

は財源不足であるが、基本的にはこのための費用を借しむべきではない。長期的に水質保全がもたらす便益はモニタリングのための費用を償って余りあることを銘記する必要がある。水質汚染があまり進んでいない現況において、ベースライン・データ構築のために下記の調査を可及的早期に実施する必要がある。

- (a) 全国表流水120地点における年間水質調査 : 最少4回/年
- (b) 全国主要井戸における年間水質調査 : 最少2回/年

(2) 水質汚染管理

(a) 水質基準の策定

現況、一般排水水質基準(generalized effluent quality standard)及び幾つかの工場排水基準(たとえば製紙、砂糖工場)があるが、その他の排水源についてもタイプ別に基準を定めて行くべきこと。併せて、排水を受ける河川、湖沼の水質基準も定めて行くべきである。

(b) 罰則履行の強化

前出水利用管理の項で述べたものと同じく、水質管理の面においても罰則の履行を強化して行く。違反者に対しては水利用権の廃止あるいは操業停止が最も有効な罰則であろう。地方レベルでのChemist及びWater Bailiffの活動を支えるには、各District毎に簡易水質試験所を設置する必要がある。

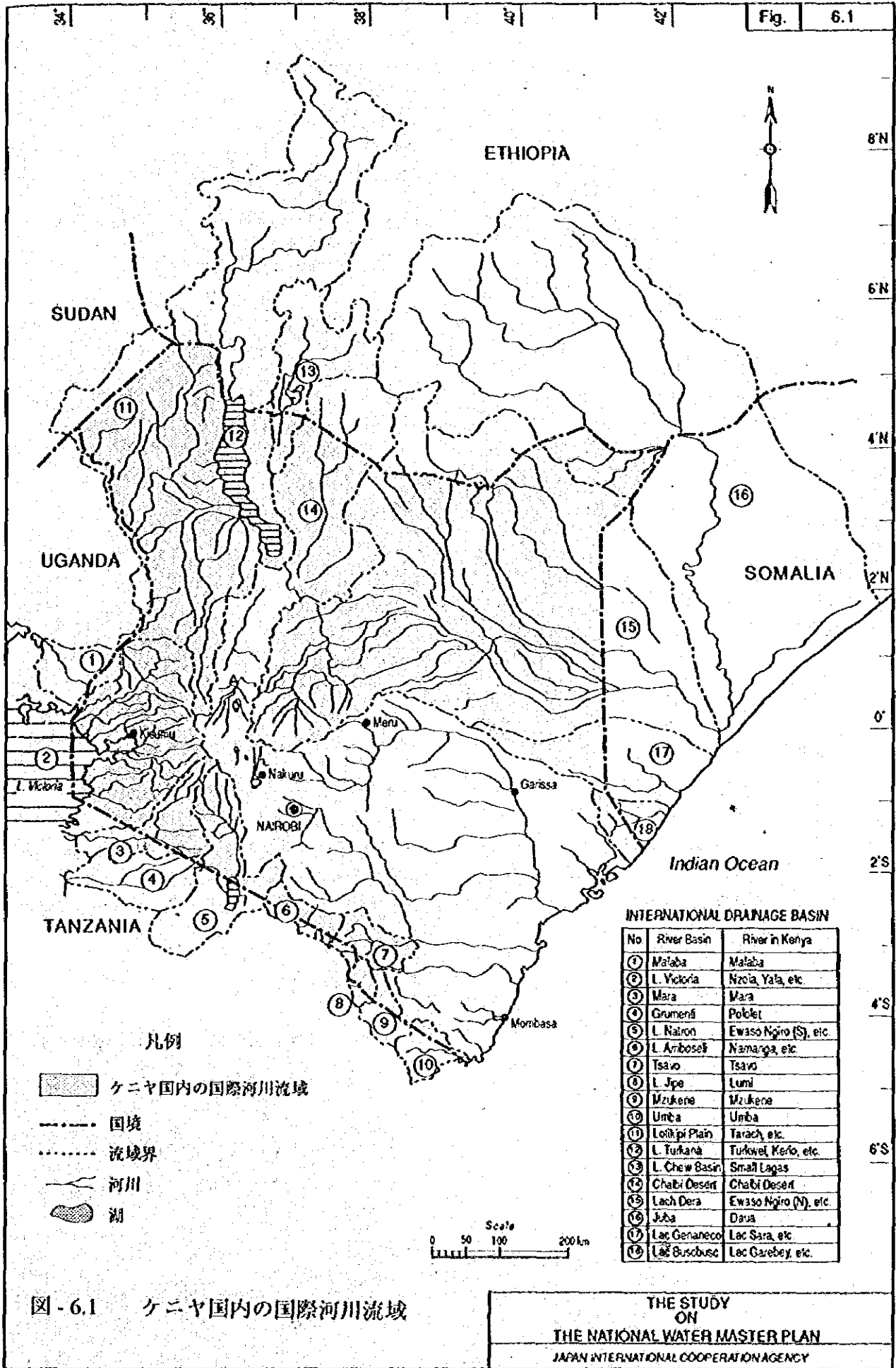
(c) 汚染防止対策の指示権

Water(General)Rulesによれば、WABは水利権所有者に排水に関わる水質改善策の提示を求める権利を有する。この権利は水利権所有者に限らず、全ての水利用者に対して有効とすべきである。併せて、WABには汚染防止修復工を命ずる権限を与える必要がある。

6.3.4 国際河川の水利用

ケニア領域には国際河川として分類される河川が18水系ある(図-6.1)。これらの河川の水利用は“国際河川の利用に関するヘルシンキルール(1966)”の原則に従って為されるべきである。

これら18水系における水資源開発量は増大して行くが、長期的観点から下記の8つの水系については下記のアクションを開始することが望ましい。



凡例

- ケニア国内の国際河川流域
- 国境
- 流域界
- ~~~~~ 河川
- 湖

INTERNATIONAL DRAINAGE BASIN

No	River Basin	River in Kenya
①	Malaba	Malaba
②	L. Victoria	Nzoia, Yala, etc.
③	Mara	Mara
④	Grumeti	Pobelet
⑤	L. Naivron	Ewaso Ng'iro (S), etc.
⑥	L. Amboseli	Namanga, etc.
⑦	Tsavo	Tsavo
⑧	L. Jipe	Lumi
⑨	Mzukene	Mzukene
⑩	Umba	Umba
⑪	Loikipi Plain	Tarach, etc.
⑫	L. Turkana	Turkvel, Kerio, etc.
⑬	L. Chew Basin	Small Lagas
⑭	Chabi Desert	Chabi Desert
⑮	Lach Dera	Ewaso Ng'iro (N), etc.
⑯	Juba	Dava
⑰	Lac Genanecc	Lac Sara, etc.
⑱	Lac Busobusc	Lac Garebey, etc.

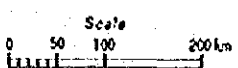


図 - 6.1 ケニア国内の国際河川流域

THE STUDY
ON
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JAPAN INTERNATIONAL COOPERATION AGENCY

表-6.1 国際河川流域に対するアクションの提言

No.	国際河川 ケニア領域内		提言するアクション
(図6-1)	水系	河川名	
(1)	Malaba (ウガンダ)	Malaba	- 水文観測 (水資源量の把握)
(2)	ビクトリア湖	13河川	- 流域外大量導水計画実施の場合、関係国との協議
(3)	Mara	Mara	- 野生動物保全の観点からの水文環境調査
(5)	Lake Natron	Ewaso Ngiro South	- ナトロン湖環境調査
(8)	Lake Jipe	Lumi	- ジベ湖環境調査
(10)	Umba	Umba	- 水文観測 (水資源量の把握)
(12)	Lake Turkana	Lake Turkana	- トルカナ湖環境調査
(16)	Juba (ソマリア)	Daua	- 水文観測 (水資源量の把握)

6.3.5 流域保全

(1) 水資源保全地区の指定

Water Actによれば、水資源大臣は水資源保全のための保護地区を指定できる。保護すべき地区の多くは森林地区、特に原生林地区であろう。事実、森林地区の周辺には多くの湧泉が見られ、森林が天然の貯水池になっていることを如実に物語っている。

水資源保全上重要なこれらの湧泉地点及びその函養地は全て保護地区と指定されるべきである。MOWDとしてとるべきアクションは、

- (a) 湧泉地点のインベントリー・リストの作成 (位置及び水量、多くはDistrict Water Officeの知識の範囲内にある)
- (b) 湧泉あるいは河川の水源函養地となっている森林の特定

他方、環境天然資源大臣は、自然環境保全の観点から保全森林を指定できる。MOWDとMOENRはお互いに情報交換を行い、整合性のある保全指定を行う必要がある。現状、流域保全事業への財源手当が十分でない面がある。MOWD及びMOENRともに十分な事業を行えるよう財源の手当が計られる必要がある。

(2) 土砂浸食/侵出防止

全国の多くの河川で土砂の過度な侵出が見られる。顕著な問題は小貯水池の堆砂による機能低下であり、あるいは河道の荒廃である。MOWDは今後土砂侵出防止工(砂防ダム、サンドポケット、河道落差工等)の事業を展開して行く必要がある。

農業省(MOA)が主導する農業開発に伴う土砂浸食防止工の努力は今後とも継続されて行くべきである。

付属資料

付属資料－1

ステアリング・コミッティー（GOK）、 テクニカル・サブコミッティー（GOK）、作業監理委員会（JICA） 及び調査団（JICA）のメンバーリスト

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付属資料 - 1.1

ステアリング・コミッティー及びテクニカル・サブコミッティー
(G O K) のメンバーリスト

Name	Organization	Position	Assignment	
			Steering Committee	Technical Sub-Committee
H.K. Rotich	NWCPC	MD	Chairman	—
E.K. Mwongera	MOWD	DWD	Co-Chairman	—
J.K. Gichuhi	OVP/MOF		Member	—
J.A. Mwinamo	MOE	PE	Member	Member
G. Muchiri	MOA	DDA	Member	Member
K. Ngugi/ Kinanjui	MORD	SPO	Member	Member
E.S. Osundwa	MPND	DCE	Member	—
W. Sakataka	MRDASAL	US/Develop ment	Member	—
G.O. Ochieng	MENR		Member	—
F.N. Kihumba/ S. Munene	NES		Member	—
P.K. Karimi	PPCSCA	WCS	Member	—
M. Mutuarachiu	KVDA		Member	—
P.J. Olum	NIB	ACE	Member	—
P.M. Gateri	TARDA	Tech. Manager	Member	—
D. Arunga	LBDA	Project Coordinator	Member	—
E.B.I.N. Rweria	MOTW	PE	Member	—
E.M. Musazi	MOLG		Member	—
B. Mwenezi	AGC		Member	—
S. Nchogu	MOWD	DDWD	Member	Chairman
W.N. Thitai	MOWD	DDWD	Member	Chairman
K. Njui	MOWD	DDWD	Member	Member
R.A. Ikobe	MOWD	APPWD	Member	Member
M.K. Migwi	MOWD	ADWD	Member	Member
J.O. Obongo	MOWD	PE	Member	Member
M.M. Mahamud	NWCPC	CCSM	Member	Member
F.M. Mwai	NWPCC	HHS	Member	Member
C.K. Koske	NWCPC	DM	Member	Member
P.K. Weru	MOWD	PC	Member	Member
T.W. Kibaki (*)	MOWD	ADWD	Member/ Secretary	Member/ Secretary

(*) Also act as the Project Coordinator for the Study

付属資料-1. 2 作業監理委員会のメンバーリスト

	氏名	所属	担当	担当分野
(1)	渡戸 健介	建設省 (熊本県土木部)	委員長	総括及び河川計画
(2)	島田 健一	建設省 (当時、近畿地方建設局河川部)	委員	水資源開発計画
	青山 俊行	建設省 (河川局治水課)	委員	水資源開発計画
(3)	吉谷 純一	建設省 (土木研究所河川部)	委員	水理・水文
(4)	町田 秀一	建設省 (当時、河川局水政課)	委員	水管理・制度
	中島 義勝	建設省 (当時、河川局水政課)	委員	水管理・制度
	藤原 健朗	建設省 (河川局水政課)	委員	水管理・制度

付属資料-1. 3 調査団 (JICA) メンバーリスト

	氏名	所属	担当
(1)	加藤 道人	日本工営	総括
(2)	大槻 参陸	日本工営	水資源開発計画
(3)	樋口 政男	建設企画コンサルタント	地下水開発計画
(4)	井上 美公	日本工営	水文調査 (水収支)
(5)	森下 甲子弘	建設技術研究所	水文調査 (高水)
(6)	広瀬 典昭	日本工営	資源評価 (データ・ベース)
(7)	小松 淳	日本工営	水文調査 (データ・ベース)
(8)	安城 康平	建設企画コンサルタント	水文調査 (井戸調査)
(9)	西川 徹	バスコ・インターナショナル	リモートセンシング
(10)	伊藤 恵悟	建設技術研究所	ダム計画
(11)	仲津 忠良	建設企画コンサルタント	ダム地質
(12)	国府 豊	バスコ・インターナショナル	測量
(13)	内田 安彦	建設技術研究所	河川計画
(14)	宮川 喜章	日本工営	電源開発
(15)	小島 詔	日本工営	農業開発
(16)	M.R.Litterick	日本工営	環境/水質
(17)	竹内 洋市	日本工営	組織/法制度
(18)	田篠 達郎	プロジェクト経済研究所	社会・経済
(19)	下條 哲成	日本工営	農業・土壌

付属資料－ 2

提言する実施計画案 (マスターアクションプラン)

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付属資料- 2 . 1 都市水道計画-実施計画案 (1 / 5)

District Code	Urban Name	City Code	Future Raw Water Source	Cost (million)		Implementation Schedule												
				US\$	K£	93	95	2000	2	4	6	8	10					
110	Nairobi	U-1	Thika Dam, Ndarugu, Ruiru-A, Chania-B	1,061.6	1,337.7	•	•	•				•	•	•				
210	Kururi	U-2	Kiambaa Dam (Rui Ruaka R.)	12.0	15.1	•	•										•	•
210	Kiambu	U-3	Kiambaa Dam (Rui Ruaka r.)	9.1	11.4	•	•		•	•							•	•
210	Qatunda & Ngenda	U-4	Thiririka River	0.3	0.4												•	•
210	Limuru	U-5	Chania P/L	14.2	17.9				•	•							•	•
210	Ruiru	U-6	Ruiru River	9.7	12.2		•	•									•	•
210	Thika	U-7	Chania River (Lower)	21.3	26.9				•	•							•	•
210	Githunguri	U-8	Ruiru river	5.0	6.3				•	•							•	•
210	Kikuyu	U-9	Kikuyu Dam	14.9	18.7		•	•									•	•
				86.4	108.8													
220	Wanguru	U-10	Thiba River	1.2	1.5				•	•							•	•
220	Sagana	U-11	Ragati River	3.6	4.5				•	•							•	•
220	Kerugoya	U-12	Kiringa River	8.3	10.5	•	•										•	•
220	Kutus	U-13	Thiba River	4.9	6.2				•	•							•	•
				18.0	22.7													
230	Kandara	U-14	Thika River	0.5	0.6												•	•
230	Maragua	U-15	Githanji river	15.1	19.0	•	•										•	•
230	Kangema	U-16	Mathioya River	1.2	1.5				•	•							•	•
230	Marang'a	U-17	Maragua river	11.4	14.3	•	•										•	•
230	Makuyu	U-18	Motoho river	4.8	6.0	•	•										•	•
				32.9	41.5													
240	Oi Kalou	U-19	Malewa River	10.7	13.5				•	•							•	•
250	Karatina	U-20	Ragati River	3.9	4.9				•	•							•	•
250	Othaya	U-21	Tothi river	5.0	6.3				•	•							•	•
250	Nyeri	U-22	Chania River	50.3	63.4	•	•										•	•
				59.2	74.6													
310	Mariakani	U-23	2nd Mzima P/L	4.6	5.8	•	•										•	•
310	Kilifi	U-24	Rare reservoir	9.6	12.2				•	•							•	•
310	Wafaruu	U-25	Sabaki pipeline	5.2	6.5	•	•										•	•
310	Malindi	U-26	Sabaki Pipeline & Rare Dam	64.4	81.1				•	•							•	•
310	Mambrai	U-135	Sabaki river	4.5	5.6	•	•										•	•
				88.3	111.2													
320	Kwale	U-27	Marere pipeline	4.8	6.0				•	•							•	•
320	Xinango	U-28	Marere pipeline	4.8	6.0				•	•							•	•
320	Msamwani	U-29	Boreholes + Mkurumuji river	45.5	57.3				•	•			•	•	•		•	•
320	Lungalunga	U-136	Umiba river	2.4	3.0				•	•							•	•
				57.4	72.3													
330	Witu	U-30	Mkondo wa Cambi river	5.4	6.8				•	•							•	•
330	Lamu	U-31	P/L from Tana River + B/II	37.5	47.3				•	•							•	•
				42.9	54.1													
340	Mombasa	U-32	2nd Mzima/Mwachi Dam, Pomba Dam	441.6	556.4	•	•	•				•	•	•			•	•

Note:

• Construction

付属資料-2.1 都市水道計画-実施計画案 (2/5)

District Code	Urban Name	City Code	Future Raw Water Source	Cost (million)		Implementation Schedule														
				US\$	Kf	93	95	2000		2	4	6	8	10						
350	Taveta	U-137	Njoro Spring	7.2	9.1	●	●													
350	Voi	U-33	2nd Mzim pipeline	7.7	9.7			●	●											
350	Wundanyi	U-34	Sigaso/Manguri River	0.9	1.2															
				15.8	19.9															
360	Bura & Madogo	U-35	Tana River	0.9	1.2			●	●											
360	Hola	U-36	Tana River	6.8	8.6			●	●											
360	Garsen	U-37	Tana River	3.0	3.8			●	●											
				10.8	13.6															
410	Runyenjes	U-38	Ena river	2.3	2.9			●	●											
410	Siakago	U-39	Ena River	0.0	0.0															
410	Embu	U-40	Lower Kapingazi River + Upper Rupingazi River	8.8	11.2					●	●									
				11.2	14.1															
420	Isiolo	U-41	Boreholes + Spring	152.6	192.2			●	●											
420	Oi Doinyo Ng'iro	U-42	Ewaso Ng'iro River	8.3	10.5	●	●													
420	Garbahala	U-138	Boreholes	40.4	50.9			●	●	●	●									
420	Merti	U-139	Ewaso Ng'iro	5.5	6.9			●	●											
				206.7	260.5															
430	Kitui	U-43	Masinga Dam	9.4	11.9	●	●													
430	Mutomo	U-44	Sub-Surface dam on Tiva river	0.0	0.0															
430	Mwingi	U-45	Kiambere Dam	16.1	20.3	●	●													
				25.6	32.2															
440	Machakos	U-46	Athi River P/L	78.1	98.4			●	●											
440	Mitaboni	U-47	Kaabana River	20.3	25.6	●	●													
440	Athi River	U-48	Upper Athi Dam	19.7	24.8					●	●									
440	Usani/Tawa	U-49	Tawa river	1.1	1.4			●	●											
440	Kangundo	U-50	Pipeline from Athi River	19.5	24.6	●	●													
440	Tala	U-140	Pipeline from Athi river	8.4	10.6			●	●											
440	Nunguni	U-51	Kyangonyo river	1.5	1.9					●	●									
440	Wote	U-141	Kuti river + Nezuuni river	3.3	4.1					●	●									
440	Emali	U-52	Nol Tresh P/L	1.7	2.1	●	●													
440	Mtito Andei&Kibwezi	U-53	Pipeline from Athi river	19.5	24.6	●	●													
				173.1	218.2															
450	North Horr	U-142	Boreholes	22.0	27.7			●	●											
450	Kurgi	U-54	Boreholes + Subsurface Dam	66.8	84.1			●	●	●	●									
450	Korr	U-143	Boreholes	56.8	71.6			●	●	●	●									
450	Marsabit	U-55	Boreholes + Small dams/Sub-surface dam/Spring	177.7	223.9			●	●	●	●									
450	Sololo	U-56	Boreholes	63.3	79.7			●	●	●	●									
450	Moyale	U-57	Boreholes + Small Dam	68.3	86.0			●	●	●	●									
				454.9	573.2															
460	Meru	U-58	Kathita river	43.5	54.9			●	●											
460	Nkubu	U-59	Thingithu River	4.6	5.8					●	●									
460	Chogoria	U-60	North Mara River	1.7	2.2	●	●													
460	Chuka	U-61	Tungu river	4.2	5.2					●	●									
460	Masa	U-62	Ura river	3.8	4.8					●	●									
				57.9	72.9															
Note:		● Construction																		

付属資料- 2 . 1 都市水道計画-実施計画案 (3 / 5)

District Code	Urban Name	City Code	Future Raw Water Source	Cost (million)		Implementation Schedule											
				US\$	K€	93	95	2000		2	4	6	8	10			
510	Mudo Gasbe	U-63	Boreholes + Subsurface Dam	19.6	24.7	•	•								•	•	•
510	Ijara	U-64	Boreholes + Small dam	10.7	13.5	•	•								•	•	•
510	Kotile	U-65	Boreholes/Subsurface Dam/Tana	15.6	19.7	•	•								•	•	•
510	Masalani	U-66	Tana River	2.4	3.0			•	•								•
510	Garissa	U-67	Tana River	12.9	16.3					•	•						•
				61.2	77.1												
520	Mandera	U-68	Daua River	3.1	4.0					•	•						•
520	Etwak	U-69	Boreholes	75.5	95.1	•	•								•	•	•
520	Rhamu	U-70	Daua River	2.9	3.6					•	•						•
				81.5	102.7												
530	Wajir	U-71	Boreholes + Ewaso Ngiro River	172.3	217.1	•	•	•	•	•	•	•	•	•	•	•	•
530	Buna	U-72	Boreholes(Lago Bor river)	94.8	119.4	•	•	•	•	•	•	•	•	•	•	•	•
530	Bute	U-73	Boreholes + Small Dams	18.4	23.2	•	•										•
				285.4	359.6												
610	Manga	U-74	Bunyuyu Dam	3.6	4.5					•	•						•
610	Keroka	U-75	Bunyuyu Dam	5.2	6.6					•	•						•
610	Nyamira + Kebirigo	U-144	Kuja river	11.6	14.6					•	•						•
610	Kisii	U-76	Bunyuyu Dam	27.5	34.7					•	•	•					•
610	Ogembo	U-77	Kuja river	1.7	2.2	•	•										•
				49.7	62.6												
620	Maseno	U-78	Edzawa Dam	15.6	19.6					•	•						•
620	Kisumu & + Kiboswa	U-79	Kibos dam	104.8	132.1	•	•								•	•	•
620	Ahero	U-80	Nyando river	5.9	7.4	•	•										•
620	Muhoroni	U-81	Nyando River	7.6	9.6	•	•										•
				133.9	168.7												
630	Bondo	U-145	Yala river	4.2	5.3					•	•						•
630	Yala	U-82	Yala river	2.5	3.2					•	•						•
630	Sisya	U-83	Yala River	16.0	20.1					•	•						•
630	Ukwala	U-84	Nzoia River	1.9	2.4					•	•						•
				24.6	31.0												
640	Homa Bay	U-85	Lake Victoria	12.5	15.8					•	•						•
640	Migori	U-86	Migori river	5.4	6.9					•	•						•
640	Kehancha + Taranganya	U-146	Migori river	4.8	6.0	•	•										•
640	Nyabikeye	U-147	Boreholes	27.0	34.1	•	•										•
640	Oyugis	U-148	Isanta river(Awach Tende)	4.9	6.2					•	•						•
640	Kendu Bay	U-87	Lake Victoria	3.0	3.7					•	•						•
640	Awendo/Sare	U-149	Sare river	5.3	6.6	•	•										•
				62.9	79.3												
710	Oloitokitok	U-88	Nol-Turesh Spring	7.0	8.9					•	•						•
710	Ngong	U-89	Kerarapon Spring	14.6	18.4	•	•										•
710	Kajiado	U-90	Kiserian P/L	19.7	24.9	•	•										•
710	Namanga	U-91	Namanga Spring	5.7	7.1	•	•										•
710	Magadi	U-92	Oloibortoto river	10.7	13.5					•	•						•
				57.7	72.7												

Note: • Construction

付属資料 - 2. 1 都市水道計画 - 実施計画案 (4 / 5)

District Code	Urban Name	City Code	Future Raw Water Source	Cost (million)		Implementation Schedule															
				US\$	Kf	93	95	2000	2	4	6	8	10								
720	Soiik	U-93	Kipsonoi River	4.5	5.6		•														
720	Kericho	U-94	Dimlitch Dam, Kimugung Dam	24.2	30.5					•											
720	Kipkelion	U-95	Nyando River	2.1	2.6																
720	Londiani	U-96	Londiani dam	58.6	73.9																
				89.4	112.7																
730	Nanyuki	U-97	Liki River	18.6	23.5								•								
730	Rumuruti	U-150	Rumuruti Dam + Borchole	9.2	11.6		•														
730	Nyahururu	U-98	Nyahururu dam + Borchole	23.1	29.0																
				50.9	64.1																
740	Gilgil	U-99	Turasha D/L & Malewa Dam	43.3	51.5																
740	Naivasha	U-100	Turasha P/L & Malewa Dam	49.0	61.7																
740	Njoro	U-101	Itare Dam	27.3	34.4		•														
740	Elburgon	U-102	Itare Dam	26.4	33.2		•														
740	Molo	U-103	Itare Dam	21.4	27.0		•														
740	Nakuru	U-104	Turasha P/L + Malewa Dam + Itare Dam	212.0	267.1		•														
				379.3	478.0																
750	Narok	U-105	Upper Narok Dam	30.9	39.0																
750	Nairagie Ngare	U-106	Nasampolai River	1.8	2.2																
750	Kilgoris	U-151	Poroko River	4.3	5.4																
750	Loikorian	U-152	Migori River	3.7	4.7																
				10.7	51.3																
760	Kitale	U-107	Koitobos River	31.8	43.8																
760	Kiminiini/Saboti + Spr. Kita	U-108	Kabeyan River	4.0	5.0		•														
760	Erdebess/Kwanza	U-109	Koitobos River	2.4	3.0		•														
				41.1	51.8																
770	Moi's Bridge	U-153	Nzoia River	2.9	3.7																
770	Turbo	U-154	Sosiani River	5.5	6.9																
770	Eldoret	U-110	Moiben Dam + Nzoia River	135.9	171.2		•														
770	Burnt Forest	U-111	Kipkaren River	2.1	2.6																
				146.4	184.5																
810	Kabarnet	U-112	Kirandich Dam	27.3	34.4		•														
810	Maji Mazuri	U-113	Maji Mazuri River	5.2	6.5																
810	Eldama Ravine	U-114	Chemususu Dam	26.6	33.5																
810	Mogotio	U-115	Molo river / Chemususu Dam	6.0	7.6																
810	Marigat	U-155	Perkerra River	2.5	3.2																
				67.6	85.2																
820	Ben + Tambach	U-116	Moiben Dam	12.7	16.0		•														
830	Nandi Hills	U-117	Mokong River	4.0	5.0																
830	Kapsabet + Baraton	U-118	Mokong River	11.8	14.9																
				15.8	19.9																
840	Maralal	U-119	Loikas/Yamo River	16.0	20.2																
840	Wamba	U-120	Boreholes	82.0	103.3		•														
840	Baragoi	U-121	Boreholes + Sub-surface dam	123.7	155.8		•														
				221.7	279.3																

Note: • Construction

付属資料- 2 .1 都市水道計画-実施計画案 (5 / 5)

District Code	Urban Name	City Code	Future Raw Water Source	Cost (million)		Implementation Schedule																			
				US\$	K£	93	95	2000		2	4	6	8	10											
850	Lodwar	U-122	Boreholes & sub-surface dam	132.6	167.1				•	•	•	•	•	•	•	•	•	•	•	•	•				
860	Kapenguria/Makutano	U-123	Kapenguria River	8.9	11.2		•	•													•	•			
910	Mawalie + Malakisi	U-156	Malikisi river	3.3	4.2	•	•															•	•		
910	Bungoma	U-124	Kuywa River	26.8	33.7					•	•											•	•		
910	Kimilili	U-125	Kimilili River	7.3	9.2		•	•															•	•	
910	Webuye	U-126	Nzoia River	20.0	25.2					•	•												•	•	
910	Chaptais	U-157	Sasuri river	2.7	3.4	•	•																•	•	
				60.1	75.8																				
920	Busia	U-127	Sio river	14.1	17.7						•	•											•	•	
920	Nambale	U-158	Sio river	2.2	2.8						•	•												•	•
				16.3	20.5																				
930	Luanda	U-128	Edzawa river	1.8	2.2																			•	•
