts can be managed by the District level. But it should be subsidized nation wide supported by the central government. However, NAWAPO 2002 states that the government would not support for the maintenance. Can JICA suggest the central government to support to

facilitate the spare parts?

Q6: It seems that the piped schemes with the water source from the Lake Victoria would involve relatively expensive methods (such as two riser pumps). Is it possible for the study team to propose much cost effective methods using new technology?
Answer: Because of the complex topographical feature and the water quality which was revealed in the study, it is advised to follow the consent of the facility design made by the study. Main reason of getting relatively high cost facility is due to the necessity of construct the filtering process.

Q7: According to some of the counterpart members, they think that the technical transfer was not sufficient. Then, that means the technical assistance from the local members would be poorly made. Please consider close communication between donors.
Answer: Not only the study team but also the counterpart members agreed to make effort for the further communication.

Q8: Regional population data as mentioned in the main report should be revised as the 2002 census data have been updated.
Answer: The team agreed to revise the regional population data on the basis of the updated census data.

In addition to the answer from the team and counterpart members, the representative of JICA headquarters commented as follows;

1) For the question of the commencement of the implementation, the representative commented that it is relatively difficult to say exact date of the implementation due to the issues are controlled by the discussion and decision between the Japanese government and the Tanzanian government.
2) In regard to the Q5 about recommendation to the central government to take over the responsibility of the spare parts supply chain in nation wide, it is difficult to make such a recommendation as it is the national strategy. However, the suggestion can be given to the authority of rural water supply. The spare parts can be prepared 5 years after the completion of the implementation phase, but it is not possible to follow up these spare parts by the (Japanese private) Contractors. Therefore, some time in the future, the Tanzanian government should procure those spare parts.

3) In regard to the Q4 about the right to use the test wells, as it is still in the study phase, the property of the test wells are belong to the property of JICA. However, receiving official letter from the Tanzanian government, the properties of the wells will be released. The study team will provide the list of wells which can be utilized by the Tanzanian side, from the view point of future implementation, discharge rate and water quality.

The study team also mentioned that they prepared to accept further comments and questions until middle of August 2006. Therefore, it is advised that these comments and questions shall be informed to the team so that the opinions will be reflected to the Final Report of the Study.

1-2 Seminar on Draft Final Report in Mara Region

The questions, suggestions and comments from the participants and answer from the JICA Study Team and the counterpart were as follows;

Q1: On the issue of water supply, do those pump types for the piped scheme use the same specification or maker pump? If not, it will be affected to the kind of spare parts and O&M cost.
Answer: The specification of the pump will be the same in all Districts.

Q2: Total cost for the project seems to be expensive. Will it accommodate with the budget of MOW in regard to their budget?
Answer: The water supply plan was made based on the internal budget allocation and expenditure by the foreign donors in reference with the report provided by the RWSSP. Therefore, the water supply plan is the expectation of the study to be implemented by the Tanzanian government. It shall be emphasized by the LGUs to the central government to conduct the projects in accordance with the water supply plan formulated by the study. The study team will also inform the head of the Rural Water Supply and Sanitation Department of MOW to conduct the water supply plan as formulated in the study.

Q3: How about using the polyethylene tank instead of using concrete tank or steel tank?
Answer: The team mentioned that polyethylene tank may be easily deteriorated. Therefore, considering the sustainability of the facility, the concrete tank is most cost effective.

Q4: In the figure of institution DPLO is not included. DPLO is still playing important role as an actor for rural water supply.
Answer: The team agreed to include DPLO in the institutional framework as it should play an

important role in DWST.

Q5: According to the NAWAPO 2002 or other instruction from the central government, it is understood that WUG shall form WUA regardless of facility type. How does it accommodate in the water supply plan?
Answer: Any WUGs can form the WUAs according to the regulations in Tanzania. The team proposed to establish a WUA for each piped scheme and a WUG for each hand pump facility. The team also proposed that each VWC should play a leading role to establish these water users' organizations.

