

APPENDIX D.3

ON-GOING WATER SUPPLY PROJECTS

NAIROBI PROVINCE

All the water projects within the City boundaries are under the Nairobi City Commission.

CENTRAL PROVINCE

KIAMBU DISTRICT

Project	Year Started	Original Cost estimate Ksh. x 1000	Type of Project	Physical Status of Funds	Source of Funds	Financial Status	Amount req. to complete project Ksh. x1000	Expected date of completion	REMARKS
1 Muniyu	1984	40,000	RWS	25%	MOWD	10,400	25,000	1993	Funds allocated are insufficient.
2 Ruiru (Augm.)	1986	5,000	UWS	65%	"	2,500	8,000	1992	Requires funds to complete augmentation.
3 Bathi (Augm.)	1986	11,700	RWS	40%	"	4,500	7,200	1993	Requires major rehabilitation.
4 Ndeiya Karai	1984	8,600	"	55%	"	3,000	5,600	1992	Rehabilitation of old County Council o supplement lower zones f Bathi W/S is required.
5 Thiririka	1979	35,000	"	50%	"	22,898	50,004	1992	Requires major augmentation which is now underway through contract arrangements.
6 Gathanga	1990	3,800	"	60%	RDF	2,000	1,800	1992	Partially operational. Equipping of second B/H in progress.
7 Kiu South	1990	6,000	"	6%	RDF	440	7,000	1994	Equipping of two B/Hs and the laying of distribution lines is outstanding.
8 Takinya	1990	5,000	"	30%	RDF	2,500	6,000	1993	Minor extensions and construction of a masonry tank are remaining.
9 Juja	1981	40,000	UWS	18%	MOWD	6,900	20,000	1993	Funds are required to start construction of Treatment Works.
10 Limuru Uplands (Rehab.)	1988	2,300	"	65%	"	1,000	1,300	1992	Requires funds to complete rehabilitation.

KIAMBU DISTRICT

Project	Year Started	Original Cost estimate Ksh. x 1000	Type of Project	Physical Status	Source of Funds	Financial Status Ksh x1000	Amount req. to complete project Ksh. x1000	Expected date of completion	REMARKS
11 Gatundu (Rehab.)	1988	1,700	UWS	55%	MOWD	800	1,700	1992	Rapidly growing town where the water demand has gone up.
12 Karimenu	1975	30,000	RWS	21%	"	6,400	24,000	1993	Requires major rehabilitation.
13 Ndarugu	1978	14,000	RWS	80%	"	8,400	12,000	1991	Requires major rehabilitation.

KIRINYAGA DISTRICT

Project	Year Started	Original Cost estimate Ksh. x 1000	Type of Project	Physical Status	Source of Funds	Financial Status Ksh.x1000	Amount req. to complete project Ksh. x1000	Expected date of completion	Remarks
1 Muratiri	1985	501.7	S/Help	90%	RDF	455	200	1991	Virtually complete except for river crossing and one 90 m ³ storage tank.
2 Nyaru	1986	860	S/Help	80%	RDF/ MOWD	856	350	1991	Partly complete and serving people. Funds are required for construction of 2 No. 45 m ³ storage tanks.
3 Mutungara	1977	51.4	S/Help	90%	RDF/ MOWD	328	100	1990	Project is serving people. Only one 45 m ³ storage tank remains to be constructed.
4 Wanguru	1989	750	RWS	60%	MOWD	326	246.4	1991	Remaining works involve pump house, backwash tanks and sand filters.
5 Kimbimbi	1978	272	RWS	70%	RDF/ MOWD/ MOA	197	80	1991	Funds are required for 2 No. storage tanks.

MURANG'A DISTRICT

Project	Year Started	Original Cost estimate KShs X 1000	Type of Project	Project Status	Source of Funds	Exp. already incurred KShs X 1000	Amount req. to complete project KShs X 1000	Expected date of completion	REMARKS
1 Kigumo	1974	89,000	RWS	60%	S/H MOWD	4,812.9	45,000	1992	Construction is in progress covering extensions.
2 Mathioya	1975	90,000	"	90%	MOWD	3,580	5,000	1991	Extensions are under construction.
3 Gatango	1984	30,000	"	70%	MOWD	1,128	8,000	1992	Laying of duplicating line in progress.
4 Murang'a	1988	3,000	UWS	80%	"	.120	30,000	1991	Expansion of treatment works and rising main is in progress.
5 Maragua	1984	17,000	UWS	10%	"	79,547	25,000	1992	The project is awaiting funding and is expected to cover Maragua town and surrounding areas.
6 Sabasaba	1988	3,000	UWS	70%	"	2,200	1,800	1992	Rehabilitation work is in progress.
7 Gaturi	1978	12,500	RWS	40%	MOWD/ RDF	4,100	8,000	1992	Pipe laying and tank construction are in progress. The intake has been completed.

NYANDARUA DISTRICT

Project	Year Started	Original Cost estimate Ksh.x1000	Type of Project	Physical Status	Source of Funds	Financial Status Ksh.x1000	Amount req. to complete project Ksh.x1000	Expected date of completion	REMARKS
1 Leshau Karagoine	1980	3300	Self/Help	45%	MOWD/EEC	3500	5000	1994	Phase 1 is operational.
2 Mdaragwa Phase I	1988	3020	"	5%	RDF/EEC	180	2842	1993	To be funded in 1991/92 by the EEC.
3 Gatimu	1988	580	"	70%	RDF	470	200	1990	Community participation is poor.
4 Kanguo/Nyaka-ringa	1989	5000	"	45%	SFT	2000	3000	1992	More funds are required.
5 Kaimbaga	1980	2000	"	60%	RDF	1170	950	1992	Ph.2 to be redesigned.
6 Kipipiri	1989	5500	"	5%	MOWD	400	5200	1993	More funds are required.
7 Njabini	1987	7500	"	15%	"	1130	7200	1993	More funds are required.
8 Nyahururu	1977	5000	Sett.	75%	MOWD	6000	3000	1993	Progress is good.
9 Ngorika	1973	1750	Self/Help	95%	RDF/EEC NGO	3000	350	1991	Operational.
10 Rurii/Ngwata-niro	1989	1500	"	15%	MOWD	200	1300	1994	Various B/Hs to be equipped under implementation.
11 Mugumo Borehole	1990	101.4	"	10%	RDF	10	95	1991	More funds are required.
12 Manunga	1989	20	"	40%	RDF	5	20	1991	More funds are required.
13 Kagaa Phase I	1989	186.3	"	20%	RDF	5	186	1991	More funds are required.
14 Kambaa	1990	35	RWS	5%	SH		40		

NYERI DISTRICT

Project Name	Year Started	Original Cost estimate Ksh. x 1000	Type of Project	Physical Status	Source of Funds	Financial Status Ksh. X1000	Amount req. to complete project Ksh. x1000	Expected date of completion	REMARKS
1 Waraza Lusoi-Jet	1985	4084.5	RWS	50%	E.E.C./GOK/S/Help	4200	2700	1991	More funds are required.
2 Mureru	1987	6566.3	RWS and Minor Irrigation.	25%	MOWD S/Help	1280	70125.9	1992	More funds are required.
3 Gatumba Kalicheni	1987	6078.7	"	45%	EEC/S/H MOWD	3300	2500	1992	More funds are required.
4 Kandune	1987	600	RWS	90%	Canadian High Commission S/HELP	540	60	1990	This is a small S/Help project and is progressing well.
5 Kabendera Irrigation	1986	3000	RWS and Irrigation.	90%	MOWD Famine relief S/Help	1600	600	1991	Funds were insufficient to complete the distribution. If funds are made available, the project can be completed in a month's time. Part of project is in operation.
6 Burguret	1987	10000	"	80%	World Vision S/Help	8000	2000	1993	More funds required to complete the project.
7 Chaka Kiganjo	1989	50	RWS	10%	Kiganjo Catho. Parish	5	45	1991	These two projects are run by Kiganjo Catholic Parish in all matters concerning Funding.
8 Thungari	1989	160	"	60%	S/H MOWD				GOK provides technical assistance only.

NYERI DISTRICT

Project Name	Year Started	Original Cost estimate Ksh. x 1000	Type of Project	Physical Status	Source of Funds	Financial Status Ksh. X1000	Amount req. to complete project Ksh. x1000	Expected date of completion	REMARKS
9 Kaharo	1987	10,000	RWS	30%	Self/ Help & RDF/ MOWD	350	8,000	1991	There are some materials on site and work is in progress.
10 Muthuthi/ Karaba line	1989	4,800	"	70%	Mukurw- ini Water Fund	3700	1,200	1990	Unskilled labour and transport are the main constraints.
11 Mbiuni/ Gaikundo line	1985	1,600	"	90%	Self Help RDF	2900	200	1991	There are some materials on site and work is in progress.
12 Endarasha	1986	7,605.7	"	10%	MOWD S/Help	4000	6000	1992	Date of completion will depend on the availability of funds. Design for the distribution system is yet to be completed.
13 Kabendera Ngaring- iro	1986	300.6	"	80%	RDF S/Help MOWD	7010	300	1991	A revised design to include some extra consumers was done in 1988.
14 Watuka	1985	789.7	"	30%	RDF S/H MOWD	-	3200	1992	Initially, the project was to be an extension of Endarasha W/P but after the supply became inadequate, an alternative source was identified.
15 Huku	1984	1900	"	95%	Famine- Relief RDF MOWD	1280	620	1991	Work remaining is construction of tank and few distribution lines. Beneficiaries are using water.

NYERI DISTRICT

Project Name	Year Started	Original Cost estimate Ksh. x 1000	Type of Project	Physical Status	Source of Funds	Financial Status	Amount req. to complete project Ksh. x1000	Expected date of completion	REMARKS
16 Titie	1988	700	RWS	80%	MOWD Funded S/Help	560	250	1990	This project can be completed this year, if funds required are made available.
17 Kanjuri	1984	2000	Irrigation and RWS	80%	MOWD	1700	500	1991	The project has little problems since the remaining work is only construction of valve chambers which will be completed on S/H basis.
18 Kihuri	1984	100	Irrigation and RWS	50%	S/Help	100	200	1994	Original cost was under estimated. An extra Ksh. 10,000 is required to complete the project as a result of the revised design.
19 Gatunganga	1987	560	Domestic	80%	RDF	460	100	1990	Remaining work is the construction of storage tank.
20 Tumutumu	1987	560	Domestic	80%	RDF	540	20	1990	All materials are available and the project is expected to be completed soon.
21 Sagana Irrigation	1983	700	Irrigation	50%	MOWD/TERRA-NOVA	350	350	1992	Original design was done by MOWD, and was later revised by a NGO. Implementation is under a NGO, Ministries of Agriculture and Water Development.

COAST PROVINCE
KILIFI DISTRICT

Project	Year Started	Original Cost estimate Ksh. x 1000	Physical Status	Source of Funds	Financial Status Ksh x1000	Amount req. to complete project Ksh. x 1000	Expected date of completion	REMARKS
1 Mariakani Kaloleni	1987	10,000	50%	MOWD	5,010	4,990	1992	Remaining works include 26 km piping to booster station, staff houses, rising main, storage tank, etc.
2 Bamba Nyayo	1985	40,000	90%	"	13,612	3,500	1992	Complete except for 250m3 storage tank; staff houses, reticulation system, rehabilitation of 3 km of pipeline.
3 Chonyi South	1987	1,200	80%	"	2,900	500	1992	2 km of pipeline remaining and 2 no. 100m3 storage tanks.
4 Ruruma Mwawesa	1990	1,000	12%	"	120	880	1992	Pipe laying is in progress.
5 Mitsajeni Kambe/Ribe	1990	400	28%	"	112	288	1992	Pipe laying is in progress.
6 Kilifi water & sanita.	1988	20,000	10%	MOWD/ FRG	13,000	55,000	1993	The project is phased and estimates revised regularly through workshops.
7 Kayafungo	1990	3,500	6%	MOWD	224	3,276	1993	Awaiting the completion of Mariakani / Kaloleni W/P as a water source.
8 Vitengeni	1985	660	100%	RDF	660	150	1990	Completed and operational except for 100 m3 tank.

KILIFI DISTRICT

Project	Year Started	Original Cost estimate Ksh. x 1000	Physical Status	Source of Funds	Financial Status Ksh x1000	Amount req. to complete project Ksh. x 1000	Expected date of completion	REMARKS
9 Dida Matano Manne	1989	520	100%	RDF	520	Nil	1990	The project has been completed and is fully operational.
10 Uyombo Mkongani	1988	320	100%	RDF	320	Nil	1990	" "
11 Gongoni Mjanaheri	1990	760	38%	RDF	293	467	1991	On-going project with funds available.
12 Maandani	1982	141	95%	RDF	451	50	1991	Complete except for a starter of a motor. But 90% of system is operational.
13 Chalani	1985	307	90%	RDF	449	150	1992	Proposed source not adequate. 8 km of pipeline completed. Funds needed to construct 100 m3 masonry tank.
14 Mtwapa settle - ment sch.	1987	2,500	30%	MOLS	1,530	3,392	1992	Funded by MOLH through Settlement Fund Trustee.
15 Mwangea Ngunguni	1989	1,500	33%	DONOR	500	1,000	1992	Funded by Baptist Mission.
16 Rehab. Dams Kaloleni	1989	400	30%	MOWD	110	300	1992	Project slowed down for lack of machinery to undertake the work.

KWALE DISTRICT

Project	Year Started	Original Cost estimate Ksh. x 1000	Physical Status	Source of Funds	Financial Status Ksh x1000	Amount req. to complete project Ksh. x1000	Expected date of completion	REMARKS
1 Kikoneni	1983	4,800	85%	MOWD	649	1,800	1992	Ongoing project. Funds required to purchase two water pumps.
2 Wasini & Mwakiro	1981	3,000	75%	MOWD/ RDF	11,426	2,515	1992 1992	More funds required to construct the three Jabias.
3 Kiteje Bombo	1987	630	90%	RDF	649	250	1991	Funds required for the construction of a storage tank.
4 Samburu Silaloni	1988	3,009	30%	RDF	9,964	2,964	1992	Funds required for the construction of a 45m3 storage tank and purchase of pipes for a distance of 17.24 km.
5 Kwale water & sanita.	1985	67,000	75%	SIDA/ MOWD	67,000	10,000	1991	A three year, second phase is expected to commence in 1991.
6 Majimboni	1989	1,650	10%	SIDA/ MOWD	580	2,081	1993	No funds allocated during 1990/91 financial year.
7 Mkongani	1984	28,000	70%	MOWD	25,803	2,377	1993	Funds are required to equip a B/H.

LAMU DISTRICT

Project	Year Started	Original Cost estimate Ksh. X 1000	Type of Project	Physical Status	Source of Funds	Financial Status Ksh.X 1000	Amount req. to complete project Ksh X 1000	Expected date of completion	Remarks
1 Lamu	1987	10672	RWS	80%	MOWD	8807.4	6000	1990	Progress is good but more funds required.
2 Mkokoni/ Kiunga	1981	10000	RWS	25%	"	2376	7840.8	1992	"
3 Lake Kenyatta	1983	2500	"	30%	"	1136	4544	1992	K£ 10,000 is required for recur- rent expenditure.
4 Witu B/Hole and Well	1967	15000	"	30%	RDF	6992.8	24930	1993	Phase 1 of the project is complete.
5 Faza Kizingi- tini	1985	10000	"	50%	S/Help	6210.5	9789.5	1993	Funding for Maintenance work is required.
6 Bargon Hindi	Not Yet Started	6000	"	Nil	RDF	Nil	6000	1993	This is a proposed Project.
7 Mxunumbi Mapenya	Not Yet Started	10000	"	Nil	RDF	Nil	1000	1992	This is a proposed project and requires funding.
8 Kisauni (Kiunga)	1989	10000	"	4%	RDF	134	9866	1993	More funds required to complete the project.
9 Chalaluma Water Pan (Witu) Mangai Mkokoni	Not Yet Started	1200	"	Nil	RDF	Nil	1200	1992	"
	Not yet Started	550	"	Nil	RDF	Nil	550	1991	"
	Not yet Started	10000	"	Nil	RDF	Nil	10000	1993	"

MOMBASA DISTRICT

Project	Year Started	Original Cost estimate Ksh. X 1000	Type of Project	Physical Status	Source of Funds	Financial Status Ksh. X 1000	Amount req. to complete project Ksh X 1000	Expected date of completion	Remarks
1 Mtongwe Mwenza	1988/89	96	UWS	33%	RDF	94	172	1991	Original cost estimate was not covering the entire area to be supplied with water.
2 Maweni	Not Yet Started	700	"	Nil	Unicef	Nil	1900	1991	New Project Proposal to be prepared.
3 Jomvu Miritini Line Extension	"	Nil	"	Nil	Unicef	Nil	400	1991	Unicef has ordered for the materials required.
4 Flats Mirima Line Extension	"	Nil	"	Nil	RDF	Nil	500	1991	New Project Proposal to be prepared.
5 Mwate-sarefu Soweto Line Rehab.	"	Nil	"	Nil	RDF	Nil	300	1991	"
6 Timbwani Line Rehab.	"	Nil	"	Nil	RDF	Nil	1000	1991	"
7 Denyenye Line Rehab.	"	Nil	"	Nil	RDF	Nil	800	1991	"

TALITA - TAVETA DISTRICT

Project	Year Started	Original Cost estimate Ksh. x 1000	Type of Project	Physical Status	Source of Funds	Financial Status Ksh.x1000	Amount req. to complete project Ksh.x1000	Expected date of completion	REMARKS
1 Mwareke-roni	1985	350	RWS	50%	County Council	350	300	1991	Count council has handed over the project to community for the letter to solicit for funds to complete the Project.
2 Makwasinyi Buguta	1970	1100	"	40%	KWAHO	1100	8000	1993	Construction progress is satisfactory.
3 Nyache	1970	500	"	50%	MOH	500	400	1992	Funds required for rehabilitation and extension project under community management.
4 Kajire Mwashigati	1970	500	"	50%	S/H	500	500	1992	"
5 Changoni	1989	400	"	50%	MOH	400	500	1992	Project fully funded by Plan International.
6 Mwanata	1970	300	"	60%	L.Community	300	400	1992	Funds required for extensions and intake improvement. No done at the moment other than the community
7 Daku	1970	400	"	50%	Catholic mission	400	600	1992	Project was handed over to the community and solicit for funds for further construction.
8 Wanganga	1986	300	"	50%	Catholic Mission,	300	400	1992	"
9 Bungule/Jora	1989	225	"	80%	Care Kenya	225	45	1991	Project handed over to community. Funds required to improve intake.
10 Kasigau Chala Chuvini	1990	150	"	40%	ASAL. Progr.	150	500	1991	Project fully funded by ASAL Programme
11 Kishushe	1986	1558.9	"	80%	Plan International	1558.9	311.8	1990	Project on progress under funding from Plan International.