930	Vihiga/Majengo	U-129	Edzawa River (Kimondi River)	5.1	6.4		•	•																•	•
930	Kaimosi	U-130	Galagoli river	0.0	0.0																				
930	Khayega	U-131	Yala river	1.8	2.2	•	•																	•	•
930	Kakamega	U-132	Isiukhu River, Mukulusi Dam	29.2	36.7					•	•													•	•
930	Butere	U-133	Viratsi River	2.2	2.8						•	•												•	•
930	Mumias	U-134	Nzoia River	13.5	17.0					•	•													•	•
				53.5	67.4																				
					0.0																				
				4,949.2	6,236.0																				

Note: • Construction

付属资料-2.2 地方水道計画(第1段階:水源開発) - 実施計画案(1/4)

Code	District	Source Development Plan									Implementation Program (%)			
		Surface Water	Borehole	Shallow Well	Roof Catch	Small Dam	Subsurface Dam	Sand Dam	Rock Catch	Existing Pipeline	Total	Up to 2000	2001-2010	
Nairobi Province														
110	Nairobi	0	0	0	0	0	0	0	0	0	0	0	0	0
	- Quantity (m3/d)	0	0	0	0	0	0	0	0	0	0	0	0	0
	- No. of Facilities	0	0	0	0	0	0	0	0	0	0	0	0	0
	- Cost (mill.US\$)	0	0	0	0	0	0	0	0	0	0	0	0	0
	- Cost (mill.K£)	0	0	0	0	0	0	0	0	0	0	0	0	0
Central Province														
210	Kiambu	39,127	2,726	83	135	2,169	0	0	30	16,360	60,630	32.3	67.7	
	- Quantity (m3/d)	0	93	17	3,718	25	0	0	3	0	3,856			
	- No. of Facilities	0	10.54	0.08	2.24	1.87	0	0	0.05	0	14.77			
	- Cost (mill.US\$)	0	13.28	0.1	2.82	2.35	0	0	0.06	0	18.63			
	- Cost (mill.K£)	0												
220	Kirinyaga	23,036	758	76	40	973	0	0	0	977	25,860	35.5	64.5	
	- Quantity (m3/d)	0	17	16	889	12	0	0	0	0	934			
	- No. of Facilities	0	2.64	0.08	0.53	0.58	0	0	0	0	3.82			
	- Cost (mill.US\$)	0	3.33	0.09	0.67	0.73	0	0	0	0	4.82			
	- Cost (mill.K£)	0												
230	Muranga	52,242	1,031	474	82	2,819	0	0	0	458	57,106	32.8	67.2	
	- Quantity (m3/d)	0	28	96	2,828	24	0	0	0	0	2,976			
	- No. of Facilities	0	3.91	0.47	1.68	0.99	0	0	0	0	7.05			
	- Cost (mill.US\$)	0	4.93	0.59	2.12	1.25	0	0	0	0	8.89			
	- Cost (mill.K£)	0												
240	Nyandarua	16,155	6,917	255	545	1,160	0	0	164	380	25,576	39.1	60.9	
	- Quantity (m3/d)	0	250	27	11,081	20	0	0	13	0	11,391			
	- No. of Facilities	0	28.17	0.12	6.65	1.09	0	0	0.23	0	36.26			
	- Cost (mill.US\$)	0	35.53	0.16	8.39	1.37	0	0	0.28	0	45.73			
	- Cost (mill.K£)	0												
250	Nyeri	34,264	163	58	0	1,473	0	0	0	51	36,009	24.8	75.2	
	- Quantity (m3/d)	0	6	12	0	28	0	0	0	0	46			
	- No. of Facilities	0	0.58	0.06	0	0.87	0	0	0	0	1.5			
	- Cost (mill.US\$)	0	0.73	0.07	0	1.09	0	0	0	0	1.89			
	- Cost (mill.K£)	0												
	Sub-total	164,824	11,595	946	802	8,594	0	0	194	18,226	205,181	32.5	67.5	
	- Quantity (m3/d)	0	391	168	18,516	109	0	0	16	0	19,203			
	- No. of Facilities	0	45.84	0.81	11.1	5.4	0	0	0.28	0	63.4			
	- Cost (mill.US\$)	0	57.8	1.01	14	6.79	0	0	0.34	0	79.96			
	- Cost (mill.K£)	0												
Coast Province														
310	Kilifi	765	3,957	6,123	3,195	30	51	55	0	9,449	23,625	38.9	61.1	
	- Quantity (m3/d)	0	104	1,219	83,244	6	11	11	0	0	84,595			
	- No. of Facilities	0	13.77	5.91	50.23	0.04	0.14	0.11	0	0	70.21			
	- Cost (mill.US\$)	0	17.37	7.46	63.34	0.05	0.18	0.14	0	0	88.53			
	- Cost (mill.K£)	0												
320	Kwale	1,566	5,038	4,775	2,720	101	49	133	0	3,071	17,453	38.7	61.3	
	- Quantity (m3/d)	0	119	944	59,067	10	13	21	0	0	60,174			
	- No. of Facilities	0	18.14	4.38	35.34	0.14	0.14	0.27	0	0	58.41			
	- Cost (mill.US\$)	0	22.88	5.52	44.57	0.17	0.17	0.35	0	0	73.65			
	- Cost (mill.K£)	0												
330	Lamu	0	652	777	259	0	0	0	0	299	1,987	34.4	65.6	
	- Quantity (m3/d)	0	22	160	8,053	0	0	0	0	0	8,235			
	- No. of Facilities	0	2.19	0.76	5.13	0	0	0	0	0	8.08			
	- Cost (mill.US\$)	0	2.76	0.96	6.47	0	0	0	0	0	10.19			
	- Cost (mill.K£)	0												
340	Mombasa	0	0	0	0	0	0	0	0	0	0			
	- Quantity (m3/d)	0	0	0	0	0	0	0	0	0	0			
	- No. of Facilities	0	0	0	0	0	0	0	0	0	0			
	- Cost (mill.US\$)	0	0	0	0	0	0	0	0	0	0			
	- Cost (mill.K£)	0	0	0	0	0	0	0	0	0	0			
350	Taita Taveta	1,971	1,310	1,481	551	74	25	25	174	838	6,449	34.4	65.6	
	- Quantity (m3/d)	0	35	296	17,923	5	5	5	24	0	18,293			
	- No. of Facilities	0	4.5	1.44	10.79	0.1	0.07	0.05	0.42	0	17.37			
	- Cost (mill.US\$)	0	5.67	1.81	13.61	0.13	0.09	0.06	0.53	0	21.91			
	- Cost (mill.K£)	0												
360	Tana River	948	918	1,906	541	21	15	15	40	97	4,501	38.3	61.7	
	- Quantity (m3/d)	0	32	328	18,534	9	4	4	8	0	18,919			
	- No. of Facilities	0	3.31	1.52	11.14	0.03	0.04	0.03	0.14	0	16.21			
	- Cost (mill.US\$)	0	4.78	1.92	14.05	0.03	0.05	0.04	0.18	0	20.44			
	- Cost (mill.K£)	0												
	Sub-total	5,250	11,875	15,062	7,266	226	140	228	214	13,754	54,015	38.1	61.9	
	- Quantity (m3/d)	0	312	2,947	186,821	30	33	41	32	0	190,216			
	- No. of Facilities	0	41.91	14.01	112.63	0.31	0.39	0.46	0.56	0	170.28			
	- Cost (mill.US\$)	0	52.86	17.67	142.04	0.38	0.49	0.59	0.71	0	214.72			
	- Cost (mill.K£)	0												

付属資料- 2. 2 地方水道計画 (第1段階: 水源開発) - 実施計画案 (2/4)

Code	District	Source Development Plan									Total	Implementation Program (%)		
		Surface Water	Borehole	Shallow Well	Roof Catch	Small Dam	Subsurface Dam	Sand Dam	Rock Catch	Existing Pipeline		Up to 2000	2001-2010	
Eastern Province														
410	Embu												37.0	63.0
	- Quantity (m3/d)	14,378	3,120	2,668	638	646	23	23	0	555	22,051			
	- No. of Facilities	0	83	537	18,126	18	6	6	0	0	18,776			
	- Cost (mill.US\$)	0	11.19	2.64	10.96	0.51	0.06	0.05	0	0	25.41			
	(mill.K\$)	0	14.11	3.33	13.82	0.64	0.08	0.06	0	0	32.04			
420	Isiolo												16.5	83.5
	- Quantity (m3/d)	301	545	673	155	2	8	25	61	12	1,782			
	- No. of Facilities	0	20	115	7,776	1	6	8	14	0	7,940			
	- Cost (mill.US\$)	0	1.91	0.58	4.71	0	0.02	0.05	0.24	0	7.52			
	(mill.K\$)	0	2.41	0.73	5.94	0	0.03	0.06	0.31	0	9.48			
430	Kitui												42.6	57.4
	- Quantity (m3/d)	846	5,506	10,782	3,029	104	325	292	539	2,622	24,045			
	- No. of Facilities	0	177	2,149	114,343	3	44	40	96	0	116,852			
	- Cost (mill.US\$)	0	20.46	10.17	68.71	0.14	0.93	0.62	1.65	0	102.68			
	(mill.K\$)	0	25.79	12.83	86.64	0.18	1.18	0.78	2.08	0	129.48			
440	Machakos												36.4	63.6
	- Quantity (m3/d)	12,589	10,501	19,777	3,746	1,234	496	332	50	5,344	54,069			
	- No. of Facilities	0	312	3,860	157,275	34	63	47	13	0	161,604			
	- Cost (mill.US\$)	0	38.62	18.6	94.38	1.69	1.42	0.69	0.2	0	155.59			
	(mill.K\$)	0	48.7	23.45	119.01	2.13	1.79	0.87	0.25	0	196.2			
450	Marsabit												28.7	71.3
	- Quantity (m3/d)	54	1,502	1,270	365	9	64	70	13	206	3,553			
	- No. of Facilities	0	55	238	18,436	3	11	11	3	0	18,757			
	- Cost (mill.US\$)	0	6	1.14	11.05	0.01	0.18	0.14	0.05	0	18.58			
	(mill.K\$)	0	7.56	1.44	13.94	0.02	0.23	0.18	0.06	0	23.43			
460	Meru												37.3	62.7
	- Quantity (m3/d)	34,311	16,661	4,596	2,199	1,882	174	47	21	2,147	62,038			
	- No. of Facilities	0	481	923	90,443	39	21	9	5	0	91,921			
	- Cost (mill.US\$)	0	60.91	4.56	54.59	2.08	0.5	0.1	0.08	0	122.82			
	(mill.K\$)	0	76.8	5.74	68.84	2.63	0.63	0.12	0.11	0	154.87			
	Sub-total												37.3	62.7
	- Quantity (m3/d)	62,479	37,835	39,766	10,132	3,877	1,090	789	684	10,886	167,538			
	- No. of Facilities	0	1,128	7,822	406,399	98	151	121	131	0	415,850			
	- Cost (mill.US\$)	0	139.09	37.69	244.4	4.43	3.11	1.65	2.22	0	432.6			
	(mill.K\$)	0	175.37	47.52	308.19	5.6	3.94	2.07	2.81	0	545.5			
North Eastern Province														
510	Garissa												19.0	81.0
	- Quantity (m3/d)	35	847	1,770	353	0	20	9	0	2	3,036			
	- No. of Facilities	0	31	343	16,174	0	10	5	0	0	16,563			
	- Cost (mill.US\$)	0	3.02	1.59	9.68	0	0.06	0.02	0	0	14.36			
	(mill.K\$)	0	3.81	2.01	12.21	0	0.07	0.02	0	0	18.11			
520	Mandera												30.1	69.9
	- Quantity (m3/d)	191	606	2,159	303	0	51	99	0	1	3,410			
	- No. of Facilities	0	28	437	17,573	0	10	15	0	0	18,063			
	- Cost (mill.US\$)	0	2.2	2.13	10.64	0	0.14	0.21	0	0	15.32			
	(mill.K\$)	0	2.78	2.69	13.41	0	0.18	0.26	0	0	19.32			
530	Wajir												22.8	77.2
	- Quantity (m3/d)	0	744	1,899	318	0	28	75	0	0	3,064			
	- No. of Facilities	0	40	369	16,739	0	10	20	0	0	17,178			
	- Cost (mill.US\$)	0	3.12	1.75	10.1	0	0.08	0.15	0	0	15.19			
	(mill.K\$)	0	3.94	2.2	12.73	0	0.09	0.19	0	0	19.16			
	Sub-total												24.2	75.8
	- Quantity (m3/d)	226	2,197	5,828	974	0	99	183	0	3	9,510			
	- No. of Facilities	0	99	1,149	50,486	0	30	40	0	0	51,804			
	- Cost (mill.US\$)	0	8.34	5.47	30.42	0	0.28	0.38	0	0	44.87			
	(mill.K\$)	0	10.53	6.9	38.35	0	0.34	0.47	0	0	56.59			

付属資料-2.2 地方水道計画 (第1段階:水源開発) - 実施計画案 (3/4)

Code	District	Source Development Plan									Total	Implementation Program (%)	
		Surface Water	Borehole	Shallow Well	Roof Catch	Small Dam	Subsurface Dam	Sand Dam	Rock Catch	Existing Pipeline		Up to 2000	2001-2010
Nyanza Province													
610	Kisii												
	- Quantity (m ³ /d)	65,503	5,329	7,590	0	3,203	0	0	0	4,373	85,998	31.8	68.2
	- No. of Facilities	0	137	1,525	0	26	0	0	0	0	1,688		
	- Cost (mill.US\$)	0	19.78	7.43	0	1.68	0	0	0	0	28.9		
	(mill.K£)	0	24.95	9.37	0	2.12	0	0	0	0	36.44		
620	Kisumu												
	- Quantity (m ³ /d)	14,808	4,350	8,238	2,629	593	0	0	116	0	30,734	23.7	76.3
	- No. of Facilities	0	115	1,084	34,621	15	0	0	7	0	35,842		
	- Cost (mill.US\$)	0	16.23	5.31	20.93	0.32	0	0	0.12	0	42.91		
	(mill.K£)	0	20.47	6.69	26.39	0.41	0	0	0.16	0	54.11		
630	Siaya												
	- Quantity (m ³ /d)	18,041	6,380	15,369	1,827	1,134	0	0	98	1,041	43,890	33.1	66.9
	- No. of Facilities	0	220	2,983	30,004	27	0	0	7	0	33,241		
	- Cost (mill.US\$)	0	23.95	14.32	18.11	0.46	0	0	0.12	0	56.96		
	(mill.K£)	0	30.2	18.06	22.83	0.58	0	0	0.16	0	71.83		
640	South Nyanza												
	- Quantity (m ³ /d)	24,460	11,171	17,346	7,043	1,924	176	176	0	292	62,588	33.3	66.7
	- No. of Facilities	0	342	3,050	92,293	51	27	27	0	0	95,790		
	- Cost (mill.US\$)	0	42.01	15.24	55.54	1.03	0.5	0.36	0	0	114.69		
	(mill.K£)	0	52.97	19.22	70.03	1.32	0.63	0.46	0	0	144.62		
	Sub-total												
	- Quantity (m ³ /d)	122,812	27,230	48,543	11,499	6,854	176	176	214	5,706	223,210	31.3	68.7
	- No. of Facilities	0	814	8,642	156,918	119	27	27	14	0	166,561		
	- Cost (mill.US\$)	0	101.97	42.3	94.58	3.51	0.5	0.36	0.24	0	243.46		
	(mill.K£)	0	128.59	53.34	119.25	4.43	0.63	0.46	0.32	0	307		
Rift Valley Province													
710	Kajiado												
	- Quantity (m ³ /d)	2,381	3,312	2,501	995	125	56	58	43	2,357	11,828	42.4	57.6
	- No. of Facilities	0	123	431	38,954	9	16	15	9	0	39,557		
	- Cost (mill.US\$)	0	12.99	2.15	23.39	0.17	0.16	0.12	0.14	0	39.1		
	(mill.K£)	0	16.39	2.71	29.49	0.21	0.2	0.15	0.17	0	49.31		
720	Kericho												
	- Quantity (m ³ /d)	60,499	2,605	1,641	0	2,678	0	0	0	1,189	68,612	35.5	64.5
	- No. of Facilities	0	68	324	0	27	0	0	0	0	419		
	- Cost (mill.US\$)	0	9.93	1.44	0	1.42	0	0	0	0	12.78		
	(mill.K£)	0	12.52	1.81	0	1.79	0	0	0	0	16.12		
730	Laikipia												
	- Quantity (m ³ /d)	2,819	4,626	722	822	373	63	46	8	0	9,479	37.9	62.1
	- No. of Facilities	0	156	145	22,725	19	18	14	1	0	23,078		
	- Cost (mill.US\$)	0	17.73	0.69	13.71	0.48	0.17	0.09	0.02	0	32.89		
	(mill.K£)	0	22.35	0.88	17.29	0.6	0.22	0.12	0.02	0	41.47		
740	Nakuru												
	- Quantity (m ³ /d)	18,557	14,086	298	2,629	1,547	166	98	72	11,058	48,511	28.7	71.3
	- No. of Facilities	0	409	31	63,406	21	24	19	8	0	63,918		
	- Cost (mill.US\$)	0	52.93	0.15	38.18	1.26	0.48	0.2	0.13	0	93.33		
	(mill.K£)	0	66.75	0.19	48.15	1.59	0.6	0.26	0.17	0	117.69		
750	Narok												
	- Quantity (m ³ /d)	13,271	6,889	6,433	3,911	900	86	79	0	279	31,848	41.3	58.7
	- No. of Facilities	0	245	1,128	60,853	28	13	13	0	0	62,280		
	- Cost (mill.US\$)	0	26.44	5.47	36.62	0.72	0.24	0.16	0	0	69.66		
	(mill.K£)	0	33.34	6.9	46.18	0.91	0.31	0.2	0	0	87.84		
760	Trans Nzoia												
	- Quantity (m ³ /d)	19,082	456	1,015	0	781	0	0	35	410	21,779	35.3	64.7
	- No. of Facilities	0	31	205	0	15	0	0	3	0	254		
	- Cost (mill.US\$)	0	1.87	0.93	0	0.5	0	0	0.05	0	3.35		
	(mill.K£)	0	2.36	1.17	0	0.63	0	0	0.07	0	4.23		
770	Uasin Gishu												
	- Quantity (m ³ /d)	16,940	129	101	0	693	0	0	18	1,838	19,719	21.9	78.1
	- No. of Facilities	0	4	21	0	20	0	0	2	0	47		
	- Cost (mill.US\$)	0	0.4	0.1	0	0.42	0	0	0.04	0	0.95		
	(mill.K£)	0	0.5	0.12	0	0.53	0	0	0.04	0	1.2		
810	Baringo												
	- Quantity (m ³ /d)	4,246	3,907	1,588	1,081	209	50	37	7	1,759	12,884	37.8	62.2
	- No. of Facilities	0	119	173	27,659	29	26	17	1	0	28,024		
	- Cost (mill.US\$)	0	14.21	0.85	16.64	0.18	0.13	0.07	0.02	0	32.09		
	(mill.K£)	0	17.91	1.07	20.99	0.23	0.17	0.09	0.02	0	40.47		
820	Elgey Marakwet												
	- Quantity (m ³ /d)	6,769	1,751	3,475	503	272	15	0	9	1,193	13,987	38.9	61.1
	- No. of Facilities	0	68	628	12,995	23	3	0	1	0	13,718		
	- Cost (mill.US\$)	0	6.74	3.11	7.78	0.22	0.04	0	0.02	0	17.91		
	(mill.K£)	0	8.5	3.92	9.81	0.27	0.05	0	0.02	0	22.58		

付属資料- 2. 2 地方水道計画 (第1段階: 水源開発) - 実施計画案 (4/4)

Code	District	Source Development Plan									Total	Implementation Program (%)	
		Surface Water	Borehole	Shallow Well	Roof Catch	Small Dam	Subsurface Dam	Sand Dam	Rock Catch	Existing Pipeline		Up to 2000	2001-2010
830	Nandi											38.1	61.9
	- Quantity (m3/d)	31,085	481	1,679	0	1,130	0	0	0	375	34,750		
	- No. of Facilities	0	25	340	0	23	0	0	0	0	388		
	- Cost (mill.US\$)	0	1.85	1.62	0	0.63	0	0	0	0	4.1		
	(mill.K£)	0	2.33	2.04	0	0.79	0	0	0	0	5.17		
840	Samburu											34.6	65.4
	- Quantity (m3/d)	240	1,174	1,607	529	15	17	18	375	6	3,981		
	- No. of Facilities	0	67	319	16,898	4	8	8	57	0	17,361		
	- Cost (mill.US\$)	0	5.18	1.47	10.19	0.02	0.05	0.04	0.99	0	17.93		
	(mill.K£)	0	6.53	1.85	12.85	0.02	0.06	0.05	1.25	0	22.61		
850	Turkana											38.6	61.4
	- Quantity (m3/d)	289	1,871	2,956	690	3	102	127	16	6	6,060		
	- No. of Facilities	0	77	500	31,371	1	20	22	2	0	31,993		
	- Cost (mill.US\$)	0	6.78	2.49	18.88	0	0.29	0.26	0.03	0	28.74		
	(mill.K£)	0	8.55	3.14	23.81	0.01	0.36	0.33	0.04	0	36.24		
860	West Pokot											40.2	59.8
	- Quantity (m3/d)	3,077	1,522	4,456	961	129	49	25	0	0	10,219		
	- No. of Facilities	0	79	882	28,553	14	11	9	0	0	29,548		
	- Cost (mill.US\$)	0	6.46	4	17.18	0.12	0.14	0.05	0	0	27.95		
	(mill.K£)	0	8.15	5.05	21.66	0.15	0.17	0.06	0	0	35.24		
	Sub-total											35.8	64.2
	- Quantity (m3/d)	179,255	42,809	28,472	12,121	8,855	604	488	583	20,470	293,657		
	- No. of Facilities	0	1,471	5,127	303,414	233	139	117	84	0	310,585		
	- Cost (mill.US\$)	0	164	24	183	6	2	1	1	0	381		
	(mill.K£)	0	206	31	230	8	2	1	2	0	480		
Western Province													
910	Bungoma											36.4	63.6
	- Quantity (m3/d)	46,022	2,867	5,728	0	2,210	0	0	258	977	58,062		
	- No. of Facilities	0	75	1,150	0	18	0	0	15	0	1,258		
	- Cost (mill.US\$)	0	9.71	5.68	0	1.19	0	0	0.25	0	16.83		
	(mill.K£)	0	12.24	7.16	0	1.51	0	0	0.31	0	21.22		
920	Busia											38.2	61.8
	- Quantity (m3/d)	18,134	4,956	10,319	1,082	899	62	53	0	1,420	36,925		
	- No. of Facilities	0	161	1,991	16,717	16	9	8	0	0	18,902		
	- Cost (mill.US\$)	0	19.04	9.92	10.1	0.51	0.18	0.11	0	0	39.86		
	(mill.K£)	0	24.01	12.51	12.74	0.65	0.22	0.14	0	0	50.27		
930	Kakamega											34.6	65.4
	- Quantity (m3/d)	96,625	3,166	7,478	0	3,462	0	0	0	891	111,622		
	- No. of Facilities	0	122	1,514	0	41	0	0	0	0	1,677		
	- Cost (mill.US\$)	0	11.24	9.42	0	1.47	0	0	0	0	22.12		
	(mill.K£)	0	14.17	11.87	0	1.85	0	0	0	0	27.89		
	Sub-total											35.8	64.2
	- Quantity (m3/d)	160,781	10,989	23,525	1,082	6,571	62	53	258	3,288	206,609		
	- No. of Facilities	0	358	4,655	16,717	75	9	8	15	0	21,837		
	- Cost (mill.US\$)	0	39.99	25.02	10.1	3.17	0.18	0.11	0.25	0	78.81		
	(mill.K£)	0	50.42	31.54	12.74	4.01	0.22	0.14	0.31	0	99.38		
Total													
	- Quantity (m3/d)	695,627	144,530	162,142	43,876	34,977	2,171	1,917	2,147	72,333	1,159,720	34.7	65.3
	- No. of Facilities	0	4,576	30,510	1,139,271	664	389	354	292	0	1,176,056		
	- Cost (mill.US\$)	0	540.65	149.77	685.8	22.96	6.16	3.95	4.99	0	1414.2		
	(mill.K£)	0	681.75	188.83	864.8	28.94	7.76	4.99	6.29	0	1783.32		

付属資料- 2. 3 地方水道計画 (第2段階: 給水施設配備) - 実施計画案

Code	District	Executing Agency	Cost (million)		Implementation Programme (%)	
			US\$	K£	Up to 2000	2001 - 2010
110	Nairobi	MOWD	-	-	-	-
210	Kiambu	MOWD	65.7	82.8	-	100
220	Kiinyaga	MOWD	28.1	35.4	-	100
230	Muranga	MOWD	62.1	78.2	-	100
240	Nyandarua	MOWD	26.7	33.6	-	100
250	Nyeri	MOWD	39.3	49.5	-	100
310	Kilifi	MOWD	24.1	30.3	-	100
320	Kwale	MOWD	17.4	21.9	-	100
330	Lamu	MOWD	1.9	2.4	-	100
340	Mombasa	MOWD	-	-	-	-
350	Taita Taveta	MOWD	6.6	8.3	-	100
360	Tana River	MOWD	4.4	5.6	-	100
410	Embu	MOWD	23.1	29.1	-	100
420	Isiolo	MOWD	1.7	2.2	-	100
430	Kitui	MOWD	23.5	29.6	-	100
440	Machakos	MOWD	53.8	67.8	-	100
450	Marsabit	MOWD	3.4	4.3	-	100
460	Meru	MOWD	64.1	80.7	-	100
510	Garissa	MOWD	2.9	3.6	-	100