Q6: Plates and marks during the survey period in the study, those marks are frequently removed by the local people. It is advised that the local administration shall instruct them not do so.
Answer: It is advised that the Region and District should work closely. In addition, CDO shall visit the villages in the initial stage of the project to make them aware of the sprit of the owner ship and DWO should support the technical aspects in regard to the facility. CDO and DWO shall also work closely for the future development of the water supply project in the rural area. All the participants agreed to this comments.

The study team also mentioned that they prepared to accept further comments and questions until middle of August 2006. Therefore, it is advised that these comments and questions shall be informed to the team so that the opinions will be reflected to the Final Report of the Study.

Programme

Seminar on Draft Final Report in Mwanza region

The Study on Rural Water Supply in Mwanza and Mara Regions
in the United Republic of Tanzania

Date: 12 July 2006
Kipepeo Hall, New Mwanza Hotel

9:00～ 9:10	Opening Remarks	Mr Nkanwa
9:10～ 9:20	Speech from JICA	Mr Aoki

Part 1 Result of DF/R

9:20～ 9:35	Summary of DF/R	Mr Matsumoto
9:35～ 9:50	Natural Conditions in Study Area	Mr Ichikawa
9:50～ 10:05	Preliminary Design of Water Supply Facilities	Mr Fujiyama
10:05～ 10:20	Organization/ Institutional Plan	Mr Masumura
10:20～ 10:35	Operation and Maintenance Plan, Community Awareness Plan	Ms Imai
10:35～ 11:00	Tea Break	

Part 2 Presentation of Counterpart Personnel

11:00～ 11:20	Piped Schemes Survey in Mwanza	Mr Nkanwa
11:20～ 11:35	Hydrogeological Survey in Mwanza	Mr Matata
11:35～ 11:50	Hydrology in Mwanza	Mr Mwambuli
11:50～ 12:05	Comments of Technical Transfer for GIS	Mr Songo
12:05～ 12:20	Geophysical Survey in Mwanza	Mr Buluba
12:20～ 12:35	Socio-Economical Conditions in Mwanza	Mr Kyamba
12:35～ 12:55	Operation and Maintenance Plan in Community of Mwanza	Mr Mkare
12:55～ 13:10	The Words from JICA Study Team	
13:10～ 13:20	Closing Remarks	Mr Mwambuli
13:20～ 14:30	Lunch	

Seminar on Draft Rinal Report for the JICA Study on Rural Water Supply in Mwanza and Mara Regions in the United Republic of Tanzania

Wednesday 12 July 2006 (Kipepeo Hall, New Mwanza Hotel 08:30-15:30)

List of Attendance for Mwanza Region

No.	Name	Institution	Signature
1	Mr. Brown Kilanga	DPLO Geita	
2	Mr. T. Nduguru	DPLO Ukerewe	
3	Mr. Mihayo	DPLO Magu	
4	Mr. Mayeji. J	DPLO Kwimba	
5	Mr. Mbanga	DPLO Sengerema	
6	Mr. ~~Casmiry Joseph~~ Moses S. Mabula	DPLO Misungwi	
7	Mr. Abdalla Abdul	DWE Geita	
8	Mr. Daniel Butati	DWE Ukerewe	
9	Mr. Henry Salala	DWE Magu	
10	Mr. Karugwa	DWE Kwimba	
11	Mr. Wawa Nyonyoli	DWE Sengerema	
12	Mr. Selemani Kiyenza	DWE Misungwi	
13	~~Mr. Rayson Muhabuki~~ Ms Zaituni S. Thani	LVBWO Mwanza	
14	Mr. Wales Nkanwa	RAS Mwanza	
15	Mr. Lusekelo Mwambuli	LVBWO Mwanza	
16	Mr. Remius Matata	LVBWO Mwanza	
17	Mr. Faustini Songo	LVBWO Mwanza	
18	Mr. Sumbuka Buluba	LVBWO Mwanza	
19	Mr. J. Kyamba	RAS Mwanza	
20	Mr. Daniel Mkare	RAS Mwanza	
21	Mr. Tumaini Mugasa	LVBWO Mwanza	
22	Mr. Hidetake Aoki	JICA Headquarters	
23	Mr. Toshiyuki Matsumoto	JICA Study Team Leader	
24	Mr. Kensuke Ichikawa	JICA Study Team	
25	Mr. Taketoshi Fujiyama	JICA Study Team	
26	Ms. Shoji Masumura	JICA Study Team	
27	Ms. Risako Imai	JICA Study Team	
28	Ms. Oliva Ally	JICA Study Team Assistant	