TAITA - TAVEYA DISTRICT

Project	Year Started	Original Cost estimate Ksh. x 1000	Type of Project	Physical Status	Source of Funds	Financial Status Ksh.x1000	Amount req. to complete project Ksh.x1000	Expected date of completion	REMARKS
12 Irindo-shigaro	1980	580	"	80%	RDF MOWD	513	145	1991	Further funding is required.
13 Kasigau Maungu/Boguta	1979	3600	MOWD	60%	MOWD	3600	1900	1993	The last allocation recieved was 1985/86. More funds are required to the project
14 Wundanyi	1989	4600	Urban W/S	95%	MOWD	4600	230	1990	More funds required for further extension.
15 Oza	1989	600	RWS	30%	"	180	420	1993	Design yet to be completed.
16 Paranga	1989	1000	"	20%	ASAL. Progr.	200	800	1992	Plan International so far has 20 shallow wells. ASAL programme is doing study of water supply.
17 TVT Shallow Well	1988	2300	"	85%	ASAL. Progr.	1955	345	1991	Project handed over to the community Funds required for maintenance of hand pumps.
18 Gora Kambito	1988	2000	"	85%	ASAL. Progr.	3900	100	1991	Project fully funded by ASAL progr.
19 Tausa	1988	700	"	95%	ASAL. Progr.	665	35	1990	"
20 Mwakiki	1989	700	"	85%	ASAL. Progr.	105	595	1991	"
21 Talio Nyika Sagalla	1990	225	"	20%	ASAL. Progr.	45	180	1991	Project under study.
22 Mgange Nyika	1970	300	"	80%	County Council	300	300	1991	Funds required for rehabilitation of the system.
23 Buguta Rock. Catch. Kasigau	1989	50	S/help	10%	ASAL. Progr.	7	43	1990	Project waiting for approval by the sheering committee.

TAITA - TAVETA DISTRICT

Project	Year Started	Original Cost estimate Ksh. x 1000	Type of Project	Physical Status	Source of Funds	Financial Status Ksh.x1000	Amount req. to complete project Ksh.x1000	Expected date of completion	REMARKS
24 Kichingima	1970	500	RWS	80%	County Council	500	350	1991	Project handed over to community.
25 Ndome	1970	300	"	80%	County Council	300	300	1991	"
26 Ghazi	1970	500	S/help	80%	KWAHO Unicef	500	400	1991	"
27 Gimba	1986	2000	RWS	50%	MOWD	1200	1500	1992	Further funding is required.
28 Mwamsha	1986	4000	S/Help	100%	ASAL. Progr.	4000	Nil	1990	Complete.
29 Josa/Modambogho	1988	325	S/Help	20%	ASAL. Progr.	65	325	1991	Fully funded by ASAL programme.
30 Bura	1985	932.2	S/Help	90%	RDF	932.2	235.3	1990	Further funding is required.
31 Mwalubi	1984	3600	S/Help	90%	Norad	3600	360	1990	Project handed over to community.
32 Ronge-Nyika	1980	2000	S/Help	50%	RDF MOWD	1000	1000	1993	Fully funded by ASAL programme.
33 Rukanga	1987	374	Institutional	90%	RDF	336.6	37.4	1990	Further funding is required.
34 Mgondinyi	1989	350	S/Help	40%	RDF	345.3	210	1991	Phase I near complete. Further funding for Phase II is required
35 Mwanda Dispensary	1989	265	S/Help	85%	RDF	265	100	1991	Phase I on progress but further funding is required.
36 Mwasoko	1989	1200	RWS	20%	MOWD	529	600	1992	Further funding is required.
37 Mlungi	1985	6498	RWS	20%	MOLH	150	6348	1993	The project has been handed over to the community since MOLH is no longer allocating fund.
38 Mwanracha	1986	2279.5	"	60%	"	1367.7	911.8	1991	Further funding is required.

TAITA - TAVEZA DISTRICT

Project	Year Started	Original Cost estimate Ksh. x 1000	Type of Project	Physical Status	Source of Funds	Financial Status Ksh.x1000	Amount req. to complete project Ksh.x1000	Expected date of completion	REMARKS
39 Mbale	1971	800	"	50%	"	800	600	1990	Phase I near complete. Further funding is required for Phase II.
40 Mbambiti	1986	513.2	Institutional	95%	Care Kenya	513.2	25.7	1990	Project handed over. Further funding is required.
41 Mata	1983	350	S/Help	95%	RDF	344.5	5.64	1985	Project abandoned.
42 Maktau	1988	668.2	"	80%	"	665.2	70	1992	Further funding is required.
43 Chala	1988	3240	"	90%	"	3240	324	1990	Further funding is required for rehabilitations and extension.
44 Mlagwa Shallow well	1989	-	RWS	100	ASAL Progr.	8	-	1990	Project was handed over to community. Further funding is required for hand-pumps

TANA RIVER DISTRICT

Project Name	Year Started	Original Cost estimate KShs X 1000	Type of Project	Physical Status	Source of Funds	Exp. already incurred KShs X 1000	Amount req. to complete project KShs X 1000	Expected date of completion	REMARKS
1 Kipini (wells)	1985	1119.9	Construction of wells	72%	MOWD	815.5	304.5	1991	Construction of an elevated tank is required.
2 Livestock Prog (IDASAGODANA)	1985	732.8	RWS	39%	"	282.8	450	1991	Construction of ground masonry tank is required.
3 Oda	1984	909.6	"	68%	"	619.6	290	1991	Purchase of pumping set required.
4 Bangale Earth Pan	1987	800	Earth Dam/Pan	2%	"	0.8	799.2	1993	More funds are required to complete the project.
5 Zubaki Water Extensions	1984	1000	"	95%	"	1093.6	52	1991	"
6 Waldena (wells)	1988	100	Construction of wells	30%	"	78.3	61.7	1991	Funds are required to purchase hand pumps.
7 Wazini	1988	692	RWS	0.5%	R.D.F	4.1	687.9	1993	The progress of the work is affected by flooding during the rainy season.
8 Daku	1989	642.3	"	3%	R.D.F	22.5	619.8	1992	More funds required to complete the project.
9 Ndurani	1989	1134.5	"	26%	R.D.F	303.9	799.9	1993	Construction of two elevated tanks required.
10 Mulanjo	1988	423.3	"	80%	R.D.F	420.7	99.1	1993	Funds for final touches are required.
11 Mbalambala	1989	498.4	"	2%	R.D.F	5.4	493	1993	Construction to start immediately after rains.
12 Wenje	1984	1071.2	"	34%	R.D.F	361.7	706	1993	Phase 1 completed; phase 2 to start when funds are available.

EASTERN PROVINCE

EMBU DISTRICT

Project	Year Started	Original Cost estimate KShs X 1000	Type of Project	Project Status	Source of Funds	Financial Status KShs X 1000	Amount req. to complete project Ksh.X 1000	Expected date of completion	REMARKS
1 Gachoka	1989	3500	RWS	20%	R.D.F.	574	2926	1991	Construction progress is good.
2 Kievaru	1989	202	"	90%	R.D.F.	191	11	1990	Phase 1 has been completed.
3 Nguithi	1987	1500	"	70%	R.D.F.	652	847.9	1991	"
4 Kyeni (South)	1984	4500	"	60%	MOWD	3100	1400	1992	More funds are required to complete the project.
5 Embu Rural Construction	1988	1000	"	85%	"	900	900	1991	"
6 Gathigagacheru	1988	1000	"	70%	R.D.F.	555	445	1991	Construction progress is good.
7 Makima	1987	1800	"	45%	R.D.F.	437	1363	1991	Phase 1 has been completed.
8 Kararitiri	1988	7000	"	65%	E.E.C	4100	2900	1991	"
9 Rue	1989	1500	"	60%	D.R.F	865	635	1991	Construction progress is good.
10 Mirundi	1989	335	"	95%	D.R.F	330	NIL	1990	The project has been completed.
11 Riandu	1988	1500	"	75%	D.R.F	484	1,016	1990	Phase 1 and 2 have been completed.
12 Karabari Rock Catchment	1989	117.6	"	10%	D.R.F	117.6	NIL	1990	Construction progress is good.

ISILOLO DISTRICT

Project Name	Year Started	Original Cost estimate KShs X 1000	Type of Project	Physical Status	Source of Funds	Expenditure already incurred KShs X 1000	Amount req. to complete project KShs X 1000	Expected date of completion	REMARKS
1 Oldonyiro	1986	2170	R.W.S	45%	MOWD	630	1540	1994	Construction of a pump house, laying of distribution lines is going on.
2 Ngaremara	1985	1300	R.W.S	10%	"	168	1200	1993	Drilling of B/H complete; construction of storage tank is in progress.
3 Kulamwe	1983	900	R.W.S	70%	"	1189	1700	1993	Drilling of an additional B/H and testing is in progress.
4 Boji	1983	N/A	R.W.S	50%	"	804.6	1700	1993	Drilling of a B/H to supplement the existing wells is required.
5 Duse	1985	1370	R.W.S	1%	"	156	1700	1994	Drilling of a B/H, construct of cat-tie trough and pipe laying going on.
6 Madagashe	1983	2100	R.W.S	2%	"	340	1700	1993	Drilling of a B/H and pipe laying is in progress.
7 Sericho	1985	6000	R.W.S	80%	SIDA	4800	1200	1991	Construction of offices and purchase of standby units required.

KITUI DISTRICT

Project	Year Started	Original Cost estimate Ksh. x 1000	Physical Status	Source of Funds	Financial Status	Amount req. to complete project Ksh. x1000	Expected date of completion	REMARKS
1 Ilika Phase 1	1986	16260	25%	MOWD	3260	5000	1993	It is a big project that will require K£ 400,000 to complete Phases 2 and 3.
2 Kamulu Muthongwe	1983	1572.5	23%	"	356	1216.5	1992	It's an old project which has taken quite a long time to complete. This has been due to allocation of inadequate funds for implementation.
3 Athi - Yatta Phase 1	1977	5897	15%	EEC/ MOWD	533	300	1992	After completion of phase 1, the project will require K£ 118,200 to complete phase 2.
4 Kakeani	1985	1100	67%	RDF	737.3	362.7	1991	The community and the institutions in the area will benefit from the completion of the only water supply project in the area.
5 Migwani	1982	1356	27%	MOWD	1356	1000	1993	Completion of the distribution line and electrification of the water supply, will cut down the cost of diesel and its transportation.
6 Thua-Kinakoni	1982	922.4	16%	"	142.4	780	1993	It is the only water supply expected to serve a very big rural population in a semi-arid area.
7 Nzeuu-Ungatu	1980	1200	56%	RDF	670	530	1992	Phase 2 of the project will cover gravity main to Ungatu market and storage tanks.
8 Nzeluni	1984	900	38%	MOWD	333.6	566.4	1992	On completion of the remaining tanks and the distribution lines, the designed supply area will be covered fully.

KITUI DISTRICT

Project	Year Started	Original Cost estimate Ksh. x 1000	Physical Status	Source of Funds	Financial Status Ksh x1000	Amount req. to complete project Ksh. x1000	Expected date of completion	REMARKS
9 Ithiani-Kavuta	1990	1380	24%	MOWD	336	1044	1993	The remaining works comprise the gravity mains from Ithiani Kavuta through Mangina Shopping Centre and a branch line to Itoleka Market.
10 Kisasi Mbitini	1990	2630.4	13%	"	336	2294.4	1992	The remaining works involve laying of the line from Kisasi to Mbitini with branches at Katwala Market to serve Kamulu and Musa shopping centres.
11 Kiima	1988	1600	60%	"	969	630.8	1993	Construction of the second intake will boost the supply of water to even a larger area and more consumers.
12 Katutu-Ngunguni	1989	18835	90%	RDF	14765	Nil	1993	The Storage tank which is under construction is progressing steadily.
13 Mutha-Kalambani	1986	3600	86%	EEC	3100	500	1992	The remaining works comprise the purchasing and laying of the line from the booster station to Mutha Market through a big distribution tank.

MACHAKOS DISTRICT

Project	Year Started	Original Cost estimate Ksh.X 1000	Type of Project	Physical Status	Source of Funds	Financial Status Ksh X 1000	Amount req. to complete project Ksh X 1000	Expected date of completion	REMARKS
14 Masinga	1988	5600	MOWD	3%	MOWD	1,584	54,400	1993	Implementation of project is slow due to lack of funds.
15 Kathiani	1986	118000	RWS	10%	MOWD	24000	94000	1994	The project requires more funds for it to be completed.
16 Machakos	1986	64000	UWS	70%	"	54626	2500	1991	More funds required to complete the project.
17 Kikumbulyu	1979	30000	RWS	90%	"	30000	20000	1992	This project requires a pumping set and construction of Phase 2

MACHAKOS DISTRICT

Project	Year Started	Original Cost estimate Ksh.X 1000	Type of Project	Physical Status	Source of Funds	Financial Status Ksh X 1000	Amount req. to complete project Ksh X 1000	Expected date of completion	REMARKS
1 Kiongwani Kima B/H	1987	900	EEC	90%	EEC	810	143	1991	Rising mains, storage tank and pump house complete. Pump engine are already installed.
2 Kibauni	1985	40403	RWS	80%	EEC/ MOWD	Nil	6,000	1992	Completion of Kalawa line BPTS are outstanding.
3 Nunguni	1987	500	EEC	90%	EEC	450	42	1991	Two intakes, pumps, sump, storage tank are complete. Roofing of pump-house not done.
4 Kithioko	1987	1300	EEC	85%	EEC	1,105	195	1992	Pumphouse is complete and pump set installed. Pipe laying for rising main and distribution line to Kithioko completed.
5 Mulima	1985	21600	EEC	95%	EEC	20,520	200	1991	Construction of dam and piping complete.
6 Muthetheni	1986	11011	EEC	95%	EEC	10,461	300	1991	Proposed line to Miu, and water kiosks are outstanding.
7 Ielanthi	1988	1500	EEC	20%	EEC	300	1,200	1992	Pumping set has been purchased but not installed.
8 Manooni	1987	14000	RWS	60%	EEC	8,400	5,600	1993	Construction of dam and piping is complete.
9 Mwindi Mem. Sec. Sch. roof catchment	1989	302	RDF	70%	RDF	280	100	1990	Project cost has been affected by price increase of materials.
10 Ithanga	1989	520	RWS	50%	RDF	380	200	1990	Supplementary funds needed.
11 Kiteta	1989	726	"	60%	RDF	620	300	1991	Slow progress due to poor community participation.
12 Kikambuani	1988	406	MOWD/RDF	90%	RDF	420	300	1991	Outstanding work is to install a pumping machine.
13 Yondoni	1988	684	MOWD/RDF	30%	RDF	322	500	1992	A new B/H is being drilled.

MARSABIT DISTRICT

Project Name	Year Started	Original Cost estimate Ksh X 1000	Type of Project	Physical Status	Source of Funds	Financial Status Ksh. X 1000	Amount req. to complete project Ksh. X 1000	Expected date of completion	REMARKS
1 Uran	1982	900	R.W.S	95%	MOWD	843.6	500	1991	Standby pumping set is required.
2 Livestock Programme	1984	10,000	R.W.S	20%	"	4888	5000	1993	More funds are required.
3 Kalacha	1982	1,010	R.W.S	95%	"	1042	400	1991	Construction of staff houses and project Intake are to be undertaken.
4 Godoma	1983	2,600	R.W.S	95%	"	2468	500	1991	Standby pumping set required.
5 Kargi	1989	10,600	R.W.S	10%	"	1060	9540	1993	Drilling of a B/H and Pipe laying are outstanding.
6 Dabel	1987	11,000	R.W.S	95%	SIDA/ MOWD	9000	2000	1990	Pipelaying completed and installation of standby pumping sets is in progress.
7 Sololo	1987	1,000	R.W.S	10%	"	100	900	1992	Drilling has been successfully completed. Dam silted up. G/W potential poor.
8 Moyale	1981	13,500	R.W.S	80%	"	11200	2000	1992	This project requires rehabilitation.