520	Mandera	MOWD	3.3	4.1	-	100
530	Wajir	MOWD	2.9	3.6	-	100
610	Kisii	MOWD	91.6	115.5	-	100
620	Kisumu	MOWD	31.4	39.5	-	100
630	Siaya	MOWD	44.2	55.7	-	100
640	South Nyanza	MOWD	63.4	79.9	-	100
710	Kajiado	MOWD	11.9	15.0	-	100
720	Kenicho	MOWD	74.2	93.4	-	100
730	Lakipia	MOWD	9.4	11.9	-	100
740	Nakuru	MOWD	50.5	63.6	-	100
750	Narok	MOWD	32.5	40.9	-	100
760	Trans Nzoia	MOWD	23.5	29.6	-	100
770	Uasin Gishu	MOWD	21.5	27.1	-	100
810	Baringo	MOWD	13.1	16.5	-	100
820	Elgey Marakwet	MOWD	14.4	18.1	-	100
830	Nandi	MOWD	37.6	47.3	-	100
840	Samburu	MOWD	3.9	4.9	-	100
850	Turkana	MOWD	5.8	7.3	-	100
860	West Pokot	MOWD	10.1	12.8	-	100
910	Bungoma	MOWD	61.9	78.0	-	100
920	Busia	MOWD	37.7	47.5	-	100
930	Kakamega	MOWD	120.0	151.2	-	100
Total			1,213.2	1,528.6	-	100

付属資料 - 2. 4 下水処理計画 - 実施計画案 (1/5)

District Code	Urban Name	City Code	Future Raw Water Source	Cost (million)		Implementation Schedule											
				US\$	Kf	93	95	2000			2	4	6	8	10		
110	Nairobi	U-1	Thika Dam, Ndarugu, Ruiru-A, Chania-B	214.81	270.66	•	•	•				•	•	•			
210	Karuri	U-2	Kianbaa Dam (Rui Ruaka R.)	1.59	2.00	•	•										•
210	Kianbaa	U-3	Kianbaa Dam (Rui Ruaka r.)	0.57	0.72	•	•		•	•							•
210	Gatundu & Ngenda	U-4	Thiririka River	0.07	0.09					•	•						•
210	Limuru	U-5	Chania P/L	0.16	0.20				•	•							•
210	Ruiru	U-6	Ruiru River	1.39	1.75		•	•									•
210	Thika	U-7	Chania River (Lower)	14.13	17.80				•	•							•
210	Githunguri	U-8	Ruiru river	0.49	0.61				•	•							•
210	Kikuyu	U-9	Kikuyu Dam	0.77	0.98		•	•									•
				19.16	24.15												
220	Wanguru	U-10	Thiba River	0.05	0.07					•	•						•
220	Sagana	U-11	Ragati River	0.38	0.48					•	•						•
220	Kerugoya	U-12	Kiringa River	1.17	1.48					•	•						•
220	Kutus	U-13	Thiba River	0.81	1.02					•	•						•
				2.42	3.04												
230	Kandara	U-14	Thika River	0.06	0.08					•	•						•
230	Maragua	U-15	Gidhanji river	3.08	3.88		•	•									•
230	Kangema	U-16	Mathioya River	0.13	0.17					•	•						•
230	Muranga	U-17	Maragua river	2.38	3.00		•	•									•
230	Makuyu	U-18	Motobo river	0.57	0.72		•	•									•
				6.22	7.84												
240	Ot Kalou	U-19	Malewa River	1.31	1.65					•	•						•
250	Karatina	U-20	Ragati River	0.71	0.90					•	•						•
250	Ohaya	U-21	Tuthi river	0.63	0.80					•	•						•
250	Nyeri	U-22	Chania River	23.74	29.91		•	•						•	•		•
				25.09	31.61												
310	Mariakani	U-23	2nd Mzima P/L	1.13	1.43		•	•									•
310	Kilifi	U-24	Rare reservoir	1.86	2.34					•	•						•
310	Wataru	U-25	Sabaki pipeline	0.32	0.40		•	•									•
310	Malindi	U-26	Sabaki Pipeline & Rare Dam	10.56	13.30					•	•						•
310	Mombui	U-135	Sabaki river	0.49	0.62		•	•									•
				14.35	18.08												
320	Kwale	U-27	Marere pipeline	0.53	0.66					•	•						•
320	Kinango	U-28	Marere pipeline	0.20	0.25					•	•						•
320	Mtsambweni	U-29	Boreholes + Mkorumuji river	1.19	1.50				•	•	•		•	•	•		•
320	Lungalunga	U-136	Umbo river	0.28	0.36					•	•						•
				2.20	2.77												
330	Witu	U-30	Mkondo wa Cambi river	0.44	0.56					•	•						•
330	Lamu	U-31	P/L from Tana River + B/H	1.19	1.50					•	•						•
				1.63	2.05												
340	Mombasa	U-32	2nd Mzima/Mwachi Dam, Pemba Dam	57.41	72.33		•	•	•				•	•	•		•

Note: • Construction

付属資料- 2. 4 下水処理計画- 実施計画案 (2/5)

District Code	Urban Name		Future Raw Water Source	Cost (million)		Implementation Schedule																
				US\$	K£	93	95	2000	2	4	6	8	10									
350	Taveta	U-137	Njoro Spring	1.00	1.26	•	•												•	•		
350	Voi	U-33	2nd Mzim pipeline	1.24	1.57			•	•										•	•		
350	Wundanyi	U-34	Sigaso/Manguri River	0.28	0.35			•	•										•	•		
				2.53	3.18																	
360	Bura & Madogo	U-35	Tana River	0.10	0.13			•	•										•	•		
360	Hofa	U-36	Tana River	1.22	1.54			•	•										•	•		
360	Garsen	U-37	Tana River	0.41	0.52			•	•											•	•	
				1.74	2.19																	
410	Runyenjes	U-38	Ena river	0.21	0.27			•	•		•	•	•	•	•	•	•	•	•	•		
410	Siakago	U-39	Ena River	0.03	0.03			•	•											•	•	
410	Embu	U-40	Lower Kapingazi River + Upper Rujingazi River	2.47	3.12			•	•											•	•	
				2.71	3.42																	
420	Isiolo	U-41	Boreholes + Spring	3.41	4.29			•	•		•	•	•	•	•	•	•	•	•	•		
420	Ol Doinyo Ng'iro	U-42	Ewaso Ng'iro River	0.70	0.89	•	•													•	•	
420	Garbaula	U-138	Boreholes	0.31	0.38			•	•											•	•	
420	Meru	U-139	Ewaso Ng'iro	0.91	1.14			•	•											•	•	
				5.32	6.71																	
430	Kitui	U-43	Masinga Dam	1.40	1.77	•	•													•	•	
430	Mutomo	U-44	Sub-Surface dam on Tiva river	0.06	0.07			•	•												•	•
430	Mwingi	U-45	Kianbere Dam	1.10	1.39	•	•														•	•
				2.56	3.22																	
440	Machakos	U-46	Athi River P/L	22.81	28.74	•	•													•	•	
440	Mitobozi	U-47	Kaashana River	7.64	9.63	•	•														•	•
440	Athi River	U-48	Upper Athi Dam	3.31	4.17			•	•												•	•
440	Uasin/Tawa	U-49	Tawa river	0.02	0.03			•	•												•	•
440	Kangundo	U-50	Pipeline from Athi River	1.50	1.89	•	•														•	•
440	Tala	U-140	Pipeline from Athi river	0.22	0.28			•	•												•	•
440	Nunguni	U-51	Kyangonyo river	0.03	0.04			•	•												•	•
440	Wote	U-141	Kali river + Nzuuni river	0.31	0.39			•	•												•	•
440	Emali	U-52	Nol Tresh P/L	0.03	0.03			•	•												•	•
440	M'ito Andei&Kibwezi	U-53	Pipeline from Athi river	0.47	0.59	•	•														•	•
				36.35	45.80																	
450	North Horr	U-142	Boreholes	0.25	0.31			•	•												•	•
450	Kargi	U-54	Boreholes + Subsurface Dam	0.65	0.81	•	•			•	•										•	•
450	Korr	U-143	Boreholes	0.67	0.84			•	•		•	•									•	•
450	Marsabit	U-55	Boreholes + Small dams/Sub-surface dam/Spring	1.65	2.07	•	•			•	•										•	•
450	Sololo	U-56	Boreholes	0.56	0.70	•	•			•	•										•	•
450	Moyale	U-57	Boreholes + Small Dam	1.02	1.28			•	•												•	•
				4.78	6.03																	
460	Meru	U-58	Kathita river	20.54	25.88	•	•														•	•
460	Nkubu	U-59	Thing'ithu River	0.70	0.88			•	•												•	•
460	Chogoria	U-60	North Mara River	0.10	0.13	•	•														•	•
460	Chuka	U-61	Tungu river	0.43	0.54			•	•												•	•
460	Maua	U-62	Ura river	0.43	0.54			•	•												•	•
				22.20	27.97																	

Note:

• Construction

付属資料- 2. 4 下水処理計画-実施計画案 (3/5)

District Code	Urban Name		Future Raw Water Source	Cost (million)		Implementation Schedule												
				US\$	Kf	93	95	2000		2	4	6	8	10				
510	Mudo Gasbe	U-63	Boreholes + Subsurface Dam	0.24	0.31	•	•								•	•	•	•
510	Ijara	U-64	Boreholes + Small dam	0.12	0.15	•	•								•	•	•	•
510	Kotile	U-65	Boreholes/Subsurface Dam/Tana	0.12	0.15	•	•								•	•	•	•
510	Masalani	U-66	Tana River	0.12	0.15			•	•									•
510	Garissa	U-67	Tana River	8.08	10.19					•	•							•
				8.68	10.93													
520	Mandera	U-68	Dava River	0.66	0.83					•	•							•
520	Elwak	U-69	Boreholes	0.89	1.12	•	•								•	•	•	•
520	Rhamu	U-70	Dava River	0.37	0.47					•	•							•
				1.93	2.43													
530	Wajir	U-71	Boreholes + Ewaso Ng'iro River	2.65	3.34	•	•	•	•	•	•	•	•	•	•	•	•	•
530	Buna	U-72	Boreholes(Lago Bor river)	0.67	0.84	•	•	•	•	•	•	•	•	•	•	•	•	•
530	Bute	U-73	Boreholes + Small Dams	0.22	0.28	•	•											•
				3.54	4.46													
610	Manga	U-74	Bunyonyu Dam	0.07	0.09					•	•							•
610	Keroka	U-75	Bunyonyu Dam	0.21	0.27					•	•							•
610	Nyamira + Kebirigo	U-144	Kuja river	1.12	1.41					•	•							•
610	Kisii	U-76	Bunyonyu Dam	9.24	11.64					•	•							•
610	Ogembo	U-77	Kuja river	0.09	0.12	•	•											•
				10.73	13.52													
620	Maseno	U-78	Edzawa Dam	1.74	2.19					•	•							•
620	Kisumu & + Kiboswa	U-79	Kibos dam	37.19	46.85					•	•				•	•		•
620	Ahero	U-80	Nyando river	0.93	1.17	•	•											•
620	Muhoroni	U-81	Nyando River	0.92	1.16					•	•							•
				40.78	51.38													
630	Bondo	U-145	Yala river	0.30	0.38					•	•							•
630	Yala	U-82	Yala river	0.23	0.28					•	•							•
630	Siaya	U-83	Yala River	1.96	2.47					•	•							•
630	Ukwala	U-84	Nzoia River	0.09	0.12					•	•							•
				2.57	3.24													
640	Homa Bay	U-85	Lake Victoria	2.50	3.16					•	•							•
640	Migori	U-86	Migori river	0.83	1.04	•	•											•
640	Kehancha + Tarang'anya	U-146	Migori river	0.34	0.43	•	•											•
640	Nyabikaye	U-147	Boreholes	0.32	0.40					•	•							•
640	Oyugis	U-148	Isania river(Awach Tende)	0.34	0.43					•	•							•
640	Kendu Bay	U-87	Lake Victoria	0.30	0.38					•	•							•
640	Awendo/Sare	U-149	Sare river	0.38	0.48	•	•											•
				5.01	6.31													
710	Oloitokitok	U-88	Nol-Turesh Spring	0.87	1.10					•	•							•
710	Ngong	U-89	Kerarapon Spring	2.86	3.61	•	•											•
710	Kajiado	U-90	Kiserian P/L	1.21	1.53	•	•											•
710	Namanga	U-91	Namanga Spring	0.97	1.23	•	•											•
710	Magadi	U-92	Oloibortoto river	0.57	0.72					•	•							•
				6.49	8.18													

Note: • Construction

付属資料- 2. 4 下水処理計画-実施計画案(4/5)

District Code	Urban Name		Future Raw Water Source	Cost (million)		Implementation Schedule														
				US\$	K£	93	95	2000		2	4	6	8	10						
720	Soik	U-93	Kipsonoi river	0.58	0.73	•	•													
720	Kericbo	U-94	Dimlitch Dam, Kimugung Dam	9.72	12.24			•	•											
720	Kipkelion	U-95	Nyando river	0.27	0.34			•	•											
720	Londiani	U-96	Londiani dam	0.39	0.50			•	•											
				10.96	13.81															
730	Nanyuki	U-97	Liki river	7.94	10.01					•	•									
730	Rumuruti	U-150	Rumuruti Dam + Borehole	0.29	0.37	•	•													
730	Nyahururu	U-98	Nyahururu dam + Borehole	2.11	2.66					•	•									
				10.35	13.04															
740	Gilgil	U-99	Turasha P/L & Malewa Dam	2.55	3.24			•	•											
740	Naivasha	U-100	Turasha P/L & Malewa Dam	12.93	16.29			•	•											
740	Njoro	U-101	Itare Dam	1.60	2.02	•	•	•	•											
740	Elburgon	U-102	Itare Dam	2.17	2.74	•	•	•	•											
740	Moto	U-103	Itare Dam	1.92	2.41	•	•	•	•											
740	Nakuru	U-104	Turasha P/L + Malewa Dam + Itare Dam	55.47	69.89	•	•													
				76.65	96.57															
750	Narok	U-105	Upper Narok Dam	3.00	3.78					•	•									
750	Nairagie Ngare	U-106	Nasampolai river	0.09	0.11					•	•									
750	Kilgoris	U-151	Poroko river	0.58	0.73					•	•									
750	Lolkorian	U-152	Migori river	0.30	0.38					•	•									
				3.97	5.01															
760	Kitale	U-107	Koitobos river	16.08	20.26							•	•							
760	Kiminiini/Saboti+Spr. Kita	U-108	Kabwyan river	0.15	0.18	•	•													
760	Endebess/Kwanza	U-109	Koitobos river	0.23	0.29	•	•													
				16.46	20.74															
770	Moi's Bridge	U-153	Nzoia river	0.35	0.45	•	•													
770	Turbo	U-154	Sosiari river	0.49	0.62					•	•									
770	Eldoret	U-110	Moiben Dam + Nzoia river	31.47	39.65	•	•													
770	Burnt Forest	U-111	Kipkaren river	0.25	0.32					•	•									
				32.56	41.03															
810	Kabarnet	U-112	Kirandich Dam	1.20	1.52	•	•													
810	Maji Mazuri	U-113	Maji Mazuri river	0.67	0.84					•	•									
810	Eldama Ravine	U-114	Chemususu Dam	0.72	0.91							•	•							
810	Mogotio	U-115	Molo river / Chemususu Dam	0.37	0.47							•	•							
810	Marigat	U-155	Perkera river	0.30	0.38					•	•									
				3.27	4.11															
820	Iten+Tambach	U-116	Moiben Dam	0.70	0.88	•	•			•	•									
830	Nandi Hills	U-117	Mokong River	0.15	0.18							•	•							
830	Kapsabet+Baraton	U-118	Mokong river	1.93	2.44							•	•							
				2.08	2.62															
840	Maralal	U-119	Loikwa/Yamo river	2.66	3.35							•	•							
840	Wamba	U-120	Boreholes	0.57	0.71									•	•					
840	Baragoi	U-121	Boreholes + Sub-surface dam	0.49	0.62											•	•			
				3.71	4.68															
Note:			•	Construction																

付属資料- 2. 4 下水処理計画-実施計画案 (5/5)

District Code	Urban Name		Future Raw Water Source	Cost (million)		Implementation Schedule													
				US\$	K£	93	95	2000		2	4	6	8	10					
850	Lodwar	U-122	Boreholes & sub-surface dam	1.34	1.69			•	•	•	•	•	•	•	•	•	•	•	•
860	Kapenguria/Makutano	U-123	Kapenguria River	1.65	2.08		•	•										•	•
910	Mwalie + Malakisi	U-156	Malakisi river	0.37	0.47	•	•												•
910	Bungoma	U-124	Kuywa River	9.50	11.97				•	•									•
910	Kimilili	U-125	Kimilili River	1.08	1.37		•	•											•
910	Webuye	U-126	Nzoia River	8.60	10.84				•	•									•
910	Chaptais	U-157	Sasuri river	0.35	0.44	•	•												•
				19.90	25.08														
920	Busia	U-127	Sio river	2.39	3.01					•	•								•
920	Nambale	U-158	Sio river	0.28	0.35					•	•								•
				2.67	3.36														
930	Luanda	U-128	Edzawa river	0.44	0.55					•	•								•
930	Vihiga/Majengo	U-129	Edzawa River (Kinondi River)	0.50	0.63		•	•											•
930	Kaimosi	U-130	Galagoli river	0.04	0.06					•	•								•
930	Khayega	U-131	Yala river	0.05	0.06	•	•												•
930	Kakamega	U-132	Isiukhu River, Mukubosi Dam	12.30	15.49				•	•									•
930	Butere	U-133	Viratsi River	0.26	0.32					•	•								•
930	Mumias	U-134	Nzoia River	2.57	3.24				•	•									•
				16.15	20.35														
				704.95	888.24														

Note: • Construction

付属資料-2.5 大規模かんがい計画-実施計画案

District Code	Project	Development Area (ha)	Executing Agency	Cost (million)		Implementation Schedule															
				US\$	K£	93	95	2000	2	4	6	8	10								
220	Mwea extension	2,900	NIB	63.7	80.3	*	*	●	●	●	●	●	●	●	●						
310	Sabaki Extension	3,000	TARDA	19.8	24.9					☆	☆	*	*	●	●	●	●				
350	Taita Taveta	3,780	TARDA	11.9	15.0							☆	☆	*	*	●	●	●	●	●	●
360	Tana Delta	12,000	TARDA	141.4	178.2	●	●	●	●												
410	Lower Ruingazi	1,800	TARDA	6.0	7.6					☆	☆	*	*	●	●	●	●				
440	Kanzalu	4,055	TARDA	37.9	47.8					☆	☆	*	*	●	●	●	●				
440	Kibwezi extension	13,200	TARDA	227.1	286.1					☆	☆	*	*	●	●	●	●	●	●	●	●
460	Kunati	1,050	TARDA	3.5	4.4					☆	☆	*	*	●	●	●					
460	Thanantu	2,520	TARDA	17.3	21.8					☆	☆	*	*	●	●	●	●	●	●	●	●
620	Kano Plain	25,640	LBDA	232.5	293.0	*	*	●	●	●	●	●	●	●	●	●	●	●	●	●	●
630	Lower Nzoia/ Bunyala Extension	10,480	NIB	12.4	15.6	☆	☆	*	*	●	●	●									
640	Lower Kuja	1,900	LBDA	5.6	7.1	☆	☆	*	*	●	●	●	●	●	●	●	●	●	●	●	●
640	Kimira	2,000	LBDA	18.1	22.8					☆	☆	*	*	●	●	●	●				
710	Lower Ewaso N'giro	10,000	ENSDA	57.0	71.8									☆	☆	*	*	●	●	●	●
820	Arros	1,340	KVDA	6.3	7.9					☆	☆	*	*	●	●	●	●	●	●	●	●
850	Turkwel	600	KVDA	1.8	2.3									☆	☆	*	*	●	●	●	●
910	Upper Nzoia	7,550	LBDA	88.0	110.9					☆	☆	*	*	●	●	●	●	●	●	●	●
920	Yala Swamp	7,540	LBDA	65.0	81.9					☆	☆	*	*	●	●	●	●	●	●	●	●
	Total	111,355		1015.3	1279.3																

Note: ☆ Study
 * Design
 ● Construction

- Tana Delta : Commenced in 1992
 - Lower Ewaso N'giro and Yala Swamp : Continue 2011 onward

付属資料-2. 6 小規模かんがい計画-実施計画案

District Code	Project	Area of Development (ha)	No. of Scheme (Nos)	Executing Agency	Cost (million)		Implementaion of development area (ha)	
					US\$	KE	up to 2000	2001-2010
	<u>Nairobi Province</u>							
110	Nairobi	-	-	-				
	<u>Central Province</u>							
210	Kiambu	115	7	MOA	0.19	0.24	57.5	57.5
220	Kirinyaga	30	2	MOA	0.05	0.06	15	15
230	Muranga	500	9	MOA	0.81	1.03	250	250
240	Nyandarua	N.A	1	MOA				
250	Nyeri	77	6	MOA	0.13	0.16	38.5	38.5
	<u>Coast Province</u>							
310	Kilifi	330	9	MOA	0.54	0.68	165	165
320	Kwale	498	6	MOA	0.81	1.02	249	249
330	Lamu	N.A	5	MOA				
340	Mombasa	-	-	-				
350	Taita Taveta	360	4	MOA	0.59	0.74	180	180
360	Tana River	540	11	MOA	0.88	1.11	270	270
	<u>Eastern Province</u>							
410	Embu	1,509	22	MOA	2.46	3.09	754.5	754.5
420	Isiolo	50	1	MOA	0.08	0.10	25	25
430	Kitui	155	9	MOA	0.25	0.32	77.5	77.5
440	Machakos/Makueni	250	4	MOA	0.41	0.51	125	125
450	Marsabit	-	-	-				
460	Meru	1,000	10	MOA	1.63	2.05	500	500
	<u>Northeastern Province</u>							
510	Garissa	46	3	MOA	0.07	0.09	23	23
520	Mandera	-	-	-				
530	Wajir	-	-	-				
	<u>Nyanza Province</u>							
610	Kisii/Nyamira	-	-	-				
620	Kisumu	N.A	2	MOA				
630	Siaya	N.A	3	MOA				
640	South Nyanza	200	1	MOA	0.33	0.41	100	100
	<u>Rift Valley Province</u>							
710	Kajiado	N.A	2	MOA				
720	Kericho	-	-	-				
730	Laikipia	407	4	MOA	0.66	0.83	203.5	203.5
740	Nakuru	-	-	-				
750	Narok	-	-	-				
760	Trans Nzoia	-	-	-				
770	Uasin Gishu	335	2	MOA	0.55	0.69	167.5	167.5
810	Baringo	31	5	MOA	0.05	0.06	15.5	15.5
820	Elgeyo Marakwet	-	-	-				
830	Nandi	-	-	-				
840	Samburu	20	1	MOA	0.03	0.04	10	10
850	Turkana	N.A	1	MOA				
860	West Pokot	48	4	MOA	0.08	0.10	24	24
	<u>Western Province</u>							
910	Bungoma	155	2	MOA	0.25	0.32	77.5	77.5
920	Busia	353	5	MOA	0.57	0.72	176.5	176.5
930	Kakamega/Vihiga	3	1	MOA	0.00	0.01	1.25	1.25
	Total	7,012	142		11.41	14.37	3,506	3,506

Notes: (1) Schemes proposed above are based on information as of September 1991.
