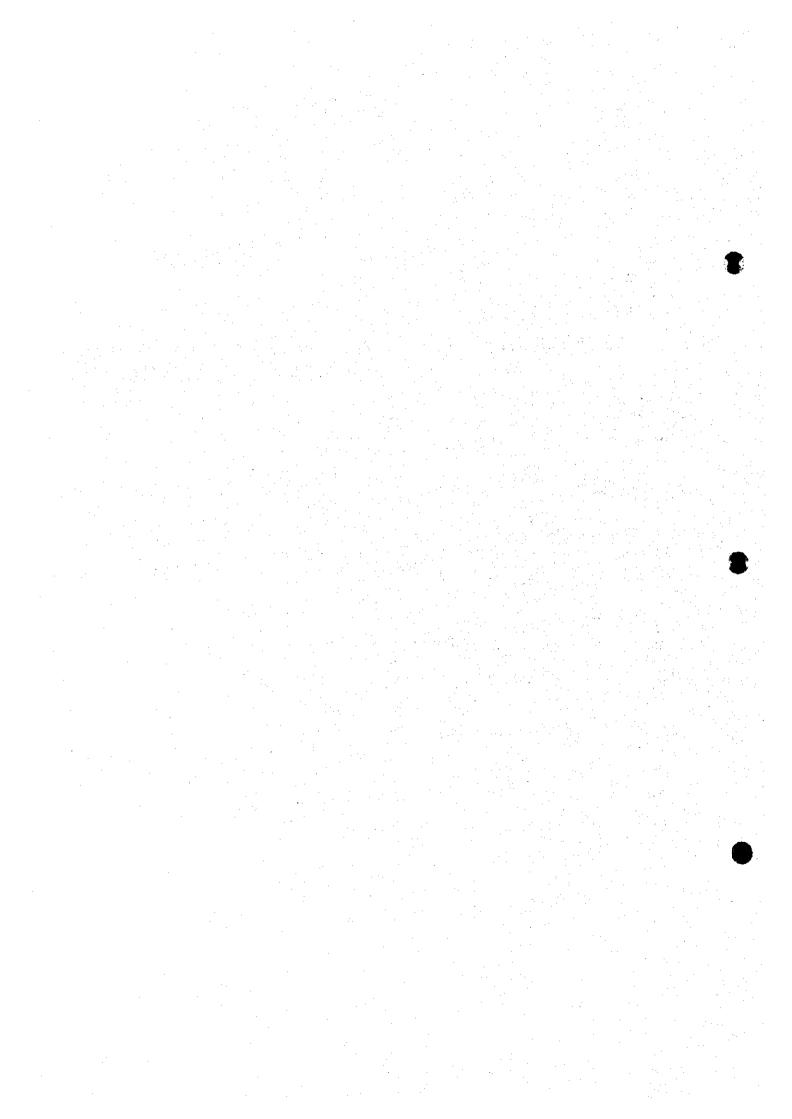
DATA BOOK IV

RESULT OF SURVEY ON EXISTING RURAL WATER SUPPLY SYSTEMS



THE AFTERCARE STUDY ON THE NATIONAL WATER MASTER PLAN

DATA BOOK

DATA BOOK IV : RESULTS OF SURVEY ON EXISTING RURAL WATER SUPPLY SYSTEMS

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GRAND SUMMARY

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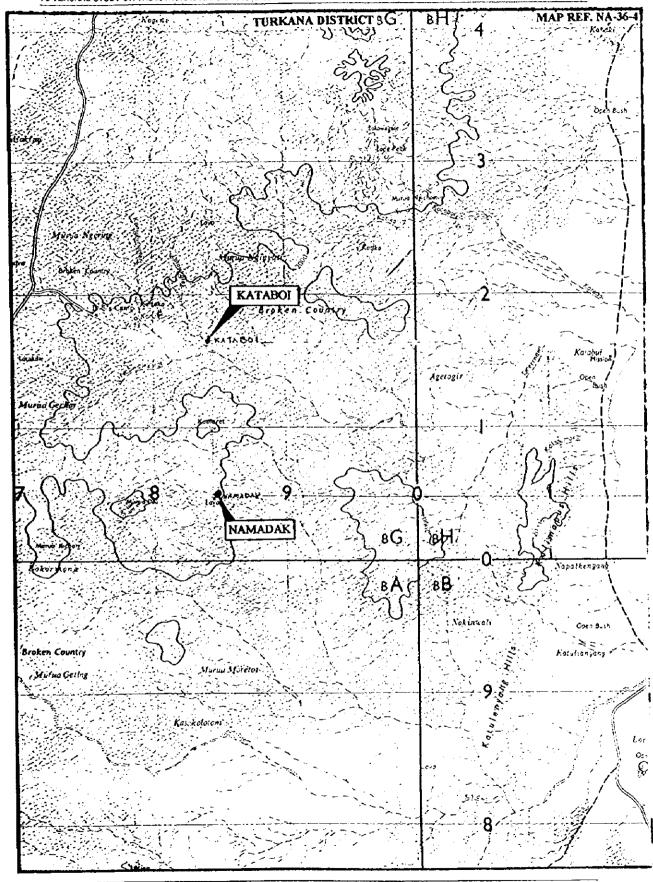
····	NAME OF		REFERENCE	WATER SOURCE/	CHEMICALS	PRODUCTION	CONSUMER	R METERING	HOUSEHOLDS	
DISTRICT	RURAL SCHEME	WATER UNDERTAKER	MAP (1/250,000)	TREATMENT PROCESS	DOSED	M3/DAY	METERED	UNMETERED	SERVED	REMARKS
TURKANA	KATABOI	MOWR	_	Hand dug well / None		None	None	All		Scheme currently unoperational since 1992 due to pump breakdown, there are no operators' houses, the scheme needs urgent rehabilitation and should include chlorination facility.
	NAMADAK	MOWR/ Community	-	Borehole/ None	None	26	None	Ali	340	Problems Include prevalent vandalism, unqualified community managers/operators, Insufficient funds and transport for operation & maintenance and lack of treatment facility. Chlorination treatment is urgently required. Future borehole development is proposed to augment supply.
	LOKORI	MOWR/ Community	_	Borehole near Kerio River/ Chlorination only	Chlorine (Tropical Chloride of Lime-TCL)	32.9	700	Nil	700	Problems include lack of communication, delays by consumers in paying bills, and production lower than demand. Rehabilitation of staff and pump houses required. Future plans, are to increase productivity to 30m3/hr to serve 6500 persons by yr. 2005.
	KAINUK	MOWR	_	Shallow wells/ Chlorination only	Chlorine (TCL)	72	None	1820 (Ali)	1820	Lack of communication system, accommodation for operating personnel and delays in payments by consumers are major problems. Expansion is required with extra boreholes to serve 20,000 persons.
	LOKICHOGIO	Community/NGOs	~	Shallow wells near Ewaso River/ Chlorination (irregular)	Chlorine (TCL)	Data N/A	None	Ali	5400 (Persons)	Poor communication due to remoteness, tack of trained operators and staff quarters are main problems. Future expansion is required by addition of more boreholes. Immediate measures include installation of 1 No. standby pump.
KEIYO & MARAKWET	CHIGILET	Community	-	Kibomo Spring/ None	None	60	None	500	500	Major problems include lack of funds for operation and maintenance, absence of supply operator, and extensive damage by floods of sections of the network, for which there are no funds for repairs. A new source needs to be identified to augment supply.
	NYALIL	Community	-	Nyalil Spring/ None	None	60	None	500	500	Damaged gravity main and distribution lines across guilies, intake foundation, tack of funds to carry out the necessary repairs and absence of local scheme attendant are major problems. Extension of supply is required. A new spring source has been identified but yield is not known.
	NERKWO	Community	90/1	None	None	5			800	The pumpset frequently breaks down and there is delay in repairs due to lack of funds and qualified staff.
	CHEPKORIO	MOWR	-	Kipkarren river/ Full treatment capacity but only Chlorination	Chlorine (TCL)	31.6	405	None	405	Supply is inadequate for demand. There are frequent power Interruptions and inadequate O&M staff.
	KAPSOWAR	MOWR		Emston river/ Chlorination only (Irregular).	Chlorine (TCL)	1,600	None	Ali	5000 (Persons)	Water from the current source is polluted and proper treatment lacking. The water is moreover insufficient to cater for demand. A new source is required with provisions for full treatment.
MURANGA	GATANGO	MOWR	-	Take off from Gatango w/s None - Treatment at larger GATANGO W/S	None	2,640	335	1194	1,529	Vandalism and misuse of and wastage of water are rampant. Full treatment is required.
	MATHOYA	MOWR	-	River Hembe/ Chlorination only	Chlorine (TCL)		:			There is misuse of and wastage of water due to flat rate connections. Lack of funds for operation and maintenance are other problems. There are plans for full treatment and augmentation.
	KIGUMO	MOWR	-	River trati/ Plain Sedimentation and Chlorination only	Chlorine (TCL)	8,640	Few (No Data)	Most (No Data)	150000 (Persons)	Scheme requires augmentation with full treatment, to serve 300,000 persons
	KANDARA	NWCPC	-	Thika river/ None	None	14,640	4300	11,000	15,300	Demand outstrips supply. This is mainly due to the size of the scheme which was designed to meet the 1982 population demand. Other factors include lack of funds for O&M, and wastage of the little water available. Preliminary design for augmentation including full treatment has been carried out by Consultants.
	KAHUTI	нисрс	-	S Mathioya / Maragua rivers/ Phase II and Kangema Urban only:Coagulation, sedimentation, Filtration, and Chlorination.	Chlorine (TCL)	12,910	750	11,050	11,800	The scheme constructed between 1950 and 1977 comprises three independent phases viz. phases I, II III and Kangema Urban. The schemes have surpassed their design horizons and are therefore unable to meet demands. Other constraints include lack of funds for O&M, and wastage of water by consumers due to flat rate connections.
NAROK	LEMEK		SA - 36 - 8	Lemek borehole/ None	None	100	600	None	600	Inadequate staff and funds for O&M. More storage facilities required including extension of pumphouse to accommodate 2 new pumpsets. Construction of treatment facilities, especially for chlorination as an immediate measure and two new water klosks required.
	MULOT	Mowa	SA - 36 - 8	Mara river/ None	None	300	2500	None	2500	Irradequate staff and funds for O&M. I No, standby pump required. Construction of treatment facilities, especially for chlorination as an immediate measure is required. As demand outstrips—supply, major augmentation is required.
	OLOLUNGA	Community	SA - 36 - 4	Ewaso Nyiro river/ None	None	110	enoM	910	910	There is Inadequa's staff, funding and technical know-how for O&M. There is also frequent breakdown of pumps. Construction of treatment facilities as an immediate measure is required

DISTRICT	NAME OF RURAL	WATER UNDERTAKER	MAP	WATER SOURCE/ TREATMENT PROCESS	CHEMICALS DOSED	PRODUCTION M3/DAY	CONSUMER METERED	METERING UNMETERED	HOUSEHOLDS SERVED	REMARKS
	SCHEME OLOPITO	Community	(1/250,000)	Borehole/ None	None	9	None	93	93	Financial constraints in O&M. At present only one communal water point(CWP). More CWP's needed to serve the larger community. Disinfection is required.
	ILMASHARIAN	MOWR		Spring/ None	None	216	None	1800	1800	Financial constraints, therefore cost sharing recommended. Erratic supply of electricity and trequent pump breakdowns. Standby pump needed. There is inadequate staff for O&M. Treatment facilities required especially chlorination as an immediate measure.
/AJIR	WAGALLA	Community		Hand dug shallow well/ None	None	5	None	300	300	There are individual shallow wells which are not protected and whose water is saline and contaminated. Supply from these wells is not treated and users do not boil before drinking.
	SABUNLEY	Sabuntey boys sec. school		Hand dug shallow well/ Chlorination only	Chlorine		None	400	400	Well no. 4 not protected and likely to be contaminated. Purchase of chlorine for disinfection done irregularly due to lack of funds.
	LEHELEY	Community	NA-37-11	Shallow well / None	None		None	210	210	Hand pump used. World vision to install solar powered pumps to supply mostly Leheley clinic.
	WAJIR CATHOLIC	Catholic mission	NA-37-11	3 no. Shallow wells / Chlorination only	Chlorine (TCL)		None	70 persons	70 persons	Catholic mission has three water supplies. There are no private consumers under this supply.
	WAJIR REHAB.	Catholic mission	NA-37-11	5 no. shallow wells/ Chlorination only	Chlorine		None	530 persons	530 persons	Catholic mission has three water supplies. There are no private consumers under this supply.
	CATHOLIC MISSION (GIRL'S TOWN)			6 no. shallow wells/ Chlorination only	Chlorine		None	400	400	Water from wells turns turbid during rainy season and has undesirably high nitrate content. The wells generally dry up during dry weather. Electric pumps replaced every two years. MSF Belgium presently providing clean water technology to the mission.
(ILIFI	PIDIMANGO	NWCPC/Communit	Y	Take off Baricho pipeline/ Full treatment	Alum, Soda Ash. Chlorine	42				Billing dispute with NWCPC results in high bills. The scheme is dependent on the operations Baricho Treatment works which serves Mombasa. Expansion desired.
	KITSOENI BUNGU	1		Take off Baricho pipeline/ Full treatment	Alum, Soda Ash, Chlorine	26	43 3	None	433	Billing dispute with NWCPC results in high bills. The scheme is dependent on the operations Baricho Treatment works which serves Mombasa.
	КАРЕСНА 1	Community NWCPC/Communit	_	Take off Baricho pipeline/ Full treatment	Alum, Soda Ash, Chlorine	48	420	None	420	Billing dispute with NWCPC results in high bills. The scheme is dependent on the operations Baricho Treatment works which serves Mombasa.
	MWELE	MOWR		Take off Baricho pipeline/ Full treatment	Alum, Soda Ash, Chlorine	13				Billing dispute with NWCPC results in high bills. The scheme is dependent on the operations Baricho Treatment works which serves Mombasa.
	MAJAJANI	MOWR		Take off Baricho pipeline/ Full treatment	Alum, Soda Ash, Chlorine	27	400	None	400	Billing dispute with NWCPC results in high bills. The scheme is dependent on the operations Baricho Treatment works which serves Mombasa.
	NGERENYA	MOWR		Take off Baricho pipeline/ Full treatment	Alum, Soda Ash, Chlorine	29			592	Scheme self-sustaining. Expansion is desired but proposals not prepared by community yet.
TAITA- TAVETA	DEMBWA WUSI	MOWR	SA-37-14	Kengwa spring and Vuria river/ Chlorination only	Chlorine	110	300	None	300	Lack of operation and maintenance, transport, laboratory and offices. Chlorination facilities need rehabilitation.
	MWAJIKA TERI	MOWR	SA-37-14	Rivers Mwaroro, Mwajika and Mwereri/ Chlorination only	Chlorine	71	165	None	165	Lack of O&M, revenue collection personnel, transport, laboratory and offices.
,	MWAKIKI	Community		Sangunyl and Mkongonyl Springs/ None	None		None	1470	1470	Revenue not being collected from water supplied.
	MWAMBITI	Community		Mwambighili, Bwaka and Mashighati springs/ None	None					The scheme primarily serves Mambiti Sec. school, with limited service to the surrounding community
KISII	GESONI	MOWR	\$A-36-4	Ria Modito spring/ Occasional Chlorination only	Chiorine	60	None		18 ; 5 schools (Pop 6000	Frequent breakdown of generator engine and pump.
	GESUSU/GETER	MOWR	SA-36-4	Spring/ None	None	15	2 schools	25	25	Supply inadequate and often dries up during the dry season. Treatment of water and testing facilities required.

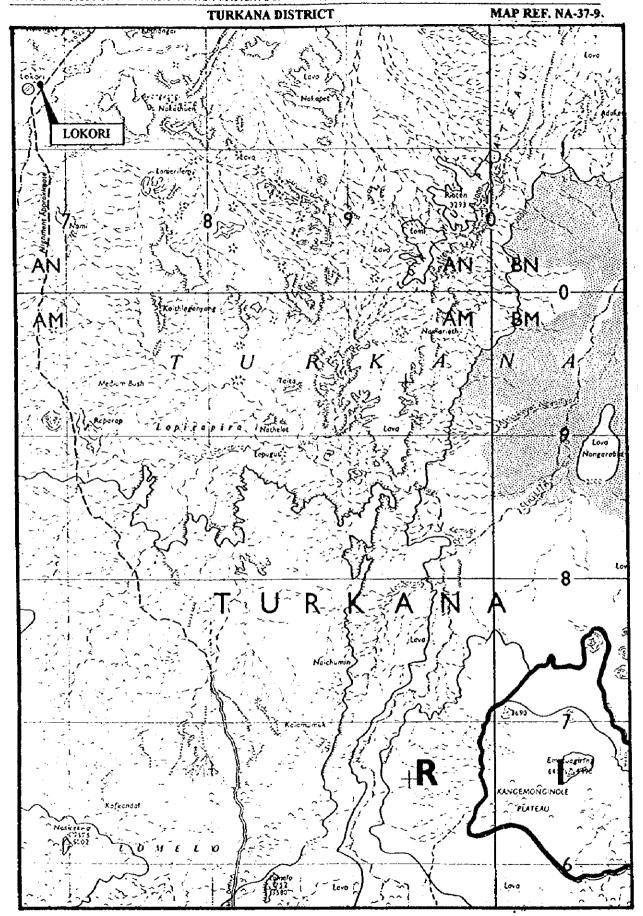
	NAME OF		REFERENCE	WATER COURCE!	CHEMICALS	PRODUCTION	CONSUMER	METERING	HOUSEHOLDS	
DISTRICT	DUDA	WATER UNDERTAKER	MAP (1/250,000)	WATER SOURCE/ TREATMENT PROCESS	DOSED	M3/DAY	METERED	UNMETERED	SERVED	REMARKS
		MOWR		Kambi ya Nyang'au spring/ None	None	24	None	160	160	Treatment of the water is required. The supply is inadequate due partly to vandalism of pipeline. Trained personnel lacking.
	MOSOCHO NYANEREMA	Community	SA-36-4	Nyanderema river/ Occasional Chlorination only	Chlorine	108	None	All consumers	each ~ 400 students	Water rationing due to inadequate supply. Frequent breakdown of dieset engine. Full Treatment is required.
!		MOWR	SA-36-4	Nyangore river/ Full treatment	Alum, Soda ash, Chlorine	190	14	26		Only small portion of Nyamarambe water production is used by Nyamarambe, Most of the supply is consumed by Rongo Township.
	TABAKA	MOWR	SA-36-4	Bombure Spring/ None	None	100	120	80	200 + ~ 2000 students	There is inadequate water at source and as a result production is limited. A new source needs to be developed. Treatment is urgently required.
IDNAN	BARATON	University of Eastern Africa - Baraton		Kimondi river, spring and Borehole/ Full treatment	Alum, Sosa ash, Chlorine	350	50	85	135	A University of Eastern Africa, Baraton scheme but also serves the surrounding community. Borehole source not operational due to financial constraints. Alum and Chlorine dosing Is not done properly as dosers are not working. The scheme was adversely affected by the El-nino floods.
MACHAKOS	WAMUNYU	MOWR		Athi river/ Full treatment	Alum, Soda ash, Chlorine	4310	150	150	300	The treatment units need repair and augmentation. Old pumps require frequent repairs. There are frequent bursts and a large no. of consumers are disconnected due to non-payment.
	KONZA	Community		Take off Not Turesh pipeline/ Chlorination only	Chlorine	358			Рор ~ 3500	Not Turesh supply not reliable. A standby borehole supply should therefore be developed. Distribution system needs improvement.
	DAM	Community		Dam on Kyethivu stream/ None	None	100			Рор -9000	Treatment is required. There is tack of trained operators. Engine and pumps need repair and the rising main needs augmentation.
	MUTHETHENI GIRLS INSTITUTE	Institution		3 no. boreholes/ None	None			All consumers	~860 students	Supply entirely for institutional use and is subsidized by contributions from parents. It is well run but needs at least chlorination at storage before use and augmentation due to increasing student enrollment.
	MEKILINGI	Community		Mekingili river/ None	None	124			ρορ. ~10000	Lack of funds for purchasing new pumpset and to overhaut one currently in use. Treatment is required urgently. The partial filtration system and dam scour are clogged. Desiltation is necessary.
	MANYATTA	Manyatta sec.		Borehole near Kyaanl river (C3066)/ Chlorination only	Chlorine(TCL)	100		All consumers	- 500 students	Replacement of generator diesel engine for borehole and chemical mixing and dosing arrangement for chlorination required.
KITUI	MATINYANI	Community		Borehole at Kalia/ None	None	120	69	None	69	The scheme is well run and makes profit. Chlorination is required.
	митомо	MOWR	SA-37-6	Tira Borehole/ None	None	14				O&M costs are high compared to revenue collected. As such operations are normally suspended due to delay in repairs. The borehole yield has dropped considerably.
	NGUNI	MOWR	\$A-36-2	Hand dug well/ None	None				200	The supply was abandoned sometime in 1984 due to high sulphide content of the borehole water. A new borehole needs to be drilled to produce 150 m ³ /d
	KABATI	Community	SA-37-6	2 no. Boreholes/ None	None				1300	One of the two boreholes has been abandoned. The pump in the operational one fell inside and has not been retrieved. The Masinga-Kitui plpeline is a viable source for the scheme.
	MUTITO	MOWR		Ngulini and Muthua springs/ None	Chlorination during epidemics	48	None	500	500	There is a lot of wastage since the scheme is unmetered. Repairs are delayed mainly due to tack of funds.
SIAYA	UYOMA	Community	SA-36-3	Lake Victoria/ Filtration and chlorination	Chiorine(TCL)	1080			1000	Pumping equipment is very old and dilapidated. Poor access to the scheme makes delivery of diesel difficult.
	ALUOR	MOWR	SA-36-3	Ogomo river/ None	None				-2000 persons	Lack of funds in suspension of operations since 1992. All pumping equipment needs replacement. Chlorination is required.
	YENGA SIRANGA	Community	NA-36-15	Yenga river/ None	None					The scheme is not operational due to lack of funds and poor management. Chlorination will be required when the scheme becomes operational.
	MAUNA DAM	MOWR	NA-36-15	Mauna Dam and spring/ Chlorination only	None currently		10	2490	2500	The scheme has not been operational since 1992 due to tack of funds. 1 No. pumpset needs replacement and repairs are required for storage tanks, cattle troughs and some pipes.