MERU DISTRICT

Project	Year Started	Original Cost estimate Ksh.X 1000	Type of Project	Physical Status	Source of Funds	Financial Status Ksh X 1000	Amount req. to complete project Ksh X 1000	Expected date of completion	REMARKS
1 Kaaga Sch.	1988	400	RWS	80%	RDF	332.1	67.9	1991	Materials on site but no funds for labour.
2 Kairuni Kiraro	1986	1500	"	60%	MOWD	1100	400	1991	Construction of storage tank in progress.
3 Kanyekine	1975	3000	"	10%	MOWD	224	2500	1993	Augmentation of the old W/S in progress.
4 Kiguru	1986	600	"	80%	RDF	500	100	1991	More funds required to complete the project.
5 Kanja	1985	4000	"	30%	RDF	700	2500	1990	Phase I is almost complete.
6 Muguna Timau	1984	1600	"	75%	RDF	1200	400	1991	More funds required to complete the project.
7 Tigania	1986	3000	"	70%	MOWD	2850	150	1993	Project is progressing well.
8 Nduruma spring	1986	136	"	10%	RDF	86	50	1991	The project has stalled due to lack of community participation.
9 Antubetwe Sch.tank	1988	141.7	"	30%	RDF	81.7	60	1991	Materials on site, but no funds for labour.
10 Mugechege	1984	800	"	90%	RDF	680	43	1990	Project is progressing well.
11 Nairiri	1977	2500	"	75%	RDF	484	121	1991	Pipe laying is in progress.
12 Naari Kirua	1977	2500	"	75%	RDF	412	600	1991	"

MERU DISTRICT

Project	Year Started	Original Cost estimate Ksh.X 1000	Type of Project	Physical Status	Source of Funds	Financial Status Ksh X 1000	Amount req. to complete project Ksh X 1000	Expected date of completion	REMARKS
13 Gitari	1989	56	RWS	50%	MOWD	50	50	1992	Some pipe laying has been done.
14 Anwari	1989	100	"	65%	MOWD	50	50	1992	"
15 Magumoni	1978	60000	"	40%	EEC	40,000	6,000	1992	More funds required.
16 Ntumburi	1983	2500	"	80%	EEC	2,000	600	1991	Roofing of tank in progress. Pipes purchased.
17 Meru T/ship	1988	24700	"	10%	MOWD	700	24,000	1993	Construction of new treatment works to be undertaken.
18 Gakando	1987	800	RWS	40%	MOWD	100	480	1991	Construction of tank in progress.

NORTH EASTERN PROVINCE

GARISSA DISTRICT

Project	Year Started	Original Cost estimate KShs X 1000	Type of Project	Physical Status	Source of Funds	Financial Status KShs X 1000	Amount req. to complete project KShs X 1000	Expected date of completion	REMARKS
1 Bulagolol Water Pan	1989	620	RWS	20%	MOWD	221	600	1990	The progress is good
2 Kamuthi	1989	620	RWS	10%	"	44.7	400	1990	Surveying has been completed
3 Raya	1988	620	RWS	30%	"	592.6	500	1990	"
4 Jara Jara	1986	400	RWS	30%	"	180.3	600	1990	Looking of unskilled labour is a constraint.
5 Garissa Urban	1991	100,000	UWS	0%	"	nil	100,000	1993	5 No. Bore holes broken down A surface source has been proposed on River Tana

MANDERA DISTRICT

Project	Year Started	Original Cost estimate KShs X 1000	Type of Project	Physical Status	Source of Funds	Financial Status KShs X 1000	Amount req. to complete project KShs X 1000	Expected date of completion	REMARKS
1 Mandera	1985	14,000	RWS	30%	MOWD	4,248	18,000	1993	Funds are lacking.
2 Rhamu	1988	10,000	RWS	10%	"	1,260	14,000	1994	More funds required.
3 Eiwak	1985	8,000	RWS	60%	"	4,780	1,000	1993	"
4 Kutulo	1988	2,000	RWS	50%	"	780	1,000	1991	"
5 Takaba	1985	2,000	UWS	70%	"	7,000	1,500	1992	"
6 Banissa	1985	2,000	RWS	70%	"	3,724	1,500	1992	"
7 S/Fatuma	1987	2,000	RWS	60%	"	2,000	1,000	1991	"
8 L.W.P.	1985	2,000	RWS	60%	"	4,000	10,000	1993	"

WAJIR DISTRICT

Project	Year Started	Original Cost estimate Ksh.x1000	Type of Project	Physical Status	Source of Funds	Financial Status Ksh x1000	Amount req. to complete project Ksh. x1000	Expected date of completion	REMARKS
1 Diff	1989	1,200	RWS To serve both human & lives-stock population	30%	MOWD	620	1880	1994	Ground water prospects are poor due to high salinity.
2 Korond-ille	1988	1,200	"	15%	"	1000	2000	1994	Drilling of B/H awaited.
3 Tarbaj	1989	1,200	"	5%	"	620	1880	1994	Due to poor ground water prospects at Tarbaj, drilling a B/H at Elben is recommended. Delay to start work due to the busy schedule of the rig.
4 Wajir Rural	1990	3,500	"	40%	"	1932	2100	1995	Existing scheme requires physical structures and pipework improvement.
5 Giriftu	1990	1,200	"	5%	"	336	2060	1994	A B/H is planned to be drilled soon.
6 Wajir Urban	1989	3,000	UWS	2%	"	100	2900	1997	More funds required.

NYANZA PROVINCE

KISII DISTRICT

Project	Year Started	Original Cost estimate KShs X 1000	Type of Project	Physical Status	Source of Funds	Financial Status KShs X 1000	Amount req. to complete project KShs X 1000	Expected date of completion	REMARKS
1 Riokindo	1981	5644	RWS	30%	MOWD/RDF	2,140	3604	1993	Project has been without funds since 1986
2 Birongo	1976	15,000	RWS	30%	"	5,620	9380	1994	More funds required.
3 Sengera	1984	1,200	RWS	20%	"	437	1991	1992	More funds needed.
4 Natongo Iganga	1986	17,744	RWS	2%	"	771	9773	1994	More funds needed.
5 Gionseri	1987	1,021	RWS	70%	RDF	605	416	1992	RDF to fund Phase 2 during the next financial year.
6 Mogocho	1987	1,509	RWS	50%	RDF	707.5	801.5	1992	"
7 Etago	1987	1,531	RWS	65%	RDF	837.8	694.2	1991	"
8 Nyamache	1987	560	RWS	50%	RDF	250	310	1991	"
9 Kiareni	1981	20,100	RWS	20%	MOWD	3327	16773	1994	Ministry to take over the project under RWS programme.
10 Gesusu/Geteri	1989	20,100	RWS	20%	RDF	2700	19830	1994	"

KISUMU DISTRICT

Project	Year Started	Original Cost estimate Ksh.X 1000	Type of Project	Physical Status of Funds	Financial Status Ksh X 1000	Amount req. to complete project Ksh X 1000	Expected date of completion	REMARKS
1 Korwenje	1979	3500	RWS	75%	2800	1900	1991	complete. The treatment works are yet to be constructed.
2 Kisumu Rural Phase 1	1990	50000	"	50%	25000	25000	1991	The project is progressing well.
3 West Kano	1985	50000	"	5%	108	39882	1993	This is a new project awaiting funds for implementation.
4 Paga Beach	1981	4403	"	80%	3800	600	1991	The project is partly complete. More funds required.
5 Kibigori	1985	350	"	60%	210	150	1992	This project is being rehabilitated and UNICEF has been providing materials under CSD programme.
6 Koru/Mnara	1988	1700	"	70%	1500	200	1992	Rehabilitation work is underway.
7 Nyahera	1989	2000	"	40%	1200	800	1993	Rehabilitation works and extension are going on. It has been funded by Kenya Finland Primary Health Care Programme.
8 Kenasia	1989	650	"	45%	340	310	1993	This is intended to be connected to Nyakach W/S.
9 Mahenya	1987	1010	"	65%	610	400	1992	This project urgently needs funding to be completed.
10 Vitendo	1985	14000	"	5%	150	13850	1994	Funds needed to complete design.
11 Songor Muhoroni	1985	4000	"	4%	168	3000	1994	Funds needed to complete design.

SIAYA DISTRICT

Project	Year Started	Original Cost estimate Ksh. x 1000	Type of Project	Physical Status	Source of Funds	Financial Status Ksh x1000	Amount req. to complete project Ksh. x1000	Expected date of completion	REMARKS
1 North Sakwa	1978	30,000	RWS	30%	Self-Help, EEC, KFFHC, Diocese of Kisumu, MOWD	14000	16000	1993	No funds have been allocated for the last 3 years.
2 South Sakwa	1978	21,000	"	20%	Self-Help, Diocese of Kisumu, MOWD, KFFHC, Nyangoma Mission	13600	7400	1993	No funds have been allocated for the last 3 years
3 Uranga/Ramula	1978	7000	"	45%	Self-Help, RDF, MOWD,	4000	3000	1992	No work is going on because of lack of funds.
4 Bondo	Not yet started.	34000	"	Nil	MOWD	Nil	34000	1994	The existing W/S was constructed in 1956, so it requires urgent rehabilitation because of the number of institutions that have come up. e.g; Nyamira, Maranda, and Bondo TTC.
5 Sidindi Malanga PHASE II	"	84000	"	Nil	MOWD	Nil	84000	1994	There is urgent need to extend the water supply to cover the areas not covered in phase I, e.g Siaya Town.

SIAYA DISTRICT

Project	Year Started	Original Cost estimate Ksh. x 1000	Type of Project	Physical Status	Source of Funds	Financial Status Ksh x1000	Amount req. to complete project Ksh. x1000	Expected date of completion	REMARKS
6 Sakwa	Not yet started.	150,000	RWS	Design work completed	MOWD	Nil	150,000	1994	The project has not received funds.
7 Mauna Dam Rehabilitation	1972	1000	RWS	10%	MOWD	1000	7000	1994	Phase 1 of the project was constructed in 1972. The operation of the W/S has become obsolete and urgently requires rehabilitation to enable it serve the rapidly growing population.

SOUTH NYANZA DISTRICT

Project Name	Year Started	Original Cost estimate KShs X 1000	Type of Project	Project Status	Source of Funds	Financial Status KShs X 1000	Amount req. to complete project KShs X 1000	Expected date of completion	REMARKS
1 Mbita	1987	6000	R.W.S.	10%	MOWD	1000	4500	1991	Mbita town has no existing W/S.
2 Kanyaluo	1977	7000	R.W.S.	20%	RDF	1200	4000	1991	To be completed soon to serve the health centre and a sec. school.
3 Wangchieng	1978	3000	"	25%	"	1000	2000	1991	Requires a storage tank and pipes.
4 Ongochi	1976	2800	"	40%	"	1600	1000	1991	Requires full treatment works.
5 Obera	1976	3000	"	50%	"	1200	1400	1991	"
6 Nyandiwa	1977	1500	"	40%	"	800	500	1991	Needs a storage tank and distribution lines.
7 Mulo/Pe-Hill Ulamba	1976	4000	"	60%	"	1200	2000	1991	The project is operational.
8 Oyani	1977	2000	"	75%	MOWD	1200	800	1991	The system is operational.

KAJIADO DISTRICT

Project	Year Started	Original Cost estimate Ksh.X 1000	Type of Project	Physical Status	Source of Funds	Financial Status Ksh X 1000	Amount req. to complete project Ksh X 1000	Expected date of completion	REMARKS
1	Namanga 1985	100	RWS	75%	MOWD	336	1000	1992	This project is being implemented in phases and is in progress. Extensions to Mailwa, fencing of storage area is in progress. Another distribution line required.
2	Bissel 1985	500	RWS	50%	MOWD	1000	2000	1992	This project is being implemented in phases. There is need to develop another B/H and two more springs to serve the town and the rural community respectively.
3	Looda-riak 1988	5000	RWS	90%	MOWD	1120	1000	1991	The project is in operation but extensions are needed. Also required are the operator's house, protection of source, fencing of tank area, provision of cattle trough, anchoring of the pipeline and provision of Air-valves. However work on this is in progress.
4	Olooseos 1988	4000	RWS	50%	MOWD	1008	4000	1992	The source is a spring. There is going to be two more sources from Ngong hills to supplement the present one under development. Provision is also required of the fence around source, operator's house and other distribution lines.
5	O/Rongai 1988	7000	UWS	30%	MOWD	1120	4000	1992	Augmentation measures includes Duncan's springs development, equipping of Tamfeeds B/H, Market B/H and provide an elevated tank and distribution in the town.

KAJIADO DISTRICT

Project	Year Started	Original Cost estimate Ksh.X 1000	Type of Project	Physical Status	Source of Funds Ksh X 1000	Financial Status Ksh X 1000	Amount req. to complete project Ksh X 1000	Expected date of completion	REMARKS	
6	Kajiado	1986	4000	UWS	80%	MOWD	3600	10000	1994	There is need to rehabilitate the old Kajiado pipeline, sink two more boreholes, repair the storage tanks in Kajiado and change the distribution network in the town.
7	Kisaju	1988	2100	RWS	60%	MOWD	572	1000	1992	The pump house, storage tank, gantries are done. There remains the pipelines, operator's house fencing of storage area, 2nd tank, communal water points and cattle troughs.
8	Olkeri B/H	1989	1000	UWS	70%	MOWD	700	300	1991	This B/H aims at supplementing Ngong W/S system.
9	Ewaso Kedong	1989	68000	RWS	70%	MOWD	50000	28000	1991	This project is being implemented on contract basis.
10	Olcho--ronyori	1988	4000	RWS	70%	MOWD	1500	2000	1992	Work is progressing well.
11	Kiserian Nkoroi	1987	2000	RWS	10%	MOWD	200	1000	1991	The submersible pump requires replacement.
12	Kipeto	1988	1000	RWS	10%	MOWD	560	5000	1993	Sinking of 3 B/Hs is required. It has delayed due to the busy schedule of the drilling rig.
13	Nkoile	1980	6000	RWS	80%	MOWD	250	4000	1993	There is the need to have a new supply network that will avoid the present booster and the mono pump. This calls for a new rising main, pumping system, new distributions, operator's house and tank.

KAJIADO DISTRICT

Project	Year Started	Original Cost estimate Ksh.X 1000	Type of Project	Physical Status	Source of Funds	Financial Status Ksh X 1000	Amount req. to complete project Ksh X 1000	Expected date of completion	REMARKS
14 Ngataaek	1980	3000	RWS	50%	MOWD	1500	2000	1992	The outstanding work involves sinking of a 2nd B/H, provision of a standby pump, provision of a distribution line to town and fencing of tank areas.
15 Kibiko	1981	2000	RWS	60%	MOWD	1560	1000	1992	This project is in operation partly. The one under implementation is another phase to serve a different direction.
16 Livestock prog.	1984	40000	RWS	40%	MOWD	560	20000	1995	This is a district wide project meant to provide water and watering facilities in group Ranches.
17 Oldonyo-nyokie	1988	3000	RWS	10%	MOWD	560	2000	1994	There is a new designed network to cater for Esonorua and Oldonyonyokie. This project will be supported by the proposed Entasopia Esonorua water project. The source is a borehole and is currently serving beneficiaries.
18 Lower-Matasia	1988	2000	RWS	90%	MOWD	1800	300	1992	The initial distribution is complete but now extensions are the ones being done. The operator's house, fencing of source and tank areas are required. The project is in operation. It needs to be gazetted for revenue collection.

KERICHO DISTRICT

Project Name	Year Started	Original Cost estimate KShs X 1000	Type of Project	Project Status	Source of Funds	Exp. already incurred KShs X 1000	Amount req. to complete project KShs X 1000	Expected date of completion	REMARKS
1 Sigor - Longisa	1979	15,000	RWS	90%	MOWD	22,600	4,000	June 1991	Construction progress is good.
2 Cheptalal	1989	1,420	"	95%	MOWD/RDF	1,360	60	June 1990	Completed.
3 Fort-Ternan	1984	2,000	"	65%	MOWD	1,800	1,200	June 1991	More funds required.
4 Chemogoch	1989	405	"	20%	RDF	266	150	June 1991	"
5 Chesinende	1988	480	"	70%	"	367	284	June 1991	"
6 Chebunyo	1988	550	"	65%	"	375	216	June 1991	"
7 Kenegut	1987	1,150	"	60%	MOWD/ Self-Help	600	540	June 1991	"
8 Ngecherok	1981	1,400	"	98%	MOWD/RDF/ Self-Help	2,182	NIL	June 1990	The project is complete.
9 Tegunot / Nyakinyua	1987	188.7	"	90%	Self-Help RDF	230	180	June 1991	The project requires more funds.

LAIKIPIA DISTRICT

Project	Year Started	Original Cost estimate Ksh. x 1000	Type of Project	Physical Status	Source of Funds	Financial Status Ksh x1000	Amount req. to complete project Ksh. x 1000	Expected date of completion	REMARKS
1 Wiumiririe	1987	5000	RWS	50%	MOWD	2200	4000	1992	Survey and design of distribution lines completed.
2 Rwathia	1987	2460	"	60%	"	800	1660	1992	Project not funded in the last two financial years.
3 OMC Lorian	1983	1000	"	60%	"	700	600	1991	Communal water points required.
4 Sirimon	1983	7500	"	10%	"	1229	6642	1992	This project was started on S/H basis and GOK only came in later and offered materials.
5 AljiJo B/H-C5140	1986	507	"	95%	"	507	200	1991	Construction of communal water points and extensions to a health centre and school in progress.
6 Alkinyei B/H-C5197	1986	507	"	90%	"	507	200	1991	Construction of an attendant's house and communal water points in progress.
7 Sweet Waters Dam	1990	380	"	75%	RDF	415	100	1990	More funds required.
8 Doldol dam	1990	400	"	30%	"	250	500	1990	Dam fencing required.