In actual implementation, due revision / addition should be made to incorporate the up-to-date schemes.
(2) N.A. : No information available, - : No schemes listed (as of Sept. 1991)

付属資料-2. 7 畜産用水開発計画-実施計画案 (1/4)

Code	District	Source Development Plan							Total	Implementation Program (%)	
		Surface Water	Borehole	Shallow Well	Small Dam	Subs-face Dam	Sand Dam	Existing Pipeline		Up to 2000	2001-2010
	Nairobi Province									0	0
110	Nairobi										
	- Quantity (m3/d)	0	0	0	0	0	0	0	0		
	- No. of Facilities	0	0	0	0	0	0	0	0		
	- Cost (mill.US\$)	0	0	0	0	0	0	0	0		
	(mill.K£)	0	0	0	0	0	0	0	0		
	Central Province										
210	Kiambu									36.3	63.7
	- Quantity (m3/d)	5,949	286	8	333	0	0	21	6,597		
	- No. of Facilities	0	13	2	28	0	0	0	43		
	- Cost (mill.US\$)	0	1.07	0.01	0.3	0	0	0	1.37		
	(mill.K£)	0	1.35	0.01	0.37	0	0	0	1.73		
220	Kirinyaga									42.6	57.4
	- Quantity (m3/d)	3,779	58	14	154	0	0	0	4,005		
	- No. of Facilities	0	2	3	12	0	0	0	17		
	- Cost (mill.US\$)	0	0.22	0.01	0.08	0	0	0	0.32		
	(mill.K£)	0	0.28	0.02	0.11	0	0	0	0.4		
230	Muranga									36.4	63.6
	- Quantity (m3/d)	5,734	19	79	305	0	0	0	6,137		
	- No. of Facilities	0	1	16	23	0	0	0	40		
	- Cost (mill.US\$)	0	0.07	0.08	0.11	0	0	0	0.26		
	(mill.K£)	0	0.09	0.1	0.14	0	0	0	0.33		
240	Nyandarua									49.1	50.9
	- Quantity (m3/d)	10,186	1,855	49	881	0	0	51	13,022		
	- No. of Facilities	0	71	7	21	0	0	0	99		
	- Cost (mill.US\$)	0	7.43	0.02	0.86	0	0	0	8.31		
	(mill.K£)	0	9.36	0.03	1.09	0	0	0	10.48		
250	Nyeri									24.7	75.3
	- Quantity (m3/d)	4,969	0	0	200	0	0	0	5,169		
	- No. of Facilities	0	0	0	27	0	0	0	27		
	- Cost (mill.US\$)	0	0	0	0.11	0	0	0	0.11		
	(mill.K£)	0	0	0	0.14	0	0	0	0.14		
	Sub-total									40.6	59.4
	- Quantity (m3/d)	30,617	2,218	150	1,873	0	0	72	34,930		
	- No. of Facilities	0	87	28	111	0	0	0	226		
	- Cost (mill.US\$)	0	8.79	0.12	1.46	0	0	0	10.37		
	(mill.K£)	0	11.08	0.16	1.85	0	0	0	13.08		
	Coast Province										
310	Kilifi									42.8	57.2
	- Quantity (m3/d)	237	1,255	2,371	8	8	7	39	3,925		
	- No. of Facilities	0	47	482	4	5	5	0	543		
	- Cost (mill.US\$)	0	4.39	2.26	0.01	0.02	0.01	0	6.7		
	(mill.K£)	0	5.54	2.85	0.01	0.03	0.02	0	8.44		
320	Kwale									46.8	53.2
	- Quantity (m3/d)	921	2,639	2,529	65	17	49	75	6,295		
	- No. of Facilities	0	68	504	12	10	15	0	609		
	- Cost (mill.US\$)	0	9.57	2.29	0.08	0.04	0.1	0	12.07		
	(mill.K£)	0	12.06	2.88	0.1	0.05	0.12	0	15.23		
330	Lamu									19.7	80.3
	- Quantity (m3/d)	0	1,203	1,442	0	0	0	0	2,645		
	- No. of Facilities	0	32	293	0	0	0	0	325		
	- Cost (mill.US\$)	0	4.04	1.41	0	0	0	0	5.44		
	(mill.K£)	0	5.09	1.77	0	0	0	0	6.86		
340	Mombasa										
	- Quantity (m3/d)	0	0	0	0	0	0	0	0		
	- No. of Facilities	0	0	0	0	0	0	0	0		
	- Cost (mill.US\$)	0	0	0	0	0	0	0	0		
	(mill.K£)	0	0	0	0	0	0	0	0		
350	Taita Taveta									35.2	64.8
	- Quantity (m3/d)	1,876	1,167	1,468	96	22	22	87	4,738		
	- No. of Facilities	0	33	295	7	9	9	0	353		
	- Cost (mill.US\$)	0	4.06	1.43	0.13	0.06	0.04	0	5.72		
	(mill.K£)	0	5.11	1.8	0.17	0.08	0.06	0	7.22		
360	Tana River									43.2	56.8
	- Quantity (m3/d)	2,100	1,852	3,779	65	47	47	30	7,920		
	- No. of Facilities	0	56	649	10	9	9	0	733		
	- Cost (mill.US\$)	0	6.64	3.02	0.09	0.13	0.1	0	9.98		
	(mill.K£)	0	8.37	3.81	0.11	0.17	0.12	0	12.58		
	Sub-total									36.6	63.4
	- Quantity (m3/d)	5,134	8,116	11,589	234	94	125	231	25,523		
	- No. of Facilities	0	236	2,223	33	33	38	0	2,563		
	- Cost (mill.US\$)	0	28.7	10.41	0.31	0.25	0.25	0	39.91		
	(mill.K£)	0	36.17	13.11	0.39	0.33	0.32	0	50.33		

Code	District	Source Development Plan							Total	Implementation Program (%)		
		Surface Water	Borehole	Shallow Well	Small Dam	Subsurface Dam	Sand Dam	Existing Pipeline		Up to 2000	2001-2010	
Eastern Province												
410	Embu										44.8	55.2
	- Quantity (m3/d)	2,176	596	710	102	3	3	12	3,602			
	- No. of Facilities	0	20	146	17	3	3	0	189			
	- Cost (mill.US\$)	0	2.13	0.7	0.08	0.01	0.01	0	2.92			
	(mill.K£)	0	2.68	0.88	0.1	0.01	0.01	0	3.68			
420	Isiolo										21.4	78.6
	- Quantity (m3/d)	3,736	5,949	7,507	46	113	332	10	17,693			
	- No. of Facilities	0	182	1,241	2	14	37	0	1,476			
	- Cost (mill.US\$)	0	21.01	6.47	0.07	0.33	0.7	0	28.57			
	(mill.K£)	0	26.49	8.15	0.08	0.41	0.89	0	36.03			
430	Kitui										49.5	50.5
	- Quantity (m3/d)	542	3,111	6,236	74	224	197	84	10,468			
	- No. of Facilities	0	103	1,251	6	36	34	0	1,430			
	- Cost (mill.US\$)	0	11.46	5.91	0.1	0.64	0.4	0	18.5			
	(mill.K£)	0	14.44	7.45	0.12	0.8	0.51	0	23.33			
440	Machakos										38.4	61.6
	- Quantity (m3/d)	3,927	2,726	5,032	444	95	65	154	12,443			
	- No. of Facilities	0	96	994	34	33	28	0	1,185			
	- Cost (mill.US\$)	0	9.93	4.69	0.6	0.26	0.13	0	15.61			
	(mill.K£)	0	12.52	5.91	0.75	0.33	0.17	0	19.69			
450	Marsabit										21.0	79.0
	- Quantity (m3/d)	753	14,425	11,587	132	539	711	262	28,409			
	- No. of Facilities	0	471	2,128	3	59	77	0	2,738			
	- Cost (mill.US\$)	0	57.43	10.48	0.19	1.56	1.51	0	71.37			
	(mill.K£)	0	72.42	13.21	0.24	1.97	1.91	0	89.75			
460	Meru										43.6	56.4
	- Quantity (m3/d)	10,891	5,417	1,622	624	61	13	2	18,630			
	- No. of Facilities	0	171	331	39	11	8	0	560			
	- Cost (mill.US\$)	0	19.7	1.6	0.71	0.17	0.03	0	22.21			
	(mill.K£)	0	24.85	2.02	0.89	0.22	0.03	0	28.01			
	Sub-total										27.6	72.4
	- Quantity (m3/d)	22,025	32,224	32,694	1,422	1,035	1,321	524	91,245			
	- No. of Facilities	0	1,043	6,091	101	156	187	0	7,578			
	- Cost (mill.US\$)	0	121.66	29.85	1.75	2.97	2.78	0	158.98			
	(mill.K£)	0	153.4	37.62	2.18	3.74	3.52	0	200.49			
North Eastern Province												
510	Garissa										19.4	80.6
	- Quantity (m3/d)	150	3,246	6,781	0	79	48	1	10,305			
	- No. of Facilities	0	91	1,305	0	13	13	0	1,422			
	- Cost (mill.US\$)	0	11.61	6.13	0	0.22	0.1	0	18.06			
	(mill.K£)	0	14.63	7.73	0	0.28	0.12	0	22.77			
520	Mandera										34.1	65.9
	- Quantity (m3/d)	951	2,620	9,342	0	216	400	0	13,529			
	- No. of Facilities	0	94	1,875	0	28	45	0	2,042			
	- Cost (mill.US\$)	0	9.55	9.26	0	0.62	0.85	0	20.28			
	(mill.K£)	0	12.04	11.67	0	0.78	1.07	0	25.57			
530	Wajir										16.4	83.6
	- Quantity (m3/d)	0	2,138	5,427	0	87	205	0	7,857			
	- No. of Facilities	0	98	1,040	0	19	31	0	1,188			
	- Cost (mill.US\$)	0	8.99	5.01	0	0.24	0.43	0	14.67			
	(mill.K£)	0	11.34	6.32	0	0.31	0.54	0	18.5			
	Sub-total										25.4	74.6
	- Quantity (m3/d)	1,101	8,004	21,550	0	382	653	1	31,691			
	- No. of Facilities	0	283	4,220	0	60	89	0	4,652			
	- Cost (mill.US\$)	0	30.15	20.4	0	1.08	1.38	0	53.01			
	(mill.K£)	0	38.01	25.72	0	1.37	1.73	0	66.84			

付属资料-2. 7 畜産用水開発計画-実施計画案 (3/4)

Code	District	Source Development Plan							Total	Implementation Program (%)		
		Surface Water	Borehole	Shallow Well	Small Dam	Subsurface Dam	Sand Dam	Existing Pipeline		Up to 2000	2001-2010	
Nyanza Province												
610	Kisii										33.3	66.7
	- Quantity (m3/d)	13,430	275	299	563	0	0	0	14,567			
	- No. of Facilities	0	10	63	26	0	0	0	99			
	- Cost (mill.US\$)	0	1.01	0.29	0.29	0	0	0	1.58			
	(mill.K£)	0	1.27	0.37	0.36	0	0	0	2			
620	Kisumu										27.9	72.1
	- Quantity (m3/d)	6,489	1,377	2,940	287	0	0	0	11,093			
	- No. of Facilities	0	41	384	16	0	0	0	441			
	- Cost (mill.US\$)	0	5.09	1.83	0.15	0	0	0	7.07			
	(mill.K£)	0	6.42	2.3	0.19	0	0	0	8.92			
630	Siaya										34.9	65.1
	- Quantity (m3/d)	4,776	1,484	3,221	263	0	0	13	9,757			
	- No. of Facilities	0	62	623	28	0	0	0	713			
	- Cost (mill.US\$)	0	5.55	2.94	0.1	0	0	0	8.59			
	(mill.K£)	0	6.99	3.71	0.13	0	0	0	10.83			
640	South Nyanza										36.0	64.0
	- Quantity (m3/d)	3,025	1,428	2,148	209	8	8	0	6,826			
	- No. of Facilities	0	68	366	47	8	8	0	497			
	- Cost (mill.US\$)	0	5.38	1.77	0.1	0.02	0.02	0	7.28			
	(mill.K£)	0	6.79	2.23	0.13	0.02	0.02	0	9.18			
	Sub-total										31.1	68.9
	- Quantity (m3/d)	27,720	4,564	8,608	1,322	8	8	13	42,243			
	- No. of Facilities	0	181	1,436	117	8	8	0	1,750			
	- Cost (mill.US\$)	0	17.03	6.83	0.64	0.02	0.02	0	24.52			
	(mill.K£)	0	21.47	8.61	0.81	0.02	0.02	0	30.93			
Rift Valley Province												
710	Kajiado										47.7	52.3
	- Quantity (m3/d)	9,193	9,559	7,539	593	160	190	174	27,408			
	- No. of Facilities	0	328	1,311	11	25	30	0	1,705			
	- Cost (mill.US\$)	0	37.2	6.52	0.8	0.46	0.4	0	45.37			
	(mill.K£)	0	46.91	8.22	1.01	0.57	0.5	0	57.21			
720	Kericho										43.6	56.4
	- Quantity (m3/d)	25,541	281	238	1,148	0	0	0	27,208			
	- No. of Facilities	0	10	50	27	0	0	0	87			
	- Cost (mill.US\$)	0	1.12	0.22	0.61	0	0	0	1.94			
	(mill.K£)	0	1.41	0.27	0.77	0	0	0	2.44			
730	Laikipia										27.0	73.0
	- Quantity (m3/d)	6,650	9,227	1,816	943	113	91	0	18,840			
	- No. of Facilities	0	279	360	20	21	18	0	698			
	- Cost (mill.US\$)	0	35.51	1.75	1.22	0.32	0.19	0	38.99			
	(mill.K£)	0	44.77	2.21	1.53	0.4	0.24	0	49.16			
740	Nakuru										19.7	80.3
	- Quantity (m3/d)	19,604	14,484	2,694	1,925	182	117	1,762	40,768			
	- No. of Facilities	0	470	277	26	25	22	0	820			
	- Cost (mill.US\$)	0	56.82	1.44	1.64	0.52	0.24	0	60.66			
	(mill.K£)	0	71.65	1.81	2.07	0.66	0.3	0	76.49			
750	Narok										55.4	44.6
	- Quantity (m3/d)	25,717	11,730	13,201	1,954	151	139	77	52,969			
	- No. of Facilities	0	392	2,326	28	22	21	0	2,789			
	- Cost (mill.US\$)	0	44.52	11.27	1.63	0.43	0.29	0	58.14			
	(mill.K£)	0	56.14	14.22	2.05	0.54	0.37	0	73.32			
760	Trans Nzoia										35.1	64.9
	- Quantity (m3/d)	6,529	0	0	268	0	0	0	6,797			
	- No. of Facilities	0	0	0	15	0	0	0	15			
	- Cost (mill.US\$)	0	0	0	0.17	0	0	0	0.17			
	(mill.K£)	0	0	0	0.21	0	0	0	0.21			
770	Uasin Gishu										22.9	77.1
	- Quantity (m3/d)	11,335	0	0	465	0	0	0	11,801			
	- No. of Facilities	0	0	0	22	0	0	0	22			
	- Cost (mill.US\$)	0	0	0	0.28	0	0	0	0.28			
	(mill.K£)	0	0	0	0.35	0	0	0	0.35			

付属資料- 2. 7 畜産用水開発計画-実施計画案 (4/4)

Code	District	Source Development Plan							Total	Implementation Program (%)	
		Surface Water	Borehole	Shallow Well	Small Dam	Subsurface Dam	Sand Dam	Existing Pipeline		Up to 2000	2001-2010
810	Baringo									42.5	57.5
	- Quantity (m3/d)	3,932	3,067	1,574	210	30	26	51	8,890		
	- No. of Facilities	0	97	172	31	16	12	0	328		
	- Cost (mill.US\$)	0	11.11	0.84	0.18	0.08	0.05	0	12.25		
	(mill.K£)	0	14.01	1.05	0.23	0.1	0.07	0	15.45		
820	Elgey Marakwet									40.8	59.2
	- Quantity (m3/d)	9,895	1,730	4,028	455	24	0	207	16,339		
	- No. of Facilities	0	63	675	25	3	0	0	766		
	- Cost (mill.US\$)	0	6.61	3.46	0.39	0.07	0	0	10.52		
	(mill.K£)	0	8.33	4.36	0.49	0.09	0	0	13.27		
830	Nandi									51.8	48.2
	- Quantity (m3/d)	12,211	0	0	414	0	0	0	12,625		
	- No. of Facilities	0	0	0	23	0	0	0	23		
	- Cost (mill.US\$)	0	0	0	0.22	0	0	0	0.22		
	(mill.K£)	0	0	0	0.28	0	0	0	0.28		
840	Samburu									36.7	63.3
	- Quantity (m3/d)	909	4,702	6,544	86	112	155	2	12,510		
	- No. of Facilities	0	242	1,287	6	21	24	0	1,580		
	- Cost (mill.US\$)	0	20.68	5.98	0.12	0.32	0.32	0	27.42		
	(mill.K£)	0	26.07	7.54	0.15	0.4	0.41	0	34.57		
850	Turkana									34.7	65.3
	- Quantity (m3/d)	3,781	22,265	34,948	64	1,157	1,417	0	63,632		
	- No. of Facilities	0	796	5,765	2	124	150	0	6,837		
	- Cost (mill.US\$)	0	80.87	29.46	0.09	3.35	3.02	0	116.78		
	(mill.K£)	0	101.97	37.15	0.11	4.22	3.8	0	147.26		
860	West Pokot									52.0	48.0
	- Quantity (m3/d)	1,588	692	2,095	75	20	10	0	4,480		
	- No. of Facilities	0	38	417	14	10	7	0	486		
	- Cost (mill.US\$)	0	2.85	1.88	0.07	0.05	0.02	0	4.87		
	(mill.K£)	0	3.6	2.37	0.09	0.07	0.03	0	6.14		
	Sub-total									35.4	64.6
	- Quantity (m3/d)	136,885	77,737	74,677	8,601	1,949	2,145	2,273	304,267		
	- No. of Facilities	0	2,715	12,640	250	267	284	0	16,156		
	- Cost (mill.US\$)	0	297.29	62.82	7.42	5.6	4.53	0	377.61		
	(mill.K£)	0	374.86	79.2	9.34	7.05	5.72	0	476.15		
Western Province											
910	Bungoma									45.6	54.4
	- Quantity (m3/d)	8,921	167	409	425	0	0	0	9,922		
	- No. of Facilities	0	9	84	19	0	0	0	112		
	- Cost (mill.US\$)	0	0.57	0.4	0.22	0	0	0	1.19		
	(mill.K£)	0	0.72	0.5	0.28	0	0	0	1.5		
920	Busia									49.0	51.0
	- Quantity (m3/d)	3,860	645	1,643	162	5	4	0	6,319		
	- No. of Facilities	0	28	308	16	3	2	0	357		
	- Cost (mill.US\$)	0	2.5	1.53	0.09	0.01	0.01	0	4.14		
	(mill.K£)	0	3.16	1.92	0.11	0.02	0.01	0	5.22		
930	Kakamega									43.1	56.9
	- Quantity (m3/d)	12,226	0	0	365	0	0	0	12,591		
	- No. of Facilities	0	0	0	41	0	0	0	41		
	- Cost (mill.US\$)	0	0	0	0.14	0	0	0	0.14		
	(mill.K£)	0	0	0	0.17	0	0	0	0.17		
	Sub-total									45.5	54.5
	- Quantity (m3/d)	25,007	812	2,052	952	5	4	0	28,832		
	- No. of Facilities	0	37	392	76	3	2	0	510		
	- Cost (mill.US\$)	0	3.07	1.93	0.45	0.01	0.01	0	5.47		
	(mill.K£)	0	3.88	2.42	0.56	0.02	0.01	0	6.89		
Total											
	- Quantity (m3/d)	248,489	133,675	151,320	14,404	3,473	4,256	3,114	558,731	33.9	66.1
	- No. of Facilities	0	4,582	27,030	688	527	608	0	33,435		
	- Cost (mill.US\$)	0	506.69	132.36	12.03	9.93	8.97	0	669.87		
	(mill.K£)	0	638.87	166.84	15.13	12.53	11.32	0	844.71		

付属資料-2. 8 乾燥地遊牧地区給水ポイント設置計画-実施計画案

District Code	Project	Assumed Nomadic Pasturage Area (km ²)	No. of Watering Points (Nos)	Executing Agency	Cost (million)		Implementation of watering points (No.)	