DISTRICT	NAME OF RURAL SCHEME	WATER UNDERTAKER	REFERENCE MAP (1/250,000)	WATER SOURCE/ TREATMENT PROCESS	CHEMICALS DOSED	PRODUCTION M3/DAY	CONSUMER METERED	METERING UNMETERED	HOUSEHOLDS SERVED	REMARKS
<u></u>		Community		Spring at Bar Ober/ None	None				-2000 persons	The scheme is not operational due to lack of funds. Chlorination will be required when the is functional.
NYANDARUA	HUHIRIO	Community		River Malewa/ None	None	44	None	180	180	There is lack of funds for O&M and trained staff. Full treatment is required.
	PASSENGA	Passenga sec.		Nyairoko river/ None	None	8 - 10			Serves only the	Originally, the community was managing the scheme but failed to run it efficiently and the school took over. Full treatment is needed as the public is using the river water directly without any treatment.
	KIRIMA	MOWR		Rivers Pesl, Karuruma and Kahaho/ None	None	258	None	659	659	Treatment of supply and repairs to burst pipes required.
	MAWINGO	Community		Kiriandu spring/ None	None	7	None	All consumers		Due to lack of funds for expansion, the scheme serves only the dispensary at Mawingo.
	MUGUMO	Community		Borehole/ None	None	53	30	None	30	Chlorination and repairs to pipe bursts required.
KERICHO	TEGUNOT	Community	SA-36-4	Small dam/ None	None		None	13	13	Construction of a new rising main, storage tank and distribution mains in Phase II of the scheme.
	LITEIN	NWCPC	SA-36-4	Itare river/ Full conventional treatment	Alum, Soda ash	6850	425	5214	5639	The existing scheme not able to meet demand. Preliminary design for the rehabilitation of existing scheme and expansion including bulk and individual metering has been carried out by a firm of consulting engineers.
	CHEPSIR ZONE A AND 8	MOWR	SA-36-4	Small dam and spring/ None	None		None	19	All consumers	Some of the consumers have defaulted on payment and have been disconnected. Treatment is urgently required. The dam in zone A requires desilting.
	NG'ECHEROK	Community	SA-36-4	Kiboit river/ None	None		None	360	360	Treatment of supply and construction of additional storage tank is required.
	BARGEYWET	MOWR		Bargeywet spring/ None	None		None	60	60	Protection of the intake and desilting the sump area is required. Treatment of the supply is needed.
UASIN GISHU	KIPKABUS	Community		Lolgarini springs/ None	None	4	None	390	390	No treatment is being done as the construction of the treatment works has not been completed. Priority should be given to the completion of the works.
	YAMUMBI	Passenga Sec.		Sosiani river/ None	None		None	1500	1500	Eldoret Municipal Council has agreed to supply the community from its water supply system but the community is required to supply the necessary pipes and fittings for the construction of a pipeline off-take.
	MOI UNIVERSITY			Samul river/ Full treatment	Alum, Soda ash and chlorine	1600	150		150 + 3500 students	The scheme serves the University students and staff, There are frequent power supply interruptions. Phases IB and II have not been completed; the treatment works are incomplete (backwash pumps not yet installed)
	SOSIANI	MOWR		2 no. boreholes/ None	None	2			104	Low production in 1996 due to frequent breakdown of pumps. Chlorination should be carried out as a priority.
	ARANGAI	Community		River Rongai/ None	None			5290	5290	Chlorination, as an immediate measure, should be carried out. The main problems are lack of community organization and management. Arangai is one of the seven schemes under Ainabkoi complex. A new scheme is proposed with take Narasha as source.

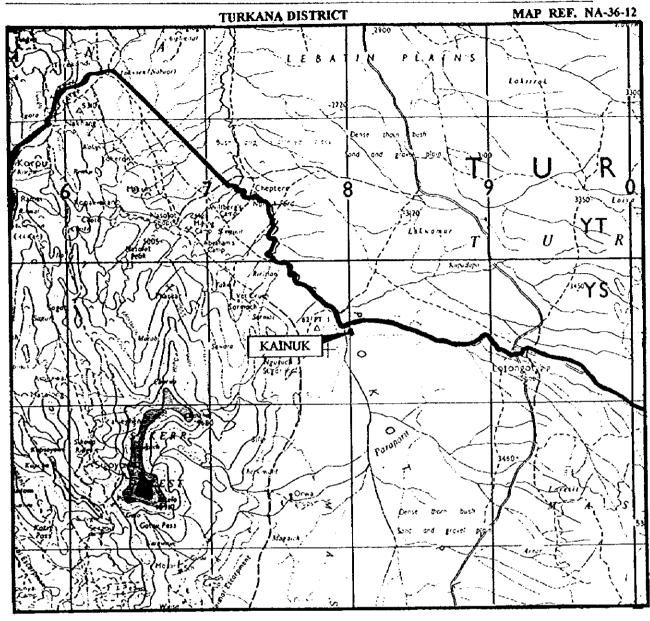
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KATABOI (1/1)

General						
Name of Rural water Supply.						
Organisation / Water Undertake	er: Ministry of	Water Reso	urces	Map Ref		
Drainage Sub Basin				Co- Ords.	X:	<u>Y:</u>
Construction Details						
Year of Construction	Phase I: 197					
Constructed By:	Setf-Help			GOK-Ph I,	World Bank	Ph II
Total Construction Cost	Ksh. 2 million	(original		-		
Year Operation Started:	1972			-		
Existing Facilities						
Water source:	Hand Dug w	ell on Naridin	g River	Intake Fac	clities: Well	
Raw Water Transmission	Pumping					
Treatment Facilities	None					
Chemicals Dosed	None					
Master Meter Details	None installed					
Distribution Mains	Diameter	50mm				
	Length	4km		<u> </u>		
	Materials	G.I.			<u></u>	
Service Reservoirs	2 No. masorır	y, 45m3 and 75	m3 respective			
Pump Details		ngine coupled			g pump-ou	tput
1 City Octains		rently broken o				<u> </u>
Customer Details						
Households Served	Members	Other H.H's	Tota!	1		
11003Citold3 Correc		None	840	J		
Customers Metered	No		Metered		Unmetere	<u>840</u>
Operation & Maintenance		Production	H.H Served	٦)		
Water Production	1993			1)		
Tydiei i roddolloll	1994			7;		
	1995	 		75	Water su	pply inoperational
	1996	T			since 199	
	1997			1 i		
Water Consumption	Domestic	Institutional	Irrigation	Others	Total]
tyaici containpion					<u> </u>]
Problems / Future Expansion	n / Remarks					
1. Scheme currently inoperational		ken down since	1992.			
2. Community not sensitized/trains	ed				·	
3. No operator staff houses					79	
4. The scheme urgently requires r	ehabilitation wh	ich should inclu	de at least a c	niorination fa	acility	
						,,
Prepared by: POM			Date: 5/3/9	8	· · · · · · · · · · · · · · · · · · ·	

NAMADAK (1/1)

<u>General</u>						
Name of Rural water Supply:	Namadak		Location / D	strict: Turk	ana	
Organisation / Water Undertake	er: MOWR/d	Community				
Drainage Sub Basin		· · · · · · · · · · · · · · · · · · ·		Co- Ords.	X:	Υ;
Construction Details						
Year of Construction	Phase I:	1988	Phase II:	1995	Phase III	
Constructed By:	MOWR/Con	itractor	Funded By:	World Bank	k	
Total Construction Cost	Ksh.3.5 million	,		_		
Year Operation Started:	1990					
Existing Facilities						
Water source:	Nabwat-Eko	rot Borehole		Intake Fac	clities:	B/hole
Raw Water Transmission	Pumping		-			
Treatment Facilities	None			<u> </u>		
Chemicals Dosed	None					
Master Meter Details	None installed	1				
Distribution Mains	Diameter	75mm	50mm	50mm		
	Length	5km	4km	1km		<u> </u>
	Materials	uPVC	uPVC	G.I.	<u> </u>	<u>l</u>
					·	
Service Reservoirs	1 No.	100m ³ Maso	nary tank, t No	o. 10m3 ferr	ocement ta	nk
Pump Details	On rising mair	n 1 No. Lister e	ngine/generato	r powered g	rundfos	
	submersible p	ump, Q≈4 m4/	hr.; H=70m			<u> </u>
<u>Customer Details</u>				7		
Households Served	Members	Other H.H's	Total	1		
	340		340	J		
Customers Metered	No		Metered		Unmeter	e <u>340</u>
Operation & Maintenance		Production	H.H Served]		
Water Production	1993	11520m3/d	300			
	1994	11520m3/d	312]		
	1995	10370m3/d	320	Service	area 0.3 l	km²
	1996	9300m3/d	340	1		
	1997			<u> </u>	·	_
Water Consumption	Domestic	Institutional	Irrigation	Others	Total	_
	80%	15%	2%	3%	100%	<u>.</u>
Problems / Future Expansion	n / Remarks					
Problems:						
1. Unqualified community operators	/ managers					·
2. Vandalism						
3. Insufficient funds and transport for	or operation an	d maintenance				
4. Chlorine treatment urgently requ	ired!					
Future borehole development is pro	oposed to impro	ve supply				
Prepared by POM			Date 5/3/98		-	

LOKORI (1/1)

Rural Water Supply System Survey

acticiai						
Name of Rural water Supply:	Lokori		Location / Dis			
Organisation / Water Underlak	cer:Community/M	OWR		Map Ref		
Drainage Sub Basin			<u></u>	Co- Ords.	X:	Y:
Construction Details						
Year of Construction	Phase I: 1978	- 1981	Phase II: 198	4-87	Phase III	1994-95
Constructed By:	MOWR + Self H	elp	Funded By:	GOK, RDF, M	orld Bank	
Total Construction Cost	Kshs. 4.6 million	1				
Year Operation Started:	1981			=		
Existing Facilities						
Water source:	Borehole on Kei	rio River Bank		Intake Fac	cilities:	Submersible Pump
Raw Water Transmission	Pumping - 75mi	n dia. uPVC/GI	for 700m - 80m	Н		
Treatment Facilities	Only disinfection	n using chlorine	<u> </u>			
Chemicals Dosed	Chlorine					
Master Meter Details	1No - in good o	ondition	,	r ——	· · · · · · · · ·	1
Distribution Mains	Diameter	75		<u> </u>	<u> </u>	
	Length	4.2 km	ļ	 	ļ	
	Materials	GMS,UPVC		<u> </u>	<u> </u>	
						
Service Reservoirs	1 No 100m3 +	1 No. steel tank	of 20m3	<u> 1</u>		
Pump Details	15m3/hr @ 80r	n head				
						
Customer Details				ר		•
Households Served	Members	Other H.H's	Total	_		
	120	580	700	<u>)</u>		
Customers Metered	Yes		Metered		_Unmeter	red
		 		- 1		
Operation & Maintenance		Production	H.H Served	<u> </u>		
Water Production	1993	26280m³		_{		
	1994	26280m³	<u> </u>	4		
	1995	26280m³		_		
	1996	12,000m ³	70	<u> </u>		
	1997					_
Water Consumption	Domestic	Institutional	Irrigation	Others	Total	_
	80%	20%	<u>6</u>		100	<u>%</u>

Problems / Future Expansion / Remarks

- Lack of communication system + transportation
 Delays in payments of bills
- 3. Production lower than demand
- 4. Future plan 30m³ for to serve 6500 by 2005
 5. Require staff housing and rehabilitation of pump house

KAINUK (1/1)

Rural Water Supply System Survey

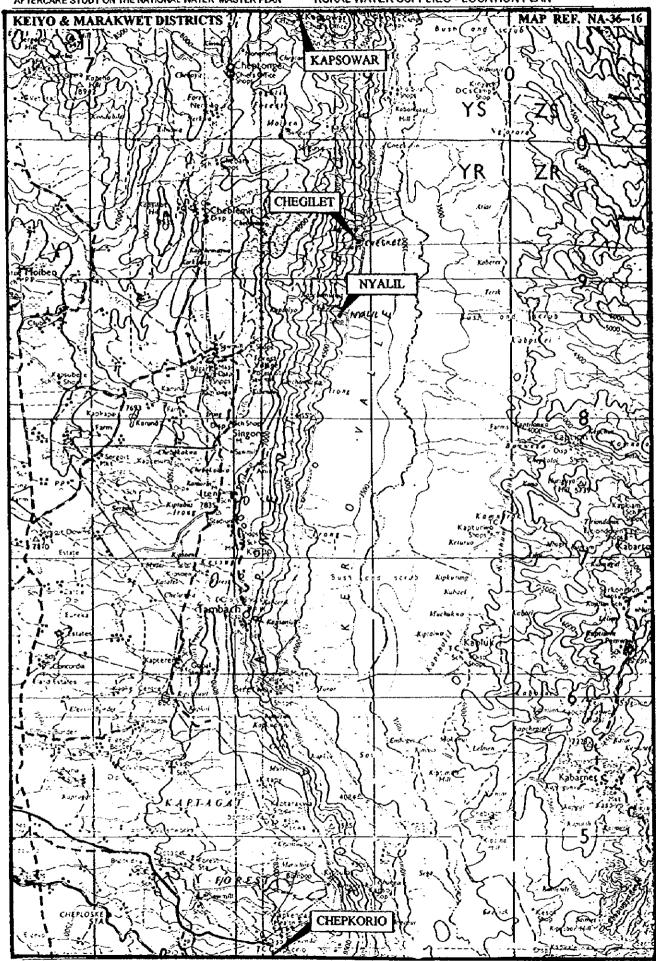
<u>General</u>						
Name of Rural water Supply:	Kainuk		Location / Di	strict: <i>Tur</i> ka.	nar	
Organisation / Water Undertake	T: MOWR			Map Ref		
Drainage Sub Basin			·	Co- Ords	X:	Y:
Construction Details						
Year of Construction	Phase I: 196	9 - 1990	Phase II: 199	4 - 96	Phase III	
Constructed By:	MOWR		Funded By:	Rural Devel	opment Fund a	nd World Bank
Total Construction Cost	1.7 Million	·				
Year Operation Started:	1990					
Existing Facilities						
Water source:	Shallow Well o	on Weiwei river		Intake Fac	lities: Pumpi	ng abstraction
Raw Water Transmission	Pumping - 1.0k	on of 50mm dia.	- Southern Cros	s Pump-50m	head, 12.8Hp	4m suction
Treatment Facilities	Only chlorination	วก	_			
		····			· · · · · · · · · · · · · · · · · · ·	
Chemicals Dosed	Chlorine					
Master Meter Details	No	···-				
Distribution Mains	Diameter	80 mm	50 mm	25mm	18mm	
	Length		<u></u>			
	Materials	4.7 Km of uPVC	and GI	l		
Service Reservoirs	1No. ferrocen	nent - 23m ^s , el	evated steel toni	ne - 50m ^s		
Pump Details	8m³/hr @ 50π	head				
		· 				
Customer Details	r		r	1		
Households Served	Members	Other H.H's	Total	ļ		
	360	1460	1820	J		
Customers Metered	Yes	-	Metered	No	Unmetered	Yes
A		lo:		1		
Operation & Maintenance		Production	H.H Served			
Water Production	1993	 	<u> </u>	-		
	1994		<u> </u>	}		
	1995		<u> </u>	-		
	1996		1,820	4		
	1997			_ :	r	ì
Water Consumption	Domestic	Institutional	Irrigation	Others	Total	
Bank to an a figure on firm and	85%	10%	<u>L. </u>	5%	100%	Ì
Problems / Future Expansion	n / Hemarks					
Lack of communication						
2. Lack of accomodation for the person	onnel					

3. Delays in payment from consumers

4. Expansion of the water supply required with extra boreholes to serve 20,000 persons

LOKICHOGIO(1/1)

General						
Name of Rural water Supply:			Location / Di			
Organisation / Water Undertake	e <u>r:</u>	Community/NG	_			
Drainage Sub Basin				Co- Ords.		
Construction Details					DI 10	
Year of Construction	_	1978-1979			Phase III	
Constructed By:	MOWR		Funded By:	GOK/AIC/IC	HC/CANAD	AN HC
Total Construction Cost	Ksh. 1,600,00	9		-		
Year Operation Started:	1979			-		
Existing Facilities					****	
Water source:						Pumping/hand p
Raw Water Transmission					m dia. GI pip	e 2.08km long , Hea
Treatment Facilities	Chlorination de	one but irregularly	and unquanti	fied		
Chemicals Dosed	Chlorine					
Master Meter Details	None					
Distribution Mains	Diameter	63mm	40mm	<u> </u>		
	Length	500m	N/A			<u> </u>
	Materials	uPVC/GI	uPVC/GI		<u> </u>	
	1 No. elevate	d 4 1 3.				
Service Reservoirs				· otor		
Pump Details	Submersible j	oump powered by	a diesei gene	TAIOI-		
Customer Details			,			
Households Served	Members	Other H.H's	Total	7		
House loids believ	5400 people		5400 people	1		
Customers Melered	No	·	Metered	 Nil	Unmetered	d All consumers
Customers Metercu		-			-	
Operation & Maintenance		Production	H.H Served]		
Water Production	1993					
TY CALCULATION OF THE PARTY OF	1994			Area serv	ed 6 km²	
	1995			Data not a		
	1996			7		
	1997	T				
Mater Concumption	Domestic	Institutional	Irrigation	Others	Total	7
Water Consumption	50%			T	100%	<u>.</u>]
Problems / Future Expansi	L		<u> </u>	1		
1. Communication problem b	ecause of long	distance betw	reen Lokicho	gio and dis	trict headq	uarters
2. Staff quarters required.						
3. Lack of trained operators						
4. Additional boreholes requi	ired.					
5. Inadequate staff for opera		enance.				
6. Future expansion entails i	installation of 1	No, standby p	итр.			