LAIKIPIA DISTRICT

Project	Year Started	Original Cost estimate Ksh. x 1000	Type of Project	Physical Status	Source of Funds	Financial Status Ksh x1000	Amount req. to complete project Ksh. x 1000	Expected date of completion	REMARKS
9 Kapkures Dam	1990	417	RWS	95%	RDF	402.62	20	1990	Dam fencing required
10 Laikipia East	1986	110	"	40%	SDC	150	100	1990	New intake chamber and pumphouse completed.
11 Water Jars	1985	660	"	70%	SDC	990	200	1991	Good progress recorded.
12 Sub-Surface Dam	1990	100	"	70%	SDC	80	70	1990	More funds required.
13 Ndurumo/Minjore	1979	1700	"	80%	MOWD	1250	614	1991	Formerly under Laikipia West Water project. Pumping set installed. The project is progressing well.
14 Muhonia	1986	220	"	40%	SDC	342	423	1990	
15 Sweet Waters	1986	340	"	20%	SDC	71	280	1990	Scoping of dam complete. Funds required for fencing.
16 Muririitha	1984	240	"	90%	SDC	368	20	1990	Construction of cattle trough is going on.
17 Nyakairo	1984	650	"	90%	SDC	480	310	1990	Almost complete and operational.
18 Laikipia West	1979	10,000	"	10%	MOWD	200	9800	1992	More funds required.
19 Marmanet	1980	5500	"	95%	"	500	1000	1991	Only extentions are outstanding.

NAKURU DISTRICT

Project Name	Year Started	Original Cost estimate KShs X 1000	Type of Project	Physical Status	Source of Funds	Exp. already incurred KShs X 1000	Amount req. to complete project KShs X 1000	Expected date of completion	REMARKS
1 Wanyoro	1984	3000	Self-Help	35%	RDF and Beneficiaries	750	2250	1992	More funds are required.
2 Kerisio	1986	400	Self-Help	90%	RDF	400	60	1992	"
3 Kinoru	1988	2065	Self-Help	40%	RDF	800	1300	1991	"
4 Kianyoro	1989	220	Self-Help	90%	MOWD	220	50	1990	"
5 Piave	1984	950	Self-Help	65%	Canadian	620	330	1992	"
6 Kerma Viosi	1989	140	Self-Help	90%	MOWD	10	40	1991	"
7 Maraigusu	1989	2400	Self-Help	30%	RDF	400	2000	1993	"
8 Mirera Suswa	1984	3600	Self-Help	50%	RDF/MOWD	440	3160	1992	"
9 Chemichemi Jyitich	1989	1500	Self-Help	10%	Baptist Mission of Kenya	120	1380	1991	"
10 Amos B/H	1989	1000	Self-Help	20%	CND	200	800	1991	"

NAROK DISTRICT

Project	Year Started	Original Cost estimate Ksh.X 1000	Type of Project	Physical Status	Source of Funds	Financial Status Ksh.X 1000	Amount req. to complete project Ksh.X 1000	Expected date of completion	REMARKS
1	1980	750	RWS	90%	MOWD	970	661	1992	Extension of distribution mains in progress.
2	1985	9000	"	50%	"	4000	5000	1992	Dam is operational. Pumping system to continue.
3	1980	1000	"	95%	"	900	245	1991	B/H operational. Work on rising and distribution mains in progress.
4	1988	1300	"	30%	"	500	800	1993	Storage tank complete.
5	1989	7739	"	25%	"	560	7179	1991	One water pan complete, three more to go.
6	1987	7786	"	98%	"	7786	100	1990	Minor finishing touches to be done.
7	1980	1000	"	80%	"	668	678	1993	The system is operational. Work on new intake, pumps and rising mains in progress.
8	1980	7000	"	90%	"	683	782	1992	The system is operational. Standby pump set required; gravity mains also complete.
9	1984	6000	"	15%	"	15000	7157	1993	Materials for main storage tank already purchased. Part of the distribution already laid.
10	1988	812	"	80%	"	707	323	1991	RDF available to support the project.

TRANS-NZOIA DISTRICT

Project	Year Started	Original Cost estimate Ksh. x 1000	Type of Project	Physical Status	Source of Funds	Financial Status Ksh x1000	Amount req. to complete project Ksh. x1000	Expected date of completion	REMARKS
1 Kiminini	1984	6000	RWS	50%	MOWD	3900	3500	1992	The project can be operational if money is available to install a purchased diesel engine, and later a standby one and electrify the project.
2 Kwanza/ Kolongolo	1983	3800	"	55%	EEC/ MOWD	1700	2900	1992	Though the project is partly operational with two pumping stations, it requires 2 No standby pumping sets (diesel) and an extra storage tank. The project has no staff houses and part of the distribution mains is not complete.
3 Saboti	1982	2000	"	65%	MOWD	660	800	1991	The project requires a standby diesel engine pumping set and extension of the distribution mains.
4 Kimondo	1983	6000	"	45%	EEC/GOK	230	210	1992	The gravity main is operational but money is required to put up the remaining distribution mains.
5 Sibanga	1986	130	"	85%	MOWD/ RDF	65	55	1992	A standby electric set, a storage tank and pipes are required to complete the project. The project is currently operational.
6 Kimitu	1987	125	"	85%	MOWD/ RDF	60	50	1991	Funds are required to extend the project to Nyabomo and Kimitu farms.
7 Mogoiywet	1987	70	RWS	90%	RDF	60	20	1991	Money is required to extend the project to Wamuini. The project is operational.
8 Muna	1986	100	"	40%	RDF	64	95	1991	Money is required to complete a tank under construction and to complete the distribution network.

TRANS-NZOIA DISTRICT

Project	Year Started	Original Cost estimate Ksh. x 1000	Type of Project	Physical Status	Source of Funds	Financial Status	Amount req. to complete project Ksh. x1000	Expected date of completion	REMARKS	
9	Bikeke	1987	95	RWS	75%	RDF	70	55	1991	Money is required to complete a tank under construction and the distribution network. The project is operational.
10	Kaisagat	1989	800	"	90%	RDF	780	100	1990	The project is almost complete. More funds required to complete outstanding works.

UASIN GISHU DISTRICT

Project	Year Started	Original Cost estimate Ksh.X 1000	Type of Project	Physical Status	Source of Funds	Financial Status Ksh.X 1000	Amount req. to complete project Ksh X 1000	Expected date of completion	REMARKS
1 Moi's Bridge	1989	20000	RWS	35%	MOWD	3120	16800	1993	Funds required for the remaining works i.e treatment works, staff quarters and two electrical pumping units.
2 Kipkabus	1985	13040	"	46%	"	5935	7105	1993	Funds required for chemical solution tanks, FRO dosers, electrical pumps, electrification and filter media.
3 Burnt Forest	1986	7500	"	45%	"	3760	3740	1993	Funds required for constructing storage tanks, treatment works, distribution lines and new pumping unit.
4 Tarakwa	1984	2454	"	25%	"	1410	1044	1993	Funds required for the continuation of gravity mains and storage tank construction.
5 Ainabkoi	1980	1800	"	35%	"	502	1228	1993	Funds required for phase III i.e Ndanai.
6 Losoito Kapngetuny	1981	1759	"	58%	RDF/ MOWD	980	779	1991	Funds required for the purchase of motor and electrification of the pumphouse.
7 Yamumbi	1981	3400	RWS	35%	RDF	514	2886	1993	Funds required for the construction of 100 m ³ storage tank, distribution lines, completion of pumphouse, purchase of complete pumping set and electrification of pumphouse.
8 Timboroa	1988	6000	"	10%	MOWD	450	5550	1994	Funds required for the construction of rising main, storage tank, distribution lines and pumping set. Construction of pumphouse and weir in progress.
9 Kampi Ya Kabatu	1988	1200	"	10%	"	118	1082	1993	Funds required for survey of dams.

UASIN GISHU DISTRICT

Project	Year Started	Original Cost estimate Ksh.X 1000	Type of Project	Physical Status	Source of Funds	Financial Status Ksh.X 1000	Amount req. to complete project Ksh X 1000	Expected date of completion	REMARKS
10 Kipkarren Dam	1988	60000	"	11%	"	6500	53500	1992	Funds required to complete the construction of dam.
11 Osorongai	1990	1500	RWS	60%	RDF	800	700	1993	Funds required for the construction of distribution lines.
12 Kemeliet	1987	3600	"	40%	RDF	750	2750	1992	Funds required for the construction of rising main and distribution lines.
13 Makongi	1988	2000	"	55%	RDF	800	1200	1992	Funds required for the construction.

RIFT VALLEY PROVINCE

BARINGO DISTRICT

Project	Year Started	Original Cost estimate KShs X 1000	Type of Project	Physical Status	Source of Funds	Financial Status KShs X 1000	Amount req. to complete project KShs X 1000	Expected date of completion	REMARKS
1 Maji Moto	1978	2000	RWS	60%	MOWD	1200	1000	1992	Outstanding work involves extensions.
2 Radat	1983	1500	RWS	60%	"	1100	2500	1992	To serve Radat centre, school and surrounding community.
3 Cheberen	1978	600	RWS	85%	"	1100	200	1992	Outstanding work involves extensions.
4 Kapchepkor	1979	200	RWS	90%	"	1000	108	1991	Outstanding work involves weir rehabilitation.
5 Talai	1979	172	RWS	60%	"	1000	1000	1991	Progress is good on the site.
6 Torongo	1988	1000	RWS	60%	"	1169	920	1991	Involves extensions and rehabilitation.
7 Timboroa	1988	1200	RWS	40%	"	950	6300	1991	Ongoing project to serve Timboroa centre and surrounding areas.
8 Turkubus (Pemwai)	1988	3179.8	RWS	80%	"	1234	1940	1991	Project is almost complete.
9 Aror/Saimo	1983	4000	RWS	30%	"	1807	3747	1991	Pipe laying is complete.
10 Kapcheluguny	1989	8800	RWS	10%	"	1760	7140	1992	The project is for flood control and to serve the community.
11 Kiamose Livestock Pro.	1989	3000	RWS	30%	"	1400	2820	1992	To supply Kiamose centre.
12 Koriema Kimalel	1989	2600	RWS	40%	"	1500	2500	1992	Outstanding works include intake, weir, tank and part of gravity line.

ELGEYO - MARAKWEI DISTRICT

Project	Year Started	Original Cost estimate Ksh. X 1000	Physical Status	Source of Funds	Financial Status Ksh x1000	Amount required to complete the project. Ksh x 1000	Remarks
1 Flax	1989	1500	30%	RDF	400	1000	The source is an existing dam.
2 Sergoit	1980	23,000	25%	MOWD	6000	17000	The project is progressing well.
3 Jemunanda Kondabillet	1986	1200	70%	RDF	800	500	Supplementary funds have been applied for.
4 Kapcherop	1989	1500	70%	MOWD	1000	1000	Construction work is being done by the district office.
5 Kapcherop W/P (For the health	1989	5000	10%	RDF	360	4500	It was necessary to undertake this small project because the time of completion of the major Kapcherop is not certain due to lack of funds.
6 Metkei	1988	1200	50%	MOWD	1000	4000	The project is to serve a secondary school nearby.
7 Lekwa	1984	3,500	60%	"	2000	2000	This project is undertaken by the DL team. No allocation of funds was given in 1989/90 financial year.
8 Chepsigot Cheptebo	1990	36,800	70%	"	16800	20000	The source is an already existing intake. It is a contracted project being supervised from the head-quarters scheduled for completion in May 1991.
9 Nyalil/Matany	1986	1800	70%	ASAL (ASAL Development prog.)	1000	1500	Implementation stopped when the ASAL programmes were suspended in the District in January, 1988.
10 Resim	1987	4200	10%	ASAL	200	4000	Progress not good due lack of funds.
11 Chesongoch	1987	4400	NIL	ASAL	NIL	5000	"

NANDI DISTRICT

Project	Year Started	Original Cost estimate Ksh. X 1000	Type of Project	Physical status	Source of Funds	Financial Status Ksh. X1000	Amount req. to complete project Ksh X1000	Expected date of completion	REMARKS
1 Satorra	1979	2000	RWS	75%	MOWD/ Self- Help	1230	1200	1992	A booster station required.
2 Ketbarak	1981	5600	"	5%	MOWD	780	15000	1995	Pipeline is the only work done
3 Mosombor	1982	1000	"	85%	"	1045	400	1991	D.D.C funds expected.
4 Meteitei	1989	14500	"	10%	"	1000	13500	1994	It is a new project.
5 Kaptel	1989	350	"	40%	"	150	200	1991	Construction progress is satisfactory.
6 Kaigat	1981	3220	"	70%	PEC & RDF	132	5000	1992	Currently, the progress is poor due to lack of funds.
7 Kemoloi/ Kobujoi	1982	53000	"	80%	MOWD	27000	26000	1992	Pump testing in progress.
8 Kapchorwa	1988	500	"	50%	RDF/MB- ND MOPND	34	100	1991	This is an on-going project and progress is good.
9 Samoei Sec.	1989	200	"	30%	RDF/ MOPND	96	52	1991	The progress of this project is good.
10 Lolmininga Dispensary	1989	96	"	40%	RDF/ S/Help	30	66	1991	"
11 Olmentuny Cattle dip	1989	40	"	60%	RDF & S/Help	46	20	1991	This is an on-going project with good progress.

SAMBURU DISTRICT

Project	Year Started	Original Cost estimate Ksh.X 1000	Type of Project	Physical Status	Source of Funds	Financial Status Ksh.X 1000	Amount req. to complete project Ksh X 1000	Expected date of completion	REMARKS
1 Losuk	1987	1200	RWS	50%	MOWD	727	800	1992	Bore hole and 50 m3 storage tank completed.
2 Kowop	1989	800	"	90%	"	1600	400	1992	Complete except for store and staff houses.
3 Wamba	1988	3000	"	90%	MOWD/ IFSP/ ASAL	909	100	1992	Complete except for rehabilitation of the distribution system.
4 Baragoi Pri. sch. underground tank	1988	100	"	95%	RDF	100	10	1992	Complete except for gutters.
5 Lesirikan	1989	700	"	5%	RDF	36	700	1992	Cattle trough complete, rising main and storage tank to be constructed.
6 Opiroi	1990	1200	"	25%	RDF	220	1200	1992	Bore hole drilled in 1990. Pumphouse and laying of pipes and storage tank to be constructed.
7 Pozo	1977	600	"	60%	MOWD	573	300	1991	Tank, pipelaying, construction of composite filters and fittings in progress.
8 Marti	1988	200	"	80%	RDF	600	600	1991	Complete except for booster pump and bore hole rehabilitation.
9 Baragoi	1990	800	"	25%	Catholic Mission Marsabit Diocess	200	800	1991	Bore hole sunk; to construct a pumphouse, procure a pumping set and pipes; rehabilitation of the old system required.
10 Kisima	1983	8000	"	20%	MOWD	1400	7000	1991	To construct composite filters, filter pumps, fittings and completion of staff houses.
11 Wamba Boys underground tank	1988	200	"	90%	RDF	200	50	1990	More funds required.
12 Baragoi Sec. sch. tank	1984	300	Domestic W/S	20%	RDF	200	100	1991	Tank already costed; some material on site.

SAMBURU DISTRICT

Project	Year Started	Original Cost estimate Ksh.X 1000	Type of Project	Physical Status	Source of Funds	Financial Status Ksh.X 1000	Amount req. to complete project Ksh X 1000	Expected date of completion	REMARKS
13 South Horr	1987	1200	Domestic W/S	85%	GOK SIDA	2500	500	1991	Complete except for intake, pipe laying and fittings.
14 Suguta Marmar	1984	1200	"	80%	MOWD	738	500	1991	Complete except for office block and dosing units.
15 Archers Post	1990	7000	Extension to existing W/S to DOD.	70%	"	400	700	1991	Pumping set to rehabilitate the old system is required.
16 Loikas	1984	1000	Domestic W/S	20%	"	400	400	1991	To complete intake and laying of gravity mains.

TURKANA DISTRICT

Project	Year Started	Original Cost estimate Ksh.x1000	Type of Project	Physical Status	Source of Funds	Financial Status Ksh x1000	Amount req. to complete project Ksh. x1000	Expected date of completion	REMARKS
1 Loruqum	1984	2000	RWS	45%	MOWD	1000	1200	1992	Funds have been coming in bits, but given sufficient funds it will be complete in two years time.
2 Lokori	1985	850	"	85%	RDF/ MOWD	720	1400	1991	Funds have not been available since 1987/88.
3 Kapendo	1985	500	S/Help RWS	50%	MOWD	500	500	1992	More funds required.
4 Namadak	1988	2000	RWS	45%	"	700	1300	1992	Ksh 700,000 re-allocated from Kerio fishing Village. It will be completed when funds required are allocated.
5 Lokitaung	1989	1600	Urban		RDF/ MOWD	819 950	1200	1992	If funds are available at once, the project will be complete in one financial year.
6 Nakwamekwi	1979	300	Now under Urban	100%	RDF/ MOWD	130.8 184.8	Nil	1992	This project is complete.
7 Livestock Programme	1986	5000	Const. of water conservation structures	30%	MOWD	1260	3600	1993	This is a continuous programme requiring funds.
8 Kainuk	1988	Ph.1 - 784 Ph.2 - 673.9	S/Help	100% 100%	RDF RDF	8.784 10.672	Nil Nil	1991 1992	The project now complete.
9 Kalobeyei	1989	Ph.1 - 800 Ph.2 - 790	S/Help	90% 40%	RDF RDF	720 328.6	80 461	1991 1992	This is phase 2 of the project and A.I.E. will expire on 13/9/92, but will require supplementary funds.
10 Kerio	1990	4000	S/Help	60%	RDF	672.9	Nil	1992	Pipe laying and water kiosks construction were all completed. Levated tank and pumping unit to be installed to by a contractor.