					US\$	KE	up to 2000	2001-2010
<u>Nairobi Province</u>								
110	Nairobi	-	-	-	-	-	-	-
<u>Central Province</u>								
210	Kiambu	-	-	-	-	-	-	-
220	Kirinyaga	-	-	-	-	-	-	-
230	Muranga	-	-	-	-	-	-	-
240	Nyandarua	-	-	-	-	-	-	-
250	Nyeri	-	-	-	-	-	-	-
<u>Coast Province</u>								
310	Kilifi	7,562	12	MOWD	2.3	2.8	4	8
320	Kwale	5,503	9	MOWD	1.9	2.4	3	6
330	Lamu	3,481	6	MOWD	1.1	1.4	2	4
340	Mombasa	-	-	-	-	-	-	-
350	Taita Taveta	4,889	8	MOWD	1.5	1.9	2	6
360	Tana River	32,277	52	MOWD	8.9	11.2	16	36
<u>Eastern Province</u>								
410	Embu	-	-	-	-	-	-	-
420	Isiolo	21,423	34	MOWD	4.9	6.2	10	24
430	Kitui	20,889	33	MOWD	5.3	6.7	10	23
440	Machakos/Makue	6,424	10	MOWD	1.7	2.1	3	7
450	Marsabit	20,305	32	MOWD	4.9	6.2	10	22
460	Meru	3,098	5	MOWD	0.8	1.0	2	3
<u>Northeastern Province</u>								
510	Garissa	39,187	63	MOWD	11.6	14.6	19	44
520	Mandera	23,946	38	MOWD	5.3	6.6	11	27
530	Wajir	53,124	85	MOWD	11.1	14.0	26	59
<u>Nyanza Province</u>								
610	Kisii/Nyamira	-	-	-	-	-	-	-
620	Kisumu	-	-	-	-	-	-	-
630	Siaya	-	-	-	-	-	-	-
640	South Nyanza	-	-	-	-	-	-	-
<u>Rift Valley Province</u>								
710	Kajiado	13,830	22	MOWD	3.2	4.0	7	15
720	Kericho	-	-	-	-	-	-	-
730	Laikipia	7,530	12	MOWD	1.9	2.4	4	8
740	Nakuru	-	-	-	-	-	-	-
750	Narok	13,481	22	MOWD	3.2	4.0	7	15
760	Trans Nzoia	-	-	-	-	-	-	-
770	Uasin Gishu	-	-	-	-	-	-	-
810	Baringo	7,087	11	MOWD	1.9	2.4	3	8
820	Elgeyo Marakwet	-	-	-	-	-	-	-
830	Nandi	1,690	3	MOWD	0.5	0.6	1	2
840	Samburu	13,563	22	MOWD	2.4	3.1	7	15
850	Turkana	44,837	72	MOWD	9.1	11.5	22	50
860	West Pokot	4,855	8	MOWD	1.1	1.3	2	6
<u>Western Province</u>								
910	Bungoma	-	-	-	-	-	-	-
920	Busia	-	-	-	-	-	-	-
930	Kakamega/Vihiga	-	-	-	-	-	-	-
Total			559		85	107	171	388

Note : Nomadic pasturage area assumed to be bushland and grassland in ASAL area after deleting area for managed pasture. (see Table F1.9)
30 % of schedule quantity to be implemented towards year 2000

付属資料 - 2. 9 水力発電開発計画 - 実施計画案

District Code	Project	Description	Executing Agency	Cost (million)		Implementation Schedule														
				US\$	K£	93	95	2000	2	4	6	8	10							
620	Sondur/Miriu	Hydropower 60MW (No.1 P/S) Sondur river -detailed design completed in 1991 -Irrigation included	KPLC/ LBDA	133	168	●	●	●	●											
		Hydropower 20.6MW (No.2 P/S) -Feasibility study completed in 1991 -Cost of detail design included in No.1 P/S	KPLC	36	45	★	★	●	●	●										
460	Low Grand Falls	Hydropower 120MW (Tana river) -Multipurpose development to be assessed	KPC/ TARDA	291	367	★	★	★	●	●	●									
750	Oldorko	Hydropower 72MW (Ewaso Ngino South river) -Irrigation included	KPC	71	89	★	★	★	●	●	●									
610	Magwagwa	Hydropower 120MW (Sondur river) -Irrigation included -Feasibility study completed in 1991	KPC/ LBDA	329	415			★	★	●	●	●								
410	Gitaru #3 Extension	Hydropower 72.5MW (Tana river) -Extension of existing Gitaru P/S	KPC/ TRDC	25	32		★	★	★	●	●	●								
460	Mutonga	Hydropower 60MW (Tana river) -Multipurpose development to be assessed	KPC/ TARDA	149	188		★	★	★	★	●	●	●	●						
	Total			1,034	1,304															

Note: ★ Study
 ★ Design
 ● Construction
 No hydropower schemes envisaged for period of 2005 - 2010.

付属資料- 2. 10 洪水防御計画-実施計画案

District Code	Project	Description	Executing Agency	Cost (million)		Implementation Schedule														
				US\$	K£	93	95	2000					2	4	6	8	10			
620	Kano Plain (Nyando river)	- Heightening of existing dykes (2 km) - Construction of new dykes (69 km)	MOWD/ LBDA	20.7	26.1	*	*	*	*	*	*	*								
110	Nairobi City (Nairobi river, etc)	- Enlargment of existing channels/culverts (13 sites) - Channel improvement (11 sites)	MOLG	10.8	13.6	*	*	*	*	*	*	*								
630	Yala Swamp (Yala/Nzoia river)	- Rehabilitation of existing dykes (25 km) - Construction of new dykes (16 km)	MOWD/ LBDA	17.7	22.3				*	*	*	*	*	*	*					
640	Kuja Rivermouth (Kuja river)	- Construction of new dykes (10 km)	MOWD/ LBDA	5.0	6.3								*	*	*	*	*	*	*	*
350	Luni Rivermouth (Luni river)	- Construction of new dykes (11 km)	MOWD	8.3	10.5									*	*	*	*	*	*	*
	Total			62.5	78.8															

Note: * Study/Design
● Construction

付属資料- 2. 11 都市排水及び河川改修計画-実施計画案 (1 / 2)

District Code	Project	Description	Executing Agency	Cost (million)		Implementation Schedule																	
				US\$	K£	93	95	2000	2	4	6	8	10										
Urban Drainage Projects																							
110	Nairobi	P = 1,413,100 , A = 90.0 Km2	MOLG	360.0	453.6	☆	☆	●	●	●													
210	Kiambu	P = 4,500 , A = 1.6 Km2	"	12.9	16.3												☆	☆	☆	●	●		
210	Thika	P = 59,000 , A = 1.9 Km2	"	14.8	18.6												☆	☆	☆	●	●		
220	Kerugoya	P = 8,900 , A = 1.0 Km2	"	7.7	9.7												☆	☆	☆	●	●		
230	Murang'a	P = 21,700 , A = 5.3 Km2	"	31.5	39.7												☆	☆	☆	●	●		
240	Olkalou	P = 9,700 , A = 0.8 Km2	"	6.0	7.5												☆	☆	☆	●	●		
250	Nyeri	P = 97,000 , A = 1.6 Km2	"	13.1	16.5					☆	☆	☆	●	●	●								
310	Kilifi	P = 12,500 , A = 0.6 Km2	"	4.9	6.2												☆	☆	☆	●	●		
310	Malindi	P = 36,700 , A = 1.0 Km2	"	7.6	9.6												☆	☆	☆	●	●		
320	Kwale	P = 3,700 , A = 0.9 Km2	"	7.2	9.1												☆	☆	☆	●	●		
330	Lamu	P = 9,000 , A = 0.9 Km2	"	7.0	8.8												☆	☆	☆	●	●		
340	Mombasa	P = 479,600 , A = 11.6 Km2	"	46.6	58.7	☆	☆	☆	●	●													
350	Voi	P = 12,200 , A = 1.2 Km2	"	9.2	11.6													☆	☆	☆	●	●	
350	Wundanyi	P = 2,700 , A = 0.3 Km2	"	2.2	2.8													☆	☆	☆	●	●	
360	Hola	P = 8,100 , A = 0.9 Km2	"	7.4	9.3													☆	☆	☆	●	●	
410	Embu	P = 18,400 , A = 1.0 Km2	"	7.6	9.6						☆	☆	☆	●	●	●							
420	Isiolo	P = 15,900 , A = 0.5 Km2	"	3.6	4.5													☆	☆	☆	●	●	
430	Kitui	P = 9,300 , A = 0.5 Km2	"	3.6	4.6													☆	☆	☆	●	●	
440	Machakos	P = 91,100 , A = 2.8 Km2	"	22.1	27.8			☆	☆	☆	●	●	●										
440	Mitaboni	P = 29,400 , A = 0.2 Km2	"	1.6	2.0			☆	☆	☆	●	●	●										
450	Marsabit	P = 11,100 , A = 0.1 Km2	"	0.8	1.1													☆	☆	☆	●	●	
460	Meru	P = 78,900 , A = 0.3 Km2	"	2.7	3.4			☆	☆	☆	●	●	●										
510	Garissa	P = 29,100 , A = 0.8 Km2	"	6.4	8.1					☆	☆	☆	●	●	●								
520	Mandera	P = 6,500 , A = 0.1 Km2	"	0.5	0.6													☆	☆	☆	●	●	
530	Wajir	P = 21,400 , A = 0.2 Km2	"	1.5	1.9													☆	☆	☆	●	●	
610	Kisii	P = 45,800 , A = 2.6 Km2	"	21.1	26.6						☆	☆	☆	●	●	●							
620	Kisumu	P = 188,700 , A = 5.6 Km2	"	33.5	42.2			☆	☆	☆	●	●	●										
630	Siaya	P = 19,400 , A = 0.1 Km2	"	1.0	1.2													☆	☆	☆	●	●	
640	Homa Bay	P = 23,000 , A = 1.2 Km2	"	9.2	11.6													☆	☆	☆	●	●	
710	Kajiado	P = 6,000 , A = 1.2 Km2	"	9.2	11.6														☆	☆	☆	●	●
720	Kericho	P = 41,200 , A = 1.2 Km2	"	9.4	11.8						☆	☆	☆	●	●	●							
730	Nanyuki	P = 25,100 , A = 2.0 Km2	"	15.6	19.7						☆	☆	☆	●	●	●							
740	Naivasha	P = 38,500 , A = 0.9 Km2	"	7.2	9.1	☆	☆	☆	●	●	●												
740	Nakuru	P = 172,200 , A = 13.0 Km2	"	51.8	65.3	☆	☆	☆	●	●	●												
750	Narok	P = 12,000 , A = 0.8 Km2	"	6.4	8.1													☆	☆	☆	●	●	
760	Kitale	P = 56,400 , A = 4.2 Km2	"	25.2	31.8					☆	☆	☆	●	●	●								
770	Eldoret	P = 112,900 , A = 8.6 Km2	"	34.3	43.2					☆	☆	☆	●	●	●								
810	Kabarnet	P = 9,400 , A = 0.2 Km2	"	1.3	1.6														☆	☆	☆	●	●
820	Iten	P = 6,300 , A = 0.3 Km2	"	2.6	3.3														☆	☆	☆	●	●
830	Kapsabet/Baraton	P = 13,400 , A = 1.6 Km2	"	13.1	16.5														☆	☆	☆	●	●
840	Maralal	P = 17,800 , A = 0.7 Km2	"	5.6	7.1														☆	☆	☆	●	●
850	Lodwar	P = 9,300 , A = 0.2 Km2	"	1.8	2.2														☆	☆	☆	●	●
860	Kapenguria/ Makutano	P = 12,000 , A = 0.4 Km2	"	2.8	3.5														☆	☆	☆	●	●
910	Bungoma	P = 29,500 , A = 1.9 Km2	"	15.0	18.8						☆	☆	☆	●	●	●							
910	Webuye	P = 26,600 , A = 0.2 Km2	"	1.8	2.3						☆	☆	☆	●	●	●							
920	Busia	P = 13,300 , A = 0.1 Km2	"	0.9	1.1						☆	☆	☆	●	●	●							
930	Kakamega	P = 49,200 , A = 2.1 Km2	"	16.6	20.9						☆	☆	☆	●	●	●							
	Sub-total	P = 3,417,500 , A = 174.6 Km2	"	874.0	1,101.2																		
Note:		☆ Study/Design ● Construction P = Estimated population (1990) A : Area																					

付属資料- 2. 11 都市排水及び河川改修計画-実施計画案 (2 / 2)

District Code	Project	Description	Executing Agency	Cost (million)		Implementation Schedule															
				US\$	K£	93	95	2000	2	4	6	8	10								
All	<u>Minor Ad-hoc River Improvement Works</u> Various rivers	To be taken up as the need is identified	MOWD	90	113.4	*	*	•	•	•	•	•	•	•	•	•	•	•	•	•	•
360	<u>Long-term Improvement of Lower Tana River</u> Lower Tana improvement	Experimental work for rectifying river meanders and bank protection	MOWD/ TARDA	40	50.4	•	•	•	•	•	•	•									
	Sub-total			130	163.8																
	TOTAL			1004	1265.0																
Note:		☆ Study/Design ● Construction																			

付属資料 - 2. 12 開発事業費の算定

Development Sector	Budget Appropriated for	Financial Requirement (Million)					
		1993 - 2000		2001 - 2010		Total	
		US\$	K€	US\$	K€	US\$	K€
1. D&I Water Supply		3,470	4,372	4,106	5,174	7,576	9,546
(1) Urban water supply	MOWD *1						
- Source development (Dam)		366	461	211	266	577	727
- Water supply system		2,614	3,294	1,758	2,215	4,372	5,509
Sub-total		2,980	3,755	1,969	2,481	4,949	6,236
(2) Rural water supply	MOWD *2						
- Source development		490	617	924	1,165	1,414	1,782
- Water supply system		-	-	1,213	1,528	1,213	1,528
Sub-total		490	617	2,137	2,693	2,627	3,310
2. Sewerage Development	MOLG *3	420	529	285	359	705	888
3. Irrigation Development		201	253	772	973	973	1,226
(1) Major irrigation projects	MORD *4	196	247	767	966	963	1,213
(2) Small irrigation schemes	MOA *5	5	6	5	7	10	13
4. Livestock Water Development		252	318	503	633	755	951
(1) Source development	MOLD *6	227	286	443	558	670	844
(2) Water points in nomadic pasturage land	MOLD *6	25	32	60	75	85	107
5. Hydropower Development	MOE *7	542	683	492	621	1,034	1,304
6. River and Flood Works		624	785	443	558	1,067	1,343
(1) Major flood control projects	MOWD *8	32	40	31	39	63	79
(2) Urban drainage works	MOLG *3	525	661	349	440	874	1,101
(3) Minor river improvement	MOWD *8	27	34	63	79	90	113
(4) Improvement of Lower Tana	MOWD *9	40	50	-	-	40	50
Total		5,509	6,940	6,601	8,318	12,110	15,258

- Notes: Executing agencies will be;
- *1 : MOWD, NWCPC, Municipalities (NCC, etc)
 - *2 : MOWD, NWCPC, County councils, NGO, etc
 - *3 : Municipal and urban councils under technical assistance by MOWD
 - *4 : NIA, LBDA, TARDA, KVDA and other basin development authorities
 - *5 : MOA and some agencies listed for *4
 - *6 : Implementation to be entrusted to MOWD and/or basin development authorities
 - *7 : KPC, KPLC and basin development authorities
 - *8 : MOWD or to be entrusted to basin development authorities and municipal/urban councils
 - *9 : To be entrusted to TARDA
- Irrigation development cost represents the cost disbursed during 1993-2010 and is therefore different from total project cost

付属資料 - 2. 13 開発事業費年間支出計画

(Unit: million US\$)

Development Sector	Year												Total							
	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004		2005	2006	2007	2008	2009	2010	
1 D&I Water Supply	509.7	509.7	497.1	497.1	388.8	388.8	339.6	339.6	385.7	385.7	428.0	428.0	441.3	441.3	398.6	399.4	399.4	399.4	7,576	
(1) Urban water supply	77.9	77.9	36.3	36.3	29.9	29.9	39.0	39.0	25.0	25.0	56.8	56.8	23.8	23.8	0.0	0.0	0.0	0.0	577	
Source development (dam)	370.5	370.5	399.5	399.5	297.6	297.6	239.3	239.3	147.0	147.0	157.5	157.5	203.8	203.8	185.0	185.0	185.8	185.8	4,372	
Water supply system	448.4	448.4	435.8	435.8	327.5	327.5	278.3	278.3	172.0	172.0	214.3	214.3	227.6	227.6	185.0	185.0	185.8	185.8	4,949	
Sub-total	61.3	61.3	61.3	61.3	61.3	61.3	61.3	61.3	92.4	92.4	92.4	92.4	92.4	92.4	92.3	92.3	92.3	92.3	1,414	
(2) Rural water supply	61.3	61.3	61.3	61.3	61.3	61.3	61.3	61.3	121.3	121.3	121.3	121.3	121.3	121.3	121.3	121.3	121.3	121.3	1,213	
Source development	61.3	61.3	61.3	61.3	61.3	61.3	61.3	61.3	213.7	213.7	213.7	213.7	213.7	213.7	213.6	213.6	213.6	213.6	2,627	
Water supply system	80.6	80.6	80.4	80.4	22.6	22.6	26.3	26.3	22.7	22.7	22.9	22.9	37.0	37.0	33.0	33.0	27.2	27.2	705	
Sub-total	32.7	33.9	9.9	15.4	44.4	22.8	16.3	24.9	34.6	36.3	49.8	54.1	124.7	140.7	133.5	103.6	79.9	15.8	973	
2 Sewerage Development (for 158 urban centres)	32.1	33.3	9.3	14.8	43.8	22.2	15.7	24.3	34.0	35.7	49.2	53.5	124.1	140.1	132.9	103.0	79.5	15.2	963	
(1) Major irrigation projects	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	10	
(2) Small irrigation schemes	31.5	31.5	31.5	31.5	31.5	31.5	31.6	31.6	50.3	50.3	50.3	50.3	50.3	50.3	50.3	50.3	50.3	50.3	755	
4 Livestock Water Development	28.4	28.4	28.4	28.4	28.4	28.4	28.4	28.4	44.3	44.3	44.3	44.3	44.3	44.3	44.3	44.3	44.3	44.3	670	
(1) Source development	3.1	3.1	3.1	3.1	3.1	3.1	3.2	3.2	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	85	
(2) Water points in nomadic pasture land	20.0	27.0	52.0	45.0	63.0	93.0	113.0	129.0	129.0	159.0	121.0	56.0	27.0	22.3	38.2	71.2	55.3	39.4	1,034	
5 Hydropower Development	5.0	5.0	99.5	104.7	139.9	162.5	73.4	33.1	31.4	50.6	66.4	46.5	22.1	22.3	38.2	71.2	55.3	39.4	1,067	
6 River and Flood Works																				
(1) Major flood control projects				5.2	5.2	8.8	8.8	3.6	4.4	4.4	4.4	4.4	0.0	1.7	1.7	4.4	2.8	2.8	63	
(2) Urban drainage works			90.0	90.0	125.2	144.2	55.1	20.0	20.7	39.9	55.7	35.8	15.8	14.3	30.2	60.5	46.2	30.3	874	
(3) Minor river improvement			4.5	4.5	4.5	4.5	4.5	4.5	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	90	
(4) Improvement of Lower Tana			5.0	5.0	5.0	5.0	5.0	5.0											40	
Total (US\$)	679.5	687.7	770.4	774.1	690.2	721.2	600.2	584.5	653.7	704.6	738.4	657.8	702.4	691.6	653.6	656.7	612.1	532.1	12,110	
(US\$)	856.1	866.5	970.7	975.3	869.6	908.7	756.2	736.4	823.6	897.8	930.3	823.8	884.9	871.3	823.5	827.3	771.1	670.3	15,258	

付属資料－3

代替財源シナリオAにおける実施計画案 (縮小財源シナリオA：50%)

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付属資料-3.1 都市水道計画-実施計画案

District Code	Urban Name	City Code	Future Raw Water Source	Cost (million)		Implementation Schedule											
				US\$	K£	93	95	2000		2	4	6	8	10			
110	Nairobi	U-1	Thika Dam, Ndaruga, Ruiru-A, Chania-B	1,061.6	1,337.7	•	•	•				•	•	•	•	•	•
210	Kiambu	U-3	Kimbea Dam (Rui Ruaka r.)	9.1	11.4					•	•					•	•
220	Kerugoya	U-12	Kiringa River	8.3	10.5	•	•									•	•
230	Maragua	U-15	Githanji river	15.1	19.0			•	•								•
240	Oi Kalou	U-19	Malewa River	10.7	13.5					•	•						•
250	Nyeri	U-22	Chania River	50.3	63.4					•	•					•	•
310	Malindi	U-26	Sabaki Pipeline & Race Dam	64.4	81.1					•	•						•
320	Kwale	U-27	Marere pipeline	4.8	6.0					•	•						•
330	Lamu	U-31	P/L from Tana River + B/H	37.5	47.3					•	•						•
340	Mombasa	U-32	2nd Mzimba/Mwachi Dam, Peruba Dam	441.6	556.4	•	•	•	•			•	•	•	•	•	•
350	Wundanyi	U-34	Sigaso/Manguri River	0.9	1.2												•
360	Hola	U-36	Tana River	6.8	8.6					•	•						•
410	Embu	U-40	Lower Kapingazi River + Upper Rupingazi River	8.8	11.2					•	•						•
430	Kisumu	U-43	Masinga Dam	9.4	11.9	•	•										•
440	Machakos	U-46	Athi River P/L	78.1	98.4					•	•					•	•
440	Wote	U-141	Kaji river + Nzuuni river	3.3	4.1					•	•						•
450	Murambit	U-55	Boreholes + Small dams/Sub-surface dam/Spring	177.7	223.9	•	•	•	•			•	•	•	•	•	•
460	Meru	U-58	Kathita river	43.5	54.9					•	•						•
510	Garissa	U-67	Tana River	12.9	16.3					•	•						•
520	Mandera	U-68	Dawa River	3.1	4.0					•	•						•
530	Wajir	U-71	Boreholes + Ewaso Ng'iro River	172.3	217.1	•	•	•	•			•	•	•	•	•	•
610	Nyandarua + Kebirigo	U-144	Kuja river	11.6	14.6					•	•						•
610	Kisumu	U-76	Bunyuyu Dam	27.5	34.7					•	•						•
620	Kisumu & + Kiboswa	U-79	Kibos dam	104.8	132.1					•	•					•	•
630	Siaya	U-83	Yala River	16.0	20.1					•	•						•
640	Homa Bay	U-85	Lake Victoria	12.5	15.8					•	•						•
710	Ngong	U-89	Kerarapon Spring	14.6	18.4					•	•						•
720	Kericho	U-94	Dimlich Dam, Kinugung Dam	24.2	30.5					•	•						•
730	Nanyuki	U-97	Liki river	18.6	23.5					•	•						•
740	Nakuru	U-104	Turasha P/L + Malewa Dam + Itare Dam	212.0	267.1					•	•					•	•
750	Narok	U-105	Upper Narok Dam	30.9	39.0					•	•						•
760	Kitale	U-107	Koitobos river	34.8	43.8					•	•						•
770	Eldoret	U-110	Moiaba Dam + Nzoiia river	135.9	171.2					•	•					•	•
810	Kabarnet	U-112	Kirandich Dam	27.3	34.4	•	•										•
820	Iten + Tambach	U-116	Moiaba Dam	12.7	16.0					•	•						•
830	Kapsabet + Baraton	U-118	Mokong river	11.8	14.9					•	•						•
840	Maralal	U-119	Loiyas/Yamo river	16.0	20.2					•	•						•
860	Kapenguria/Makutao	U-123	Kapenguria River	8.9	11.2					•	•						•
910	Bungoma	U-124	Kuywa River	26.8	33.7					•	•						•
920	Busia	U-127	Sio river	14.1	17.7					•	•						•
930	Vihiga + Mejengo	U-129	Edzawa River (Kinondi River)	5.1	6.4					•	•						•
930	Kakamega	U-132	Isiukhu River, Mukulusi Dam	29.2	36.7					•	•						•
TOTAL				3,015.9	3,800.1												

Note: • Construction

付属资料-3. 2 下水処理計画-実施計画案

District Code	Urban Name	City Code	Future Raw Water Source	Cost (million)		Implementation Schedule														
				US\$	K£	93	95	2000			2	4	6	8	10					
110	Nairobi	U-1	Thika Dam, Ndarugu, Ruira-A, Chania-B	214.81	270.66	•	•	•												
210	Kisumu	U-3	Kinbaa Dam (Rui Ruak r.)	0.57	0.72															
220	Kerugoya	U-12	Kiringa River	1.17	1.48	•	•													
230	Muragua	U-15	Githanji river	3.08	3.88															
240	Olkaria	U-19	Malewa River	1.31	1.65															
250	Nyeri	U-22	Chania River	23.74	29.91															
310	Malindi	U-26	Sabaki Pipeline & Rure Dam	10.56	13.30															
320	Kwale	U-27	Marere pipeline	0.53	0.66															
330	Lamu	U-31	P/L from Tana River + B/H	1.19	1.50															
340	Mombasa	U-32	2nd Mzima/Mwachi Dam, Fernba Dam	57.41	72.33															
350	Wundanyi	U-34	Sigaso/Manguri River	0.28	0.35															
360	Hola	U-36	Tana River	1.22	1.54															
410	Embu	U-40	Lower Kapinguzi River + Upper Kapinguzi River	2.47	3.12															
430	Kitui	U-43	Masinga Dam	1.40	1.77	•	•													
440	Machakos	U-46	Athi River P/L	22.81	28.74															
440	Wote	U-141	Kaithi river + Nanyuni river	0.31	0.39															
450	Marsabit	U-55	Boreholes + Small dams/Sub-surface dam/Spring	1.65	2.07															
460	Meru	U-58	Kashita river	20.54	25.88															
510	Garissa	U-67	Tana River	8.08	10.19															
520	Mandera	U-68	Daus River	0.66	0.83															
530	Wajir	U-71	Boreholes + Ewaso Ng'iro River	2.65	3.34															
610	Nyamira + Kebirigo	U-144	Kuja river	1.12	1.41															
610	Kisii	U-76	Bunyonyu Dam	9.24	11.64															
620	Kisumu & + Koboswa	U-79	Kibos dam	37.19	46.85															
630	Siaya	U-83	Yala River	1.96	2.47															
640	Homa Bay	U-85	Lake Victoria	2.50	3.16															
710	Ngong	U-89	Kerarapon Spring	2.86	3.61															
720	Kericho	U-94	Dimbitch Dam, Kimugung Dam	9.72	12.24															
730	Nanyuki	U-97	Liki river	7.94	10.01															
740	Nakuru	U-104	Turasha P/L + Maleaa Dam + Itare Dam	55.47	69.89															
750	Narok	U-105	Upper Narok Dam	3.00	3.78															
760	Kitale	U-107	Koitobos river	16.08	20.26															
770	Eldoret	U-110	Moiben Dam + Nzoi river	31.47	39.65															
810	Kisumu	U-112	Kirandich Dam	1.20	1.52	•	•													
820	Iteet+Tambach	U-116	Moiben Dam	0.70	0.88															
830	Kapsabet+Baraton	U-118	Mekong river	1.93	2.44															
840	Maralal	U-119	Loikat/Yamo river	2.66	3.35															
860	Kapenguria/Makutao	U-123	Kapenguria River	1.65	2.08															
910	Bungoma	U-124	Kuywa River	9.50	11.97															
920	Busia	U-127	Sio river	2.39	3.01															
930	Vihiga+Majengo	U-129	Edzawa River (Kimondi River)	0.50	0.63															
930	Kakamega	U-132	Isiukhu River, Mokuhsi Dam	12.30	15.49															
TOTAL				587.82	740.65															

Note: • Construction

付属資料- 3. 3 かんがい計画-実施計画案

District Code	Project	Development Area (ha)	Executing Agency	Cost (million)		Implementation Schedule															
				US\$	K£	93	95	2000	2	4	6	8	10								
	Small Scale Schemes	7,000	MOA	11.4	14.4	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
220	Mwea extension	2,900	NIB	63.7	80.3	★	★	●	●	●	●	●	●	●	●	●	●	●	●	●	
360	Tana Delta	12,000	TARDA	141.4	178.2	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
410	Lower Ruringazi	1,800	TARDA	6.0	7.6			☆	☆	★	★	●	●	●	●	●	●	●	●	●	
460	Kunati	1,050	TARDA	3.5	4.4			☆	☆	★	★	●	●	●	●	●	●	●	●	●	
620	Kano Plain	25,640	LBDA	232.5	293.0	★	★	●	●	●	●	●	●	●	●	●	●	●	●	●	
630	Lower Nzoia/ Bunyala Extension	10,480	NIB	12.4	15.6	☆	☆	★	★	●	●	●	●	●	●	●	●	●	●	●	
640	Lower Kuja	1,900	LBDA	5.6	7.1			☆	☆	★	★	●	●	●	●	●	●	●	●	●	
640	Kimira	2,000	LBDA	18.1	22.8			☆	☆	★	★	●	●	●	●	●	●	●	●	●	
	Total	57,770		483.2	608.8																

Note: ☆ Study
★ Design
● Construction

付属資料- 3. 4 洪水防御計画-実施計画案

District Code	Project	Description	Executing Agency	Cost (million)		Implementation Schedule														
				US\$	K£	93	95	2000			2	4	6	8	10					
620	Kano Plain (Nyando river)	- Heightening of existing dykes (2 km) - Construction of new dykes (69 km)	MOWD/LBDA	20.7	26.1	☆	☆	☆	●	●	●									
110	Nairobi City (Nairobi river, etc)	- Enlargement of existing channels/culverts (13 sites) - Channel improvement (11 sites)	MOLG	10.8	13.6								☆	☆	☆	●	●	●		
	Total			31.5	39.7															

Note: ☆ Study/Design