MANGAT, I.B. PATEL AND PARTNERS, Consulting Engineers, Nairobi, Kenya.

IV-14

CHEGILET (1/1)

General			Lacation / Dist	triot: Maius			
Name of Rural water Supply:	Chegilet		Location / Dist	_Map Ref			
Organisation / Water Undertak	(er:Community					Y:	
Drainage Sub Basin				Co- Ords.	<u> </u>	<u> </u>	
Construction Details					rst 101		
Year of Construction	Phase I: 1982		Phase II: 1984				
Constructed By:	Self Help		Funded By: _0	CARE (Keny	a), ASAL, G	OK	
Total Construction Cost	Kshs. 580,000/-						
Year Operation Started:	1986						
Existing Facilities							
Water source:	Spring - Kibome	Sp		Intake Fac	lities:	Weir	
Raw Water Transmission	Gravity						
Treatment Facilities	None						
Chemicals Dosed	None						
Master Meter Details	None						
Distribution Mains	Diameter	400mm	25mm		. 	<u> </u>	
	Length	2350m	3700m			 	
	Materials	GMS	GMS			<u> </u>	
			·				
Service Reservoirs	Masonry	20m³					
Pump Details	N/A						
Customer Details				1			
Households Served	Members	Other H.H's	Total				
	500	<u> </u>	500	J			
Customers Metered	No	-	Metered		Unmeter	e <u>500</u>	
				1			
Operation & Maintenance		Production	H.H Served				
Water Production	1993		<u> </u>				
No records	1994]			
	1995		<u> </u>	ļ			
	1996	21,900	500	500 Nholds	@ 6 memb	bers per h/hold @ 20 l/Cap	
	1997	<u> </u>				7	
Water Consumption	Domestic	Institutional	Irrigation	Others	Total	_	
			<u> </u>	<u> </u>	<u> </u>	J	
Problems / Future Expans	ion / Remarks						
Lack of funds to procure mainte No operator assigned for operat	lion an d m aintenan	ce					
3. Now course need to be identifie	d and connected &	o the network to	augment the sup	opiy Inde availabli	e io repair ti	ha	
4. The 1997 floods have washed a damage	away considerable	section of the n	ECHOIN AND NO ID	arasabi	reper b	- -	

General

NYAUL (1/1)

Name of Rural water Supply:	Nyalil		Location / Di	strict: Keiyo	•		
Organisation / Water Undertake	er:Community			Map Ref			
Drainage Sub Basin				Co- Ords	. X:	Y:	
Construction Details							
Year of Construction	Phase I: 1986	- 87	Phase II: 199	2-96	Phase III		
Constructed By:			Funded By:	ASAL			
Total Construction Cost	Kshs. 2.3 millio	n		_			
Year Operation Started:	1996						
Existing Facilities							
Water source:	Nyalil Spring	_,		Intake Fa	cilities:	Weir	
Raw Water Transmission	Gravity						
Treatment Facilities	None	 		·			,
Chemicals Dosed	None					· · · · · · · · · · · · · · · · · · ·	
Master Meter Details	None		, 		· · · · · · · · · · · · · · · · · · ·		1
Distribution Mains	Diameter	50mm	40mm	25mm		<u> </u>	Į
	Length		9.0km			ļ	į
	Materials		GMS	1	<u> </u>	<u> </u>	ļ
Service Reservoirs	Masonry	45m³ + 2 No	. 25m3 : Total :	= 90m3)
Pump Details	None						-
Customer Details							•
Households Served	Members	Other H.H's	Total]			
	500		500	J			
Customers Metered	No		Metered		Unmeter	ed	-
Operation & Maintenance		Production	H.H Served]			
Water Production	1993	<u> </u>]			
No records	1994						
	1995			1			
	1996	21,900	500	500 hhold	s @ 6 memb	ers per h/hold	@ 20 l/Cap/d = 60m³/d
	1997			<u> </u>		_	
Water Consumption	Dornestic	Institutional	Irrigation	Others	Total	_	
				<u> </u>			
Problems / Future Expansio	n / Remarks						

- 1. Gravity and distribution line across gullies need repairs
- Extension of supply required
 Lack of funds cited
- 4. No local scheme attendant
- 5. Intake weir leaning from the base
- 6. New spring identified as an alternative source, but requires yield tests to be carried out

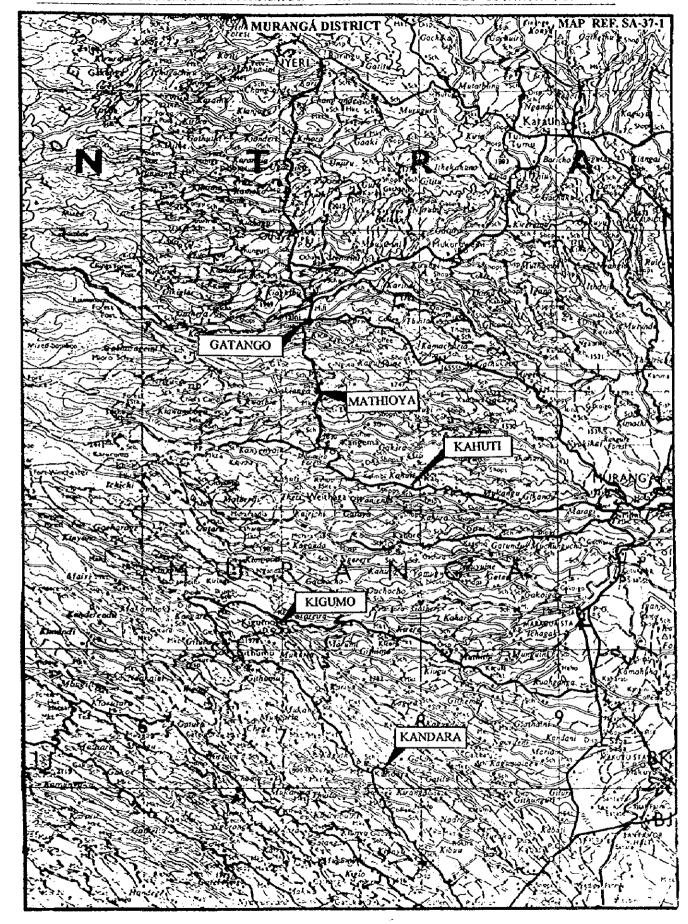
CHEPKORIO (1/1)

General				alaki eessii			
• • • • • • • • • • • • • • • • • • • •	Chepkorio		ocation / Dist	· ·			
Organisation / Water Undertak	er:Ministry of Wate	r Resources		lap Ref		···	
Drainage Sub Basin			(o- Ords.	X:	Υ;	
Construction Details							
Year of Construction	Phase I: 1978		Phase II: 1992		Phase III		
Constructed By:		F	funded By. 🕹	SAL			
Total Construction Cost							
Year Operation Started:	1982						
Existing Facilities							
Water source:	Kipkarren River			ntake Fac	lities:	Weir	
Raw Water Transmission	Pumping - 2Nos	pumps @ 10m	hr @ 15m hea	<u>đ</u>			
Treatment Facilities	Full treatment	Capacity of 3001	n ³ /d initially inc	eased to 50	0m³/d.		
			y chlorine being				
Chemicals Dosed	Chlorine				 	<u></u>	
Master Meter Details	1 No. existing a	nd in good cond	tion		-		
Distribution Mains	Diameter	80 mm	50mm			<u> </u>	
	Length	10km				ļ	
	Materials	uPVC				<u> </u>	
					.		
Service Reservoirs	11No. storage t	anks with a total	capacity of 384	m³	<u> </u>	<u>L</u> _	
Pump Details	2No. low lift -10m ³ /hr x 15mH. 2No. high lift 16m ³ /hr x 80mH						
, a, a. a			H. Average pu				
Customer Details							
Households Served	Members	Other H.H's	Total				
		1300	1300				
Customers Metered	Yes		Metered	1300	Unmeter	·ed	
				-			
Operation & Maintenance		Production	H.H Served				
Water Production	1993	11424m ⁵	375	İ			
No records	1994	10973m³	372				
110 1-00100	1995	11685m³	389]			
	1996	11550m ³	405	}			
	1997						
Water Consumption	Domestic	Institutional	irrigation	Others	Total	╛	
traid consulpton	9,818m³	1,386m³		347m³	11,550m	,]	
Problems / Future Expansi		<u></u>					
Supply inadequate to serve the							
Frequent power breakdowns de Inadequate operating staff	trimental to consis	tent supply					

KAPSOWAR W/S (1/1)

<u>General</u>						
Name of Rural water Supply:	Kapsowar W/S	3	Location / Di	strict:	Kapsowar/I	Marakwet
Organisation / Water Undertak	e <u>r: Kapsowar A</u>	IC Mission con	nmunity.	Map Ref		
Drainage Sub Basin				Co- Ords.	. <u>X:</u>	Y:
Construction Details						
Year of Construction	Phase I:	1880-81	Phase II:		Phase III	
Constructed By:	MOWR		Funded By.		MOWR/Kay	osowar AIC Missic
Total Construction Cost	Ksh. 4000,000			_		
Year Operation Started:	1982			-		
Existing Facilities						
Water source:	Emaston river	in Kipkunur Fo	orest	Intake Fa	cilities:	Weir
Raw Water Transmission	Gravity - 100r	nm dia. pipe 5.:	5km long, absti	racting 324r	n³/d	
Treatment Facilities	Only Chlorina	tion is being ca	rried out some	times.		
Chemicals Dosed	No other treat	ment				
Master Meter Details	No master me	eter				
Distribution Mains	Diameter	80	50	40		
	Length	2km	25km	2.7km		
	Materials	GI	UPVC	GI	<u> </u>	
		L-,	Lie-man	*		
Service Reservoirs	1 No masona	ry tank of capa	city 100m³			
Pump Details	None	<i>2</i>				
,						
Customer Details						·
Households Served	Members	Other H.H's	Total	1		
		5,000	5,000	people		
Customers Metered	No		Metered		Unmetere	d All consumers
7,700		•			-	
Operation & Maintenance		Production	H.H Served	7		
Water Production	1993	250m³/d	Hospital, scho	ol and comi	munity	
		280m³/d		7	•	
		600m³/d		1		
		1000m³/d	<u> </u>	Area servi	8	
		1600m³/d		1	-	
Water Consumption	Domestic	Institutional	Irrigation	Others	Total	7
trater consumption	26%	1	1	11%		
Problems / Future Expansion		<u></u>	<u> </u>		100	<u>ت</u>
Water from current source is p.		orms/100mN A	new source is	required to	he develor	ed with
	AMARCA (Z40008	niosi ivonij. A	new source o	-equied to	CS OF FEMPE	- etiti
provisions of full treatment.		•				
2. Water supply is insufficient to	cater for demand	l				





GATANGO (1/1)

General						
Name of Rural water Supply:	Gatango		Location / Di	strict: Mara	gua	
Organisation / Water Undertake	er: MOWR		<u></u>	Map Ref		
Drainage Sub Basin				Co- Ords.	X:	Y:
Construction Details						
Year of Construction	Phase I:	1970-72	Phase II:		Phase III	
Constructed By:	Contractor		Funded By:	Self help,M	OWR	
Total Construction Cost	30,000,000 di	stribution syste	m	_		•
Year Operation Started:	1972			_		
Existing Facilities						
Water source:	Pipeline offtak	re - North Math	ioya River	Intake Fac	cilities:	Offtake
Raw Water Transmission	Pumping and	gravity				
Treatment Facilities	North Mathioy	/a - untreated				
Chemicals Dosed	None at at Mu	ıranga				
Master Meter Details	None					
Distribution Mains	Diameter	Ĺ				
	Length					
	Materials				!	
Service Reservoirs	5No.	50m³ + 9No n	n3 + 6No 5m3	all masonaŋ	/	
Pump Details					_	
Customer Details						
Households Served	Members	Other H.H's	Total			
	1529		1529]		
Customers Metered	Yes		Metered	335	Unmetere	1194
		T		1		
Operation & Maintenance		Production	H.H Served			
Water Production	1993	2,640	1500	ļ		
	1994	2,640	1500	ļ		
	1995		1510	ļ		
	1996		1529	Service are	ea 96km2	
	1997	T		ļ	· · · · · · · · · · · · · · · · · · ·	•
Water Consumption	Domestic	Institutional	Irrigation	Others	Total	Į
	75%	20%	<u> </u>	5%	100%	J
Problems / Future Expansion	n / Remarks					
1) Treatment of North Mathioya R.	ver supply requ	iired			<u></u>	
· · · · · · · · · · · · · · · · · · ·						
2) Another parallel gravity main sta	arted from river	to distribution to	ank started in :	1984 but not	completed	
						
						

MATHIOYA W/S (1/1)

Name of Rural water Supply: Organisation / Water Undertal			Location / Di	strict:	Maragua	
				Map Ref		
Drainage Sub Basin				Co- Ords,	X:	Y :
Construction Details				•		
Year of Construction	Phase I:	1980-84	Phase II:		Phase III	
Constructed By:	WRD (INT) LT	D	Funded By:	MOWR sta	ige 1, DAFF	ODIL stage
Total Construction Cost	Ksh. 53000000		•			
Year Operation Started:	1984			_		
Existing Facilities				•		
Water source:	River Hembe			Intake Fa	cilities:	Weir
Raw Water Transmission		n and UPVC p	ipe 250m long			
Treatment Facilities	Only chlorinat					
Chemicals Dosed	Tropical Chlor	inationated lime	· · · · · · · · · · · · · · · · · · ·			
Master Meter Details	1 No but in po					
Distribution Mains	Diameter	350-75mm				I
	Length	174kmtotal				
	Materials	UPVC/DVGS		<u> </u>		
Service Reservoirs Pump Details	8 No reinforce	ed concrete tan	ks 338m³ eacl	ን		
Customer Details				7		
Households Served	Members	Other H.H's	Total	1		
	1,250		1,250	.		
Customers Metered	No		Metered	•	_Unmeter	e <u>A#</u>
Operation & Maintenance		Production	H.H Served]		
Water Production	1993	6000 m 3/d	3,390	<u>.</u> j		
	1994	6000 m 3/d	3,890	<u>.</u>		
	1995	6000 m 3/d	4,390	<u> </u>		
	1996	6000 m 3/d	4,890	Service ar	ea 143km2	
	1997				· · · · · · · · · · · · · · · · · · ·	٦
Water Consumption	Domestic	Institutional	Irrigation	Others	Total	_
	45%	55%			100%	J
Problems / Future Expansi	on / Remarks					
4) Thorouge plane for full treatme	ent works and au	gmentation				
 There are plans for full treatment 	a ta fat cata cana	ections				
2) There is wastage of water du	e to nat rate conf	-				

KIGUMO (1/1)

General						
Name of Rural water Supply:	Kigumo		Location / Di			
Organisation / Water Undertak	er: MOWR			Map Ref		
Drainage Sub Basin				Co- Ords.	X:	Y:
Construction Details						
Year of Construction	Phase I:	1975-77	Phase II:	1987	Phase III	
Constructed By:	Contractor &	self help	Funded By:	Self help,Mi	OWR	
Total Construction Cost	445,000,000					
Year Operation Started:	1987 - Kigum	o is partly a ver	y large scheme	by the sam	e name	
Existing Facilities						
Water source:	River Irati			Intake Fac	itties:	Weir
Raw Water Transmission	Gravity 315m	m and UPVC p	ipe = 5km long			·
Treatment Facilities	Only plan sed	limentation don)			
Chemicals Dosed						
Master Meter Details	only V notch					
Distribution Mains	Diameter	315-80mm				
	Length	180km toti				
	Materials	UPVC				
				1		
Service Reservoirs	Total storage	capacity 50m3	<u> </u>	<u> </u>	L	·
Pump Details						
Customer Details	e					
Households Served	Members	Other H.H's	Total]		
	15,000	 	15,000	1		
Customers Metered	Yes / No	-	Metered	lew	Unmetere	majority
Operation & Maintenance		Production	H.H Served	1		
Water Production	1993		100,000	1		
Traice Troubers	1994	† · · · · ·	120,000	1		
	1995	† · · · · · · · · · · · · · · · · · · ·	145,000	1		
	1996			Service are	a 725km2	
	1997	<u> </u>	150,000	Joervice are	C P EUNINE	
Water Consumption	Domestic	Institutional	Irrigation	Others	Total	}
Water Consumption			ilingatosi	1		ł
Ozoblome / Eutura Expansio	98%		<u> </u>	5%	100%	J
Problems / Future Expansion						
The sheme may be augmented	•	re to sen'e a po	opulation of 30	0,000.		
2) Currently Chlorination is at k	east required.					
						