WEST POKOT DISTRICT

Project	Year Started	Original Cost estimate Ksh. x 1000	Type of Project	Physical Status	Source of Funds	Financial Status Ksh.x1000	Amount req. to complete project Ksh. x1000	Expected date of completion	REMARKS
1 Ywarateke Morbus	1988	21000	RWS	30%	EEC/RDF	3950	17050	1993	Almost all the pipes and materials for the main reservoir and the distribution lines have been purchased but the implementation of the project is very slow because the unskilled labour contribution by the local wananchi is very much unreliable. The people are not interested in working at all. Lack of transport is also a hindrance to implementation of this project.
2 Sigor	1982	11800	"	80%	MOWD	9400	2450	1991	More funds are required to enable project completion. Lack of a truck to ferry materials to site has been a drawback to implementation of this project.
3 Chesegeon	1988	900	"	45%	RDF/ MOWD	328	300	1990	The pipe laying has been done. What is remaining is the construction of storage tank and intake.
4 Arpollo	1985	89	"	80%	RDF	Nil	89	1991	Funds allocated to this project are for Gabion construction along the furrow serving this project. Amount allocated Ksh 99,000.00
5 Sina	1987	500	"	50%	RDF	7360	250	1990	The completion scheduled for Dec. 1991 is only for the intake works, laying of the gravity main and construction of the storage tank. Distribution lines, cattle troughs and communal water points to be done if funds are available either from RDF or from the local people.

WEST POKOT DISTRICT

Project	Year Started	Original Cost estimate Ksh. x 1000	Type of Project	Physical Status	Source of Funds	Financial Status Ksh.x1000	Amount req. to complete project Ksh. x1000	Expected date of completion	REMARKS
6 Chepare- ria	1987	5000	RWS	56%	MOWD	2000	2000	1992	The project was not allocated funds in 1989/90. More funds are required to complete the project. Activities to be undertaken are:- (1) Intake completion (2) construction of complete treatment works (3) Minor Extensions to areas of public utility.
7 Karas	1988	150	"	98%	RDF/ MOWD	150	800	1992	The Quoted amount of funds required is to meet the cost of constructing treatment works.
8 Tarau	1987	1400	"	90%	RDF	23440	1000	1990	The completion scheduled for september 1990 is of the pump house, laying of rising main, construction of storage tanks and laying of distribution lines. The cattle troughs and CWP are to be constructed when to local people have contributed money.
9 Lityei	1986	500	"	85%	RDF/ Self Help	347	20	1990	The beneficiaries are to meet the balance of the funds to enable project completion as per the agreement.
10 Kaprech	1987	525	"	70%	RDF	453	100	1991	The quoted funds will be contributed by the community served by this project as per agreement.

WEST POKOT DISTRICT

Project	Year Started	Original Cost estimate Ksh. x 1000	Type of Project	Physical Status	Source of Funds	Financial Status Ksh.x1000	Amount req. to complete project Ksh. x1000	Expected date of completion	REMARKS
11 Livestock Programme	1986	450		20%	MOWD	450	2100	1993	Funds for this project were used to purchase pipes for water supplies in Karapokot sub-district. More funds are required for construction of more boreholes, sub-surface dams cattle troughs and other feasible structures for livestock use.
12 Kabich-bich		1400		80%	"	1200	200	1991	This project is currently operational. The major activity on-going is staff house construction.

WESTERN PROVINCE
BUNGOMA DISTRICT

Project	Year Started	Original Cost estimate KShs X 1000	Revised Cost Estimate	Type of Project	Physical Status	Source of Funds	Financial Status Ksh. X 1000	Amount req. to complete project Ksh. X 1000	Expected date of completion	REMARKS
1 Malaba/ Kocholia	1982	54000	85000 (1986)	RWS	32%	MOWD	25340	59660	1993	Mode of funding has been very poor. Completion date depends on the mode of funding. Funding is very slow, only a few pipes were purchased with the limited funds. KEFINCO is undertaking the construction of the remaining Phase 2 & 3. Phase 1 is operational, Standby pumping unit is to be purchased. Progress is satisfactory. Good progress. Good progress. More funds needed.
2 Little Nzoia West	1989	63467.4	75000 (1988)	"	10%	"	560	74000	1993	
3 Chemoge/ Kapskwony	1982	600	13000	"	46.7%	"	2100	900	1992	
4 Kibabii	1986	1116.5	3451	"	68%	RDF	766.5	2884.6	1991	
5 Kimobo	1989	125.4	1000	"	30%	RDF	360	664	1991	
6 Ndalu	1988	950	950	"	93%	RDF	877	Nil	1990	
7 Lukhuna	1987	1415	1415	"	95%	RDF	1332.3	Nil	1990	
8 Muchi/Milo Khalumuli	1989	5000	5000	"	66.6%	RDF	1389	3611	1991	
9 Sichei/Nalondo Lurembe	1976	1200	1300	"	32%	NGO	386.8	813.2	1991	The funding agency CARE is now out of the District.

BUSIA DISTRICT

Project	Year Started	Original Cost estimate Ksh. X 1000	Type of Project	Physical Status	Source of Funds	Financial Status Ksh X 1000	Amount req. to complete project Ksh X 1000	Expected date of completion	Remarks
1 Angoromo East Phase 1	1988	1000	RWS	80%	RDF	800	300	1991	This project was implemented in phases because of inadequate funds.
2 Angurai	1989	800	RWS	65%	RDF	680	500	1991	Funds currently not available.
3 Nasewe Tree Nursery Phase 1	1988	50	RWS	50%	RDF	91	50	1990	This is a forest department project involving water components for the tree nursery, therefore the allocation indicated is only for the water component involved.
Phase 2	1990	52	"	0%	"	Nil	52	1993	Phase 2 of the project was to start in June 1990. The phasing was done due to lack of funds.
5 Busia-Mundika	1983	30,000	RWS	85%	MOWD	26000	2986.7	1992	Funds currently not available, but sections of the project that are complete are operational.

KAKAMEGA DISTRICT

Project	Year Started	Original Cost estimate Ksh. X 1000	Type of Physical Project Status	Source of Funds	Financial Status	Amount req. to complete project Ksh. X 1000	Expected date of completion	REMARKS
1 Soy	1982	8000	RWS	20% GOK	1500	6500	1992	The Project requires urgent funding so that it can be completed as it has taken almost 10 years before completion.
2 Tumbo/ Shem akhokho	1986	2000	"	60% RDF	1200	800	1991	Most of the work is done and part of the water project is operating.
3 Esalwa	1989	700	Institu- tion	80% RDF	5510	55.1	1990	The project is an extension of Maseno W/s with a booster station at Mwibona.
4 Chavavol Mahanga	1986	1500	RWS	70% RDF	845	655	1991	The supply is a gravity system and completed lines are operating.

APPENDIX D.4

**CALCULATION OF FINANCIAL INTERNAL RATE OF RETURN
FOR SELECTED SERVICE CENTRES**

Calculation of Financial Internal Rate of Return for Selected Centres

1. Preconditions for calculation

- 1) Water Charges were based on the current "Fees and charges", which the JICA Study Team received at the following date.
 - a) Embu Municipality: September, 1991
 - b) Thika Municipality: March, 1991

- 2) Applied water rates were arranged into average flat rates, because respective consumers were quite diversified and complicated, and moreover their individual information was not available. Thus, typical unit of each sector was assumed as follows, and a flat rate of respective sectors was estimated.
 - a) Residential unit

A typical family was assumed to consist of four members, which was the same number of family size of Kiambu and Embu District. A water consumption by the family was assumed at 15 m³/month, because water unit rate is 125 lit/day/capita. Then, a flat rate of residential unit was estimated as US\$7.19/year/capita in Embu Municipality and US\$4.71/year/capita in Thika Municipality .

 - b) Non-residential unit

The number of non-residential units was assumed to be 5% of the total number of households in the municipalities. Since the consumption volume by non-residential consumers was estimated in the potential water demand in Appendix D.2. People in non-residential facilities were assumed to work for 20 days a month. Thus, an average water consumption volume was calculated on these information. Finally, a flat rate of non-residential units was estimated as US\$0.19/cu.m. in Embu Municipality and US\$0.11/cu.m in Thika Municipality

 - c) Industrial unit

The number of industrial establishments in the municipalities was derived from the original data of Table A7.1 in Sectoral Report (A). Since the consumption volume by industrial establishments was estimated in the potential water demand in Appendix D.2, as well. The manufacturing establishments were assumed to function for 20 days a month. Thus, an average water consumption

volume was calculated on these information. Finally, a flat rate of industrial units was estimated as US\$0.55/cu.m. in Embu Municipality and US\$0.12/cu.m.

d) Livestock use

Water charge for livestock use was assumed to be the same as the non-residential units.

Table 1 and 3 show average flat rate of water supply system in Embu and Thika, respectively.

3. Construction period, operation and maintenance costs, and replacement costs were based on the same conditions as done in the economic evaluation, although the all monetary values were indicated in financial prices, of causes.
4. The life of the facilities was assumed to be the economic life explained in Section 6.8.2 in the Main Report. In the same manner, the benefit for evaluation was added up for the same period, applying the aforesaid flat rates. In calculation of FIRR, inflation and interests were omitted, with a view to simplifying financial evaluation.
5. The results of the calculation are shown in Tables 2 and 4 for Embu and Thika, respectively. Fig 1 illustrates the sensitivity of the calculated FIRR with the changes of the water charge.

Table 1 Average Flat Rates of Water Supply System in Embu Municipality: 1990/91

1. Water Charge		Exch. Rate:	21.6 KShs./US\$
A. Water Rates			
Minimum Charge: below 10 m ³ /month		30.00	
10 ≤ V < 30 m ³ /month		3.50	
More than 30 m ³ /month		7.50	
More than 50 m ³ /month		10.00	
More than 100 m ³ /month		12.50	
B. Meter Rates			
Size 3/4 "	(20 mm)	KShs./month	5.00
Size 1 "	(25 mm)	KShs./month	7.00
Size 1&1/2 "	(40 mm)	KShs./month	15.00
Size 2 "	(50 mm)	KShs./month	20.00
Size 2&1/2 "	(65 mm)	KShs./month	30.00
Size 3 "	(75 mm)	KShs./month	45.00
1. Average Flat Rate			
A. Residential Unit			
Water consumption: 15m ³ /month		<=4 members of household*124lit/day/capita	
Size 20 mm		4	
Less than 10 m ³		30	<= Minimum Charge
Less than 30 m ³		18	
Monthly Charge	(KShs./hh/month)	52	
Annual Charge	(KShs./hh/year)	618	
Average flat rate	(KShs./cu.m.)	3.43	=====> 155.39 KShs./capita/year
Average flat rate	(US\$/cu.m.)	0.16	=====> 7.19 US\$/capita/year
Remark:	18,400people/4members=4,380households Annual consumption 45.26 m ³ per capita		
B. Non-residential Unit			
Water consumption: 35 m ³ /month			
Size 25 mm		7	
Less than 10 m ³		30	<= Minimum Charge
Less than 30 m ³		70	
More than 30 m ³		38	
Monthly Charge	(KShs./office/mo)	145	+---> 46.40 US\$/(cu.m./day)
Annual Charge	(KShs./office/yr)	1,734	=====> 1002.31 KShs./(cu.m./day)
Average flat rate	(KShs./cu.m.)	4.13	=====> 1734.00 KShs./office/year
Average flat rate	(US\$/cu.m.)	0.19	=====> 80.27 US\$/office/year
Remark:	5% of 4,380 unit of households=>220 offices 381m ³ /day/220offices=1.73m ³ /day/office 1.73m ³ /day*20days=35m ³ /month=420m ³ /year		
C. Industrial Unit			
Water consumption: 704 m ³ /month			
Size 50 mm		20	
Less than 10 m ³		30	
Less than 30 m ³		70	
More than 30 m ³		150	
More than 50 m ³		500	
More than 100 m ³		7,550	
Monthly Charge	(KShs./fact./mo)	8,320	+---> 131.31 US\$/(cu.m./day)
Annual Charge	(KShs./fact./yr)	99,840	=====> 2836.36 KShs./(cu.m./day)
Average flat rate	(KShs./cu.m.)	11.82	=====> 4992.00 KShs./factory/year
Average flat rate	(US\$/cu.m.)	0.55	=====> 231.10 US\$/factory/year
Remark:	Unit Water Demand=317m ³ /day/9factories=35.2m ³ /day/factory 35.2m ³ /day*20days=704m ³ /month=8448cu.m./year		

Remark: Water charge for livestock is assumed to be the same as the non-residential rate.

Table 2 Financial Cost and Benefit Stream and FIRR of Water Supply Project in Embu Municipality

(Unit: US\$1000)

No.	Year	Cost	Benefit	Balance
1	1993	1,062	0	(1,062)
2	1994	1,062	0	(1,062)
3	1995	1,062	0	(1,062)
4	1996	1,062	0	(1,062)
5	1997	212	171	(41)
6	1998	212	194	(19)
7	1999	212	218	6
8	2000	212	245	33
9	2001	1,363	264	(1,099)
10	2002	1,363	285	(1,078)
11	2003	1,363	307	(1,056)
12	2004	1,363	331	(1,032)
13	2005	442	356	(86)
14	2006	442	384	(58)
15	2007	442	414	(29)
16	2008	442	446	4
17	2009	442	481	38
18	2010	442	518	76
23	2015	442	518	76
24	2016	655	518	(137)
25	2017	442	518	76
31	2023	442	518	76
32	2024	673	518	(155)
33	2025	442	518	76
43	2035	442	518	76
44	2036	655	518	(137)
45	2037	442	518	76
46	2038	442	518	76
47	2042	442	518	76

Remark: The results of sensitivity of FIRR are shown in the below table.

Case No.	Raise in rates of water charge	FIRR
Original	0%	-6.0%
1	25%	-1.2%
2	50%	1.3%
3	75%	3.2%
4	100%	4.7%
5	150%	7.4%
6	200%	9.6%
7	250%	11.6%
8	300%	13.5%
9	400%	16.9%
10	500%	20.0%

Table 3 Average Flat Rates of Water Supply System in Thika Municipality: 1990/91

1. Water Charge			
A. Water Rates			
First 10,000 gallons	Sh./1000 gallons	9	Remarks: Exch. Rates: 21.6 KShs./US\$ 1 gallon = 4.546 liters
Above 10,000 gallons	Sh./1000 gallons	12	
Minimum		25	
B. Meter Rent			
Size 1/2 "	(13 mm)	KShs./month	4
Size 3/4 "	(20 mm)	KShs./month	9
Size 1 "	(25 mm)	KShs./month	15
Size 1&1/2 "	(40 mm)	KShs./month	20
Size 2 "	(50 mm)	KShs./month	30
Size 2&1/2 "	(65 mm)	KShs./month	40
Size 3 "	(75 mm)	KShs./month	50
Size 4 "	(100 mm)	KShs./month	60
Above 4 "	(>100 mm)	KShs./month	100
Turning on charge			100
2. Average Flat Rate			
A. Residential Unit			
Water consumption: 15m ³ /month=3,300gallons		<==4 members of household*124lit/day/capita	
Size 1/2 " meter		4	
First 10,000 gal		30	<== more than Minimum Charge
Monthly Charge (KShs./hh/month)		34	
Annual Charge (KShs./hh/year)		404	
Average flat rate (KShs./cu.m.)		2.25	=====> 101.68 KShs./capita/year
Average flat rate (US\$/cu.m.)		0.10	=====> 4.71 US\$/capita/year
Remark:	59,000people/4members=14,950households Annual consuption 45.26 m ³ per capita		
B. Non-residential Unit			
Water consumption: 33m ³ /month=7,300gallons			
Size 1 "		15	
First 10,000 gallons		66	<== more than Minimum Charge
Above 10,000 gallons		0	
Monthly Charge (KShs./office/mo)		81	+--> 27.17 US\$/cu.m./day)
Annual Charge (KShs./office/yr)		968	=====> 586.91 KShs./cu.m./day)
Average flat rate (KShs./cu.m.)		2.45	=====> 968.40 KShs./office/year
Average flat rate (US\$/cu.m.)		0.11	=====> 44.83 US\$/office/year
Remark:	5% of 14,750 unit of households=>740 offices 1,223m ³ /day/740offices=1.65m ³ /day/office 1.65m ³ /day*20days=33m ³ /month=396m ³ /year		
C. Industrial Unit			
Water consumption: 1,050m ³ /mo=231,000gallons			
Size 2 "		30	
First 10,000 gallons		90	
Above 10,000 gallons		2,652	
Monthly Charge (KShs./fact./mo)		2,772	+--> 29.33 US\$/cu.m./day)
Annual Charge (KShs./fact./yr)		33,264	=====> 633.60 KShs./cu.m./day)
Average flat rate (KShs./cu.m.)		2.64	=====> 1663.20 KShs./factory/year
Average flat rate (US\$/cu.m.)		0.12	=====> 77.00 US\$/factory/year
Remark:	Unit Water Demand=2,522m ³ /day/48Factories=52.5m ³ /day/factory 52.5m ³ /day*20days=1,050m ³ /month=12,600cu.m./year		

Remark: Water charge for livestock is assumed to be the same as the non-residential rate.