● Construction

付属資料- 3. 5 都市排水及び河川改修計画-実施計画案

District Code	Project	Description	Executing Agency	Cost (million)		Implementation Schedule																			
				US\$	K£	93	95	2000					2	4	6	8	10								
110 340	Urban Drainage Projects		MOLG " "	360 47 407	454 59 513																				
	Nairobi	P = 1,481,800 , A = 90 km ²				☆	☆	●	●	●	●														
	Mombasa	P = 529,200 , A = 11.6 km ²																		☆	☆	●	●	●	●
	Sub-total	P = 2,011,000 , A = 101.6 km ²		407	513																				
All	Minor Ad-hoc River Improvement Works		MOWD	45	57	☆	☆	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		
	Various rivers	To be taken up as the need is identified																							
360	Long-term Improvement of Lower Tana River		MOWD/ TARDA	20	25	●	●	●	●	●	●	●													
	Lower Tana improvement	Experimental work for rectifying river meanders and bank protection																							
	Sub-total			65	82																				
	TOTAL			472	595																				
Note:		☆ Study/Design ● Construction																							

付属資料-3、6 開発事業費の算定

Development Sector	Budget Appropriated for	Financial Requirement (Million)					
		1993 - 2000		2001 - 2010		Total	
		US\$	K£	US\$	K£	US\$	K£
1. D&I Water Supply		2,081	2,622	2,249	2,834	4,330	5,456
(1) Urban water supply	MOWD *1	1,836	2,313	1,180	1,487	3,016	3,800
(2) Rural water supply	MOWD *2	245	309	1,069	1,347	1,314	1,656
2. Sewerage Development	MOLG *3	353	445	235	296	588	741
3. Irrigation Development		201	253	285	360	486	613
(1) Major irrigation projects	MORD *4	196	247	280	353	476	600
(2) Small irrigation schemes	MOA *5	5	6	5	7	10	13
4. Livestock Water Development	MOLD *6	128	161	249	314	377	475
5. Hydropower Development	MOE *7	542	683	492	621	1,034	1,304
6. River and Flood Works		235	296	269	339	504	635
(1) Major flood control projects	MOWD *8	21	26	11	14	32	40
(2) Urban drainage works	MOLG *3	180	227	227	286	407	513
(3) Minor river improvement	MOWD *8	14	18	31	39	45	57
(4) Improvement of Lower Tana	MOWD *9	20	25	-	-	20	25
Total		3,540	4,460	3,779	4,764	7,319	9,224

Notes: Executing agencies will be:

*1: MOWD, NWCPC, Municipalities (NCC, etc)

*2: MOWD, NWCPC, County councils, NGO, etc

*3: Municipal and urban councils under technical assistance by MOWD

*4: NIA, LBDA, TARDA, KYDA and other basin development authorities

*5: MOA and some agencies listed for *4

*6: Implementation to be entrusted to MOWD and/or basin development authorities

*7: KPC, KPLC and basin development authorities

*8: MOWD or to be entrusted to basin development authorities and municipal/urban councils

*9: To be entrusted to TARDA

付属資料 - 3. 7 開発事業費年間支出計画

(Unit: million US\$)

Development Sector	Year												Total						
	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004		2005	2006	2007	2008	2009	2010
1 D&I Water Supply	282.4	282.4	246.1	246.1	294.2	294.2	217.8	217.8	220.7	220.7	210.5	210.5	239.9	239.9	230.6	230.6	222.5	222.6	4,330
(1) Urban water supply	251.8	251.8	215.5	215.5	263.6	263.6	187.2	187.2	113.8	113.8	103.6	103.6	133.0	133.0	123.7	123.7	115.6	115.6	3,016
(2) Rural water supply	30.6	30.6	30.6	30.6	30.6	30.6	30.6	30.6	106.9	106.9	106.9	106.9	106.9	106.9	106.9	106.9	106.9	106.9	1,314
2 Sewerage Development (for 158 urban centres)	57.4	57.4	32.4	32.4	61.9	61.9	25.1	25.1	18.6	18.6	3.9	3.9	36.2	36.2	35.2	35.2	23.2	23.2	588
3 Irrigation Development	32.7	33.9	9.9	15.4	44.4	22.8	16.3	24.9	34.6	28.7	30.9	31.2	39.0	56.0	44.4	20.4	0.9	0.6	486
(1) Major irrigation projects	32.1	33.3	9.3	14.8	43.8	22.2	15.7	24.3	34.0	28.1	30.3	30.6	38.4	55.4	43.8	19.8	0.3	0.0	476
(2) Small irrigation schemes	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	10
4 Livestock Water Development	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	24.9	24.9	24.9	24.9	24.9	24.9	24.9	24.9	24.9	24.9	577
5 Hydropower Development	20.0	27.0	52.0	45.0	63.0	93.0	113.0	129.0	129.0	159.0	121.0	56.0	27.0						1,034
6 River and Flood Works	2.5	2.5	5.5	10.7	10.7	10.7	100.7	95.5	92.7	92.7	2.7	6.3	6.3	6.3	2.7	18.4	18.4	18.4	504
(1) Major flood control projects				5.2	5.2	5.2	5.2					3.6	3.6	3.6					32
(2) Urban drainage works				3.0	3.0	3.0	90.0	90.0	90.0	90.0						15.7	15.7	15.7	407
(3) Minor river improvement				2.5	2.5	2.5	3.0	3.0	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	45
(4) Improvement of Lower Tana				2.5	2.5	2.5	2.5	2.5	2.5	2.5									20
Total	411.0	419.2	367.9	365.5	490.1	498.5	438.8	508.3	520.5	544.6	393.9	332.8	373.3	363.3	337.8	329.5	289.9	289.7	7,319

付属資料－４

代替財源シナリオBにおける実施計画案 (縮小財源シナリオB：75%)

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付属資料-4.1 都市水道計画-実施計画案 (1/2)

District Code	Urban Name	City Code	Future Raw Water Source	Cost (million)		Implementation Schedule											
				US\$	K£	93	95	2000	2	4	6	8	10				
110	Nairobi	U-1	Thika Dam, Ndarugu, Ruiru-A, Chania-B	1061.6	1,337.7	•	•	•									
210	Karuri	U-2	Kjamba Dam (Rui Ruaka R.)	12.0	15.1	•	•				•	•	•				
210	Kiambu	U-3	Kiamba Dam (Rui Ruaka r.)	9.1	11.4	•	•										
210	Ruiru	U-6	Ruiru River	9.7	12.2			•									
220	Kenya	U-12	Kiriga River	8.3	10.5	•	•										
230	Maragua	U-15	Githanji river	15.1	19.0	•	•										
230	Makuyu	U-18	Motoko river	4.8	6.0	•	•										
240	Ol Kalou	U-19	Malewa River	10.7	13.5					•	•						
250	Nyeri	U-22	Chania River	50.3	63.4			•	•								
310	Mariakani	U-23	2nd Mzima P/L	4.6	5.8			•	•								
310	Malindi	U-26	Sabaki Pipeline & Rare Dam	64.4	81.1					•	•						
320	Kwale	U-27	Marege pipeline	4.8	6.0					•	•						
330	Lamu	U-31	P/L from Tana River + B/M	37.5	47.3												
340	Mombasa	U-32	2nd Mzima/Mwachi Dam, Pumba Dam	441.6	556.4	•	•										
350	Taveta	U-137	Njoro Spring	7.2	9.1			•	•								
350	Wundanyi	U-34	Sigaso/Mangori River	0.9	1.2												
360	Ilola	U-36	Tana River	6.8	8.6												
410	Embu	U-40	Lower Kapingazi River + Upper Rupingazi River	8.8	11.2												
420	Isiolo	U-41	Boreholes + Spring	152.6	192.2												
420	Ot Doinyo Ng'iro	U-42	Ewaso Ngiro River	8.3	10.5	•	•										
420	Merti	U-139	Ewaso Ngiro	5.5	6.9												
430	Kitui	U-43	Masinga Dam	9.4	11.9	•	•										
430	Mwingi	U-45	Kiambere Dam	16.1	20.3	•	•										
440	Machakos	U-46	Athi River P/L	78.1	98.4												
440	Mitaboni	U-47	Kaathana River	20.3	25.6	•	•										
440	Kangundo	U-50	Pipeline from Athi River	19.5	24.6	•	•										
440	Wote	U-141	Kaji river + Nzuuni river	3.3	4.1												
450	Kargi	U-54	Boreholes + Subsurface Dam	66.8	84.1												
450	Marsabit	U-55	Boreholes + Small dam/Sub-surface dam/Spring	177.7	223.9												
460	Meru	U-58	Kathita river	43.5	54.9												
510	Garissa	U-67	Tana River	12.9	16.3												
520	Mandera	U-68	Daba River	3.1	4.0												
520	Elwak	U-69	Boreholes	75.5	95.1												
530	Wajir	U-71	Boreholes + Ewaso Ngiro River	172.3	217.1												
530	Buna	U-72	Boreholes(Lago Bor river)	94.8	119.4												
610	Nyamira + Kebingo	U-144	Kuja river	11.6	14.6												
610	Kisii	U-76	Bunyonyu Dam	27.5	34.7												
620	Kisumu & + Kiboswa	U-79	Kibos dam	104.8	132.1												
620	Ahero	U-80	Nyando river	5.9	7.4	•	•										
620	Muhoroni	U-81	Nyando River	7.6	9.6												
630	Siaya	U-83	Yala River	16.0	20.1												
640	Homa Bay	U-85	Lake Victoria	12.5	15.8												
640	Migori	U-86	Migori river	5.4	6.9												
710	Oloitokitok	U-88	Nol-Turash Spring	7.0	8.9												
710	Ngong	U-89	Kerarapon Spring	14.6	18.4												
710	Kajiado	U-90	Kiserian P/L	19.7	24.9												
710	Namanga	U-91	Namanga Spring	5.7	7.1												
720	Sotik	U-93	Kipsonoi river	4.5	5.6												
720	Kenicho	U-94	Damlitch Dam, Kimugung Dam	24.2	30.5												
730	Nanyuki	U-97	Iki river	18.6	23.5												
740	Nakuru	U-104	Turasha P/L + Malewa Dam + Jiara Dam	212.0	267.1												
750	Narok	U-106	Upper Narok Dam	30.9	39.0												
760	Kitale	U-107	Koitobos river	34.8	43.8												
770	Eldoret	U-110	Mojiba Dam + Nzoia river	135.9	171.2												
810	Kabarnet	U-112	Kirandich Dam	27.3	34.4	•	•										
810	Maji Mazuri	U-113	Maji Mazuri river	5.2	6.5												
820	Iten + Tambach	U-116	Mojiba Dam	12.7	16.0												

Note:

• Construction

付属資料- 4. 1 都市水道計画- 実施計画案 (2 / 2)

District Code	Urban Name	City Code	Future Raw Water Source	Cost (million)		Implementation Schedule												
				US\$	KSh	93	95	2000		2	4	6	8	10				
830	Kapsabet/Bazaton	U-118	Mokong river	11.8	14.9					•	•					•	•	
840	Maralal	U-119	Loikas/Yamo river	16.0	20.2					•	•					•	•	
850	Lodwar	U-122	Boreholes & sub-surface dam	132.6	167.1					•	•	•	•	•	•	•	•	•
860	Kapenguria/Maketano	U-123	Kapenguria River	8.9	11.2			•	•							•	•	
910	Bungoma	U-124	Kuywa River	26.8	33.7						•	•				•	•	
910	Kimilili	U-125	Kimilili River	7.3	9.2			•	•									•
920	Busia	U-127	Sio river	14.1	17.7							•	•					•
930	Vihiga/Majengo	U-129	Edzwa River (Kimondi River)	5.1	6.4			•	•									•
930	Kakamega	U-132	Isiukhu River, Mukulusi Dam	29.2	36.7					•	•							•
				3,714.5	4,680.3													
Note:			● Construction															

付属資料一 4. 2 下水処理計画一実施計画案 (1 / 2)

District Code	Urban Name	City Code	Future Raw Water Source	Cost (million)		Implementation Schedule											
				US\$	K£	93	95	2000		2	4	6	8	10			
110	Nairobi	U-1	Tbika Dam, Ndarugu, Ruiru-A, Chania-B	214.81	270.66	•	•			•	•	•					
210	Karuri	U-2	Kiamba Dam (Rui Ruaka R.)	1.59	2.00	•	•										•
210	Kiambu	U-3	Kiamba Dam (Rui Ruaka r.)	0.57	0.72			•	•								•
210	Ruiru	U-6	Ruiru River	1.39	1.75		•										•
220	Kerugoya	U-12	Kiringa River	1.17	1.48	•	•										•
230	Maragus	U-15	Githanji river	3.08	3.88	•	•										•
230	Makuyu	U-18	Motobo river	0.57	0.72	•	•										•
240	Olkari	U-19	Malewa River	1.31	1.65				•	•							•
250	Nyeri	U-22	Chania River	23.74	29.91		•	•									•
310	Mariakani	U-23	2nd Mzima P/L	1.13	1.43		•	•									•
310	Malindi	U-26	Sabaki Pipeline & Rare Dam	10.56	13.30				•	•							•
320	Kwale	U-27	Marere pipeline	0.53	0.66				•	•							•
330	Lamu	U-31	P/L from Tana River + B/L	1.19	1.50				•	•							•
340	Mombasa	U-32	2nd Mzima/Mwachi Dam, Pamba Dam	57.41	72.33	•	•			•	•						•
350	Taveta	U-137	Njoro Spring	1.00	1.26		•	•									•
350	Wundanyi	U-34	Sigaso/Manguri River	0.28	0.35				•	•							•
360	Hola	U-36	Tana River	1.22	1.54				•	•							•
410	Embu	U-40	Lower Kapingazi River + Upper Kapingazi River	2.47	3.12				•	•							•
420	Isiolo	U-41	Boreholes + Spring	3.41	4.29				•	•							•
420	Oldoinyo Ngiro	U-42	Ewaso Ngiro River	0.70	0.89	•	•										•
420	Merti	U-139	Ewaso Ngiro	0.91	1.14		•	•									•
430	Kitui	U-43	Masinga Dam	1.40	1.77	•	•										•
430	Mwingi	U-45	Kiambera Dam	1.10	1.39	•	•										•
440	Machakos	U-46	Athi River P/L	22.81	28.74		•	•									•
440	Mitsaboni	U-47	Kaathana River	7.64	9.63	•	•										•
440	Kangundo	U-50	Pipeline from Athi River	1.50	1.89	•	•										•
440	Wote	U-141	Keiti river + Nzuuni river	0.31	0.39				•	•							•
450	Kargi	U-54	Boreholes + Subsurface Dam	0.65	0.81		•	•		•	•						•
450	Marsabit	U-55	Boreholes + Small dams/Sub surface dam/Spring	1.65	2.07		•	•		•	•						•
460	Meru	U-58	Kathita river	20.54	25.88		•	•									•
510	Garissa	U-67	Tana River	8.08	10.19				•	•							•
520	Mandera	U-68	Daua River	0.66	0.83				•	•							•
520	Elwak	U-69	Boreholes	0.89	1.12		•	•									•
530	Wajir	U-71	Boreholes + Ewaso Ngiro River	2.65	3.34		•	•		•	•						•
530	Buna	U-72	Boreholes(Lago Bor river)	0.67	0.84		•	•		•	•						•
610	Nyamira + Kebirigo	U-144	Kuja river	1.12	1.41				•	•							•
610	Kisii	U-76	Bunyonyu Dam	9.24	11.64				•	•							•
620	Kisumu & + Kiboswa	U-79	Kibos dam	37.19	46.85		•	•									•
620	Ahero	U-80	Nyando river	0.93	1.17	•	•										•
620	Muhoroni	U-81	Nyando River	0.92	1.16		•	•									•
630	Siaya	U-83	Yafa River	1.96	2.47				•	•							•
640	Iloma Bay	U-85	Lake Victoria	2.50	3.16				•	•							•
640	Migori	U-86	Migori river	0.83	1.04		•	•									•
710	Oloitokrok	U-88	Nol-Turesh Spring	0.87	1.10				•	•							•
710	Ngong	U-89	Kerarapon Spring	2.86	3.61		•	•									•
710	Kajiado	U-90	Kiserian P/L	1.21	1.53		•	•									•
710	Namanga	U-91	Namanga Spring	0.97	1.23		•	•									•
720	Sotik	U-93	Kipsonoi river	0.58	0.73		•	•									•
720	Kericho	U-94	Dimlitch Dam, Kunungung Dam	9.72	12.24				•	•							•
730	Nanyuki	U-97	Liki river	7.94	10.01				•	•							•
740	Nakuru	U-104	Turasha P/L + Malewa Dam + Itare Dam	55.47	69.89		•	•									•

Note: • Construction

付属资料 - 4. 2 下水处理計画 - 実施計画案 (2/2)

District Code	Urban Name	City Code	Future Raw Water Source	Cost (million)		Implementation Schedule									
				US\$	Kf	93	95	2000	2	4	6	8	10		
750	Narok	U-105	Upper Narok Dam	3.00	3.78			●	●					●	●
760	Kitale	U-107	Keitobos river	16.08	20.26			●	●					●	●
770	Eldoret	U-110	Moiben Dam + Nzola river	31.47	39.65		●	●					●	●	
810	Kobaróet	U-112	Kirandich Dam	1.20	1.52	●	●						●	●	
810	Maji Mazuri	U-113	Maji Mazuri river	0.67	0.84		●	●						●	●
820	Iten + Tambach	U-116	Moiben Dam	0.70	0.88				●	●				●	●
830	Kapsabet Baraton	U-118	Mekong river	1.93	2.44			●	●					●	●
840	Maralal	U-119	Loikaa/Yamo river	2.66	3.35			●	●					●	●
850	Loŕar	U-122	Borcholes & sub-surface dam	1.34	1.69			●	●	●	●	●	●	●	●
860	Kapenguria Makutano	U-123	Kapenguria River	1.65	2.08		●	●						●	●
910	Bungoma	U-124	Kuywa River	9.50	11.97				●	●				●	●
910	Kimilili	U-125	Kimilili River	1.08	1.37		●	●						●	●
920	Busia	U-127	Sio river	2.39	3.01				●	●				●	●
930	Viŕga + Majeŕo	U-129	Edzawa River (Kimondi River)	0.50	0.63		●	●						●	●
930	Nakuru	U-132	Isiukhu River, Mukulusi Dam	12.30	15.49			●	●					●	●
				620.38	781.68										
Note:			● Construction												

付属資料-4.3 かんがい計画-実施計画案

District Code	Project	Development Area (ha)	Executing Agency	Cost (million)		Implementation Schedule														
				US\$	K£	93	95	2000	2	4	6	8	10							
	Small Scale Schemes	7,000	MOA	11.4	14.4	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
220	Mwea extension	2,900	NIB	63.7	80.3	★	★	●	●	●	●	●	●	●	●	●	●	●	●	●
310	Sabaki Extension	3,000	TARDA	19.8	24.9			★	★	●	●	●	●	●	●	●	●	●	●	●
360	Tana Delta	12,000	TARDA	141.4	178.2	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
410	Lower Ruringazi	1,800	TARDA	6.0	7.6			★	★	●	●	●	●	●	●	●	●	●	●	●
440	Kanzalu	4,055	TARDA	37.9	47.8			★	★	●	●	●	●	●	●	●	●	●	●	●
460	Kunati	1,050	TARDA	3.5	4.4			★	★	●	●	●	●	●	●	●	●	●	●	●
460	Thanantu	2,520	TARDA	17.3	21.8			★	★	●	●	●	●	●	●	●	●	●	●	●
620	Kano Plain	25,640	LBDA	232.5	293.0	★	★	●	●	●	●	●	●	●	●	●	●	●	●	●
630	Lower Nzoia/ Bunyala Extension	10,480	NIB	12.4	15.6	★	★	★	★	●	●	●	●	●	●	●	●	●	●	●
640	Lower Kuja	1,900	LBDA	5.6	7.1			★	★	★	★	●	●	●	●	●	●	●	●	●
640	Kimira	2,000	LBDA	18.1	22.8			★	★	★	★	●	●	●	●	●	●	●	●	●
820	Arror	1,340	KVDA	6.3	7.9			★	★	●	●	●	●	●	●	●	●	●	●	●
920	Yala Swamp	7,540	LBDA	65.0	81.9			★	★	★	★	●	●	●	●	●	●	●	●	●
	Total	83,225		640.9	807.5															
Note:		★ Study	- Tana Delta : Commenced in 1992																	
		★ Design	- Lower Ewaso N'giro and Yala Swamp : Continue 2013 onward																	
		● Construction																		

付属資料 - 4. 4 洪水防御計画 - 実施計画案

District Code	Project	Description	Executing Agency	Cost (million)		Implementation Schedule														
				US\$	KE	93	95	2000	2	4	6	8	10							
620	Kano Plain (Nyando river)	- Heightening of existing dykes (2 km) - Construction of new dykes (69 km)	MOWD/LBDA	20.7	26.1	☆	☆	☆	●	●	●									
110	Nairobi City (Nairobi river, etc)	- Enlargment of existing channels/culverts (13 sites) - Channel improvement (11 sites)	MOLG	10.8	13.6					☆	☆	☆	●	●	●					
630	Yala Swamp (Yala/Nzoia river)	- Rehabilitation of existing dykes (25 km) - Construction of new dykes (16 km)	MOWD/LBDA	17.7	22.3								☆	☆	☆	●	●	●	●	
	Total			49.2	62.0															

Note: ☆ Study/Design
● Construction

付属資料 - 4. 5 都市排水及び河川改修計画 - 実施計画案

District Code	Project	Description	Executing Agency	Cost (million)		Implementation Schedule												
				US\$	K£	93	95	2000				2	4	6	8	10		
Urban Drainage Projects																		
110	Nairobi	P = 1,413,100 , A = 90.0 Km ²	MOLG	360.0	453.6	☆	☆	●	●	●	●							
210	Thika	P = 59,000 , A = 1.9 Km ²	"	14.8	18.6											☆	☆	☆
250	Nyeri	P = 97,000 , A = 1.6 Km ²	"	13.1	16.5								☆	☆	☆	●	●	
340	Mombasa	P = 479,600 , A = 11.6 Km ²	"	46.6	58.7			☆	☆	☆	●	●	●					
440	Machakos	P = 91,100 , A = 2.8 Km ²	"	22.1	27.8					☆	☆	☆	●	●				
460	Meru	P = 78,900 , A = 0.3 Km ²	"	2.7	3.4							☆	☆	☆	●	●		
610	Kisii	P = 45,800 , A = 2.6 Km ²	"	21.1	26.6											☆	☆	●
620	Kisumu	P = 188,700 , A = 5.6 Km ²	"	33.5	42.2					☆	☆	☆	●	●				
720	Kericho	P = 41,200 , A = 1.2 Km ²	"	9.4	11.8											☆	☆	●
740	Nakuru	P = 172,200 , A = 13.0 Km ²	"	51.8	65.3					☆	☆	☆	●	●				
760	Kitale	P = 56,400 , A = 4.2 Km ²	"	25.2	31.8											☆	☆	●
770	Eldoret	P = 112,900 , A = 8.6 Km ²	"	34.3	43.2											☆	☆	●
930	Kakamega	P = 49,200 , A = 2.1 Km ²	"	16.6	20.9											☆	☆	●
	Sub-total	P = 2,885,100 , A = 145.4 Km ²	"	651.2	820.5													
Minor Ad-hoc River Improvement Works																		
All	Various rivers	To be taken up as the need is identified	MOWD	68.0	86.0	☆	☆	●	●	●	●	●	●	●	●	●	●	●
Long-term Improvement of Lower Tana River																		
360	Lower Tana improvement	Experimental work for rectifying river meanders and bank protection	MOWD/TARDA	30.0	38.0	●	●	●	●	●	●	●						
	Sub-total			98.0	124.0													
TOTAL				749.2	944.4													
Note:		☆ Study/Design																
		● Construction																

付属資料 - 4. 6 開発事業費の算定

Development Sector	Budget Appropriated for	Financial Requirement (Million)					
		1993 - 2000		2001 - 2010		Total	
		US\$	K£	US\$	K£	US\$	K£
1. D&I Water Supply		2,606	3,284	3,079	3,879	5,685	7,163
(1) Urban water supply	MOWD *1	2,238	2,820	1,476	1,860	3,714	4,680
(2) Rural water supply	MOWD *2	368	464	1,603	2,019	1,971	2,483
2. Sewerage Development	MOLG *3	371	467	249	314	620	781
3. Irrigation Development		200	252	398	502	598	754
(1) Major irrigation projects	MORD *4	195	246	393	495	588	741
(2) Small irrigation schemes	MOA *5	5	6	5	7	10	13
4. Livestock Water Development	MOLD *6	192	242	374	471	566	713
5. Hydropower Development	MOE *7	542	683	492	621	1,034	1,304
6. River and Flood Works		462	582	336	423	798	1,005
(1) Major flood control projects	MOWD *8	21	26	28	36	49	62
(2) Urban drainage works	MOLG *3	391	493	260	327	651	820
(3) Minor river improvement	MOWD *8	20	25	48	60	68	85
(4) Improvement of Lower Tana	MOWD *9	30	38	-	-	30	38
Total		4,373	5,510	4,928	6,210	9,301	11,720

- Notes: Executing agencies will be;
- *1 : MOWD, NWCPC, Municipalities (NCC, etc)
 - *2 : MOWD, NWCPC, County councils, NGO, etc
 - *3 : Municipal and urban councils under technical assistance by MOWD
 - *4 : NIA, LBDA, TARDA, KVDA and other basin development authorities
 - *5 : MOA and some agencies listed for *4
 - *6 : Implementation to be entrusted to MOWD and/or basin development authorities
 - *7 : KPC, KPLC and basin development authorities
 - *8 : MOWD or to be entrusted to basin development authorities and municipal/urban councils
 - *9 : To be entrusted to TARDA

付属資料 - 4. 7 開発事業費年間支出計画

(Unit: million US\$)

Development Sector	Year												Total						
	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004		2005	2006	2007	2008	2009	2010
1 D&I Water Supply	471.8	471.8	395.0	395.0	201.5	201.5	234.8	234.8	332.2	332.2	363.9	363.9	323.9	296.6	296.6	223.0	223.0	5,685	
(1) Urban water supply	425.8	425.8	349.0	349.0	155.5	155.5	188.8	188.8	171.9	171.9	203.6	203.6	163.6	136.3	136.3	62.7	62.7	3,714	
(2) Rural water supply	46.0	46.0	46.0	46.0	46.0	46.0	46.0	46.0	160.3	160.3	160.3	160.3	160.3	160.3	160.3	160.3	160.3	1,971	
2 Sewerage Development (for 158 urban centres)	78.7	78.7	79.2	79.2	11.1	11.1	16.4	16.4	22.7	22.7	22.7	22.7	36.6	31.4	31.4	11.4	11.4	620	
3 Irrigation Development	32.7	33.9	9.9	15.4	44.4	22.8	15.6	24.9	33.4	28.6	36.9	46.0	54.1	76.0	63.9	39.1	11.3	9.0	598
(1) Major irrigation projects	32.1	33.3	9.3	14.8	43.8	22.2	15.0	24.3	32.8	28.0	36.3	45.4	53.5	75.4	63.3	38.5	10.7	8.4	588
(2) Small irrigation schemes	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	10
4 Livestock Water Development	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	37.4	37.4	37.4	37.4	37.4	37.4	37.4	37.4	37.4	37.4	566
5 Hydropower Development	20.0	27.0	52.0	45.0	63.0	93.0	113.0	129.0	129.0	159.0	121.0	56.0	27.0					1,084	
6 River and Flood Works	3.7	3.7	97.1	102.3	102.4	102.4	27.9	22.7	20.3	44.2	44.2	43.9	21.5	21.6	25.8	38.1	38.4	38.2	798
(1) Major flood control projects			5.2	5.2	5.2	5.2	5.2			3.6	3.6	3.6		4.4	4.4	4.4	4.4	4.4	49
(2) Urban drainage works			90.0	90.0	90.0	90.0	15.5	15.5	15.6	35.9	35.9	35.6	16.7	16.8	16.6	28.9	29.2	29.0	651
(3) Minor river improvement			3.4	3.4	3.4	3.4	3.4	3.4	4.7	4.7	4.7	4.7	4.8	4.8	4.8	4.8	4.8	4.8	68
(4) Improvement of Lower Tana			3.7	3.7	3.7	3.8	3.8	3.8											30
Total	630.8	639.0	657.2	660.9	446.3	454.7	431.6	451.7	575.0	624.1	626.1	569.9	500.5	495.5	455.1	442.6	321.5	319.0	9,302

Note: Development cost of rural and livestock water supply systems were estimated at 25 % of full scale development plan.