KANDARA (1/1)

General						
Name of Rural water Supply.	Kandara		Location / D			
Organisation / Water Undertak	e <u>r: <i>NWCPC</i></u>			-		
Drainage Sub Basin				_Co- Ords	. <u>X:</u>	<u>Y:</u>
Construction Details						
Year of Construction	Phase I:	1975-1980	Phase II:		Phase III	•
Constructed By:	Self help/Con	tractors	Funded 8y:	Local com	munity and (3OK
Total Construction Cost				-		
Year Operation Started:	1980			_		
Existing Facilities						
Water source:	Thika river			_Intake Fa	acilities:	Concret weir
Raw Water Transmission	Gravity					
Treatment Facilities	None			<u>-</u>		
Chemicals Dosed	None					
Master Meter Details	No master m	eler				~
Distribution Mains	Diameter	300-80mm		<u> </u>		<u> </u>
	Length	72km		<u> </u>		_
	Materials	UPVC/GI		1		
Service Reservoirs	45m³ - 1No	90m³ - 4No	150m³ - 1No	225m³-	41 250m³ - 1	No450m3 - 2No
Pump Details	1-0117 - 1140	10000	1			
Fump Details		···				
Customer Details						
Households Served	Members	Other H.H	Total	7		
House:olds delived	Members		15,30	ω 		
Customers Metered	Yes / No		Metered		<u>v</u> Unmeter	ed 11,000
Operation & Maintenance		Production	H.H Serve	a		
Water Production	199					
Water Production	199		 	_		
		5 14,640 m ³ /	d 15.30	20		
	199					
	199			7		
Water Consumption		Institutiona	l Irrigation	Others	Total	
water consumption	75				100	0%
Problems / Future Expans	L					
The existing scheme was constru	ucted in stages	between mid_1	970 and 1980,	mainly on se	elf-help basis	by the local
community, and covers an area of	of 426km². The	existing schen	ne is managed	by NWCPC	and is not a	ible to meet the
demand in the area due to various	os constraints.	The constaints	are lack of ope	eration and r	naintenance	funds; facilities were
constructed to meet the 1982 wa						
due to taps left running all the tin	ne as majority o	f consumers a	e on flat rate. F	reliminary d	esing for reh	abilitation of the
existing scheme and expansion	including full co	nventional trea	tment has been	n carried out	by a firm of	Consulting Engineers on is 14.640m ³ /d.
In 1995, a customer survey indic The scheme manager's records	indicate that the	ere are approxi	nately 7,000 co	istomers. A	oproximately	60% of the consume
get regular supply						

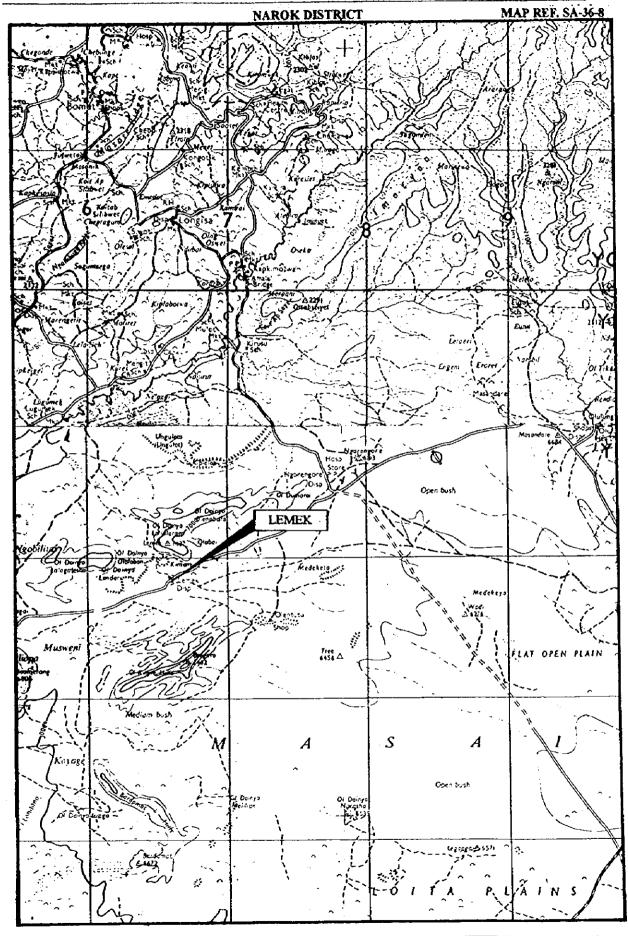
KAHUTI (1/1)

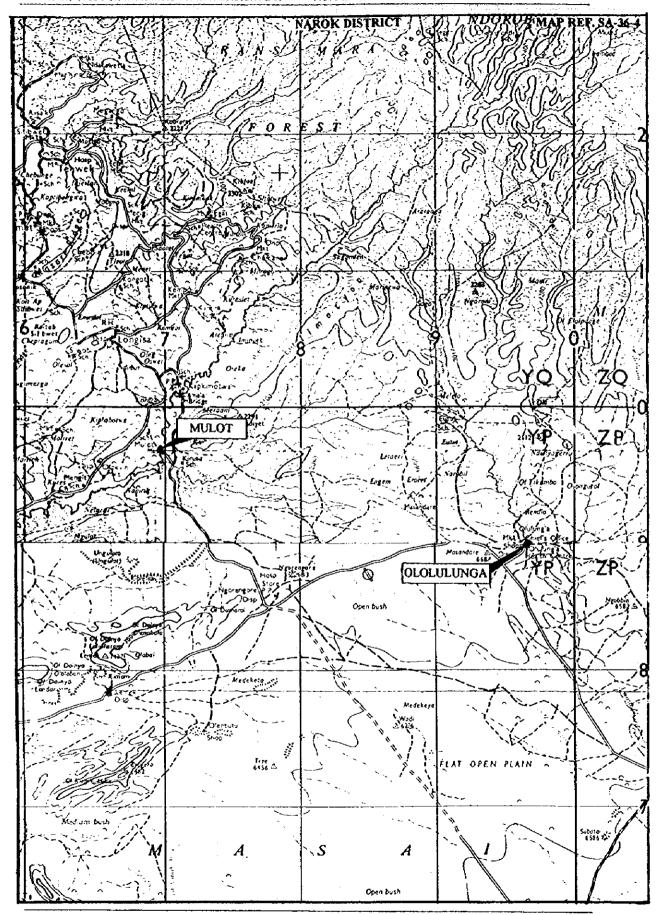
Rural Water Supply System Survey

Meneral						
Name of Rural water Supply:	Kahuti		Location / Di	strict:	Muranga	
Organisation / Water Undertak	(er: <i>NWCPC</i>			Map Ref		
Drainage Sub Basin				Co- Ords.	X:	Y:
Construction Details						
Year of Construction	Phase I:	1950's	Phase II:	1972	Phase III	1977
Constructed By:	Self help grou	p/Contractors	Funded By:	GOK and I	local commu	nity
Total Construction Cost						
Year Operation Started:	1950					
Existing Facilities						
Water source:	South Mathio	ya and Maragu	a rivers	Intake Fac	clities:	Concrete weir
	Phaset: Sout	h Mathioya Riv	er	_		
	Phase II: Sou	th Mathioya Ri	ver	_		
	Phase III: Ma	agua River		-		
Raw Water Transmission					<u>-</u>	
Treatment Facilities	Full convention	nal treatment f	or phase ii and	Kangema u	rban coaguia	tion, sedimenta
	filtration and	disinfection	by chlorine			
Chemicals Dosed	No treatment	facilities for ph	ase III Soda As	h, Alum and	Chlorine	
Master Meter Details	1 No 300mm	Dia type Kent	for phase II Sc	heme		
Distribution Mains	Diameter	300mm	200-100mm	80-25mm		
	Length	0.25km	26.4km	213km		
	Materials	UPVC	UPVC/GI	UPVC/GI		
Service Reservoirs	250m³ - 1No	200m³ - 1No	100m³ - 7No	50m³ - 23a	250m³ - 22	No
Pump Details	High level zoi	ne- 2 No capac	ity 17.53m³/hr	, head 133.5	5m make Wh	L 40/10
	High level zon	ne-2 No capaci	ity 17.5m³/hr, l	ead 197m i	nake MOVI	40/8 <i>0</i>
Customer Details				_		
Households Served	Members	Other H.H's	Total]		
			11,800	J		
Customers Metered	Yes / No	_	Metered	750	Unmetere	d11,050
				_		
Operation & Maintenance		Production	H.H Served			
Water Production	1993]		
	1994]		
	1995	12,910 m 3/d	11,800			
	1996			7	ea 143km2	
	1997]		
Water Consumption	Domestic	Institutional	Irrigation	Others	Total	_
•	75%		T		100%	6

Problems / Future Expansion / Remarks

1. The existing Kahuti water suppy scheme was costructed between 1950 and 1977 in various phases, and comprises of three independent phase viz. Phase II, Phase III and Kangema Urban. The schemes have surpassed their design horizons and are not able to meet the demand of the growing rural population. Lack of operation and maintenance funds has resulted in continued lowering of standards of service in the scheme. In 1995, a customer survey indicated that there are 11,800 customers and the production is 12,910m3/d. However, not all customers get water. Estimated number of customers who get water regularly is about 6,500. Most of the consumers are on flat rate and thus not careful on water usage and wastage is prevalent. Preliminary design for rehabilitation and augmentation of the existing scheme including bulk and individual metering has been carried out by a firm of Consulting Engineers





MBP PARTNERS

MANGAT, I.B. PATEL AND PARTNERS, Consulting Engineers, Nairobi, Kenya.

LEMEK W/S (1/1)

General						
Name of Rural water Supply:	Lemek W/S		Location / Dis		Narok	
Organisation / Water Undertake	F			Map Ref		
Drainage Sub Basin			 -	Co-Ords	X: 35° 23'	Y:S01° 06'
Construction Details						
Year of Construction	Phase I:	1973-74	Phase II:		Phase III	
Constructed By:	MOWR		Funded By:		MOWR	
Total Construction Cost				-		
Year Operation Started:	1972			_		
Existing Facilities						
Water source:	Lemek boreho	le		Intake Fa	cilities:	B _i Hole
Raw Water Transmission	Pumping:main:	s varying from 751	nm to 25mm			
Treatment Facilities	None					
Chemicals Dosed	None Testing	done once a year))			
Master Meter Details	None				·•	· · · · · · · · · · · · · · · · · · ·
Distribution Mains	Diameter	63mm	40mm	32mm	25mm	<u> </u>
	Length (km)	_3	2	0.5	0.5	<u>. </u>
	Materials	UPVC	G.I.	G.1	G.I.	·L
Service Reservoirs	1 No masono	y tank of capacity	45m ³		<u> </u>	
Pump Details		40, prime mover 1		∕nr. H=120r	n	
r only belass	inone party o	To, printe more				
Customer Details						
Households Served	Members	Other H.H's	Total]		
1 1003 G 10103 C G 1 V C C	600	0 0101 11110	600	,		
Customers Metered	1	L	Metered	_	Unmetere	d
Customas Metareu	yes	•	metaca		_ •,	
Operation & Maintenance	ſ	Production	H.H Served	7		
Water Production	1993			7		
Water Froduction	1994		 	-		
	1995			1		
			 -	╡		
	1996	app.100m ³ /d	600	1		
				Others	Total	7
Water Consumption	Domestic	Institutional	Irrigation	Oniers	Total	-
Problems / Future Expansion	on / Remarks	<u> </u>				_
1. Inadequate staff and funds to c	arry out operation	ons and maintenau	nce.			
2. More storage facilities are requ	ired.					
3. Extension of pump house to ac	comodate two r	ew pumpsets is r	eguired.			
4. Two new water kiosks require	to be constructe	<u>d.</u>		-	-10-2	
5. Treatment facilities required, es	specially chlorina	ition as an immed	ate measure			

MULOT (1)

General							
Name of Rural water Supply:	Mulot W/S		Location / D	/ District: Narok			
Organisation / Water Undertake	er:	MOWR		Map Ref			
Drainage Sub Basin				Co- Ords.	X: 35° 25'	Y: S 00° 56'	
Construction Details							
Year of Construction	Phase I:	1979-80	Phase II:	1981-85	Phase III		
Constructed By:	MOWR & Set	help	Funded By:	GOK	· · · · · · · · · · · · · · · · · · ·		
Total Construction Cost	•			_			
Year Operation Started:	1980			_			
Existing Facilities							
Water source:	Mara River			_Intake Fac	cities:	Direct abstraction	
Raw Water Transmission	1 No. Loewe	centrifugal pum	o, Q=30m³/hr	, H=150m			
Treatment Facilities	None						
Chemicals Dosed	None						
Master Meter Details	None			-1 			
Distribution Mains	Diameter	75mm	50mm	32mm	25mm		
	Length	3 km	1.5 km	2 km	0.5 km	<u> </u>	
	Materials	uPVC/G.I.	uPVC/G.I.	uPVC/G.I.	uPVC/G.I.		
Service Reservoirs	2 No. masoni	y tanks, 45m³	and 90m³				
Pump Details	Loewe centrif	ugai pump - Q=	30m³/hr, H=	150m			
Customer Details	·			1			
Households Served	Members	Other H.H's	Total	4			
	1,000	1,500	2,500				
Customers Metered	Yes		Metered	2,500	Unmetered	N //	
		т	<u> </u>	ר			
Operation & Maintenance	ļ	Production	H.H Served	4			
Water Production	1993			-			
	1994			-{			
	1995			-{			
	1996			-			
		300m³/d		<u> </u>	1.	ר	
Water Consumption	Domestic	Institutional	T	Others	Total	4	
	50%	30%	<u>}-</u>	20%	100%		
Problems / Future Expansio	<u>n / Remarks</u>						
1. Regular breakdown of pum	pş				·	·	
2.Insufficient funds to purchas	e repair mate	rials					
3. Inadequate staff for operati	on and mainte	enance					
4. Treatment facilities required			an immedia	ate measur	e		
5. 1 No. standby pump require	ed.						
6. Demand oustripping the su	pply, major at	igmentation i	equired.				

OlOIUIUNGA (1/1)