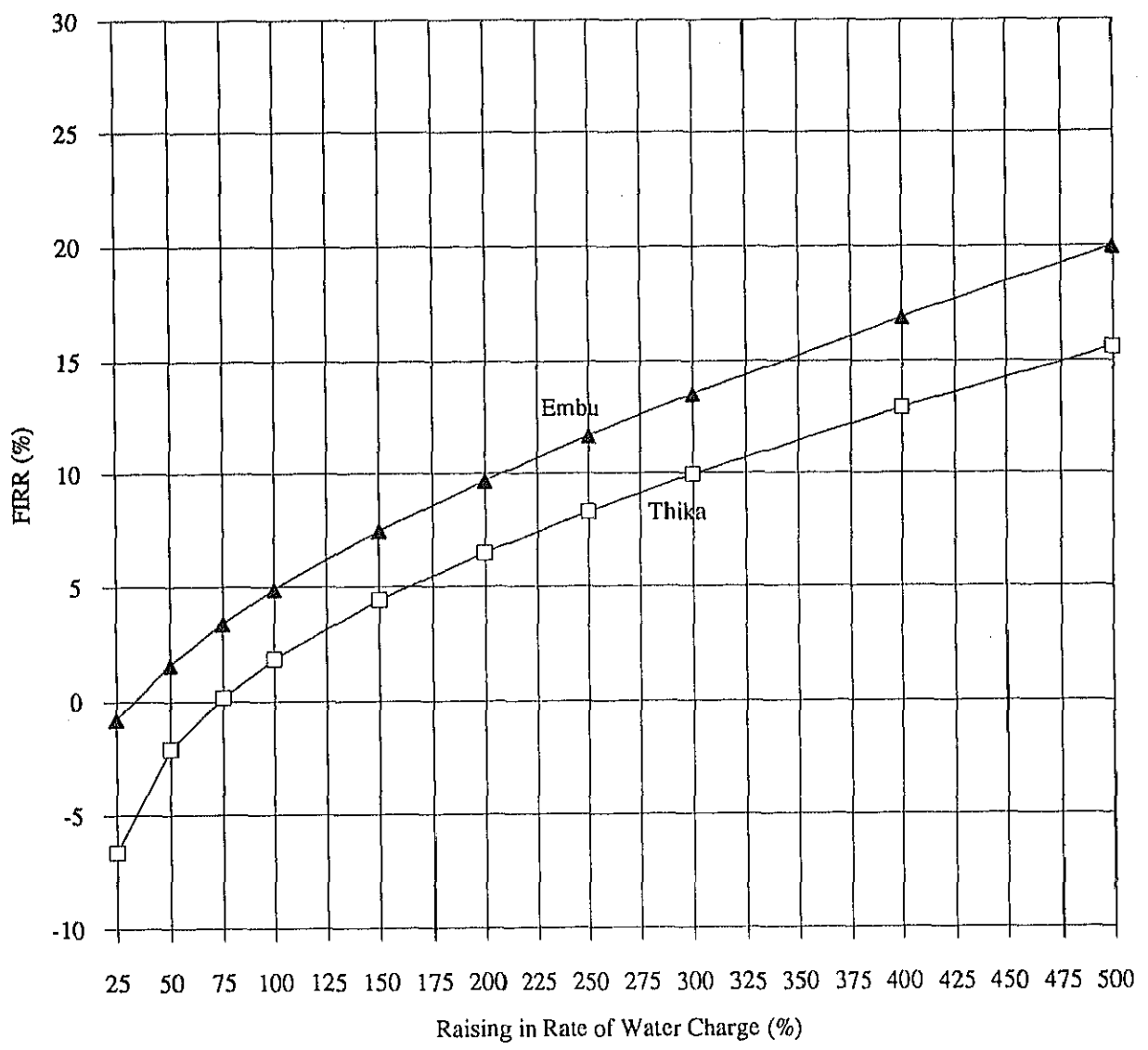
Table 4 Financial Cost and Benefit Stream and FIRR of Water Supply Project in Thika Municipality

(Unit: US\$1000)

No.	Year	Cost	Benefit	Balance
1	1993	2,597	0	(2,597)
2	1994	2,597	0	(2,597)
3	1995	2,597	0	(2,597)
4	1996	2,597	0	(2,597)
5	1997	519	319	(200)
6	1998	519	362	(157)
7	1999	519	409	(110)
8	2000	519	460	(59)
9	2001	3,257	495	(2,762)
10	2002	3,257	533	(2,725)
11	2003	3,257	573	(2,685)
12	2004	3,257	616	(2,641)
13	2005	1,067	663	(404)
14	2006	1,067	713	(354)
15	2007	1,067	767	(300)
16	2008	1,067	825	(241)
17	2009	1,067	888	(179)
18	2010	1,067	955	(111)
23	2015	1,067	955	(111)
24	2016	1,586	955	(631)
25	2017	1,067	955	(111)
31	2023	1,067	955	(111)
32	2024	1,615	955	(659)
33	2025	1,067	955	(111)
43	2035	1,067	955	(111)
44	2036	1,586	955	(631)
43	2045	1,067	955	(111)
47	2042	1,067	955	(111)

Remark: The results of sensitivity of FIRR are shown in the below table.

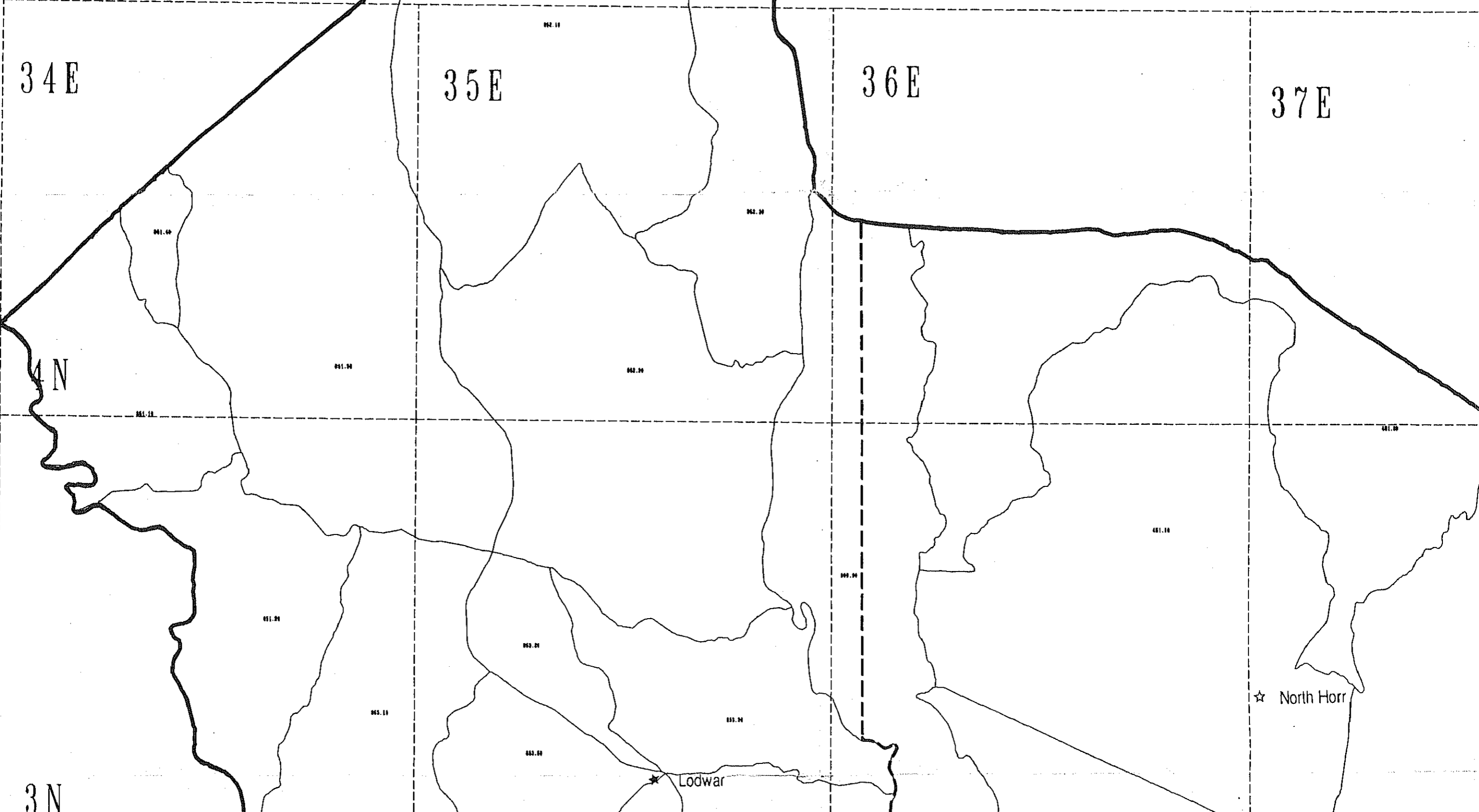
Case No.	Raise in rates		FIRR
	of water charge		
Original		0%	-203.2%
1		25%	-7.8%
2		50%	-2.6%
3		75%	-0.2%
4		100%	1.6%
5		150%	4.2%
6		200%	6.4%
7		250%	8.2%
8		300%	9.9%
9		400%	12.9%
10		500%	15.6%