付属資料－5

開発規模を縮小した場合の上水道供給事業の実施計画案 (開発規模：2000年水需要に対応する程度の縮小規模)

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付属資料 - 5. 1 都市水道計画 - 実施計画案 (1/2)

District Code	Urban Name	City Code	Future Raw Water Source	Cost (million)		Implementation Schedule													
				US\$	K£	93	95	2000				2	4	6	8	10			
110	Nairobi	U-1	Thika Dam, Ndarugu, Ruiru-A, Chania B	577.6	727.8	•	•	•	•	•	•	•	•	•	•	•	•	•	•
210	Karuri	U-2	Kiamba Dam (Rui Ruaka R.)	9.1	11.4	•	•	•	•	•	•	•	•	•	•	•	•	•	•
210	Kiamba	U-3	Kiamba Dam (Rui Ruaka r.)	6.5	8.2	•	•	•	•	•	•	•	•	•	•	•	•	•	•
210	Ruiru	U-6	Ruiru River	6.5	8.2	•	•	•	•	•	•	•	•	•	•	•	•	•	•
210	Thika	U-7	Chania River (Lower)	10.4	13.1	•	•	•	•	•	•	•	•	•	•	•	•	•	•
210	Kikuyu	U-9	Kikuyu Dam	12.7	16.0	•	•	•	•	•	•	•	•	•	•	•	•	•	•
220	Kerugoya	U-12	Kisinga River	5.0	6.3	•	•	•	•	•	•	•	•	•	•	•	•	•	•
220	Kutus	U-13	Thiba River	2.8	3.5	•	•	•	•	•	•	•	•	•	•	•	•	•	•
230	Maragua	U-15	Githanji river	10.4	13.2	•	•	•	•	•	•	•	•	•	•	•	•	•	•
230	Murang'a	U-17	Maragua river	7.1	8.9	•	•	•	•	•	•	•	•	•	•	•	•	•	•
230	Makuyu	U-18	Motobo river	3.1	3.9	•	•	•	•	•	•	•	•	•	•	•	•	•	•
240	Oi Kalou	U-19	Malewa River	6.8	8.5	•	•	•	•	•	•	•	•	•	•	•	•	•	•
250	Karatina	U-20	Ragati River	1.5	1.9	•	•	•	•	•	•	•	•	•	•	•	•	•	•
250	Ochaya	U-21	Tuthi river	3.0	3.8	•	•	•	•	•	•	•	•	•	•	•	•	•	•
250	Nyeri	U-22	Chania River	29.2	36.8	•	•	•	•	•	•	•	•	•	•	•	•	•	•
310	Marjakeni	U-23	2nd Mzima P/L	2.9	3.6	•	•	•	•	•	•	•	•	•	•	•	•	•	•
310	Kilifi	U-24	Rare reservoir	4.5	5.7	•	•	•	•	•	•	•	•	•	•	•	•	•	•
310	Malindi	U-26	Sabaki Pipeline & Rare Dam	48.9	61.6	•	•	•	•	•	•	•	•	•	•	•	•	•	•
320	Kwale	U-27	Marere pipeline	2.9	3.7	•	•	•	•	•	•	•	•	•	•	•	•	•	•
320	Msambani	U-29	Boreholes + Mkurumuji river	26.7	33.7	•	•	•	•	•	•	•	•	•	•	•	•	•	•
330	Lamu	U-31	P/L from Tana River + B/I	23.9	30.1	•	•	•	•	•	•	•	•	•	•	•	•	•	•
340	Mombasa	U-32	2nd Mzima/Mwachi Dam, Pusba Dam	324.8	409.2	•	•	•	•	•	•	•	•	•	•	•	•	•	•
350	Taveta	U-137	Njoro Spring	5.0	6.3	•	•	•	•	•	•	•	•	•	•	•	•	•	•
350	Voi	U-33	2nd Mzim pipeline	4.9	6.1	•	•	•	•	•	•	•	•	•	•	•	•	•	•
360	Hola	U-36	Tana River	4.2	5.3	•	•	•	•	•	•	•	•	•	•	•	•	•	•
410	Embu	U-40	Lower Kapingazi River + Upper Ropingazi River	4.2	5.4	•	•	•	•	•	•	•	•	•	•	•	•	•	•
420	Isiolo	U-41	Boreholes + Spring	72.4	91.3	•	•	•	•	•	•	•	•	•	•	•	•	•	•
420	Ol Doinyo Ng'iro	U-42	Ewaso Ng'iro River	5.2	6.6	•	•	•	•	•	•	•	•	•	•	•	•	•	•
420	Meru	U-139	Ewaso Ng'iro	3.4	4.3	•	•	•	•	•	•	•	•	•	•	•	•	•	•
430	Kitui	U-43	Masinga Dam	5.6	7.0	•	•	•	•	•	•	•	•	•	•	•	•	•	•
430	Mwingi	U-45	Kiambere Dam	10.2	12.9	•	•	•	•	•	•	•	•	•	•	•	•	•	•
440	Machakos	U-46	Athi River P/L	47.4	59.7	•	•	•	•	•	•	•	•	•	•	•	•	•	•
440	Mitaboni	U-47	Kaathana River	12.5	15.8	•	•	•	•	•	•	•	•	•	•	•	•	•	•
440	Athi River	U-48	Upper Athi Dam	12.6	15.8	•	•	•	•	•	•	•	•	•	•	•	•	•	•
440	Kaungundo	U-50	Pipeline from Athi River	12.4	15.6	•	•	•	•	•	•	•	•	•	•	•	•	•	•
440	Wote	U-141	Kaiti river + Nzuuni river	2.0	2.5	•	•	•	•	•	•	•	•	•	•	•	•	•	•
450	Kargi	U-54	Boreholes + Subsurface Dam	38.2	48.1	•	•	•	•	•	•	•	•	•	•	•	•	•	•
450	Korr	U-143	Boreholes	33.4	42.1	•	•	•	•	•	•	•	•	•	•	•	•	•	•
450	Marsabit	U-55	Boreholes + Small dams/Sub-surface dam/Spring	101.8	128.2	•	•	•	•	•	•	•	•	•	•	•	•	•	•
450	Moyale	U-57	Boreholes + Small Dam	38.5	48.5	•	•	•	•	•	•	•	•	•	•	•	•	•	•
460	Meru	U-58	Kathita river	26.1	32.8	•	•	•	•	•	•	•	•	•	•	•	•	•	•
460	Nkubu	U-59	Thingithu River	2.8	3.5	•	•	•	•	•	•	•	•	•	•	•	•	•	•
510	Garissa	U-67	Tana River	6.6	8.3	•	•	•	•	•	•	•	•	•	•	•	•	•	•
520	Mandera	U-68	Dava River	1.4	1.8	•	•	•	•	•	•	•	•	•	•	•	•	•	•
520	Etwak	U-69	Boreholes	50.7	63.9	•	•	•	•	•	•	•	•	•	•	•	•	•	•
530	Wajir	U-71	Boreholes + Ewaso Ng'iro River	104.7	131.9	•	•	•	•	•	•	•	•	•	•	•	•	•	•
530	Bona	U-72	Boreholes(Lago Bor river)	62.5	78.7	•	•	•	•	•	•	•	•	•	•	•	•	•	•
610	Nyamira + Kibirigo	U-144	Kuja river	7.6	9.6	•	•	•	•	•	•	•	•	•	•	•	•	•	•
610	Kisii	U-76	Bunyonyu Dam	19.2	24.2	•	•	•	•	•	•	•	•	•	•	•	•	•	•
620	Maseno	U-78	Edzawa Dam	10.1	12.8	•	•	•	•	•	•	•	•	•	•	•	•	•	•
620	Kisumu & + Kiboswa	U-79	Kibos dam	72.7	91.6	•	•	•	•	•	•	•	•	•	•	•	•	•	•

Note: • Construction

付属資料 - 5. 1 都市水道計画 - 実施計画案 (2 / 2)

District Code	Urban Name	City Code	Future Raw Water Source	Cost (million)		Implementation Schedule														
				US\$	Kf	93	95	2000	2	4	6	8	10							
620	Ahero	U-80	Nyando river	4.0	5.0	●	●													
620	Muhoroni	U-81	Nyando River	4.9	6.1		●	●												
630	Siaya	U-83	Yala River	10.3	13.0			●	●											
640	Homa Bay	U-55	Lake Victoria	8.1	10.2			●	●											
640	Migori	U-86	Migori river	3.6	4.5		●	●												
710	Okotiekok	U-88	Nol-Turesh Spring	4.0	5.1			●	●											
710	Ngong	U-89	Kerarapon Spring	8.4	10.5		●	●												
710	Kajjado	U-90	Kiserian P/L	12.0	15.1		●	●												
710	Namanga	U-91	Namanga Spring	3.2	4.0		●	●												
720	Seuk	U-93	Kipsonoi river	3.0	3.8		●	●												
720	Kericho	U-94	Dimlitch Dam, Kimugung Dam	15.2	19.1			●	●											
730	Nanyuki	U-97	Liki river	10.4	13.1			●	●											
730	Nyahururu	U-98	Nyahururu dam + Borehole	13.4	16.9			●	●											
740	Gilgil	U-99	Turasha P/L & Malewa Dam	6.3	8.0			●	●											
740	Naivasha	U-100	Turasha P/L & Malewa Dam	21.5	27.1			●	●											
740	Eiburgon	U-102	Itare Dam	16.3	20.6		●	●	●											
740	Molo	U-103	Itare Dam	13.3	16.8		●	●	●											
740	Nakuru	U-104	Turasha P/L + Malewa Dam + Itare Dam	121.0	152.5		●	●								●	●			
750	Narok	U-105	Upper Narok Dam	22.8	28.7			●	●											
760	Kitale	U-107	Koitobos river	19.6	24.7			●	●											
770	Eldoret	U-110	Moiben Dam + Nzoia river	80.7	101.6		●	●								●	●			
810	Kabarot	U-112	Kirandich Dam	24.2	30.5	●	●													
810	Maji Mazuri	U-113	Maji Mazuri river	3.2	4.0		●	●												
810	Eldama Ravine	U-114	Chemususu Dam	21.8	27.5			●	●											
820	Iten+Tambach	U-116	Moiben Dam	8.5	10.7		●	●												
830	Kapsabet+Baraton	U-118	Mokong river	7.1	8.9			●	●											
840	Maralal	U-119	Loikas/Yamo river	9.5	12.0			●	●											
850	Lodwar	U-122	Boreholes & sub-surface dam	65.5	82.5			●	●	●	●	●	●	●	●	●	●	●	●	●
860	Kapenguria/Makutano	U-123	Kapenguria River	5.3	6.7		●	●												
910	Bungoma	U-124	Kuywa River	15.9	20.0			●	●											
910	Kimilili	U-125	Kimilili River	4.4	5.6		●	●												
910	Webuye	U-126	Nzoia River	11.8	14.9			●	●											
920	Busia	U-127	Sio river	8.1	10.2			●	●											
930	Vhiga+Majengo	U-129	Edzawa River (Kinondi River)	3.4	4.3		●	●												
930	Kakamega	U-132	Isiokhu River, Mukulusi Dam	18.5	23.3			●	●											
930	Mumias	U-134	Nzoia River	9.0	11.4			●	●											
				2,522.9	3,178.9															

Note: ● Construction

付属資料 - 5. 2 下水処理計画 - 実施計画案 (1 / 2)

District Code	Urban Name	City Code	Future Raw Water Source	Cost (million)		Implementation Schedule														
				US\$	K£	93	95	2000	2	4	6	8	10							
110	Nairobi	U-1	Thika Dam, Ndarugu, Ruiru-A, Chania-B	140.77	177.37	•	•	•												
210	Karuri	U-2	Kiambaa Dam (Rui Ruaka R.)	1.08	1.36		•	•												
210	Kiambu	U-3	Kiambaa Dam (Rui Ruaka R.)	0.36	0.45				•	•										
210	Ruiru	U-6	Ruiru River	0.94	1.19				•	•										
210	Thika	U-7	Chania River (Lower)	8.96	11.29				•	•										
210	Kikuyu	U-9	Kikuyu Dam	0.48	0.61		•	•												
220	Kerugoya	U-12	Kiringa River	0.71	0.89	•	•													
220	Kutus	U-13	Thiba River	0.49	0.62				•	•										
230	Maragua	U-15	Githanji river	2.17	2.73		•	•												
230	Murang'a	U-17	Maragua river	1.54	1.94	•	•													
230	Makuyu	U-18	Motoho river	0.37	0.46		•	•												
240	Oi Kalou	U-19	Malewa River	0.86	1.08				•	•										
250	Karatina	U-20	Ragati River	0.42	0.53				•	•										
250	Ohaya	U-21	Tuthi river	0.37	0.47				•	•										
250	Nyeri	U-22	Chania River	14.12	17.79				•	•										
310	Mariakani	U-23	2nd Mzima P/L	0.52	0.65				•	•										
310	Kilifi	U-24	Rare reservoir	1.31	1.65				•	•										
310	Malindi	U-26	Sabaki Pipeline & Rare Dam	3.14	3.96				•	•										
320	Kwale	U-27	Maree pipeline	0.33	0.42				•	•										
320	Msamwani	U-29	Boreholes + Mkurumuji river	0.75	0.95				•	•										
330	Lamu	U-31	P/L from Tana River + B/I	0.71	0.89				•	•										
340	Mombasa	U-32	2nd Mzima/Mwachi Dam, Pemba Dam	42.51	53.57	•	•													
350	Taveta	U-137	Njoro Spring	0.71	0.89				•	•										
350	Voi	U-33	2nd Mzim pipeline	0.81	1.02				•	•										
350	Wundanyi	U-34	Sigaso/Manguni River	0.18	0.23				•	•										
360	Jlola	U-36	Tana River	0.76	0.96				•	•										
410	Embu	U-40	Lower Kipirigazi River + Upper Ruperigazi River	1.51	1.90				•	•										
420	Isiolo	U-41	Boreholes + Spring	1.84	2.32				•	•										
420	Oldoinyo Ng'iro	U-42	Ewaso Ng'iro River	0.42	0.53		•	•												
420	Merti	U-139	Ewaso Ng'iro	0.54	0.68				•	•										
430	Kitui	U-43	Masinga Dam	0.84	1.05	•	•													
430	Mwingi	U-45	Kiambere Dam	0.66	0.83	•	•													
440	Machakos	U-46	Athi River P/L	13.87	17.47				•	•										
440	Mitaboni	U-47	Kaathana River	2.32	2.92		•	•												
440	Athi River	U-48	Upper Athi Dam	2.00	2.52				•	•										
440	Kangundo	U-50	Pipeline from Athi River	0.90	1.14		•	•												
440	Wote	U-141	Kaiti river + Nzuuni river	0.19	0.24				•	•										
450	Kargi	U-54	Boreholes + Subsurface Dam	0.39	0.50		•	•												
450	Korr	U-143	Boreholes	0.45	0.56		•	•												
450	Marsabit	U-55	Boreholes + Small dam/Sub-surface dam/Spring	1.01	1.27		•	•												
450	Moyale	U-57	Boreholes + Small Dam	0.62	0.78				•	•										
460	Meru	U-58	Kathita river	12.58	15.85				•	•										
460	Nkubu	U-59	Thing'ahu River	0.42	0.53				•	•										
510	Garissa	U-67	Tana River	2.59	3.26				•	•										
520	Mandera	U-68	Daus River	0.43	0.54				•	•										
520	Etwak	U-69	Boreholes	0.62	0.78				•	•										
530	Wajir	U-71	Boreholes + Ewaso Ng'iro River	1.62	2.04		•	•												
530	Buna	U-72	Boreholes(Lago Bor river)	0.45	0.56		•	•												
610	Nyamira + Kibirigo	U-144	Kuja river	0.73	0.92				•	•										
610	Kisii	U-76	Bunyonyu Dam	3.06	3.85				•	•										
620	Maseño	U-78	Edzawa Dam	1.10	1.39				•	•										

Note: • Construction

付属資料- 5. 2 下水処理計画-実施計画案 (2/2)

District Code	Urban Name	City Code	Future Raw Water Source	Cost (million)		Implementation Schedule												
				US\$	K£	93	95	2000		2	4	6	8	10				
620	Kisumu & + Kiboswa	U-79	Kibos dam	23.13	29.14			•	•									
620	Ahero	U-80	Nyando river	0.64	0.80	•	•											
620	Muhoroni	U-81	Nyando River	0.57	0.72			•	•									
630	Siaya	U-83	Yala River	1.27	1.60					•	•							
640	Homa Bay	U-85	Lake Victoria	1.65	2.08					•	•							
640	Migori	U-86	Migori river	0.54	0.68			•	•									
710	Oloitokitok	U-88	Nol-Turesh Spring	0.46	0.58					•	•							
710	Ngong	U-89	Kerarapon Spring	1.58	1.98					•	•							
710	Kajiado	U-90	Kiserian P/L	0.64	0.80					•	•							
710	Namanga	U-91	Namanga Spring	0.51	0.65					•	•							
720	Sodik	U-93	Kipsonoi river	0.39	0.49					•	•							
720	Kericho	U-94	Dimlich Dam, Kinugung Dam	3.00	3.78					•	•							
730	Nanyuki	U-97	Liki river	2.20	2.77					•	•							
730	Nyahururu	U-98	Nyahururu dam + Berchole	1.26	1.58					•	•							
740	Gilgil	U-99	Turasha P/L & Malewa Dam	1.37	1.73					•	•							
740	Naivasha	U-100	Turasha P/L & Malewa Dam	7.07	8.91					•	•							
740	Elburgon	U-102	Iare Dam	1.17	1.47					•	•							
740	Molo	U-103	Iare Daro	1.03	1.29					•	•							
740	Nakuru	U-104	Turasha P/L + Malewa Dam + Iare Dam	30.09	37.91					•	•							
750	Narok	U-105	Upper Narok Dam	1.51	1.91					•	•							
760	Kitale	U-107	Koitobos river	9.43	11.88					•	•							
770	Eldoret	U-110	Moiben Dam + Nzoia river	17.50	22.05					•	•							
810	Kabarot	U-112	Kirandich Dam	0.71	0.89	•	•											
810	Maji Mazuri	U-113	Maji Mazuri river	0.39	0.50					•	•							
810	Eldama Ravine	U-114	Chemususu Dam	0.43	0.54					•	•							
820	Iten+Tambach	U-116	Moiben Dam	0.45	0.57					•	•							
830	Kapsabet+Baraton	U-118	Mokoog river	1.14	1.43					•	•							
840	Maralal	U-119	Loitas/Yamo river	1.50	1.89					•	•							
850	Lodwar	U-122	Boreholes & sub-surface dam	0.81	1.02					•	•							
860	Kapenguria/Makutano	U-123	Kapenguria River	0.96	1.21					•	•							
910	Bungoma	U-124	Kuywa River	2.80	3.52					•	•							
910	Kimilili	U-125	Kimilili River	0.63	0.79					•	•							
910	Webuye	U-126	Nzoia River	2.53	3.18					•	•							
920	Busia	U-127	Sio river	1.41	1.78					•	•							
930	Vihiga+Majengo	U-129	Edzawa River (Kimondi River)	0.34	0.43					•	•							
930	Kakamega	U-132	Isiukhu River, Mukubusi Dam	7.76	9.78					•	•							
930	Mumias	U-134	Nzoia River	1.76	2.21					•	•							
				407.11	512.96													
Note:						• Construction												

付属資料 - 5. 3 開発事業費の算定

Development Sector	Budget Appropriated for	Financial Requirement (Million)					
		1993 - 2000		2001 - 2010		Total	
		US\$	K£	US\$	K£	US\$	K£
1. D&I Water Supply		1,904	2,399	1,933	2,436	3,837	4,835
(1) Urban water supply	MOWD *1	1,247	1,571	1,276	1,608	2,523	3,179
(2) Rural water supply	MOWD *2	657	828	657	828	1,314	1,656
2. Sewerage Development	MOLG *3	203	256	204	257	407	513
Total		2,107	2,655	2,137	2,693	4,244	5,348

Notes: Executing agencies will be;
 *1 : MOWD, NWCPC, Municipalities (NCC, etc)
 *2 : MOWD, NWCPC, County councils, NGO, etc
 *3 : Municipal and urban councils under technical assistance by MOWD

付属資料-5. 4 關發事業費年間支出計畫

Development Sector	Year												Total						
	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	
1 D&I Water Supply	336.2	336.2	257.4	257.4	170.9	170.9	187.3	187.3	190.6	190.6	195.5	195.5	213.9	213.9	204.1	204.1	162.5	162.5	3,837
(1) Urban water supply	254.1	254.1	175.3	175.3	88.8	88.8	105.2	105.2	125.0	125.0	129.8	129.8	148.2	148.2	138.4	138.4	96.8	96.8	2,523
(2) Rural water supply	82.1	82.1	82.1	82.1	82.1	82.1	82.1	82.1	65.7	65.7	65.7	65.7	65.7	65.7	65.7	65.7	65.7	65.7	1,314
2 Sewerage Development (for 158 urban centres)	30.6	30.6	31.7	31.7	22.5	22.5	16.9	16.9	16.7	16.7	16.8	16.8	32.1	32.1	21.3	21.3	14.8	14.8	407
Total	366.9	366.9	289.1	289.1	193.4	193.4	204.2	204.2	207.3	207.3	212.3	212.3	246.0	246.0	225.4	225.4	177.3	177.3	4,244

付属資料 - 5. 5 都市水道計画 - 実施計画案 (1/3)

District Code	Urban Name	City Code	Future Raw Water Source	Cost (million)		Implementation Schedule										
				US\$	Kf	93	95	2000	2	4	6	8	10			
110	Nairobi	U-1	Thika Dam, Ndarugu, Ruiru-A, Chania-B	1,061.6	1,337.7	●	●				●	●	●			
210	Karuri	U-2	Kiambaa Dam (Rui Ruaka R.)	9.1	11.4	●	●									●
210	Kiambu	U-3	Kiambaa Dam (Rui Ruaka r.)	6.5	8.2	●	●		●	●						●