Organisation / Water Undertakee: Community Map Ref SA-36-4 Drainage Sub Basin Co- Ords, X: 35° 40′ Y: S.01° 00 Construction Details Vear of Construction Phase I: 1983-1985 Phase II: 1988 Phase III Construction Cost Ks. 1,600,000 Vear Operation Started: 1985 Existing Facilities Water Source: Ewase Nytre River Intake Facilities: Direct abstrr. Braw Water Transmission 2 No. pumps: Q = 27m² for pumping 4-6 hoursid twice a week, rising main 100mm.c GL/LPYC 3.6 km kmg pipe Treatment Facilities None Chemicals Dosed None Master Meter Details Distribution Mains Diameter focomm Length Materials Service Reservoirs 8 No. masonry tanks 45m² and 1 No. 90m², total 380m² Pump Details Pump Details Households Served Members Other H H's Total 40 Served 1993 Customers Metered No Metered No Metered No Unmetered 910 Customers Metered No Metered No Metered No Unmetered 910 Customers Metered No Metered No Metered No Unmetered 910 Water Production Demasic Institutional Irrigation Others Total 1993 Water Consumption Demesic Institutional Irrigation Others Total 100% Problems / Future Expansion / Remarks 1, Financial constraints. 2, Lack of technical know-how to operate and maintain the scheme. 3, Frequent breakdown of pumps. 4, Treatment facilities required, especially chlorination as an immediate measure.	Name of Divisional County	Olekskinsen		Location / Di	istrict:	Narok	
Co- Ords, X: 35° 40' Y: S 01° 00 Construction Details Year of Construction Phase I: 1983-1985 Phase III				•			
Phase : 1983-1985 Phase : 1988	- -	<u>'</u>	COMMINICATING		•		Y. S 01° 00'
Year of Construction Phase I: 1983-1985 Phase II: 1988 Phase III Constructed By: DDC Funded By: Set Help & World Bank Total Construction Cost Ks. 1,600,000 Year Operation Started: 1985 Existing Facilities Water source: Ewaso Nyiro River Intake Facilities: Direct abstration facilities Water Source: Ewaso Nyiro River Intake Facilities: Direct abstration facilities Water Source: Ewaso Nyiro River Intake Facilities: Direct abstration facilities Water Source: Ewaso Nyiro River Intake Facilities: Direct abstration facilities Preadment Facilities None Chemicals Dosed Master Meter Detaits Diameter Intomin Intake Facilities: Direct abstration facilities aweek, rising main 100mm of GLIAPPIC 3.6 km long pipe Treatment Facilities None Chemicals Dosed Master Meter Detaits Diameter Intomin Interest Intomin Interest In	•				_00 0,00	71.00	7. 0 0
Constructed By: Doc		Dhono le	1002 1005	Phaco II:	1088	Phasa III	
Total Construction Cost Year Operation Started: Existing Facilities Water Source: Ewaso Nyto River Intake Facilities: Direct abstra 2 No. pumps: Q = 27m² five pumping 4-6 hoursid twice a week, rising main 100mm of 0.1/pPVC 3.6 km long pipe Treatment Facilities None Chemicals Dosed Master Meter Details Distribution Mains Diameter foomm Length Materials Service Reservoirs 6 No. masonry tanks 45m³ and 1 No. 90m³, total 380m² 2 No. pumps, 1 duty, 1 standby, Q = 27m3 five pumping 4-6 hrs a day, twice a week Customer Details Households Served Members Other H.H's Total 410 500 910 Customers Metered No Metered N	•	-				•	
Year Operation Started: Existing Facilities Water source: Ewaso Nyiro River Intake Facilities: Direct abstrated: Ewaso Nyiro River Intake Facilities: No pumps: Q= 27m³ for pumping 4-6 hours/d twice a week, rising main 100mm of GLAPVC 3.6 km long pipe Treatment Facilities None Chemicals Dosed Master Meter Detaits Distribution Mains Distribution Mains Distribution Mains Distribution Mains Distribution Mains Service Reservoirs B No. masonry tanks 45m³ and 1 No. 90m³, total 360m³ 2 No. pumps, 1 duly, 1 standby; Q= 27m3 hr pumping 4-6 hrs a day, twice a week Customer Details Households Served Members Other H.H's Total 410 500 910 Customers Metered No No Metered No No Metered No No Metered No No No Metered No No No No No No No No No N	•			Funded by.	Seil neip a	YVUIU Darik	
Existing Facilities Water source: Raw Water Transmission 2 No. pumps: Q = 27m³ fm pumping 4-6 hours/d twice a week, rising main 100mm of 1/4PVC 3.6 km long pipe Treatment Facilities None Chemicals Dosed Master Meter Details Distribution Mains Distribution					_		
Water source: Raw Water Transmission 2 No. pumps: Q = 27m³ fire pumping 4-6 hours/d twice a week, rising main 100mm.c GLAPPCG 3-6 km long pipe Treatment Facilities None Chemicals Dosed None Master Meter Details Diameter Icomm Length Materials Service Reservoirs Service Reserv	· · · · · · · · · · · · · · · · · · ·	1985			_		
Raw Water Transmission 2 No. pumps: Q = 27m³ fm pumping 4-6 hours/d twice a week, rising main 100mm of GL/LPVC 3.6 km long pipe Treatment Facilities None Chemicals Dosed None Master Meter Details Diameter tocomm	Existing Facilities					#1.F	District Control
G.I.UPVC 3.6 km long pipe Chemicals Dosed None Chemicals Dosed None Master Meter Details Distribution Mains Distribution Mains Distribution Mains Distribution Mains Service Reservoirs E. No. masonry tenks 45m³ and 1 No. 90m³, total 380m³ 2 No. pumps, 1 duty, 1 standby:Q= 27m3hr pumping 4-6 hrs a day, twice a week Customer Details Households Served Members Other H.H's Total 410 500 910 Customers Metered No Metered No Metered No Metered 1993 Production H.H Served 1994 Area served 16 km² 1995 1996 1997 110m³/d Water Consumption Problems / Future Expansion / Remarks 1. Financial constraints. 2. Lack of technical know-how to operate and maintain the scheme. 3. Frequent breakdown of pumps. 4. Treatment facilities required, especially chlorination as an immediate measure.	Water source:						
Chemicals Dosed Master Meter Details Distribution Mains Pump Details Pump Details Pump Details Households Served Members Dither H.H's Total Atro Atroa Maintenance Production Metered Members Dither H.H's Total Atroa Maintenance Production H.H Served Details Distribution Mains Members Distribution Mains Atroa Maintenance Production Distribution Mains Atroa Maintenance Institutional Irrigation Dithers Total Domestic Institutional Irrigation Others Total Total Total Domestic Institutional Irrigation Others Total Total Domestic Institutional Irrigation Others Total Total Domestic Institutional Irrigation Others Total Total Total Domestic Institutional Irrigation Others Total Tot	Raw Water Transmission	2 No. pumps:	$Q = 27m^3/hr pt$	umping 4-6 ho	urs/d twice a	a week, rising	main 100mm dia.
Chemicals Dosed Master Meter Details Distribution Mains Distribution Mains Diameter focomm		G.I./uPVC 3.6	km long pipe				
Master Meter Details Distribution Mains Dismeter fcomm	Freatment Facilities	None					
Master Meter Details Distribution Mains Diameter toomm	Chemicals Dosed	None					
Diameter foomm Length Materials Service Reservoirs 6 No. masonry tenks 45m³ and 1 No. 90m³, total 350m³ Pump Details 2 No. pumps, 1 duty, 1 standby:Q= 27m3/hr pumping 4-6 hrs a day, twice a week Customer Details Households Served Members Other H.H's Total 410 500 910 Customers Metered No Metered Ni Unmetered 910 Operation & Maintenance Water Production 1993 1994 Area served 16 km² 1995 1996 1997 110m³/d Water Consumption Domestic Institutional Irrigation Others Total 70% 30% 100% Problems / Future Expansion / Remarks 1. Financial constraints. 2. Lack of technical know-how to operate and maintain the scheme. 3. Frequent breakdown of pumps. 4. Treatment facilities required, especially chlorination as an immediate measure.							<u></u>
Length Materials 2 No. masony tanks 45m³ and 1 No. 90m³, total 350m³ 2 No. pumps, 1 duty, 1 standby: Q= 27m3/hr pumping 4-6 hrs a day, twice a week Customer Details Members Other H.H's Total 410 500 910 Metered Ni			foomm		T	1	
Service Reservoirs Solution	CIANIDARAH MARIA					<u> </u>	
Service Reservoirs Pump Details 2 No. pumps, 1 duty, 1 standby, Q = 27m3hr pumping 4-6 hrs a day, twice a week Customer Details Households Served Members Other H.H's Total 410 500 910 Customers Metered No. Metered No. Metered No. Metered No. Metered No. Metered Production H.H Served 1993 1994 Area served 16 km² 1995 1996 1997 110m³/d Water Consumption Domestic Institutional Irrigation Others Total 70% 30% - 100% Problems / Future Expansion / Remarks 1. Financial constraints. 2. Lack of technical know-how to operate and maintain the scheme. 3. Frequent breakdown of pumps. 4. Treatment facilities required, especially chlorination as an immediate measure.				·			
Members Other H.H's Total 410 500 910 Customers Metered No Metered Ni Unmetered 910 Operation & Maintenance Water Production 1993 Area served 16 km² 1994 Area served 16 km² 1995 Area served 16 km² 1996 Area served 16 km² 1997 110m³/d Area served 100% Problems / Future Expansion / Remarks 1. Financial constraints. 2. Lack of technical know-how to operate and maintain the scheme. 3. Frequent breakdown of pumps. 4. Treatment facilities required, especially chlorination as an immediate measure.	rump Details	2 No. pamps,	Tooly, Tstark	zy,cz= zmion	, panpag	70110 4 449,	
Customers Metered No Metered Ni Unmetered 910 Operation & Maintenance Production H.H Served 1993 Area served 16 km² 1995 Area served 16 km² 1996 Institutional Irrigation Others Total 70% 30% Institutional Irrigation Others Total 1. Financial constraints. 2. Lack of technical know-how to operate and maintain the scheme. 3. Frequent breakdown of pumps. 4. Treatment facilities required, especially chlorination as an immediate measure.	<u>Customer Details</u>	r			7		
Customers Metered No Metered Nil Unmetered 910 Operation & Maintenance Production H.H Served 1993 Area served 16 km² 1994 Area served 16 km² 1995 1996 1997 110m³/d Water Consumption Domestic Institutional Irrigation Others Total 70% 30% - 100% Problems / Future Expansion / Remarks 1. Financial constraints. 2. Lack of technical know-how to operate and maintain the scheme. 3. Frequent breakdown of pumps. 4. Treatment facilities required, especially chlorination as an immediate measure.	Households Served	Members	Other H.H's	Total	-}		
Operation & Maintenance Water Production 1993 1994 1995 1996 1997 110m³/d Water Consumption Domestic Institutional Irrigation Others Total 70% 30% - 100% Problems / Future Expansion / Remarks 1. Financial constraints. 2. Lack of technical know-how to operate and maintain the scheme. 3. Frequent breakdown of pumps. 4. Treatment facilities required, especially chlorination as an immediate measure.		410	500	910	2		
Water Production 1993 1994 Area served 16 km² 1995 1996 1997 110m³/d Water Consumption Domestic Institutional Irrigation Others Total 70% 30% - 100% Problems / Future Expansion / Remarks 1. Financial constraints. 2. Lack of technical know-how to operate and maintain the scheme. 3. Frequent breakdown of pumps. 4. Treatment facilities required, especially chlorination as an immediate measure.	Customers Metered	No	-	Metered	Nil	_Unmetered	d <u>910</u>
1994 Area served 16 km² 1995 1996 1997 110m³/d Water Consumption Domestic Institutional Irrigation Others Total 70% 30% - 100% Problems / Future Expansion / Remarks 1. Financial constraints. 2. Lack of technical know-how to operate and maintain the scheme. 3. Frequent breakdown of pumps. 4. Treatment facilities required, especially chlorination as an immediate measure.	Operation & Maintenance		Production	H.H Served			
1995 1996 1997 110m³/d Water Consumption Domestic Institutional Irrigation Others Total 70% 30% - 100% Problems / Future Expansion / Remarks 1. Financial constraints. 2. Lack of technical know-how to operate and maintain the scheme. 3. Frequent breakdown of pumps. 4. Treatment facilities required, especially chlorination as an immediate measure.	Water Production	1993	<u> </u>				
Water Consumption Domestic Institutional Irrigation Others Total 70% 30% - 100% Problems / Future Expansion / Remarks 1. Financial constraints. 2. Lack of technical know-how to operate and maintain the scheme. 3. Frequent breakdown of pumps. 4. Treatment facilities required, especially chlorination as an immediate measure.		1994			_Area ser	ved 16 km²	
Water Consumption Domestic Institutional Irrigation Others Total 70% 30% - 100% Problems / Future Expansion / Remarks 1. Financial constraints. 2. Lack of technical know-how to operate and maintain the scheme. 3. Frequent breakdown of pumps. 4. Treatment facilities required, especially chlorination as an immediate measure.		1995		<u> </u>	_]		
Water Consumption Domestic Institutional Irrigation Others Total 70% 30% - 100% Problems / Future Expansion / Remarks 1. Financial constraints. 2. Lack of technical know-how to operate and maintain the scheme. 3. Frequent breakdown of pumps. 4. Treatment facilities required, especially chlorination as an immediate measure.		1996					
Water Consumption Domestic Institutional Irrigation Others Total 70% 30% - 100% Problems / Future Expansion / Remarks 1. Financial constraints. 2. Lack of technical know-how to operate and maintain the scheme. 3. Frequent breakdown of pumps. 4. Treatment facilities required, especially chlorination as an immediate measure.		1997	110m³/d			<u></u>	- -
Problems / Future Expansion / Remarks 1. Financial constraints. 2. Lack of technical know-how to operate and maintain the scheme. 3. Frequent breakdown of pumps. 4. Treatment facilities required, especially chlorination as an immediate measure.	Water Consumption	Domestic	Institutional	Irrigation	Others	Total	
1. Financial constraints. 2. Lack of technical know-how to operate and maintain the scheme. 3. Frequent breakdown of pumps. 4. Treatment facilities required, especially chlorination as an immediate measure.	•	70%	30%			100%	6
2. Lack of technical know-how to operate and maintain the scheme. 3. Frequent breakdown of pumps. 4. Treatment facilities required, especially chlorination as an immediate measure.	Problems / Future Expansio	n / Remarks					
3. Frequent breakdown of pumps. 4. Treatment facilities required, especially chlorination as an immediate measure.	1. Financial constraints.						
4. Treatment facilities required, especially chlorination as an immediate measure.	2. Lack of technical know-how	rto operate a	nd maintain t	he scheme.			
	3. Frequent breakdown of pur	nps.					
F. L. J at Miles approximated maintenance	4. Treatment facilities required	l, especially o	hlorination a	s an immedia	ate measu	re.	
5. Inadequate staff for operation and maintenance.	5. Inadequate staff for operati	on and maint	enance.				

OLOPITO W/\$ (1/1)

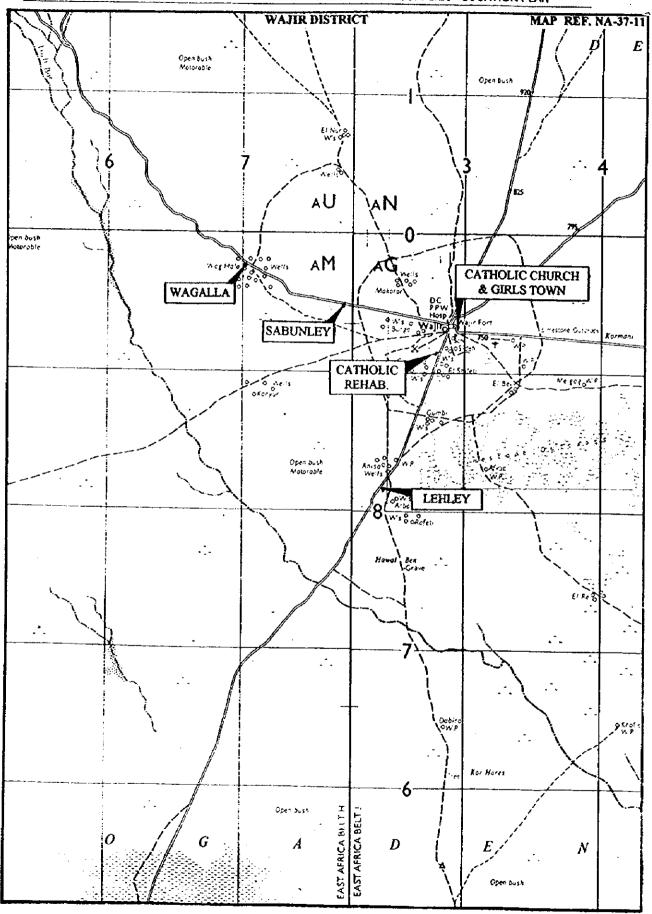
Rural Water Supply System Survey

General						
Name of Rural water Supply:			Location / D			
Organisation / Water Undertain	(e <u>r:</u>			Map Ref		
Drainage Sub Basin				_Co- Ords.	X:	Y:
Construction Details						
Year of Construction	Phase I: 199	<u> </u>	Phase II:		Phase III	
Constructed By:	Salvation Arm	Υ	Funded By:	Salvation A	rmy	
Total Construction Cost	_			_		
Year Operation Started:	1991			-		
Existing Facilities						
Water source:	Borehole - pur	nping		_Intake Fac	cilities:	
Raw Water Transmission	Pumping					
Treatment Facilities	None		.,			
						
Chemicals Dosed	None					
Master Meter Details	None				,	,
Distribution Mains	Diameter	25mm				<u> </u>
	Length	500m				<u> </u>
	Materials	GI			<u> </u>	<u> </u>
Service Reservoirs	1 No. elevated	d tank of 9 m ³				
Pump Details	Submersible p	oump				
Customer Details				_		
Households Served	Members	Other H.H's	Total	_		
	93	<u> </u>	93	3		
Customers Metered	Yes / No		Metered		Unmeter	e <u>d</u>
Operation & Maintenance		Production	H.H Served	<u> </u>		
Water Production	1993	<u> </u>				
	1994					
	1995	<u></u>	<u></u>	_]		
	1996		1	_		
	1997	3315 m3/d			·	_
Water Consumption	Domestic	institutional	Irrigation	Others	Total	_
	75%	25%]-	<u> </u> -	100%	
Problems / Future Expansi	on / Remarks					
1) Figurolal constraints in to	h anaration on	d maintaran	00			

Financial constraints in teh operation and maintenance
 At present only one communal water point. Need more to serve the community widely
 Disinfection required

IIMASHARIAN W/S (1/1)

General						
Name of Rural water Supply:	Ilmasharian W	,	Location / Di		Varok	
Organisation / Water Undertake	er:	MOWR				
Drainage Sub Basin				Co- Ords.	~ -	
Construction Details						
Year of Construction	Phase I:	1980-86	Phase II:		Phase III	
Constructed By:	Ranch Water	Team	Funded By:	MOWR		
Total Construction Cost				•		
Year Operation Started:	1986	· · · · · · · · · · · · · · · · · · ·		_		
Existing Facilities						
Water source:	Spring			Intake Fac	:ilities:	Weir
Raw Water Transmission	Pumping. Ca	orari - Q=20m³/h	r, H=150m			
Treatment Facilities	None					
Chemicals Dosed	None					
Master Meter Details	Installed, in g	ood working con	lition		·	
Distribution Mains	Diameter	foomm	75mm	50mm	35mm	
	Length	3.7km	1.5km	1.8km	1km	<u> </u>
	Materials	uPVC/GI	uPVC	uPVC	uPVC	<u> </u>
Pump Details <u>Customer Details</u>		umps: Q=20m ³ /i		1		
Households Served	Members	Other H.H's	Total	_		
	1,600	200	1,80	<u>o</u>]		
Customers Metered	<u>No</u>	_	Metered	Ni	_Unmetere	d <u>All consum</u>
Operation & Maintenance		Production	H.H Servex	1		
Water Production	199	3	-	┦.	101-2	
	199	4	 	- Area sen	ved 9 km²	
	199	5		-		
	199		- -	_		
		7 App.216m ³ /d	_	 -		7
Water Consumption	Domestic	Institutional	irrigation	Others	Total	_
	60		<u>%]</u>	20%	100	%
Problems / Future Expansi	<u>on / Remark</u>	<u>s</u>				
1. Financial constraints. Cos	t sharing reco	ommended				-
2. Eletricity supply required f	or more relial	ole and continu	ous running o	of pumps.		
3. Frequent breakdown of pu						
4. Treatment facilities require		chlorination as	an immedia	te measure	•	
5. Inadequate staff for opera			<u> </u>			
						-
6 Future expansion entails i	ınstallatları ol	i ivo, starioty	טוווט.			



WAGALLA (1/1)

Rural Water Supply System Survey

General						
Name of Rural water Supply:						
Organisation / Water Undertake	er:Local Commun	ity		Map Ref		
Drainage Sub Basin				Co-Ords.	X:	<u>Y:</u>
Construction Details						
Year of Construction	Phase I: 1988					·
Constructed By:	Self Help		Funded By:	Local Comm	unity	
Total Construction Cost		<u></u>				
Year Operation Started:	1988			•		
Existing Facilities						
Water source;	Hand Dug Sha	llow Well		Intake Fac	ilities: N/A	
Raw Water Transmission	Hand Pump					
Treatment Facilities	No Treatment		<u></u>			
Chemicals Dosed	None					
Master Meter Details	None	·		1		г
Distribution Mains	Diameter			<u> </u>	; 	
	Length			_		
	Materials				L	<u></u>
				т		
Service Reservoirs						<u> </u>
Pump Details	Hand Pump					
Customer Details				ר		
Households Served	Members	Other H.H's	Total	┧		
			300	J		
Customers Metered	No		Metered		Unmetere	e <u>d</u>
		_F		٦		
Operation & Maintenance	<u></u>	Production	H.H Served			
Water Production	1993		}	-		
	1994			4		
	1995			4		
	1996		<u> </u>	4		
	1997	5m³/Day		<u> </u>		ר
Water Consumption	Domestic	Institutional	Irrigation	Others	Total	4
	60%	40%	<u> </u>	<u></u>	100%	

Problems / Future Expansion / Remarks

The Wagalla Community approximates 5 000 persons. However there are other individual shallow wells which are not protected and water from these wells is saline and contaminated. Supply from these wells is not treated at all and the local community does not boil water before drinking. Recently so many people have been dying daily after suffering from water borne diseases.

SABUNLEY (1/1)

Rural Water Supply System Survey

<u>General</u>							
Name of Rural water Supply:	Sabunley		Location / D	istrict: Wajir			
Organisation / Water Undertak	er:Sabunley Boy	s Sec. School		Map Ref	· · · · · · · · · · · · · · · · · · ·		
Drainage Sub Basin				Co- Ords.	X:	Y:	
Construction Details							
Year of Construction	Phase I: 1979	1	Phase II: 198	2	Phase III19	789	
Constructed By:	School Staff		Funded By:	Ministry of W	/ater Resourc	es	
Total Construction Cost	Kshs. 1,000,00	<u> </u>		_			
Year Operation Started:	1978-1979			•			
Existing Facilities							
Water source:	Shallow hand	dug wells - 5N	o	Intake Fac	ilities:		
Raw Water Transmission	Well No 1&2 al	andoned, Well	No 3 equiped w	ith wind mill			
Treatment Facilities	Well No. 4 equ	Vetl No. 4 equiped with hand pump, well No. 5 equiped with so					
Chemicals Dosed	District No. 1		nerar e - La	-			
Master Meter Details	Disinfection by	calorine					
Distribution Mains	None Diameter	40					
DISTRIBUTION Mania			 				
	Length	220	i	<u> </u>			
	Materials	GMS	<u> </u>	.i			
Service Reservoirs	1No-6m³						
Pump Details							
Customer Details				_			
Households Served	Members	Other H.H's	Total				
	40	360	400				
Customers Metered	No		Metered		Unmetere		
Operation & Maintenance		Production	H.H Served	ר			
Water Production	1003		HATOGVEG	1			
No records	1993		<u> </u>	1			
NO records	1994		 	-			
	1995		 	1			
	1996	<u> </u>	 	-{			
Motor Consumption	1997	Incits dian-1	lecination.	Others	Total	ì	
Water Consumption	Domestic	Institutional		Others	Total		
	80%	20%	I	. 1	100%	1	

Problems / Future Expansion / Remarks

Well No. 4 is not protected and it is most likely contaminated. Purchase of chlorine for disinfection is irregular due to tack of funds which result in water being consumed without been disinfected. Water borne diseases are very common in this area.