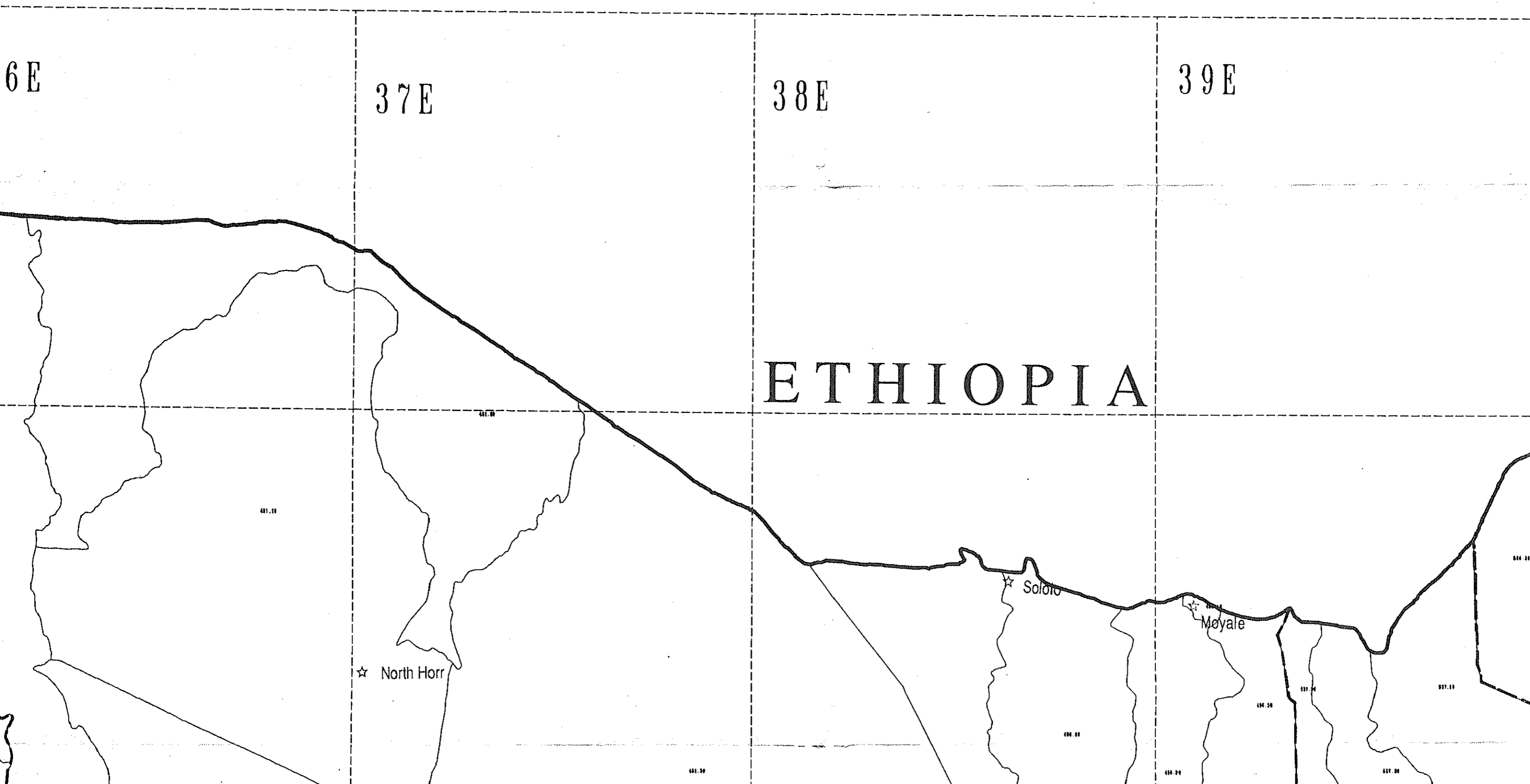
Sensitivity of FIRR

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SUDAN



SELECTED TOWNS FOR URBAN WATER SUPPLY



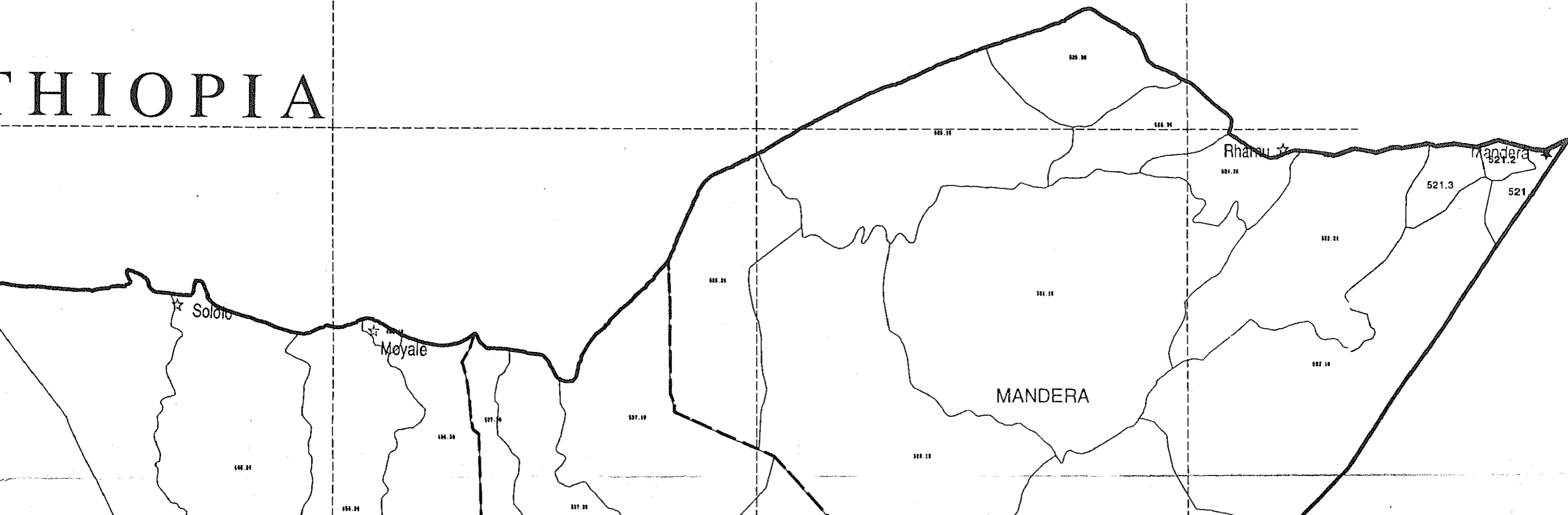
TOWNS FOR SUPPLY

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WEST POKOT

TRANS NZOIA

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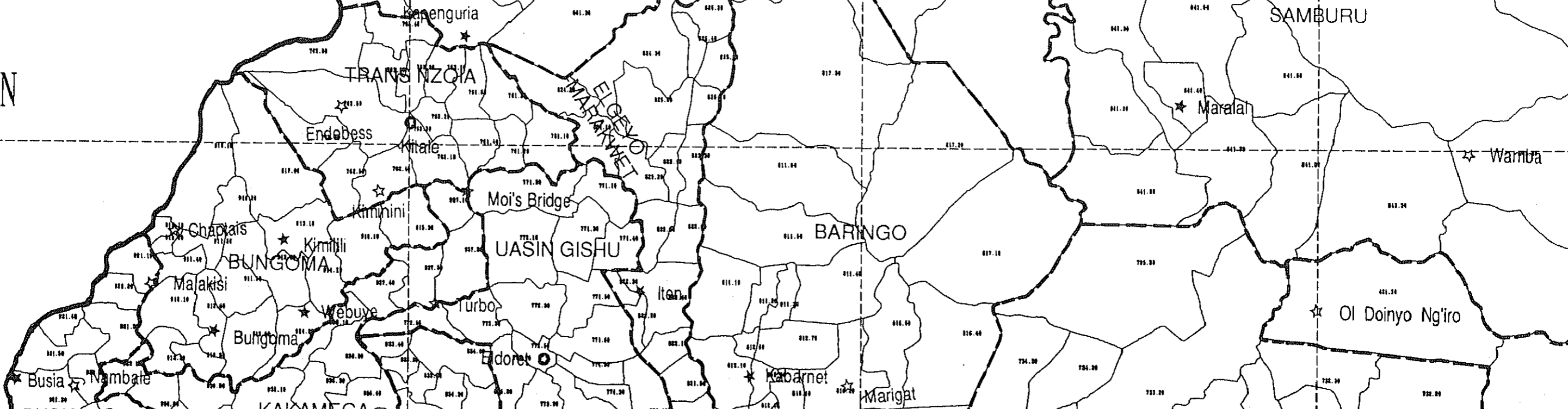
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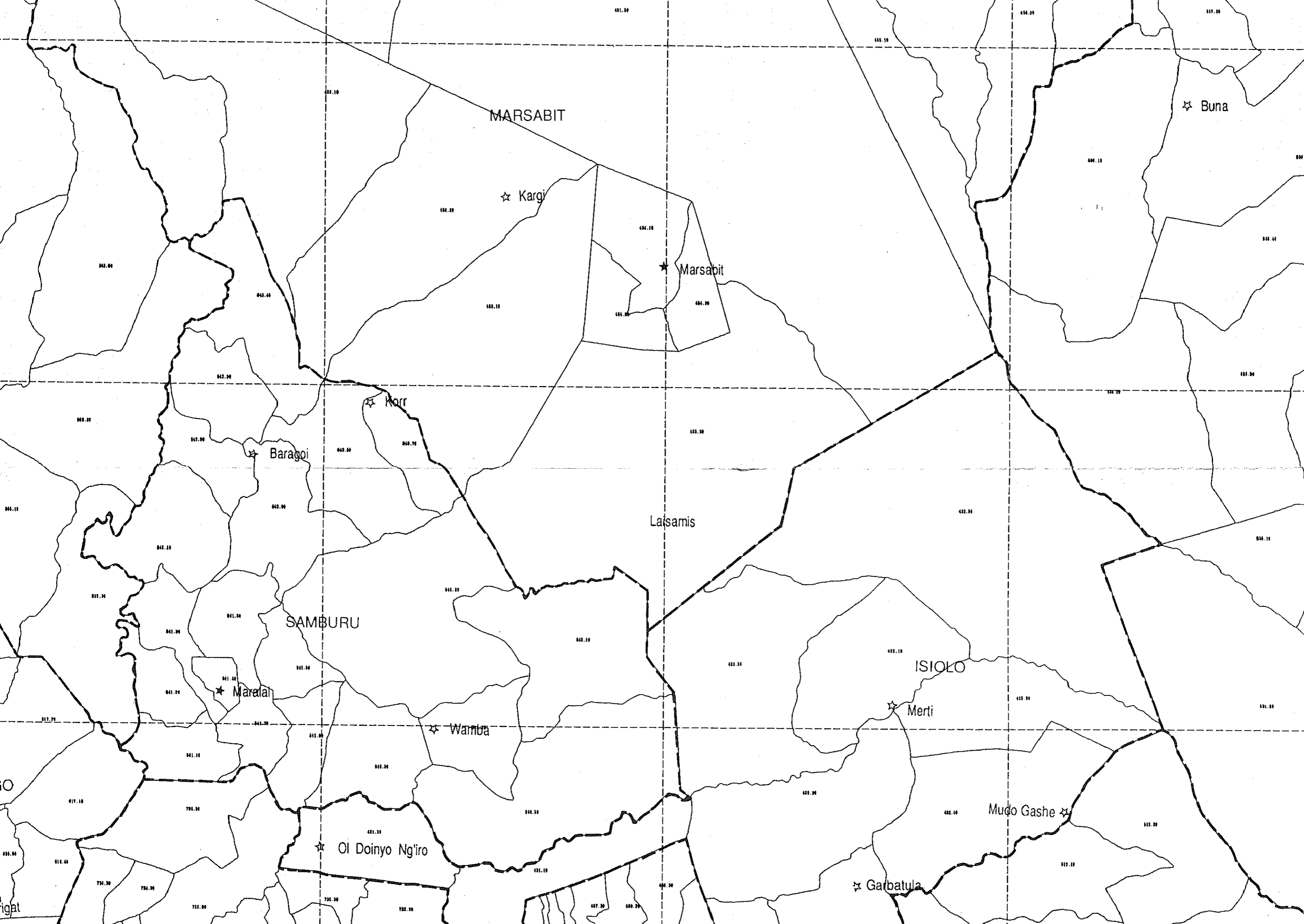
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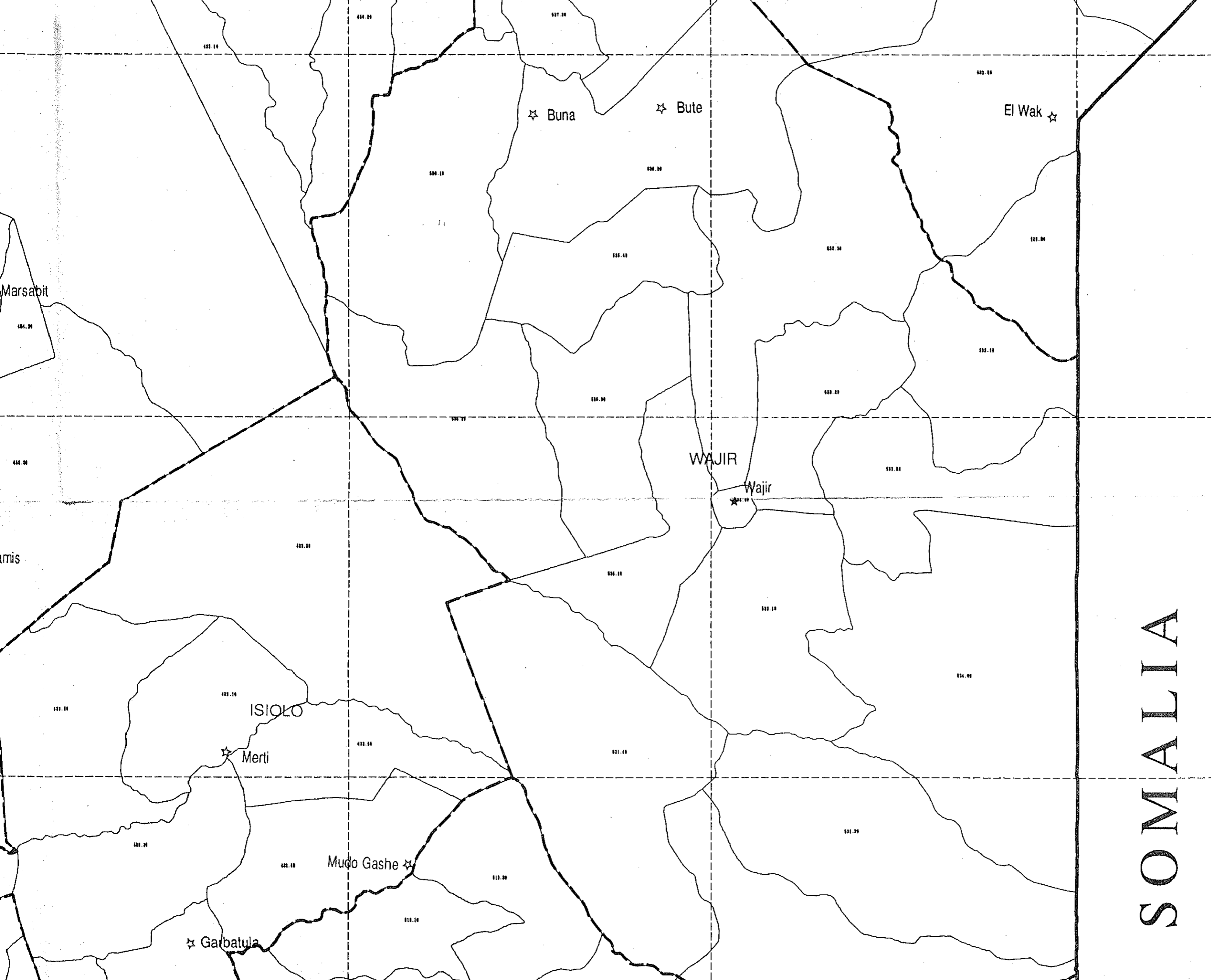
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Mudo Gashe ☆