Programme

Seminar on Draft Final Report in Mara region

The Study on Rural Water Supply in Mwanza and Mara Regions
in the United Republic of Tanzania

Date: 14 July 2006
Venue: Conference Hall, Afrilux Hotel

9:00～ 9:10	Opening Remarks	Mr Mabula
9:10～ 9:20	Speech from JICA	Mr Aoki

Part 1 Result of DF/R

9:20～ 9:35	Summary of DF/R	Mr Matsumoto
9:35～ 9:50	Natural Conditions in Study Area	Mr Ichikawa
9:50～ 10:05	Preliminary Design of Water Supply Facilities	Mr Fujiyama
10:05～ 10:20	Organization/ Institutional Plan	Mr Masumura
10:20～ 10:35	Operation and Maintenance Plan, Community Awareness Plan	Ms Imai
10:35～ 11:00	Tea Break	

Part 2 Presentation of Counterpart Personnel

11:00～ 11:15	Problems of Piped Schemes in Mara	Mr Komba
11:15～ 11:30	Current Condition of Water Supply in Musoma	Mr Mboje
11:30～ 11:45	Hydrogeological Survey in Mara	Mr Mabula
11:45～ 12:00	Hydrology in Mara	Mr Sariro
12:00～ 12:15	Geophysical Survey in Mara	Mr Dimoso
12:15～ 12:30	Socio-Economical Conditions in Mara	Ms Nyeme
12:30～ 12:45	Operation and Maintenance Plan in Community of Mara	Ms Masanza
12:45～ 13:00	Comments of Technical Transfer for Environmental/ Social Consideration	Mr Misana
13:00～ 13:15	The Words from JICA Study Team	
13:15～ 13:25	Closing Remarks	Mr Sariro
13:25～ 14:30	Lunch	

Seminar on Draft Rinal Report for the JICA Study on Rural Water Supply in Mwanza and Mara Regions in the United Republic of Tanzania

Friday 14 July 2006 (Conference Hall, Afrilux Hotel 08:30-15:30)

List of Attendance for Mara Region

No.	Name	Institution/title	Signature
1	Mr. Temba	RPLO RAS Mara	
2	Mr. Bamanyisa	DPLO Bunda	
3	Mr. Masero	DPLO Tarime	
4	Mr. Kisa	DPLO Serengeti	
5	Mr. ~~Malembeka~~ Kizindaro I	DPLO Musoma (R) Ag	
6	Mr. ~~Tano Deule~~ Bonus Marecele	DWE Bunda Ag	
7	Mr. J. Ngodagula	DWE Serengeti	
8	Mr. Felix Mboje	DWE Musoma (R)	
9	Mr. M. Nyandiga	DWE Tarime	
10	Mr. B.M. Nkwande	RAS Mara	
11	Mr. William Mabula	LVBWO Mara	
12	Mr. Sariro Mwita	LVBWO Mara	
13	Mr. Dimoso Mmba	LVBWO Mara	
14	Ms. Edith Nyeme	CDO Musoma (R)	
15	Ms. Mary Masenza	CDO Bunda	
16	Mr. Lucas Misana	LVBWO Mara	
17	Ms. A. Mujemula	~~DED~~ CDO Tarime	
18	Mr. M. Komba	DED Musoma (R)	
19	Mr. Hidetake Aoki	JICA Headquarters	
20	Mr. Toshiyuki Matsumoto	JICA Study Team Leader	
21	Mr. Kensuke Ichikawa	JICA Study Team	
22	Mr. Taketoshi Fujiyama	JICA Study Team	
23	Mr. Shoji Masumura	JICA Study Team	
24	Ms. Risako Imai	JICA Study Team	