LEHLEY WATER SUPPLY (1/1)

General							
Name of Rural water Supply:	Lehley Water S	Supply 1			Wajir		
Organisation / Water Undertake	4; ·	Community		Map Ref			
Drainage Sub Basin				Co- Ords.	X: 40° 00'	Y: NO1° 3	7'
Construction Details							
Year of Construction	Phase I:		Phase II.		Phase III	1992	
Constructed By:	AIC+Commun	<u>ðy</u> 1	Funded By:	World Vision	n - to instal s	olar panel, pur	mp and pipework
Total Construction Cost				to distribut	ion tank		
Year Operation Started:	1995			_			
Existing Facilities							
Water source:	Shallow well			Intake Fac	ilities:	Well	
Raw Water Transmission	Plans to instal	a solar powere	d pump. Equip	oment not ins	talled yet		
Treatment Facilities	None						
Chemicals Dosed	Chlorination pl	lanned				-	
Master Meter Details	None						
Distribution Mains	Diameter	32-20mm					
	Length	66m					
	Materials	G.S.					
Service Reservoirs	1 No. elevated	d plastic tank ca	apacity 6.5m ³	<u> </u>	<u> </u>	<u> </u>	j
Pump Details	Solar powered	d pump for both	raw water an	d distribution	planned bu	t not installed y	/et
•							
Customer Details				7			
Households Served	Members	Other H.H's	Total	_			
	210 persons	<u> </u>	210 persons	J			
Customers Metered	No	_	Metered		Unmetere	ed <u>All consume</u>	ers
				-1			
Operation & Maintenance		Production	H.H Served	<u> </u>			
Water Production	1993			_		_	
	1994			Area sen	red about	0.5 km²	
	1995			_			
	1996		<u> </u>	_			
	1997					_	
Water Consumption	Domestic	Institutional	Irrigation	Others	Total	_	
	90%		10%	6	100	<u>%</u>]	
Problems / Future Expansion	n / Remarks						
World Vision International is to ins	tall solar powere	ed pumps. Curr	ently a hand p	ump is used	<u>!</u>		-
Most of this supply will be used by	Lehiey clinic fo	r out-patients a	nd staff.				_
							_
			_				<u>-</u>
							_
							_

CATHOLIC MISSION (1/1)

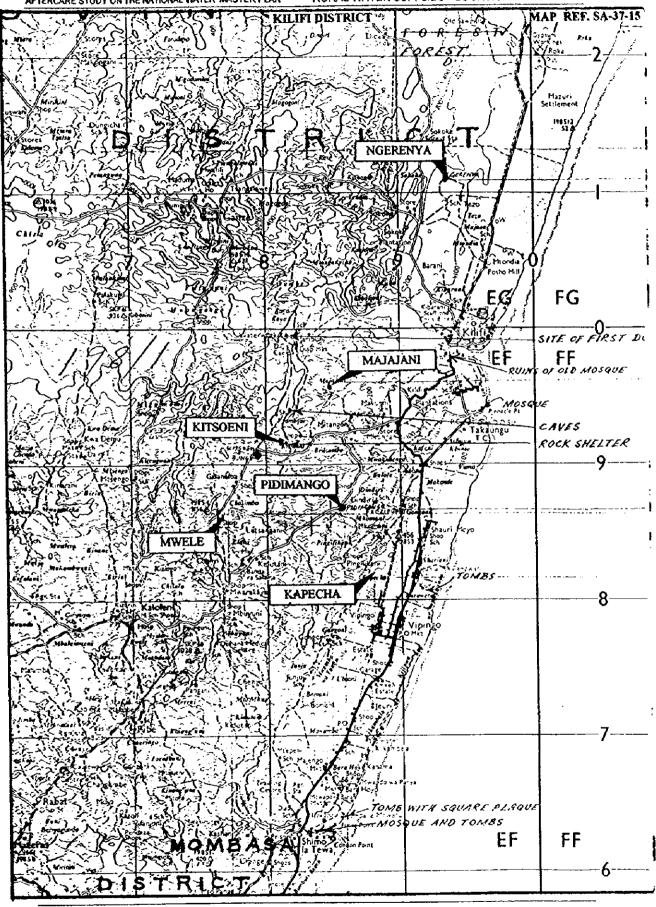
General						
Name of Rural water Supply:	Catholic Miss	ion supply	Location / D	istrict:	Wajir	
	Girls' Town		_			
Organisation / Water Undertak	er: Community	,		_Map Ref		
Drainage Sub Basin					s. X:	Y:
Construction Details	-			-		
Year of Construction	Phase I:	1970	Phase II:	1978	Phase III	1994
Constructed By:	Cahtolic Miss	ion	Funded By:	Catholic M	– Nission/British	H. Comm.
Total Construction Cost	Information U	Inava:lable	_	_		
Year Operation Started:	1970			_		
Existing Facilities						
Water source:	6No. wells of	Mission		_Intake Fa	acilities:	Well
Raw Water Transmission	Pumping, 75	mm dia. G.I. ris	ing main 60m l	ong.		
Treatment Facilities	Chlorination of	only		·- , · · ·		
Chemicals Dosed	Chlorine only			_		
Master Meter Details	None		·			
Distribution Mains	Diameter	60mm-50mm			<u> </u>	
	Length	400m				
	Materials	G.L		<u> </u>		
			·· - -			
Service Reservoirs	1 No.	20m³ mason	ary and 1 No. :	30m³ steel	tank both elev	ated on masonr
Pump Details	Raw water po	umps -TORBOS	SSOM		·	
Customer Details		1	1	7		
Households Served	Members	Other H.H's	Total	4		
	100	300	400			
Customers Metered	No	- :	Metered		_Unmetered	400
0	Γ		T	ר		
Operation & Maintenance		Production	H.H Served	-		
Water Production	1993		 -	-		
	1994		<u> </u>	┨		
	1995			4		
	1996	· · · · ·		4		
W-3 O	1997				I	1
Water Consumption	Domestic		Irrigation	Others	Total	-
Orablama (Potosa Formanata	7.5	92.5	<u> </u>	<u> </u>	100%	J
Problems / Future Expansio						
Water from wells turns turbid du		ons.				
2 Water has undesirably high nitra	e content.				 	
Electric pumps have to be replace	ced every 2 yea	ers				
4. Wells generally dry up in dry we	ather					
5. MSF Beigium is presently provid	ling clean water	technology to	the mission		<u> </u>	
5. MSF Belgium is presently provid	ling clean water	technology to	the mission	 	<u> </u>	

WAJIR REHAB CENTRE W/S (1/1)

<u>General</u>						
Name of Rural water Supply:	Wajir Rehab. C	Centre w/s	Location / Di		Wajir	
Organisation / Water Undertak	er:	catholic Miss	ion	Map Ref		16 11 04 0 444
Drainage Sub Basin				Co- Ords.	X: 40° 04'	Y: N 01° 44'
Construction Details						
Year of Construction	Phase I:	1972-1973		1984-85		1992
Constructed By:	Catholic Missi	on	Funded By:	Catholic Mis	ssion and Ov	verseas Private Donors
Total Construction Cost	<u>N/A</u>			=		
Year Operation Started:	1972			_		
Existing Facilities						
Water source:	5 No. Shallow			_Intake Fac		Well
Raw Water Transmission	3 No. pums: C)=16.8m3/hr H	=16m through	32mm G.I. <u>p</u>	ipe about 20	iom long to elevated
	tank, 1 No. ha					_
Treatment Facilities	Water for hou	seholds is chlo	rinated. 250gr	ams of Tropic	cal Chloride	of Lime is used week
Chemicals Dosed	Chlorination					
Master Meter Details	None					
Distribution Mains	Diameter	50mm-12mm	<u></u>	<u> </u>		
	Length	400m				
	Materials	uPVC	<u> </u>	<u></u>	<u> </u>	
						
Service Reservoirs	2 No. fibregla	ss elevated ta	nks 10m3 eac	h and 1 No. j	plastic tank i	2.5m3
Pump Details	Raw water po	ımps only				
•						
Customer Details				_		
Households Served	Members	Other H.H's	Total			
	530 persons		530 persons	ال		
Customers Metered	No	_	Metered		_Unmetere	ed All consumers
				-		
Operation & Maintenance		Production	H.H Serve	븨		
Water Production	1993	3		_		
•••	1994	ıl				
	1995	5	<u> </u>			
	1996	3		_		
	199	7				_
Water Consumption	Domestic	Institutional	Irrigation	Others	Total	
THE CONTRACTOR	8%	,	92.50	%	100	%
Problems / Future Expans	ion / Remarks					
Catholic Mission has three water			as			
All scmemes are financed by ca				rs under the s	supply	
At somethes are illianced by ca	0 MIII, 11122 MIII, 11	ioic aic to pir				
						

WAJIR CATHOLIC MISSION (1/1)

General						
Name of Rural water Supply:	Wajir Catholic	Mission	Location / Di	istrict:	Wajir	
	Church plot				-	
Organisation / Water Undertak	er:	catholic Miss	ion	Map Ref	NA-37-11	
Drainage Sub Basin				Co- Ords	.X: 40° 05	Y: N 01° 44
Construction Details						
Year of Construction	Phase I:	1979-80	Phase II:	1980	Phase III	1997
Constructed By:	Catholic Miss.	ion	Funded By:	Catholic M	ission	
Total Construction Cost	N/A			_		
Year Operation Started:	1980			_		
Existing Facilities						
Water source:	3 No. Shallow	wells		Intake Fa	cilities:	Well
Raw Water Transmission	pumping: risin	g main 32mm (G.I. pipe about	100m long :	o elevated ta	ınk
Treatment Facilities	Chlorination o	enty				
Chemicals Dosed	Tropical Chio	ride of Lime, 2	50grams/week			
Master Meter Details	None					
Distribution Mains	Diameter	NA				
	Length	N/A				
	Materials	N/A			1	
	<u> </u>					
Service Reservoirs	N/A					
Pump Details	Raw water pu	imps only			.4	
•	···		· · · · · · · · · · · · · · · · · · ·			
Customer Details						
Households Served	Members	Other H.H's	Total		1	
	About 70 pers	sons	About 70 pers	ions	1	
Customers Metered	No		Metered		_ Unmetere	d
		-		All supply	-	
Operation & Maintenance		Production	H.H Served] '''		
Water Production	1993			1		
	1994			1		
	1995			1		
	1996			1		
	1997			1		
Water Consumption	Domestic	Institutional	Irrigation	Others	Total	7
•	20%	i		1	100%	
Problems / Future Expansio				·	1 100/	
Catholic Mission has three water s	supplies in three	separate area	ŝ			
All schemes are finances by Catho				uner this su	ant.	
THE SELECTION OF S	one moonen. The	ic are no pina	ne consoliters	uner tris su	<i>PP9</i>	
-						



PIDIMANGO (1/1)

<u>General</u> Name of Rural water Supply:	Pidimango		Location / Di	istrict:	Chonyi/K	'ilifi
Organisation / Water Undertak		NWCPC/Col	mmunity		•	
Drainage Sub Basin				Co- Ords	X:	Y:
Construction Details				-		
Year of Construction	Phase I:		Phase II:	1994	Phase III	
Constructed By:	Self Help		Funded By:	GTZ (KIW)	ASAP)	
Total Construction Cost	Ksh.2.8 mili	on	•			
Year Operation Started:	1991			-		
Existing Facilities				_		
Water source:	Baricho-Mo	mbasa pipeli	ne	Intake Fa	clities:	off-take
Raw Water Transmission	N/A		•			
Treatment Facilities	Baricho T/Wo	richo T/Works				
Chemicals Dosed	Full treatment	at Baricho Tre	atment Works	 -	·	
Master Meter Details	Installed, in go	ood working co	ndition			
Distribution Mains	Diameter	100mm	80mm	75mm	50mm	
	Length	Total length 15	5.7 km			
	Materials	uPVC	uPVC	uPVC	υPVC	
Service Reservoirs	0.1/2 42-22		3	<u> </u>	Τ	Т
		ment total capa	city 150m	L	i	
Pump Details	N/A				·	
Customer Details			··			
Households Served	Members	Other H.H's	Total]		
				Information	on not ava	ilable
Customers Metered	Yes		Metered	-	Unmeter	ed
				Informatio	- on not ava	ilable
Operation & Maintenance		Production	H.H Served			
Water Production	1993	11,928m³	1124			
	1994	12,508m³	1168]		
	1995	11,940m³	1215]		
	1996	15,481m³	1264			
	1997					
Water Consumption	Domestic	Institutional	Irrigation	Others	Total]
	99%	1%		1	100%	J
Problems / Future Expansio	n / Remarks					
		nd Pipeline Co	rporation result	ting in high a	ccumulated	<u> </u>
Billing dispute with National Water	Conservation a	770 1 100770 00				
Billing dispute with National Water bills. The scheme is dependent on		•				asa
		•				asa

KITSOENI BUNGU (1/1)

<u>General</u>						_
Name of Rural water Supply:	Kitsoeni Bungu		ocation / Di		Chonyi/Kiti	fi
Organisation / Water Undertake	e <u>r</u> 1	WCPC/Com	munity			
Drainage Sub Basin				Co- Ords.	X:	Y:
Construction Details						
Year of Construction	Phase I:		Phase II:		Phase III	
Constructed By:	Self Help	1	Funded By:	GTZ (KIWA	ISAP)	
Total Construction Cost	N/A			_		
Year Operation Started:	1995			_		
Existing Facilities						
Water source:	Baricho-Mor	nbasa pipelin	e	_Intake Fa	cilities:	off-take
Raw Water Transmission	N/A					
Treatment Facilities	Baricho T/Wor	ks				
Chemicals Dosed	Full treatment	at Baricho Trea	tment Works	· · · · · · · · · · · · · · · · · · ·		
Master Meter Details	Installed, in go	od working con	dition	·	т	
Distribution Mains	Diameter	90mm			 	
	Length	4km			 -	
	Materials	uPVC		<u> </u>	1	<u> </u>
Service Reservoirs	2 No. ferrocer	nent total capa	city 100m³			<u> </u>
Pump Details		main, Q=14.4		₹}		
Customer Details			T-1-1	 7		
Households Served	Members	Other H.H's	Total	199	7	
	433	L	43	٠٠٠ ي	r 3 Unmetere	tu be
Customers Metered	Yes	-	Metered		_ Offinierer	, G <u>148</u>
Operation & Maintenance		Production	H.H Served	<u>.</u>		
Water Production	1993			_		
	1994	5366m ³	37	0		
	1995	9547m³	38	4		
	1996	9470m³	40	<u>o</u>]		
	1997		43	3		_,
Water Consumption	Domestic	Institutional	Irrigation	Others	Total	_
•	98%	2%	<u> </u>		100	9 %
Problems / Future Expansi						
Billing dispute with National Water	er Conservation	and Pipeline Co	rporation res	ulting in high	accumulated	<u> </u>
bills. The scheme is dependent of						
and Coastal Water Supply						
the control trains output						
						

KAPECHA 1 (1/1)

General						
Name of Rural water Supply:	Kapecha 1		Location / Dis		Junju/Kilifi	
Organisation / Water Undertak	ė <u>r</u>	NWCPC/Cor		Map Ref		
Drainage Sub Basin				Co-Ords.	X:	Y:
Construction Details						
Year of Construction	Phase I:		Phase II:		Phase III	
Constructed By:	Self Help		Funded By:	GTZ (KIWA	(SAP)	
Total Construction Cost	N/A					
Year Operation Started:	1990					
Existing Facilities						
Water source:	Ubaoni br. o	f Baricho-Mo.	mbasa line	Intake Fac	cilities:	off-take
Raw Water Transmission	N/A					
Treatment Facilities	Baricho T/Wo	rks	<u>,_</u> ,			
Chemicals Dosed	Full treatment	at Baricho Trea	atment Works			
Master Meter Details	Installed, in go	od working cor	ndition	_		
Distribution Mains	Diameter	90mm				<u>.</u>
	Length	5km				<u> </u>
	Materials	uPVC		<u> </u>	<u> </u>	<u> </u>
Service Reservoirs	None			<u> </u>	<u> </u>	
Pump Details	No pumping					
					·····	····
Customer Details						
Households Served	Members	Other H.H's	Total	j		
	420		420	1997		
Customers Metered	Yes		Metered	420	Unmetered	Nil
		·		,		
Operation & Maintenance		Production	H.H Served	1		
Water Production	1993	11,000m ³	359	j		
	1994	12,000m³	373			
	1995	12,000m³	388			
	1996	17,455m ³	404]		
	1997		420]		
Water Consumption	Domestic	Institutional	Irrigation	Others	Total]
	90%	1%		Ī	100%]
Problems / Future Expansion	n / Remarks					_
Billing dispute with National Water	r Conservation a	and Pipeline Co	rporation result	ting in high a	accumulated	
bills. The scheme is dependent on	the operations	of the Baricho	Treatment work	ks which se	rves Mombasa	
and Coastal Water Supply						

MWELE (1/1)

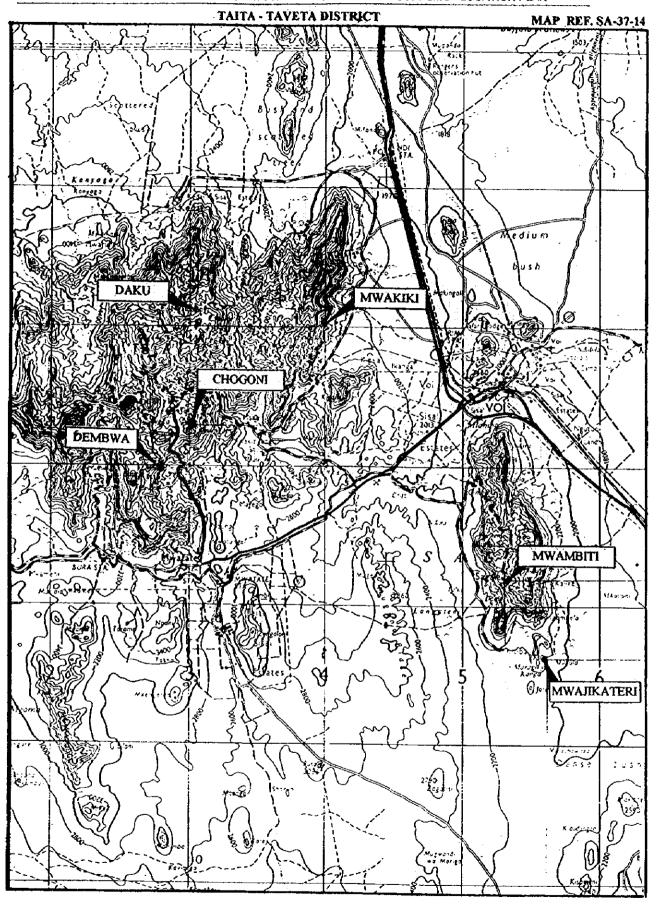
General		1	ocation / Di	etriot:	Chonyil	<iiifi< th=""></iiifi<>
Name of Rural water Supply:			ocation / Di			
Organisation / Water Underlake	3 <mark>. √</mark>	MOWR				Y:
Drainage Sub Basin		<u> </u>		_00-010\$		
Construction Details			St 19.	1006	Dhaca li	1
Year of Construction	Phase I:	1993				'
Constructed By:	Self Help		Funded By:	GIZ (KIW.	45AP)	
Total Construction Cost	Ksh.1.7 millio	<u>n</u>		-		
Year Operation Started:	1996			_		
Existing Facilities					200	- 66 4-1
Water source:	Baricho-Mon	rbasa pipelin	2	_intake Fa	chities:	off-take
Raw Water Transmission	N/A					
Treatment Facilities	Baricho T/Wor	ks				
Chemicals Dosed	Full treatment	at Baricho Trea	itment Works	5		
Master Meter Details	installed, in go	od working cor	dition			
Distribution Mains	(90mm	63mm	<u> </u>	↓	
	Length	Total length 9.	ł km		ļ	
		uPVC	uPVC	<u> </u>	<u> </u>	
a : December	2 No.	total 150m³ f	errocement	1	Ţ	T
Service Reservoirs		HP on rising n				
Pump Details	1110. 2.113, 10	ZH CHINDING II				
Customer Details						
Customer Details	Members	Other H.H's	Total	7		
Households Served	Wernbers	Outer Trave		Informa	tion unav	ailable
O to an and Malanad	Voc	L	Metered		Unmet	
Customers Metered	Yes	•	Meteres	Informa	— tion unav	
O		Production	H.H Serve	_		
Operation & Maintenance	1993					
Water Production			<u> </u>	7		
	1994		 			
	1995	4,800m³	52	,,		
				+		
	1997		Irrination	Others	Total	
Water Consumption	Domestic	Institutional	T	Outers		10%
	10000.0%		<u></u>			<u> </u>
Problems / Future Expans				B		atad
Billing dispute with National Wat	er Conservation	and Pipeline C	orporation res	utung In nigi	1 accumus	3:60
bills. The scheme is dependent of	on the operations	of the Baricho	Treatment w	orks which	erves Mo	mbasa
and Coastal Water Supply						