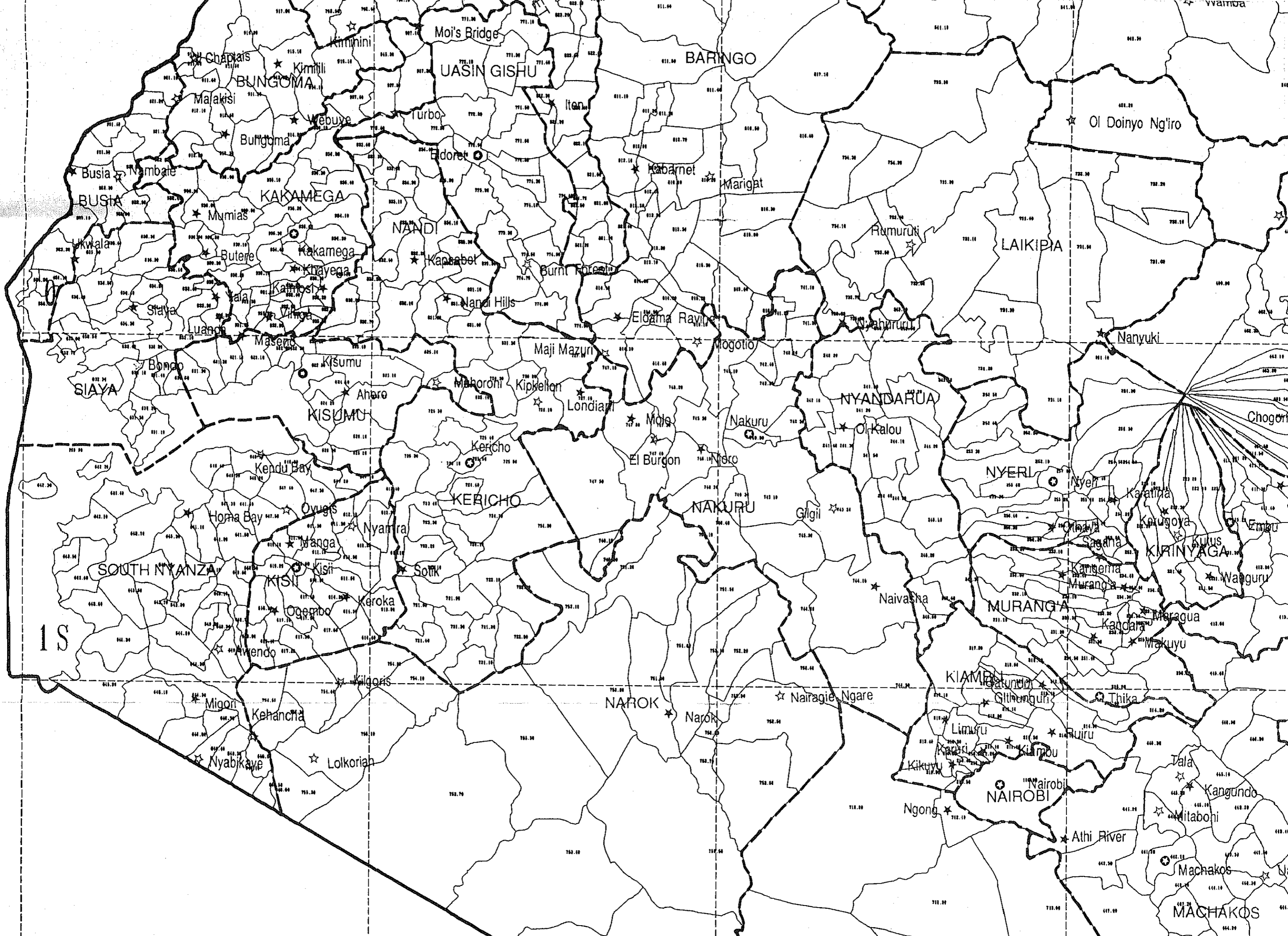
☆ OI Doinyo Ng'iro

☆ Garbatula

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SOMALIA



Moi's Bridge

BARINGO

UASIN GISHU

BUNGOMA

Ol Doinyo Ng'iro

Bungoma

Turbo

Iten

BUSIA

Nambale

KAKAMEGA

NANDI

Marigat

Mumias

Kakamega

Kapchoret

Burnt Forest

Rumurui

LAIKIPIA

Butere

Khayegga

Kapchoret

Nandi Hills

Eldama Ravine

Wahurui

Nanyuki

Siaya

Kisumu

Maji Mazuri

Mogotio

Wahurui

SIAYA

Bondo

KISUMU

Mahorohi

Kipkelion

Mois

Nakuru

NYANDARUA

NYERI

Nyeri

Chogoria

Kendu Bay

Ahoro

Mahorohi

Londiani

El Burdon

Nakuru

Ol Kalou

Nyeri

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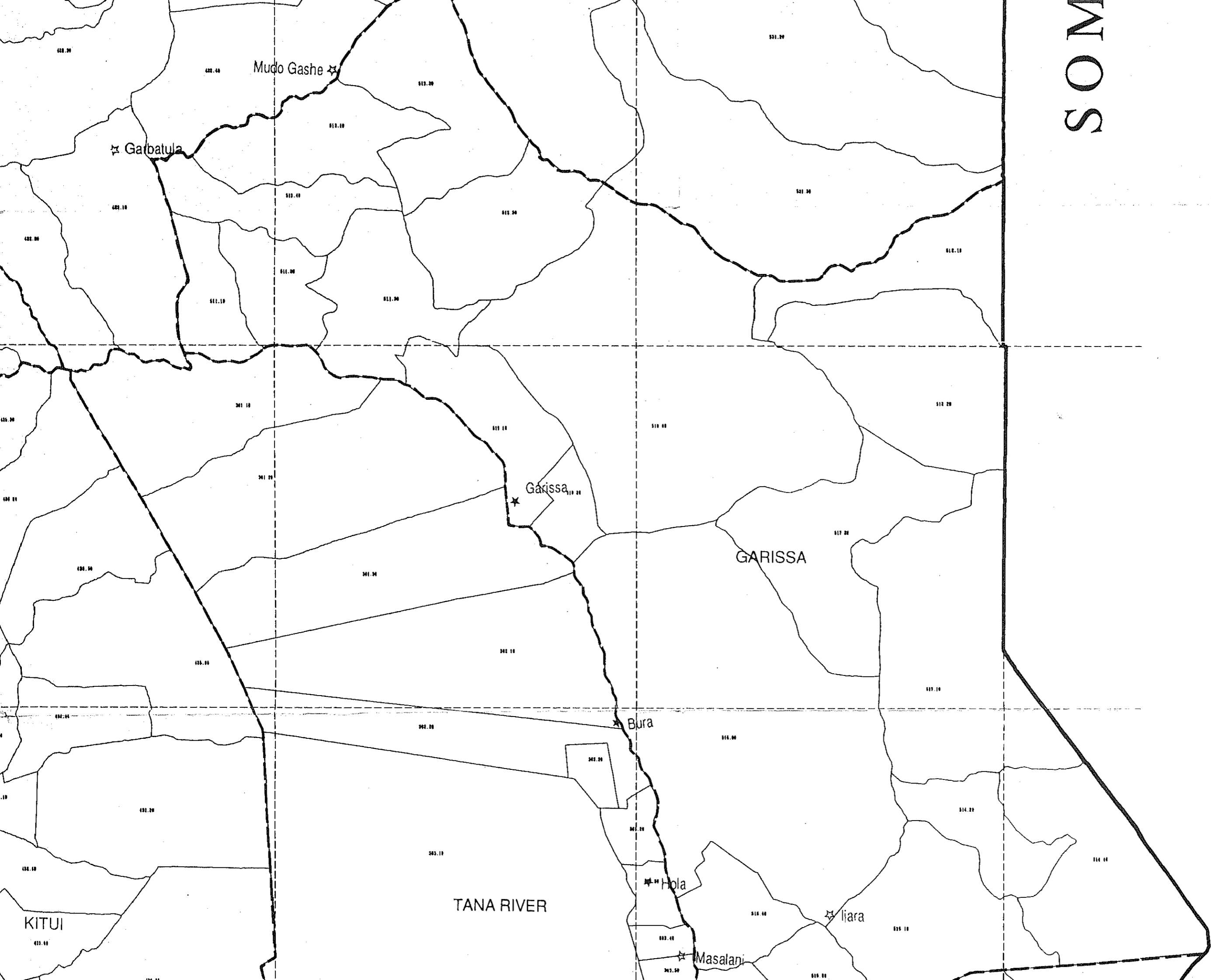
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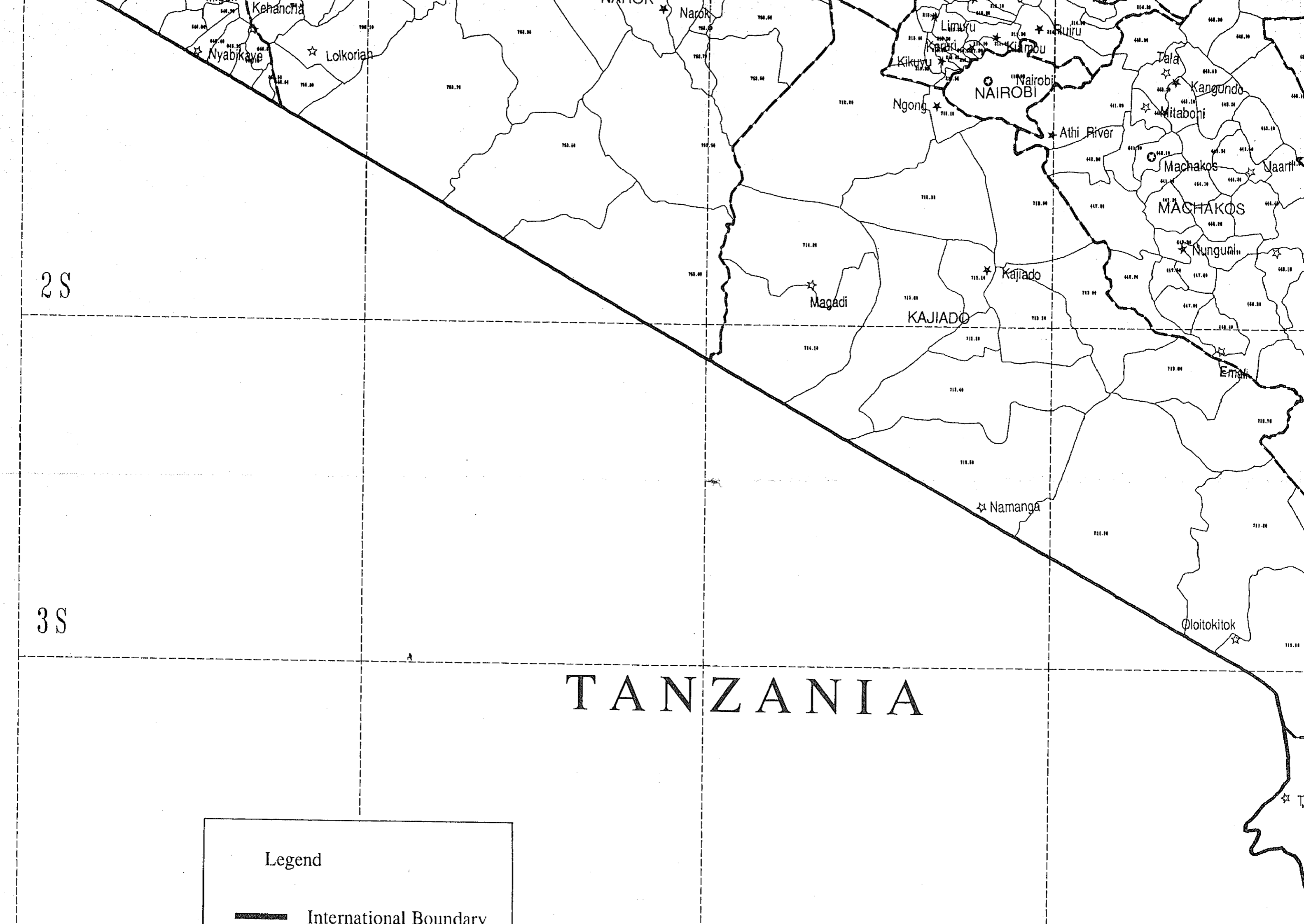
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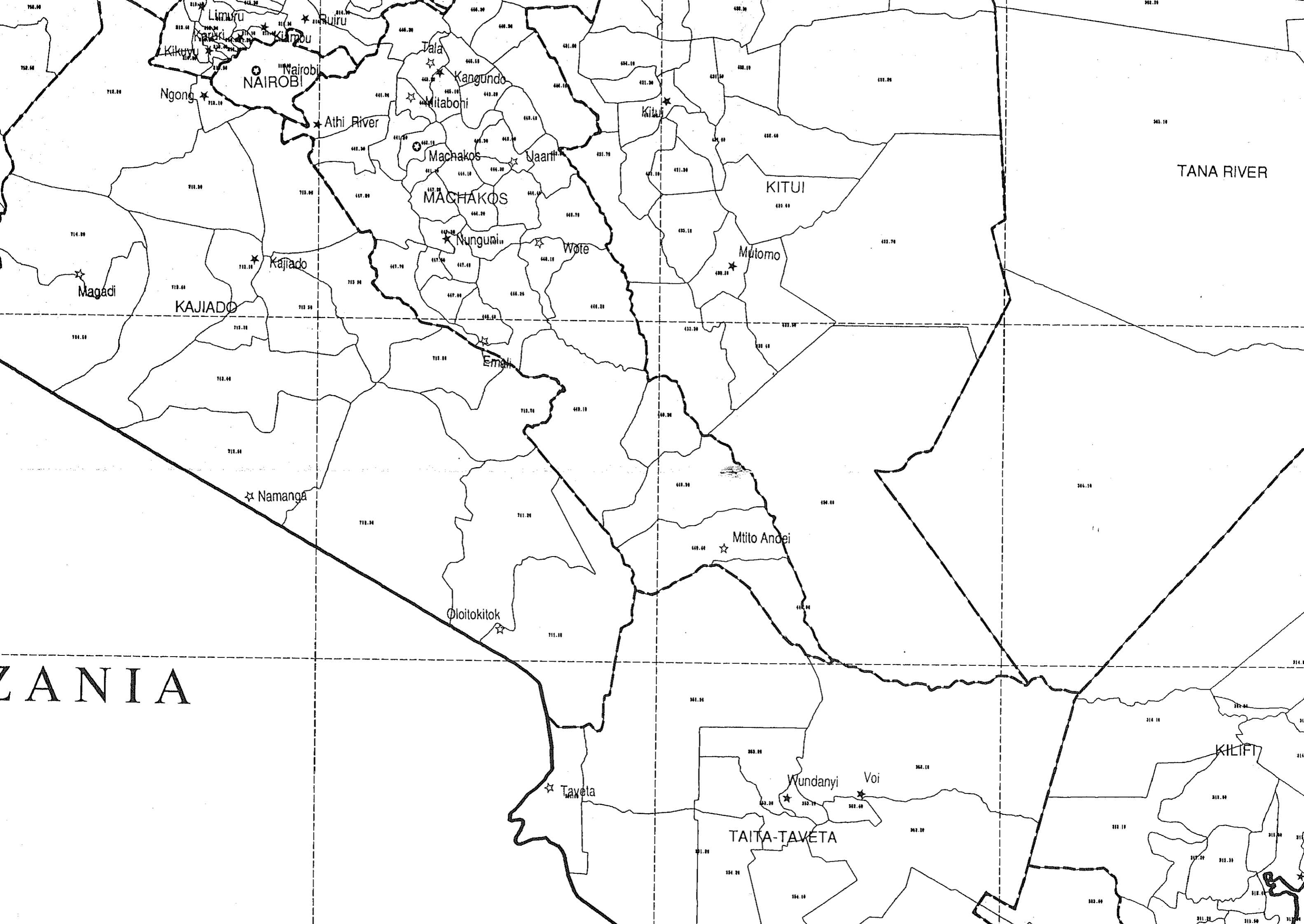
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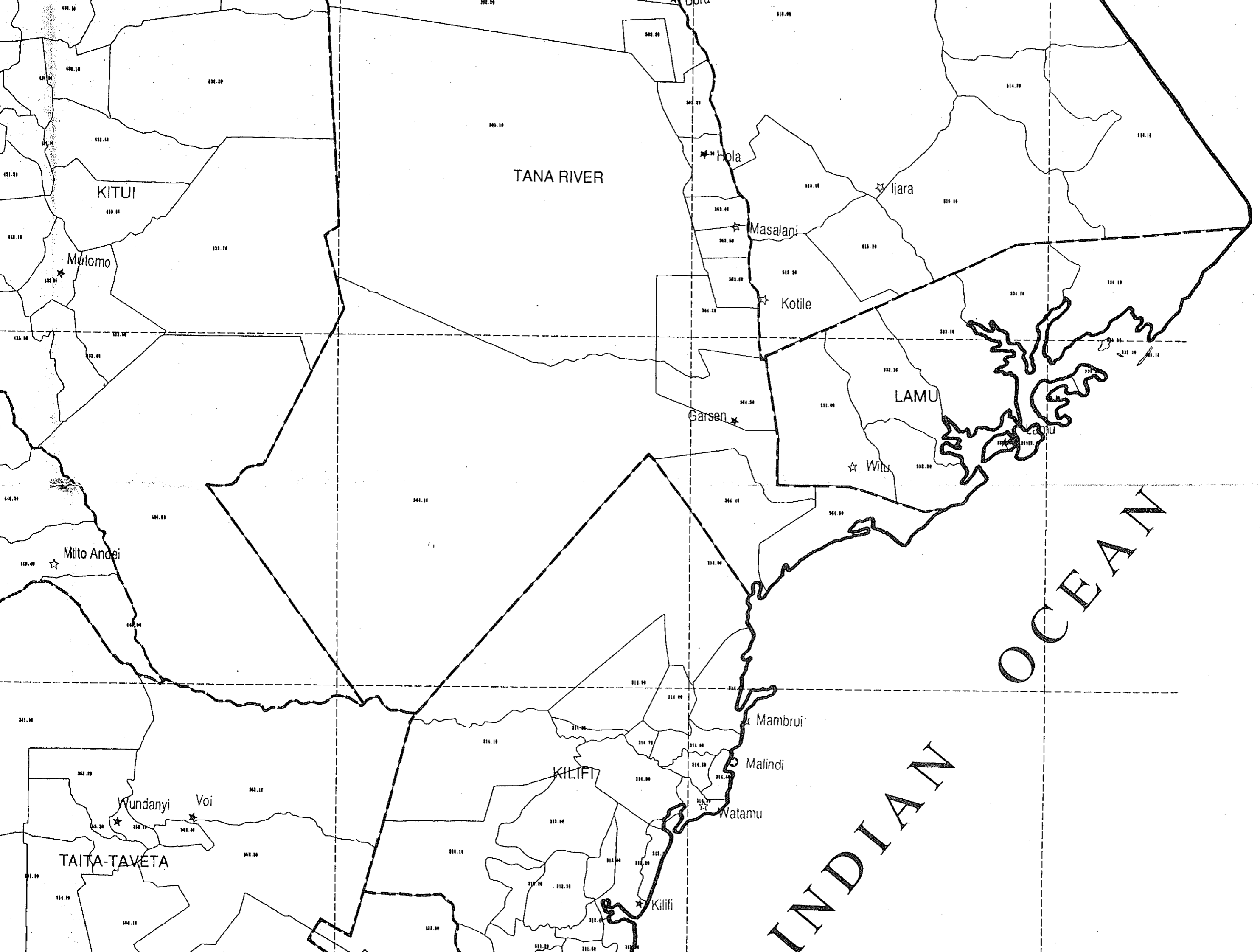
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TANZANIA

Legend

 International Boundary





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TANZANIA

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-  International Boundary
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-  Location Boundary
-  Principal town
-  Urban center
-  Rural center

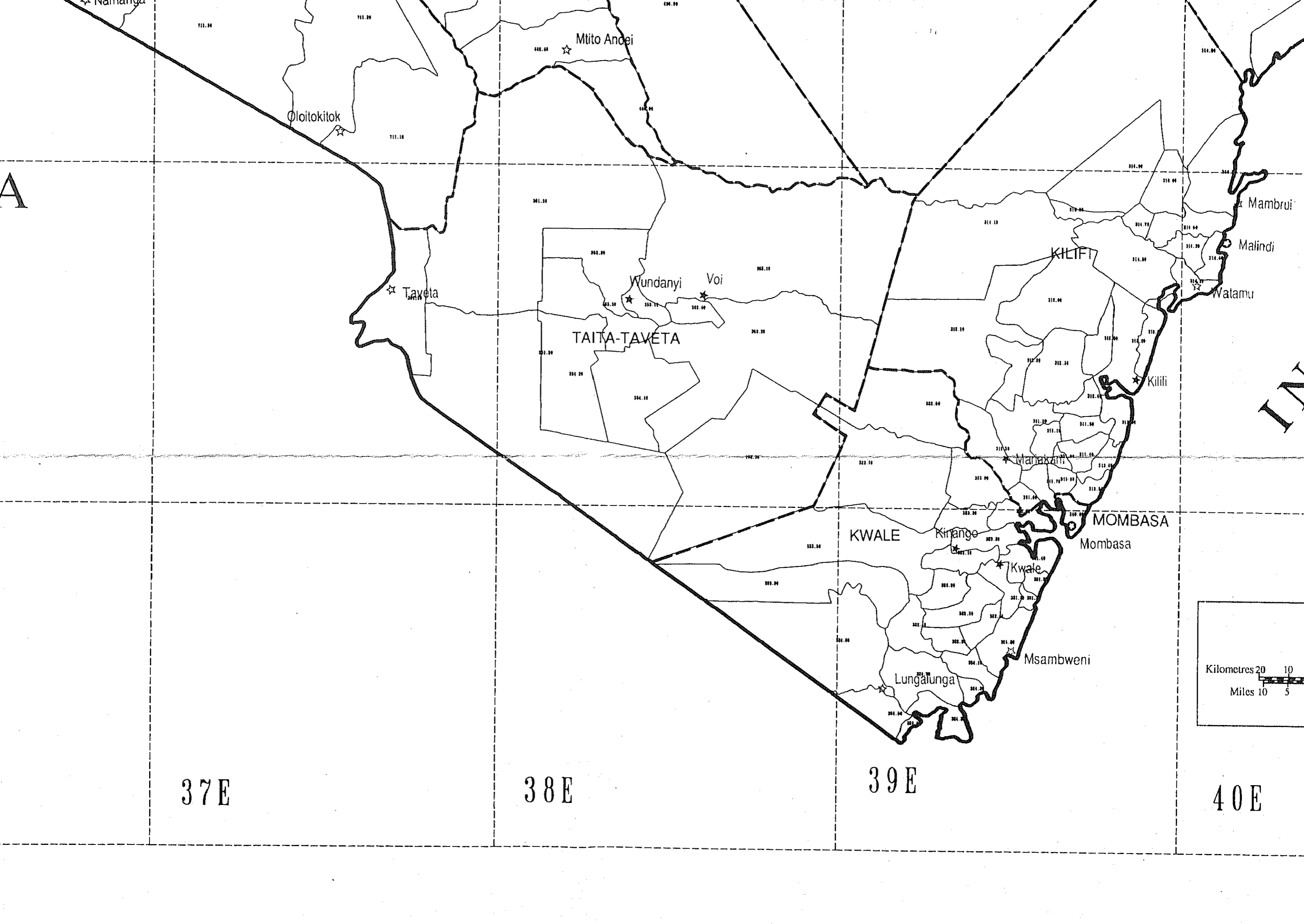
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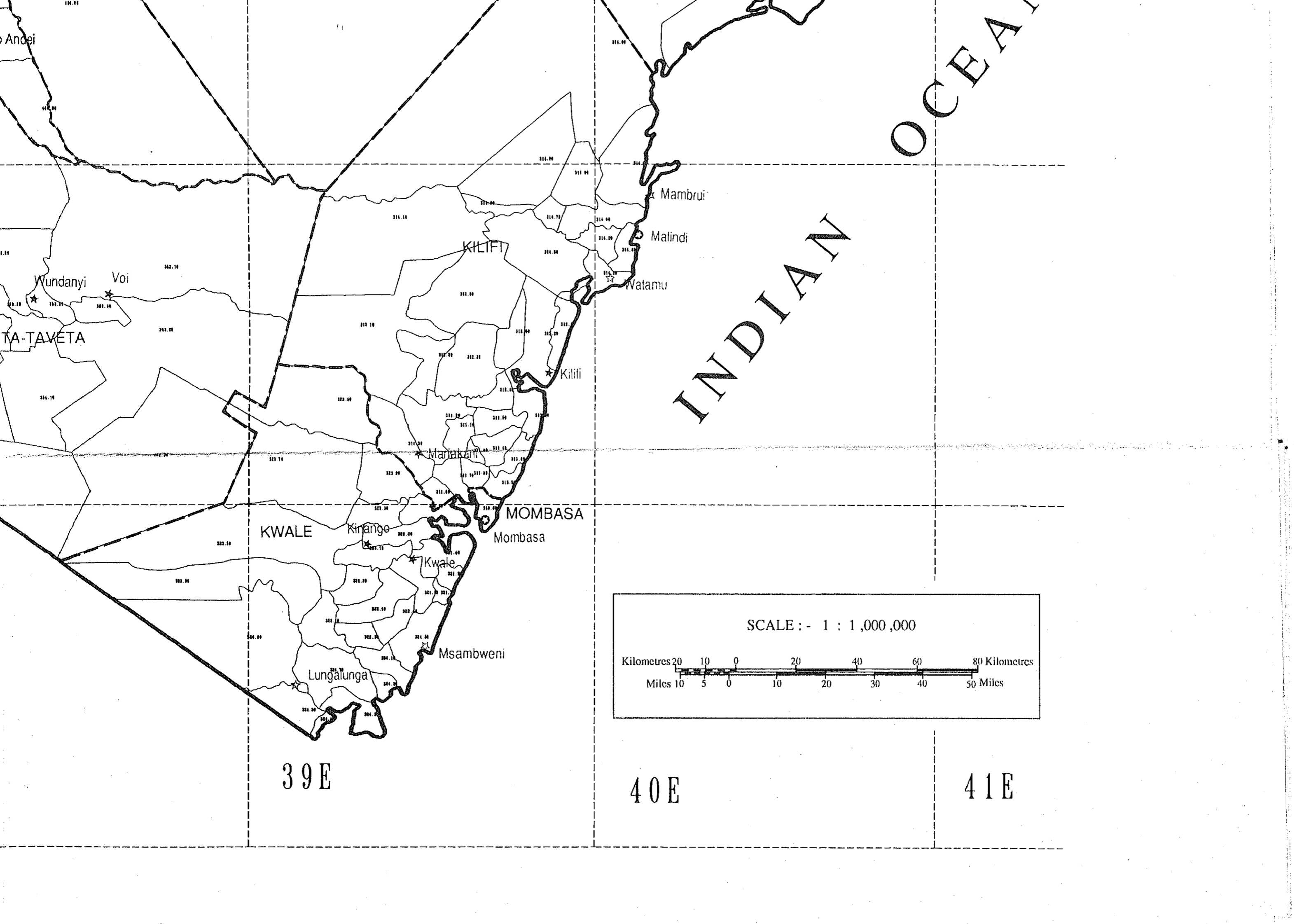
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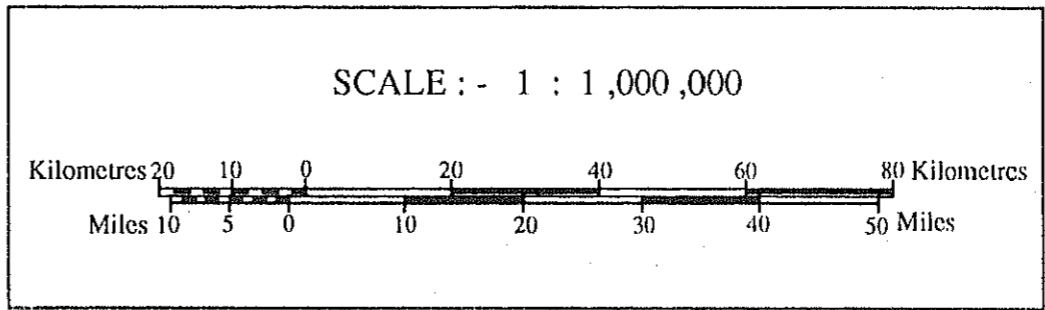
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INDIAN OCEAN



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