MAJAJANI (1/1)

<u>General</u>						
Name of Rural water Supply:	Majajani		Location / Di	strict:	takaungu	-Mavueni/Kilifi
Organisation / Water Undertake	¥	MOWR		Map Ref		
Drainage Sub Basin				Co- Ords	, X:	Y:
Construction Details						
Year of Construction	Phase I:	1993	Phase II:		Phase III	
Constructed By:	Self Help		Funded By:	GTZ (KIWA	ASAP)	
Total Construction Cost	Ksh. 1.45 m	ilion		•		
Year Operation Started:	1995					
Existing Facilities						
Water source:	Takaungu b	r. of Baricho-	Mornbasa lini	Intake Fa	cilities:	off-take
Raw Water Transmission	N/A					
Treatment Facilities	Baricho T/Wo	rks				
Chemicals Dosed	Full treatment	at Baricho Tre	atment Works			<u>.</u>
Master Meter Details	100mm dia. in	good working	condition			
Distribution Mains	Diameter	90mm	63mm	<u> </u>	<u> </u>	
	Length	Total length 9.	3 km	L		
	Materials	uPVC	uPVC			<u> </u>
Service Reservoirs	2 No.	30m³ each (fe	errocement)			
Pump Details	N/A					
						
Customer Details				_		
Households Served	Members	Other H.H's	Total	_		
	400		400	.]		
Customers Metered	Yes		Metered		Unmeter	e <u>d</u>
				Informati	on not ava	ilable
Operation & Maintenance		Production	H.H Served	_		
Water Production	1993	8000m³	355			
	1994	8400m³	384	.]		
	1995	7656m³	400	ا		
	1996	9684m³	416	:]		
	1997					_
Water Consumption	Domestic	Institutional	Irrigation	Others	Total]
	97%	3%]	100%	j
Problems / Future Expansion	n / Remarks					
Billing dispute with National Water (Conservation a	nd Pipeline Col	rporation result	ing in high a	ccumulated	
bills. The scheme is dependent on	the opereration	s of Baricho tre	eatment works	which serve	es Mombas	a
and Coastal Water Supply.						
and coasies trains cuppy.						
						<u></u>
						
						_

NGERENYA (1/1)

Name of Rural water Supply:	Noerenva		Location / Di	strict:	Killi	
Organisation / Water Undertake						
Drainage Sub Basin	,	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		Co- Ords.	X:	Y:
Construction Details				•		
Year of Construction	Phase I:	1995	Phase II:		Phase III	
Constructed By:	-				-	
Fotal Construction Cost	Ksh.2.7 milk		, 0 ,,,,,,,,	<u> </u>	<u> </u>	_
Year Operation Started:	1996	<u> </u>		-		
Existing Facilities	1930			-		
Water source:	Kilifi branch	of Baricho-Mo	mhasa line	Intake Fa	olities:	off-take
Raw Water Transmission	N/A	or transfer or	ATROUSE IIITE	_ maner a	ontico.	
Treatment Facilities	Baricho T/Wo	eks	· · · · · · · · · · · · · · · · · · ·			
freatment racines	Barcio I/Wo	1.4.5			-	
Chemicals Dosed	Full treatment	at Baricho Trea	atment Works			
Master Meter Details	100mm dia. in	good working	condition			
Distribution Mains	Diameter		63mm		<u> </u>	<u> </u>
	Length	Total length 9.	2 km	<u> </u>	<u> </u>	<u> </u>
	Materials	uPVC	uPVC		<u> </u>	<u> </u>
Service Reservoirs	1 No.	50m³ ferroce	ment		<u> </u>	<u> </u>
Pump Details	No pumping					
					u	
Customer Details				_		
Households Served	Members	Other H.H's	Total			
	30	562	592			
Customers Metered	Yes		Metered		_ Unmeter	ed
				Informati	ion unavail	able
Operation & Maintenance		Production	H.H Served			
Water Production	1993					
	1994			7		
	1995			1		
		105,38m³	592	2		
	1997			7		
Water Consumption	Domestic	Institutional	Irrigation	Others	Total	7
Trater concompton	100%				100%	6
Problems / Future Expansio			<u> </u>			
Scheme self sustaining . Expansion			nrenered by d	ภาคระเกลีย <u>ช</u>	ret	
Scheme ser sustaining . Expansio	in is desired but	i proposais not	prepared by c	CHINKHING Y		
				<u></u>		
	··-					
						



DEMBWA WUSI (1/1)

Name of Rural water Supply: 💹	Dembwa Wusi		Location / Di	strict:	Taita Tave	ta
Organisation / Water Undertaker		MOWR			SA-37-14	
Drainage Sub Basin				Co- Ords	X: 38° 21'	V: \$ 03° 27
Construction Details						
Year of Construction	Phase I:	1974	Phase II:	1975	Phase III	
Constructed By:	MOWR Direct	labour	Funded By:	GOK	<u> </u>	
Total Construction Cost	Ksh. 5.5 milli	on		_		
Year Operation Started:	1976			-		
Existing Facilities						
Water source:	kengwa sprir	ng +Vuria riv	er	Intake Fa	citities:	Weir
Raw Water Transmission	Gravily					
Treatment Facilities	Chlorination or	nly				
Chemicals Dosed	Chlorine					
Master Meter Details	Installed but in	poor condition	7		 	
Distribution Mains	Diameter	50:mm	50mm	38mm	25mm	<u> </u>
	Length	Total length 1	0 km			<u> </u>
[Materials	G.I.	uPVC	uPVC	uPVC	
Service Reservoirs	1 No.	25m³ mason	ry, 5 No. R.C.	each 5m³		
	No pumping	<u></u>				
	<u> </u>					
Customer Details						
Households Served	Members	Other H.H's	Total	1		
	300		300			
Customers Metered	Yes		Metered	300	_Unmetere	d
Operation & Maintenance		Production	H.H Served			
Water Production	1993	29,875m³/yr	292	<u> </u>		
	1994	35,130m³/yr	294	<u>. </u>		
	1995	39,120m³/yr	256	3		
	1996	40,150m ³ /yr	280)		
	1997					_
Water Consumption	Domestic	Institutional	Irrigation	Others	Total	_
•	97%	2%	<u>, </u>	19	6 100%	6
Problems / Future Expansion	/ Remarks					
		ce, transport,	laboratory and	offices . Ca	hlorination	
facilities need to be rehabilitated						
Problems include lack of operation a		ce, transport,	laboratory and	l offices . C	hlorination	

MWAJIKA TERI (1/1)

General						
Name of Rural water Supply:	Mwajika Teri		Location / D			
Organisation / Water Undertak	e MOWR		·	Map Ref		
Drainage Sub Basin		<u></u>		Co- Ords.	X:	Y:
Construction Details						
Year of Construction	Phase I:	1972	Phase II:	1973	Phase III	1978
Constructed By:	MOWR		Funded 8y:	GOK		
Total Construction Cost				_		
Year Operation Started:	1974			_		
Existing Facilities				•		
Water source:	Mwaroro, Mw	ajika & Mwerei	i rivers	Intake Fa	cilities:	weir
Raw Water Transmission	Gravity			•		
Treatment Facilities	Chlorination o	nly	·-			
Chemicals Dosed	Chlorine					
Master Meter Details		n poor condition				
Distribution Mains	Diameter	75mm		38mm	25mm	19mm
·	<u> </u>	l length 14km	201711	SOCIALI	2011111	1301011
	Materials	N/A	N/4	N/A	A1/A	
	[Iviate lais	I N/A	N/A	I N/A	N/A	N/A
Service Reservoirs	1 No.	450m³ maso	nary 1 No. R.C	. 10m3 and	l 1 No, stee.	
Pump Details	No pumping					~
Customer Details				-		
Households Served	Members	Other H.H's	Total]		
	165	1	165	Ī		
Customers Metered	Yes	* · · · · · · · · · · · · · · · · · · ·	Metered	,	Unmetere	165
		•			O mileton	
Operation & Maintenance		Production	H.H Served	1		
Water Production	1993	21,826	145]		
	1994	1	157	1		
	1995			1		
	1996		··	1		
	1997			1		
Water Consumption	Domestic	Institutional	irrigation	Others	Total]
	96%	3%	anganon	- Canada	100%	1
Problems / Future Expansion		1	L	J	1 100%	1
		alloction norses	nol transment i	- h	- d - 65	
Problems include lack of operation			nei transport, i	aboratory ar	na omces	
There are no immediate plans for fu	iture expansion	<u> </u>				
						
						
Prepared by POM	 		Date:5/3/98			

MWAKIKI (1/1)

Mwakiki				•	aita Tavela
e Community P	roject comm	ittee	Map Ref		
			Co-Ords	. <u>X:</u>	<u>Y:</u>
Phase I:	1970	Phase II:	1989	Phase III	
Self help		Funded By:	Mwambib :	Sec. School	
			<u>.</u>		
1991			_		
Sangunyi and	Mkongonyi spi	ings	_Intake Fa	icilities:	spring chamb
Gravity					
None					
None					
Installed but in	poor condition		- 	- -	 _
Diameter			 	<u> </u>	
Length	ut length 6km				<u> </u>
Materials			<u>.</u>	<u> </u>	<u> </u>
4No.	masonary ta	nks each 25m	3		
No pumping					
Members	Other H.H's	Total]		
1470		147	0		
No		Metered		_Unmeter	e <u>1470</u>
	Production	H.H Serve	3	}	
1993		T		} informat	ion not
1994				} available	!
1995			}	}	
1996				}	
				}	
	 	Irrigation	Others	Total	
	<u> </u>	<u> </u>			
ion / Remarks					
hich is very esse	ntial is done!				
ing collected from	n water supplie	d			
	•				
	· ···				
		<u></u>			
	Phase I: Self help 1991 Sangunyi and I Gravity None Installed but in Diameter Length Materials 4No. No pumping Members 1470 No 1993 1994 1995 1996 1997 Domestic	Phase I: 1970 Self help 1991 Sangunyi and Mkongonyi spr Gravity None None Installed but in poor condition Diameter Length ut length 6km Materials 4No. masonary ta No pumping Members Other H.H's 1470 No Production 1993 1994 1995 1996 1997 Domestic Institutional ion / Remarks	Phase I: 1970 Phase II: Self help Funded By: 1991 Sangunyi and Mkongonyi springs Gravity None None Installed but in poor condition Diameter Length ut length 6km Materials 4No. masonary tanks each 25m No pumping Members Other H.H's Total 1470 No Metered Production H.H Server 1993 1994 1995 1996 1997 Domestic Institutional Irrigation ion / Remarks	Phase I: 1970 Phase II: 1989 Self help Funded By: Mwambib: 1991 Sangunyi and Mkongonyi springs Intake Fa Gravity None None Installed but in poor condition Diameter Length ut length 6km Materials 4No. masonary tanks each 25m3 No pumping Members Other H.H's Total 1470 1470 No Metered Production H.H Served 1993 1994 1995 1996 1997 Domestic Institutional Irrigation Others ion / Remarks thich is very essential is done!	ECommunity Project committee Map Ref Co- Ords, X: Phase I: 1970 Phase II: 1989 Phase III Self help Funded By: Mwambin Sec. School 1991 Sangunyi and Mkongonyi springs Intake Facilities: Gravity None None Installed but in poor condition Diameter Length ut length 6km Materials 4No. masonary tanks each 25m3 No pumping Members Other H.H's Total 1470 No Metered Unmeter 1493 } Informat 1994 } Informat 1994 } Informat 1995 } Informat 1995 } Informat 1995 } Informat 1996 } Informat 1997 } I

MWAMBITI (1/4)

<u>General</u>						
Name of Rural water Supply.			Location / D		-	aita Taveta
Organisation / Water Undertak	e <u>Mwambiti</u> Co	mmunity				
Drainage Sub Basin		· · · · · · · · · · · · · · · · · · ·		_Co- Ords	. <u>X:</u>	<u>Y:</u>
Construction Details						
Year of Construction	Phase I:	1951	Phase II:		Phase III	
Constructed By:	Self help		Funded By:	Mwambiti S	Sec. School	· · · · · · · · · · · · · · · · · · ·
Fotal Construction Cost				_		
Year Operation Started:	1951			-		
Existing Facilities						
Water source:	Mwambighili, E	waka+ Mash	ghati Spri	_Intake Fa	cities:	spring chambe
Raw Water Transmission	Gravity, 35mn	G.G. main				
Treatment Facilities	None					
Chemicals Dosed	None		·			
Master Meter Details	Installed in goo	od working con	ndition			
Distribution Mains	Diameter	25mm	19mm			
	Length	N/A	N/A		Ţ	
	Materials	G.I.	G.I			
Out in December	1 No.	80m³ mason	and FOrm?	maconanti		
Service Reservoirs		mps delivery to			CV IA	· · · · · · ·
Pump Details	naw water po	rips delivery is	O UISS IOURIOTT IS	21K3		
Customer Details				_		
Households Served	Members	Other H.H's	Total	_		
			<u> </u>	_]		
Customers Metered	Yes / No		Metered	No	_Unmeter	e <u>Yes</u>
Operation & Maintenance		Production	H.H Served	i)	}	
Water Production	1993				} Informati	ion not
	1994				· } avaitable	!
	1995			7	}	
	1996	· · · · · · · · · · · · · · · · · · ·		7	}	
	1997			7	, }	
Water Consumption	Domestic	Institutional	Irrigation	Others	Total	
P. 11 (Fig.) Property	(Damarka	L	<u> </u>	<u> </u>	<u> </u>	_]
Problems / Future Expansion						
1. No treatment, at least even chi		_				
This sheme primarily serves Man	nbiti Sec. School	, with limited s	ervice to the s	urrounding o	communities	<u>. </u>
	<u></u>					
		· · · · · · · · · · · · · · · · · · ·				
Prepared by POM			Date:5/3/9	8		

MWAMBITI (2/4)

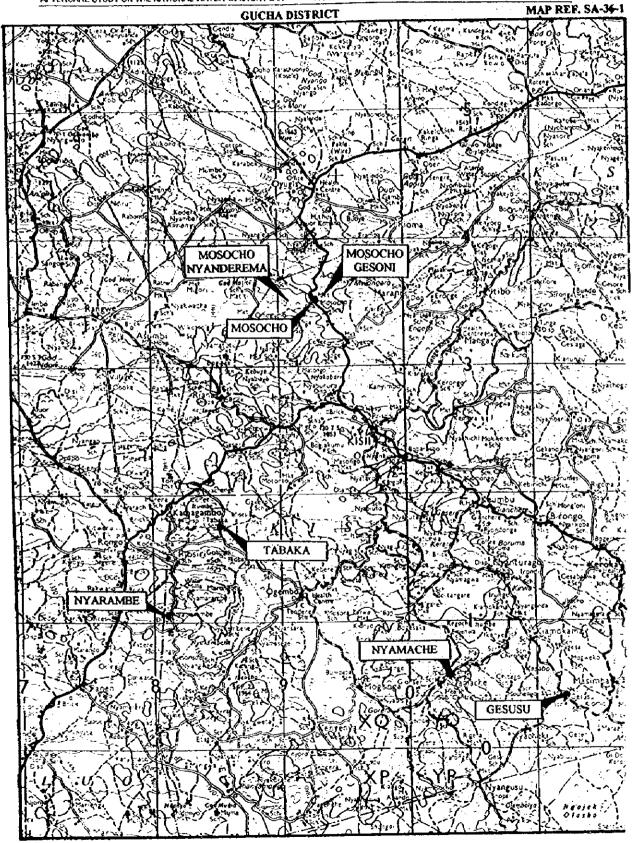
<u>General</u>						
Name of Rural water Supply:			Location / Di			aita Taveta
Organisation / Water Undertak	e Mwambiti Cor	nmunity				
Orainage Sub Basin				_Co- Ords	. <u>X:</u>	<u>Y:</u>
Construction Details						
Year of Construction	Phase I:	1951				
Constructed By:	Self help	···	Funded By:	Mwambiti :	Sec. School	
Total Construction Cost				_		
Year Operation Started:	1951			-		
Existing Facilities						
Water source:	Mwambighili, B	waka+ Mashig	hati Spri	_Intake Fa	clities:	spring chambe
Raw Water Transmission	Gravity, 35mm	G.G. main				
Treatment Facilities	None					
Chemicals Dosed	None					
Master Meter Details	Installed in goo	od working con	dition			
Distribution Mains	Diameter	25mm	19mm	<u> </u>	 	1
	Length	N/A	N/A	<u> </u>	ļ	
	Materials	G.I.	G.I	<u>.</u>	<u> </u>	1
Service Reservoirs	1 No.	80m³ mason	ary and 50m3	masonary	lank	
Pump Details	Raw water put	mps delivery to	distribution to	anks		
<u>Customer Details</u> Households Served	Members	Other H.H's	Total]		
Customers Metered	Yes / No		Metered	No	Unmete	re <u>Yes</u>
Operation & Maintenance		Production	H.H Serve	<u>.</u>	}	
Water Production	1993				} Informa	tion not
Training to be a second	1994				} available	е
	1995		Ī		}	
	1996				}	
	1997			Ì	}	_
Water Consumption	Domestic	Institutional	Irrigation	Others	Total	_
Problems / Future Expans	ion / Remarks		<u> </u>			J
No treatment, at least even of						
This sheme primarily serves Ma		with limited s	envire to the	surroundina	communitie	·s.
This sheme primarily serves Ma	mon Sec. Scribbi	, was wined s	erre lo ac c	<u>arrounding</u>	00,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
	 					
						······································
Prepared by POM			Date:5/3/9	98		

MWAMBITI (3/4)

Construction Details Year of Construction Phase I: 1951 Phase II: Phase III Constructed By: Self help Funded By: Mwambiti Sec. School Total Construction Cost 1951 Year Operation Started: 1951 Existing Facilities Water source: Mwambighili, Bwaka+ Mashighati Spri. Intake Facilities: spring	
Drainage Sub Basin Construction Details Year of Construction Phase I: 1951 Phase II: Phase III Constructed By: Funded By: Mwambiti Sec. School Total Construction Cost Year Operation Started: 1951 Existing Facilities Water source: Mwambighili, Bwaka+ Mashighati Spri. Intake Facilities: spring Raw Water Transmission Treatment Facilities None Chemicals Dosed Master Meter Details Distribution Mains Diameter 25mm 19mm Length N/A	veta
Construction Details Year of Construction Phase I: 1951 Phase II: Phase III Constructed By: Seif help Funded By: Mwambiti Sec. School Total Construction Cost 1951 Existing Facilities Year Operation Started: 1951 Intake Facilities Water source: Mwambighili, Bwaka+ Mashighati Spri. Intake Facilities: spring Raw Water Transmission Gravity, 35mm G.G. main Treatment Facilities None Chemicals Dosed None Master Meter Details Installed in good working condition Distribution Mains Diameter 25mm 19mm Length N/A N/A Materials G.t. G.t. Service Reservoirs I No. 80m³ masonary and 50m3 masonary tank Pump Details Raw water pumps delivery to distribution tanks	
Year of Construction Phase I: 1951 Phase II: Phase III Constructed By: Self help Funded By: Mwambiti Sec. School Total Construction Cost 1951 Existing Facilities Year Operation Started: 1951 Intake Facilities: Water source: Mwambighil, Bwaka+ Mashighati Spri. Intake Facilities: spring Raw Water Transmission Gravity, 35mm G.G. main Intake Facilities: spring Chemicals Dosed None None Master Meter Details Installed in good working condition Distribution Mains Diameter 25mm 19mm Installed in good working condition Service Reservoirs Installed in good working condition Installed in good working condition Service Reservoirs Installed in good working condition Installed in good working condition Diameter 25mm 19mm Length N/A N/A Materials G.t. G.t. Service Reservoirs Installed in good working condition Raw water pumps delivery to distribution tanks	
Constructed By: Self help Funded By: Mwambiti Sec. School Total Construction Cost Year Operation Started: Existing Facilities Water source: Mwambighili, Bwaka+ Mashighati Spri. Intake Facilities: spring Raw Water Transmission Treatment Facilities None Chemicals Dosed Master Meter Details Distribution Mains Diameter Diamete	
Total Construction Cost Year Operation Started: 1951 Existing Facilities Water source: Mwambighili, Bwaka+ Mashighati Spri. Intake Facilities: spring Raw Water Transmission Gravity, 35mm G.G. main Treatment Facilities None Chemicals Dosed None Master Meter Details Installed in good working condition Distribution Mains Diameter 25mm 19mm Length N/A	
Year Operation Started: Existing Facilities Water source: Mwambighili, Bwaka+ Mashighati Spri. Intake Facilities: spring Raw Water Transmission Treatment Facilities None Chemicals Dosed Master Meter Details Distribution Mains Diameter 25mm 19mm Length N/A	
Existing Facilities Water source: Mwambighili, Bwaka+ Mashighati Spri. Intake Facilities: spring Raw Water Transmission Gravity, 35mm G.G. main Treatment Facilities None Chemicals Dosed None Master Meter Details Installed in good working condition Distribution Mains Diameter 25mm 19mm 19mm Length N/A N/A N/A Materials G.I. G.I. G.I. Service Reservoirs 1 No. 80m³ masonary and 50m3 masonary tank Pump Details Raw water pumps delivery to distribution tanks	
Water source: Mwambighili, Bwaka+ Mashighati Spri. Intake Facilities: spring Gravity, 35mm G.G. main Treatment Facilities None Chemicals Dosed Master Meter Details Distribution Mains Diameter 25mm 19mm	
Raw Water Transmission Treatment Facilities None Chemicals Dosed Master Meter Details Distribution Mains Diameter Length Materials G.I. Service Reservoirs 1 No. 80m³ masonary and 50m3 masonary tank Pump Details Raw water pumps delivery to distribution tanks	
Treatment Facilities None Chemicals Dosed Master Meter Details Distribution Mains Diameter 25mm 19mm Length N/A N/A Materials G.I. G.I. Service Reservoirs 1 No. 80m³ masonary and 50m3 masonary tank Pump Details None Installed in good working condition Diameter 25mm 19mm Length N/A N/A Materials G.I. G.I.	<u>chamber</u>
Chemicals Dosed Master Meter Details Distribution Mains Diameter 25mm 19mm Length N/A N/A Materials G.I. G.I. Service Reservoirs 1 No. 80m³ masonary and 50m3 masonary tank Pump Details Raw water pumps delivery to distribution tanks	
Master Meter Details Distribution Mains Diameter 25mm 19mm Length N/A	
Master Meter Details Distribution Mains Diameter 25mm 19mm Length N/A	
Distribution Mains Diameter 25mm 19mm Length N/A N/A Materials G.I. G.I. Service Reservoirs 1 No. 80m³ masonary and 50m3 masonary tank Pump Details Raw water pumps delivery to distribution tanks	
Length N/A N/A Materials G.I. G.I. Service Reservoirs 1 No. 80m³ masonary and 50m3 masonary tank Pump Details Raw water pumps delivery to distribution tanks	— <u>1</u>
Materials G.I. G.I. Service Reservoirs 1 No. 80m³ masonary and 50m3 masonary tank Pump Details Raw water pumps delivery to distribution tanks	 -{
Service Reservoirs 1 No. 80m³ masonary and 50m3 masonary tank Pump Details Raw water pumps delivery to distribution tanks	
Pump Details Raw water pumps delivery to distribution tanks	
Pump Details Raw water pumps delivery to distribution tanks	\neg
Customer Datails	
COSCORRED DECARS	
Households Served Members Other H.H's Total	
Customers Metered Yes / No Metered No Unmetere Yes	
Operation & Maintenance Production H.H Served }	
Water Production 1993 } Information not	
1994 } available	
1995 }	
1996 }	
1997	
Water Consumption Dornestic Institutional Irrigation Others Total	
Trace Consumption	
Problems / Future Expansion / Remarks	
No treatment, at least even chlorine is done!	
This sheme primarily serves Mambiti Sec. School, with limited service to the surrounding communities.	
Prepared by POM Date:5/3/98	

MWAMBITI (4/4)

<u>General</u>						
Name of Rural water Supply:			Location / Di		•	Taita Tavela
Organisation / Water Undertak	e <u>Mwambiti Co</u>	mmunity				
Drainage Sub Basin				Co- Ords	<u>X:</u>	<u>Y:</u>
Construction Details						
Year of Construction	Phase I:	1951	Phase II:		Phase !	i
Constructed By:	Self help		Funded By:	Mwambiti 5	Sec. Scho	ol
Total Construction Cost				-		
Year Operation Started:	1951			_		
Existing Facilities						
Water source:	Mwambighili, E	Bwaka+ Mashig	hati Spri	_Intake Fa	cilities:	spring chambe
Raw Water Transmission	Gravity, 35mm	G.G. main				
Treatment Facilities	None					
Chemicals Dosed	None					
Master Meter Details		od working con	dition			
Distribution Mains	Diameter	25mm	1 <i>9</i> mm			
	Length	N/A	N/A			
	Materials	G.I.	G.I.			
Service Reservoirs	1 No.	80m³ mason	and 50m3	masonani	ank	
		mps delivery to			VO 114	
Pump Details	naw water po	mps delivery it	OBZIDORATIC	<u> </u>		
Customer Balaile			,			
Customer Details	Members	Other H.H's	Total	7		
Households Served	Members	Outer Hars	TOtal	7		
Customers Metered	Yes / No		Metered	_) _ <u>No</u>	_Unmet	ere <u>Yes</u>
Operation & Maintenance		Production	H.H Served	ก	}	
Water Production	1993			-1	} Informa	ation not
Water Froduction	1994		-	1	} availab	
	1995	 			}	
	1996		 	-	, 1	
		1		-	, 1	
	1997	Institutional	Luiantian	Others	Total	
Water Consumption	Domestic	institutoriai	ingaton	Others	Tolai	
Problems / Future Expans	ion / Remarks					
1. No treatment, at least even ch						<u> </u>
This sheme primarily serves Mar	mbiti Sec. School	, with limited s	ervice to the s	urrounding	communiti	es
	· · · · · · · · · · · · · · · · · · ·					
	·					
Prepared by POM			Date:5/3/9	8		
1 ishaica nji Om						



No treatment facilities - rarely samples taken for testing Frequent breakdown of generator engine and pump

MOSOCHO GESONI W/S (1/1)

<u>General</u>						
Name of Rural water Supply:	Location / Di	·				
Organisation / Water Undertake	C:MOWR	·		Map Ref: _		
Drainage Sub Basin				Co- Ords.	X:34° 451	Y: 8 00° 32'
Construction Details						
Year of Construction	Phase I: 1987	-1988	Phase II:	1989	Phase III	
Constructed By:	MOWR		Funded By:	MOWR		_
Total Construction Cost	Kshs. 1,500,000 - 1937			-		
Year Operation Started:	1988			_		
Existing Facilities						
Water source:	Ria Modito Spri	ng		Inlake Fac	ilities:	Weir
Raw Water Transmission	Pumping 100m	n dia. pipe		_		
Treatment Facilities	Occassional do	sing of chlorine				
Chemicals Dosed	Chlorine					
Master Meter Details	No master mete	er				·
Distribution Mains	Diameter	75				
	Length	Арр. 2 Km				
	Materials	uPVC				
Service Reservoirs	30m ³	masonary	in good condi	tion		
Pump Details	1 pump; discha	rge Q = 18m³/	h, 137m head			
·			<u>.</u>			
Customer Details				_		
Households Served	Members	Other H.H's	Total	_		
	3 6	5 schools	4:	<u> </u>		
Customers Metered	No	,	Metered	Nil	Unmetere	ed All
				_		
Operation & Maintenance		Production	H.H Served	니		
Water Production	1993	100 m³/d	36+5 schools			
No records	1994	100m³/d	36+5 schools	area served	1 25km2	
	1995	60m³/d	18+5 schools	Population	serve d 600 0	
	1996		<u> </u>	_		
	1997					_
Water Consumption	Domestic	Institutional	Irrigation	Others	Total	
•	20%	80%			100	9%
Problems / Future Expansion	n / Remarks					

GESUSU-GATERI W/S (1/1)

Rural Water Supply System Survey

<u>General</u>						
Name of Rural water Supply:	Gesusu-Gateri	w/s	Location / Di	strict: <i>Kīsii</i>		
Organisation / Water Undertake	Y:MOWR			Map Ref:	1:250,000 SA	36 4
Drainage Sub Basin				Co- Ords.	X:34 50 1	Y: 5 00° 53'
Construction Details						
Year of Construction	Phase I: 197	7	Phase II:	1989	Phase III	
Constructed By:	MOWR		Funded By:	MOWR Rura	al Developmen	Fund
Total Construction Cost	Kshs. 19,806,4	85				
Year Operation Started:	1977					
Existing Facilities						
Water source:	Spring			Intake Fac	alties:	Pan
Raw Water Transmission	Gravity:upto pu	mp house. Twin	n pipes 50mm di	a Phase 1 53	mm dia.	
	Phase II total le	ngth 1608m				
Treatment Facilities	None					
Chemicals Dosed						
Master Meter Details	None	1No. in poor sta	rte			
Distribution Mains	Diameter	32mm	63mm			
	Length	1000m	420m			
	Materials	υPVC	uPVC			
Service Reservoirs	20m³	masonary	1 No			
Pump Details	1 No 16 H.P, C	iesel Engine ge	nerator, pump C). = 10.9 ¹ / _s		
	Head - 239m					
<u>Customer Details</u>				_		
Households Served	Members	Other H.H's	Total]		
	25	2 schools	27]		
Customers Metered	Yes		Metered	2 Nr	Unmetered	domestic
	·			_		
Operation & Maintenance		Production	H.H Served			
Water Production	1993	15m³/d	25			
No records	1994					
	1995			<u> </u>		
	1996			area served	16 km²	
	1997					
Water Consumption	Domestic	Institutional	Irrigation	Others	Total	
	50%	50%			100%	
Problems / Future Expansion	/Remarks					
Source dries up during draught per	riods					
2. Land owner near intake interferes t	with the system	of intake				

4. Treatment of water and testing facilities required

3. Inadequate supply

NYAMACHE (1/1)

District: Gucha Map Ref: 1:250,01 Co- Ords. X:34° 4 Phase MOWR & Communit Intake Facilities:	9' Y:500°52'
Co- Ords. X:34° 4 Phase MOWR & Communit	9' Y:500°52' HI
Phase MOWR & Communit	: #II Y
f. MOWR & Communit	y
f. MOWR & Communit	y
Intake Facilities:	<u>Pan</u>
Intake Facilities:	<u>P</u> an
Intake Facilities:	<u>P</u> an
Intake Facilities:	<u>P</u> an
1 1	
	
nk	
	
Total population se	
<u>Mi</u> Unme	etered <u>Ali</u>
Population served .	
area covered 4 km	¥
 	
Others Total	
	100%
	Total population se Nil Unme Population served area covered 4 km

- 1. Inadequate water supply
- 2. Lack of trained personnel
- 3. Treatment required
- 4. Distruction of pipe lines by vandalism to be curbed

MOSOCHO NYANDEREMA (1/1)

Rural Water Supply System Survey

General						
Name of Rural water Supply:	Mosocho Nyan	derema	Location / Di	strict: <i>Kisii</i>		
Organisation / Water Undertake	er:Sell Help;Corr	imunity		Map Ref:	1:250,000 S	A-36-4
Drainage Sub Basin				Co- Ords.	X:34° 441 Y	: S 00 ° 35 1
Construction Details						
Year of Construction	Phase I: 199	1 - 1995	Phase II:		Phase III	
Constructed By:	MOWR		Funded By:	MOWR		
Total Construction Cost	Kshs. 806,200					
Year Operation Started:	1996			•		
Existing Facilities						
Water source:	Nyanderema R	iver		Intake Fac	ilities: Weir	
Raw Water Transmission	Gravity 75mm	Ductile Iron Pic	e			
Treatment Facilities	Only chlorination	n done occasio	naily			
Chemicals Dosed	Chlorine occas	ionally				
Master Meter Details	None					
Distribution Mains	Diameter	50mm				
	Length	2.5km				
	Materials	UPVC	<u> </u>		·	
			+			
Service Reservoirs	1No	20 m ³	Masonry in goo	d condition		
Pump Details	1No. pump for	treated water.	No. High lift pu	np and		
	Electric pump	dīa. = 18m²,ħ, i	Head 140m			
Customer Details			+	1		
Households Served	Members	Other H.H's	Total	4 school ha	ve each	
	40	4 schools	L	approximate	ely 400 studer	nts
Customers Metered			Metered	No	Unmetered	3
				,		
Operation & Maintenance		Production	H.H. Served			
Water Production	1993					
No records	1994			ļ		
	1995			_		
	1996	108 m³/d	20	area serv	ed 9 km²	
	1997			<u> </u>	,	
Water Consumption	Domestic	Institutional	Irrigation	Others	Total	
	25%	75%	<u> </u>		100%	

Problems / Future Expansion / Remarks

- 1. Inadequate water supply for area population , water is rationed
- 2. Full Treatment required
- 3. Frequent Breakdown of diesel engine

NYAMARAMBE (1/1)

<u>General</u>						
Name of Rural water Supply:	Nyamarambe		Location / Di			
Organisation / Water Undertake	er:MOWR			Map Ref:		
Drainage Sub Basin				Co- Ords.	X 34° 38'	Y: 500° 45'
Construction Details						
Year of Construction	Phase I: 1988	- 1987	Phase II:		Phase III	
Constructed By:	MOWR		Funded 8y.	MOWR		
Total Construction Cost	Kshs. 790,200					
Year Operation Started:	1990					
Existing Facilities						
Water source:	Nyangore River			Intake Fac		Weir
Raw Water Transmission	2No pumps suc	tion 100mm dia	Ductile fron = .	7m³/h 50m h	ead	
Treatment Facilities	Treatment plant	exists, in good	oondition but th	e supply was	s abondone	f in
	November due	to clashes in the	area			
Chemicals Dosed	Alum, soda ash	and chlorine				
Master Meter Details	Damaged					
Distribution Mains	Diameter	75mm				1
	Length	5km				
	Materials	Ductile Iron		<u> </u>	<u> </u>	<u> </u>
						
Service Reservoirs	1No	50m³	Masonry	<u> </u>	l	
Pump Details	tNo. pump for	treated water. 1	No. High lift pu	mp and		
	3No electric r	notors are disc	onnected			
Customer Details				1		
Households Served	Members	Other H.H's	Total	-		
		Ĺ. <u></u>		J		
Customers Metered	Total 40		Metered	14No	Unmete	e <u>26</u>
				7		
Operation & Maintenance		Production	Рор.	4		
Water Production	1993			4		
	1994	143m³/d	45	<u> </u>		
	1995	168 m³/d	50	<u>.</u>		
	1996	190 m³/d	60	2		
	1997		ļ <u></u>			7
Water Consumption	Domestic	Institutional	Irrigation	Others	Total	_
	60%	40%	<u> </u>		100	%)
Problems / Future Expansion	on / Remarks					
Only small portion of Nyamarambe t Township	water production i	s used by Nyan	naramb e . Most	of the supply	r is consume	ed by Rongo

TABAKA (1/1)

General Name of Dural water Supplie	Tab _d		Landley (D	intrint:	Queta	
Name of Rural water Supply:	Tabaka	MOINS	Location / D		Gucha	
Organisation / Water Undertake	e <u>r:</u>	MOWR		Map Ref		
Drainage Sub Basin				_Co- Ords	. X: 34°38'	Y: \$ 00° 45
Construction Details	Di	4075 70	Ol 10.		Db 101	
Year of Construction		1975-76			_Phase III	
Constructed By:	MOWR	· · · · · · · · · · · · · · · · · · ·	Funded By:	MOWR		
Total Construction Cost	Ksh 4 million	·		_		
Year Operation Started:	1975			-		
Existing Facilities		_		~	44.1	_
Water source:	Bombure Spr			_Intake Fa		<u>Pan</u>
Raw Water Transmission		avity: Gravity	thorugh 75mm	dia D.I. for	20m then p	umped. Q±6, t
Treatment Facilities	None					
Chemicale Daged	Alexa.					
Chemicals Dosed Master Meter Details	None					-
Distribution Mains	Installed but r			Т	T	
Olstribution Mains		75mm		 	<u> </u>	
	Length Materials	1 km		<u> </u>	<u> </u>	
	[waterials	Mostly D.I. wit	nurvo in sina	ar sections	<u> </u>	<u></u>
Service Reservoirs		1 No 25m ³ m	95050/	T	<u> </u>	
Pump Details	1 No Q=20m		asony	<u> </u>		L
Tomp Octars	7110 0-2011	78 11=13077				
Customer Details			· ·			
Households Served	Members	Other H.H's	Total	7		
(population)		2000 stud.	Арргох. 200 г	.₃ nembers+ 2	2000 student	!s
Customers Metered	Yes	,	Metered	_	Unmeter	
		-			-	
Operation & Maintenance		Production	H.H Served]		
Water Production	1993	480m³/d	100	5		
	1994	N/A	N/A	Population	n served :	about 4200
	1995	N/A		Area sen	ved 2 km²	
	1996	100m³/d	200	5]		
	1997					_
Water Consumption	Domestic	Institutional	Irrigation	Others	Total]
	25%	75%			100%]
Problems / Future Expansion	n / Remarks					_
1. There is inadequate water at sou	irce and as a re	esult production	n is limited. A n	ew source r	needs to be	developed
2. Treatment is urgently required						
Treatment is urgently required A nearby private water supply at	so serves lew a	consumers in T	abaka			