210	Limuru	U-5	Chania P/L	9.2	11.6				●	●						●
210	Ruiru	U-6	Ruiru River	6.5	8.2		●	●								●
210	Thika	U-7	Chania River (Lower)	10.4	13.1											●
210	Githunguri	U-8	Ruiru river	3.2	4.0				●	●						●
210	Kikuyu	U-9	Kikuyu Dam	12.7	16.0		●	●								●
220	Wanguru	U-10	Thiba River	0.6	0.7											●
220	Sagana	U-11	Ragati River	2.2	2.7					●	●					●
220	Kerugoya	U-12	Kiringa River	5.0	6.3		●	●								●
220	Kutus	U-13	Thiba River	2.8	3.5					●	●					●
230	Maragua	U-15	Githanji river	10.4	13.2		●	●								●
230	Kangema	U-16	Mathioya River	0.5	0.7											●
230	Murang'a	U-17	Maragua river	7.1	8.9		●	●								●
230	Makuyu	U-18	Motoho river	3.1	3.9		●	●								●
240	Oi Kalou	U-19	Malewa River	6.8	8.5					●	●					●
250	Karatina	U-20	Ragati River	1.5	1.9											●
250	Ochaya	U-21	Tuthi river	3.0	3.8					●	●					●
250	Nyeri	U-22	Chania River	29.2	36.8		●	●								●
310	Mariakani	U-23	2nd Mzima P/L	2.9	3.6		●	●								●
310	Kilifi	U-24	Rare reservoir	4.5	5.7											●
310	Watanu	U-25	Sabaki pipeline	3.3	4.2		●	●								●
310	Malindi	U-26	Sabaki Pipeline & Rare Dam	61.4	81.1					●	●					●
310	Mambui	U-135	Sabaki river	2.5	3.2		●	●								●
320	Kwale	U-27	Marere pipeline	2.9	3.7					●	●					●
320	Kinango	U-28	Marere pipeline	3.1	4.0					●	●					●
320	Msamweni	U-29	Boreholes + Mkurumuji river	26.7	33.7					●	●	●	●	●	●	●
320	Lungalunga	U-136	Umba river	1.5	1.9					●	●					●
330	Witu	U-30	Mkondo wa Cambi river	3.3	4.2					●	●					●
330	Lamu	U-31	P/L from Tana River + B/H	37.5	47.3					●	●					●
340	Mombasa	U-32	2nd Mzima/Mwachi Dam, Pamba Dam	441.6	556.4		●	●				●	●	●		●
350	Taveta	U-137	Njoro Spring	5.0	6.3		●	●								●
350	Voi	U-33	2nd Mzim pipeline	4.9	6.1					●	●					●
360	Bura & Madogo	U-35	Tana River	0.6	0.8					●	●					●
360	Hola	U-36	Tana River	4.2	5.3					●	●					●
360	Garsen	U-37	Tana River	2.0	2.5					●	●					●
410	Runyenjes	U-38	Eta river	1.5	1.9					●	●		●	●	●	●
410	Embu	U-40	Lower Kapigazi River + Upper Kapigazi River	4.2	5.4					●	●					●
420	Isioto	U-41	Boreholes + Spring	72.4	91.3					●	●	●	●	●	●	●
420	Oi Doinyo Ng'iro	U-42	Ewaso Ngiro River	5.2	6.6		●	●								●
420	Garbatula	U-138	Boreholes	21.1	26.6					●	●	●	●			●
420	Meru	U-139	Ewaso Ngiro	3.4	4.3					●	●					●
430	Kitui	U-43	Masinga Dam	5.6	7.0		●	●								●
430	Mwingi	U-45	Kiambera Dam	10.2	12.9		●	●								●
440	Machakos	U-46	Athi River P/L	47.4	59.7					●	●					●
440	Mtshoni	U-47	Kanuhana River	12.5	15.8		●	●								●
440	Athi River	U-48	Upper Athi Dam	12.6	15.8					●	●					●
440	Uasin/Tawa	U-49	Tawa river	0.8	1.0					●	●					●
440	Kangundo	U-50	Pipeline from Athi River	12.4	15.6		●	●								●
440	Tala	U-140	Pipeline from Athi river	5.6	7.1		●	●								●

Note: ● Construction

付属資料 - 5. 5 都市水道計画 - 実施計画案 (2 / 3)

District Code	Urban Name	City Code	Future Raw Water Source	Cost (million)		Implementation Schedule											
				US\$	Kf	93	95	2000	2	4	6	8	10				
440	Nunguni	U-51	Kyangonyo river	1.0	1.3			•	•							•	•
440	Wete	U-141	Kaiti river + Nzuuni river	2.0	2.5			•	•							•	•
440	Emali	U-52	Nol Tresh P/L	1.2	1.5	•	•									•	•
440	Mtito Andei&Kibwezi	U-53	Pipeline from Athi river	12.8	16.1	•	•									•	•
450	North Horr	U-142	Boreholes	13.9	17.5		•	•							•	•	•
450	Kargi	U-54	Boreholes + Subsurface Dam	38.2	48.1		•	•	•	•	•				•	•	•
450	Korr	U-143	Boreholes	33.4	42.1		•	•	•	•	•				•	•	•
450	Marsabit	U-55	Boreholes + Small dams/Sub-surface dam/Spring	177.7	223.9		•	•	•	•	•	•	•	•	•	•	•
450	Soloko	U-56	Boreholes	36.6	46.1		•	•	•	•	•				•	•	•
450	Moyale	U-57	Boreholes + Small Dam	38.5	48.5			•	•	•					•	•	•
460	Meru	U-58	Kathita river	26.1	32.8		•	•							•	•	•
460	Nkubu	U-59	Thingithu River	2.8	3.5				•	•						•	•
460	Chogoria	U-60	North Mara River	1.3	1.6	•	•									•	•
460	Chuka	U-61	Tungu river	2.6	3.3				•	•						•	•
460	Maua	U-62	Ura river	2.5	3.2				•	•						•	•
510	Mudo Gashe	U-63	Boreholes + Subsurface Dam	12.9	16.3		•	•							•	•	•
510	Ijara	U-64	Boreholes + Small dam	8.0	10.1		•	•							•	•	•
510	Kotile	U-65	Boreholes/Subsurface Dam/l'ana	11.7	14.8		•	•							•	•	•
510	Masalani	U-66	Tana River	1.7	2.1				•	•						•	•
510	Garissa	U-67	Tana River	6.6	8.3											•	•
520	Mandera	U-68	Daua River	1.4	1.8											•	•
520	Etwak	U-69	Boreholes	50.7	63.9		•	•							•	•	•
520	Rhamu	U-70	Daua River	1.8	2.3					•	•					•	•
530	Wajir	U-71	Boreholes + Ewaso Ng'iro River	101.7	131.9		•	•	•	•	•	•	•	•	•	•	•
530	Buna	U-72	Boreholes(l'ago Bor river)	62.5	78.7		•	•	•	•	•	•	•	•	•	•	•
530	Bute	U-73	Boreholes + Small Dams	12.0	15.2		•	•							•	•	•
610	Manga	U-74	Bunyonyu Dam	2.0	2.6				•	•						•	•
610	Keroka	U-75	Bunyonyu Dam	3.6	4.6				•	•						•	•
610	Nyamira + Kebirigo	U-144	Kuja river	7.6	9.6				•	•						•	•
610	Kisii	U-76	Bunyonyu Dam	19.2	24.2				•	•	•				•	•	•
610	Ogembo	U-77	Kuja river	1.2	1.5	•	•									•	•
620	Maseno	U-78	Idraawa Dam	10.1	12.8				•	•						•	•
620	Kisumu & + Kiboswa	U-79	Kibos dam	101.8	132.1		•	•							•	•	•
620	Ahero	U-80	Nyando river	4.0	5.0	•	•									•	•
620	Muhoroni	U-81	Nyando River	4.9	6.1		•	•								•	•
630	Bondo	U-145	Yala river	2.8	3.5				•	•						•	•
630	Yala	U-82	Yala river	1.7	2.1				•	•						•	•
630	Siaya	U-83	Yala River	10.3	13.0				•	•						•	•
630	Ukwala	U-84	Nzoia River	1.3	1.6				•	•						•	•
640	Ifoma Bay	U-85	Lake Victoria	8.1	10.2				•	•						•	•
640	Migori	U-86	Migori river	3.6	4.5		•	•								•	•
640	Kehancha + Tarang'anya	U-146	Migori river	3.3	4.1	•	•									•	•
640	Nyabikaye	U-147	Boreholes	18.9	23.8		•	•							•	•	•
640	Oyugis	U-148	Isanta river(Awach Tende)	3.4	4.3				•	•						•	•
640	Kendu Bay	U-87	Lake Victoria	1.9	2.5				•	•						•	•
640	Awendo/Sare	U-149	Sare river	3.6	4.6	•	•									•	•
710	Oloitokitok	U-88	Nol-Turesh Spring	4.0	5.1				•	•						•	•
710	Ngong	U-89	Kerarapon Spring	8.4	10.5				•	•						•	•
710	Kajiado	U-90	Kiserian P/L	12.0	15.1				•	•						•	•
710	Namanga	U-91	Namanga Spring	3.2	4.0				•	•						•	•
710	Magadi	U-92	Oloibortoto river	6.4	8.0				•	•						•	•
720	Soik	U-93	Kipsonoi river	3.0	3.8		•	•								•	•

Note: • Construction

付属资料 - 5. 5 都市水道計画 - 実施計画案 (3 / 3)

District Code	Urban Name	City Code	Future Raw Water Source	Cost (million)		Implementation Schedule									
				US\$	K£	93	95	2000	2	4	6	8	10		
720	Kericho	U-94	Dimbich Dam, Kimugung Dam	24.2	30.5			•	•					•	•
720	Kipkelion	U-95	Nyando river	1.3	1.6			•	•						•
720	Londiani	U-96	Londiani dam	52.1	72.0			•	•						•
730	Nanyuki	U-97	Liki river	10.4	13.1					•	•				•
730	Rumuruti	U-150	Rumuruti Dam + Borehole	7.3	9.2	•	•								•
730	Nyahururu	U-98	Nyahururu dam + Borehole	13.4	16.9					•	•				•
740	Gilgil	U-99	Turasha P/L & Malewa Dam	6.3	8.0			•	•						•
740	Naivasha	U-100	Turasha P/L & Malewa Dam	21.5	27.1			•	•						•
740	Njoro	U-101	Itare Dam	16.9	21.3	•	•	•	•						•
740	Elburgon	U-102	Itare Dam	16.3	20.6	•	•	•	•						•
740	Molo	U-103	Itare Dam	13.3	16.8	•	•	•	•						•
740	Nakuru	U-104	Turasha P/L + Malewa Dam + Itare Dam	212.0	267.1	•	•						•	•	
750	Narok	U-105	Upper Narok Dam	22.8	28.7					•	•				•
750	Nairagio Ngare	U-106	Nasampolai river	1.1	1.3					•	•				•
750	Kitgoris	U-151	Poroko river	2.6	3.3			•	•						•
750	Lolkorian	U-152	Migori river	2.3	2.9			•	•						•
760	Kitale	U-107	Koitobos river	19.6	24.7					•	•				•
760	Kiminiini/Saboti+Spr.Kita	U-108	Kabwyan river	2.1	2.7	•	•								•
760	Endebess/Kwanza	U-109	Koitobos river	1.7	2.1	•	•								•
770	Moi's Bridge	U-153	Nzoia river	1.9	2.4			•	•						•
770	Turbo	U-154	Sosiani river	3.5	4.4			•	•						•
770	Eldoret	U-110	Moiiben Dam + Nzoia river	80.7	101.6			•	•				•	•	
770	Burnt Forest	U-111	Kipkaren river	1.3	1.6			•	•						•
810	Kabarnet	U-112	Kirandich Dam	24.2	30.5	•	•							•	•
810	Maji Mazuri	U-113	Maji Mazuri river	3.2	4.0			•	•						•
810	Eldama Ravine	U-114	Chemususu Dam	21.8	27.5					•	•				•
810	Mogotio	U-115	Molo river /Chemususu Dam	4.7	5.9					•	•				•
810	Marigat	U-155	Perkerra river	1.6	2.1			•	•						•
820	Iten+Tambach	U-116	Moiiben Dam	8.5	10.7	•	•			•	•				•
830	Nandi Hills	U-117	Mokong River	2.7	3.3			•	•						•
830	Kapsabet+Baraton	U-118	Mokong river	7.1	8.9			•	•						•
840	Maralal	U-119	Loikas/Yamo river	9.5	12.0			•	•						•
840	Wamba	U-120	Boreholes	43.1	54.3	•	•	•	•				•	•	•
840	Baragoi	U-121	Boreholes + Sub-surface dam	66.5	83.8	•	•	•	•				•	•	•
850	Lodwar	U-122	Boreholes & sub-surface dam	65.5	82.5	•	•	•	•	•	•	•	•	•	•
860	Kapenguria/Makutano	U-123	Kapenguria River	5.3	6.7	•	•								•
910	Mawajie + Malakisi	U-156	Malakisi river	2.2	2.8	•	•								•
910	Bungoma	U-124	Kuywa River	15.9	20.0					•	•				•
910	Kimilili	U-125	Kimilili River	4.4	5.6			•	•						•
910	Webuye	U-126	Nzoia River	11.8	14.9			•	•						•
910	Chaptais	U-157	Sasuri river	1.8	2.2	•	•								•
920	Busia	U-127	Sio river	8.1	10.2					•	•				•
920	Nambale	U-158	Sio river	1.4	1.8					•	•				•
930	Vihiga+Majengo	U-129	Edzawa River (Kimondi River)	3.4	4.3			•	•						•
930	Khayega	U-131	Yela river	1.2	1.5	•	•								•
930	Kakamega	U-132	Isiukhu River, Mukulusi Dam	18.5	23.3			•	•					•	•
930	Butere	U-133	Viratsi River	1.4	1.8					•	•				•
930	Mumias	U-134	Nzoia River	9.0	11.4			•	•						•
				3,818.1	4,810.8										

Note: • Construction

付属資料 - 5. 6 下水処理計画 - 実施計画案 (1 / 3)

District Code	Urban Name	City Code	Future Raw Water Source	Cost (million)		Implementation Schedule														
				US\$	K£	93	95	2000	2	4	6	8	10							
110	Nairobi	U-1	Thika Dam, Ndarugu, Ruiru-A, Chania-B	214.81	270.66	•	•	•												
210	Karuri	U-2	Kiamba Dam (Rui Ruaka R.)	1.08	1.36		•	•												
210	Kiambu	U-3	Kiamba Dam (Rui Ruaka R.)	0.36	0.45					•	•									
210	Gatunda & Ngenda	U-4	Thirika River	0.03	0.03															
210	Limuru	U-5	Chania PL	0.11	0.14					•	•									
210	Ruiru	U-6	Ruiru River	0.94	1.19					•	•									
210	Thika	U-7	Chania River (Lower)	8.96	11.29					•	•									
210	Githunguri	U-8	Ruiru river	0.30	0.38					•	•									
210	Kikuyu	U-9	Kikuyu Dam	0.48	0.61		•	•												
220	Wanguru	U-10	Thiba River	0.04	0.05					•	•									
220	Sagana	U-11	Ragati River	0.23	0.29					•	•									
220	Kerugoya	U-12	Kiringa River	0.71	0.89	•	•													
220	Kutus	U-13	Thiba River	0.49	0.62					•	•									
230	Kandara	U-14	Thika River	0.02	0.03															
230	Maragua	U-15	Githanji river	2.17	2.73		•	•												
230	Kangema	U-16	Mathioya River	0.10	0.12					•	•									
230	Muranga	U-17	Maragua river	1.54	1.94	•	•													
230	Makuyu	U-18	Motcho river	0.37	0.46		•	•												
240	Oi Kalou	U-19	Malewa River	0.86	1.08					•	•									
250	Karatina	U-20	Ragati River	0.42	0.53					•	•									
250	Othaya	U-21	Tvthi river	0.37	0.47					•	•									
250	Nyeri	U-22	Chania River	14.12	17.79					•	•									
310	Mariakani	U-23	2nd Mzima P/L	0.52	0.65					•	•									
310	Kilifi	U-24	Rare reservoir	1.31	1.65					•	•									
310	Watu	U-25	Sabaki pipeline	0.19	0.23	•	•													
310	Malindi	U-26	Sabaki Pipeline & Rare Dam	10.56	13.30					•	•									
310	Mambui	U-135	Sabaki river	0.24	0.30	•	•													
320	Kwale	U-27	Marere pipeline	0.33	0.42					•	•									
320	Kinango	U-28	Marere pipeline	0.15	0.19					•	•									
320	Msambweni	U-29	Boreholes + Mkurumuji river	0.75	0.95					•	•									
320	Lungalunga	U-136	Umba river	0.20	0.25					•	•									
330	Witu	U-30	Mkondo wa Cambi river	0.26	0.33					•	•									
330	Lamu	U-31	P/L from Tana River + B/L	1.19	1.50					•	•									
340	Mombasa	U-32	2nd Mzima/Mwachi Dam, Pemba Dam	57.41	72.33	•	•	•												
350	Taveta	U-137	Njoro Spring	0.71	0.89					•	•									
350	Voi	U-33	2nd Mzim pipeline	0.81	1.02					•	•									
350	Wundanyi	U-34	Sigaso/Manguri River	0.18	0.23					•	•									
360	Bura & Madogo	U-35	Tana River	0.07	0.09					•	•									
360	Ilola	U-36	Tana River	0.76	0.96					•	•									
360	Garsen	U-37	Tana River	0.28	0.36					•	•									
410	Runyenjes	U-38	Eta river	0.14	0.18					•	•									
410	Siakago	U-39	Eta River	0.01	0.01					•	•									
410	Embu	U-40	Lower Kapingazi River + Upper Kapingazi River	1.51	1.90					•	•									
420	Isiolo	U-41	Boreholes + Spring	1.84	2.32					•	•									
420	Oi Doinyo Ng'iro	U-42	Ewaso Ng'iro River	0.42	0.53		•	•												
420	Garbatula	U-138	Boreholes	0.18	0.23		•	•		•	•									
420	Meru	U-139	Ewaso Ng'iro	0.54	0.68					•	•									
430	Kitui	U-43	Masinga Dam	0.84	1.05	•	•													
430	Mutomo	U-44	Sub-Surface dam on Tiva river	0.02	0.03															
430	Mwingi	U-45	Kiambere Dam	0.66	0.83	•	•													
440	Machakos	U-46	Athi River P/L	13.87	17.47					•	•									
440	Misaboni	U-47	Ksathana River	2.32	2.92		•	•												
440	Athi River	U-48	Upper Athi Dam	2.00	2.52					•	•									

Note: • Construction

付属資料- 5. 6 下水処理計画- 実施計画案 (2/3)

District Code	Urban Name	City Code	Future Raw Water Source	Cost (million)		Implementation Schedule														
				US\$	K£	93	95	2000	2	4	6	8	10							
440	Usani/Tawa	U-49	Tawa river	0.02	0.02		●													
440	Kangundo	U-50	Pipeline from Athi River	0.90	1.14		●													
440	Tala	U-140	Pipeline from Athi river	0.14	0.18		●													
440	Nunguni	U-51	Kyangonyo river	0.03	0.03					●										
440	Wote	U-141	Kaiti river + Nzuuni river	0.19	0.24					●										
440	Emali	U-52	Nol Tresh P/L	0.02	0.03	●	●													
440	Mtito Andei&Kibwezi	U-53	Pipeline from Athi river	0.29	0.37	●	●													
450	North Horr	U-142	Boreholes	0.16	0.21		●													
450	Kargi	U-54	Boreholes + Subsurface Dam	0.39	0.50		●			●										
450	Korr	U-143	Boreholes	0.45	0.56		●			●										
450	Marsabit	U-55	Boreholes + Small dams/Sub-surface dam/Spring	1.65	2.07		●			●										
450	Sololo	U-56	Boreholes	0.34	0.43		●			●										
450	Moyale	U-57	Boreholes + Small Dam	0.62	0.78		●			●										
460	Meru	U-53	Kathita river	12.58	15.85					●										
460	Nkubu	U-59	Thingithu River	0.42	0.53					●										
460	Chogoria	U-60	North Mara River	0.08	0.10	●	●													
460	Chuka	U-61	Tungu river	0.29	0.36					●										
460	Maua	U-62	Ura river	0.29	0.36					●										
510	Mudo Gashe	U-63	Boreholes + Subsurface Dam	0.17	0.21		●													
510	Ijara	U-64	Boreholes + Small dam	0.09	0.11		●													
510	Koile	U-65	Boreholes/Subsurface Dam/fana	0.09	0.11		●													
510	Masalani	U-66	Tana River	0.09	0.11					●										
510	Garissa	U-67	Tana River	2.59	3.26					●										
520	Mandera	U-68	Daua River	0.43	0.54					●										
520	Elwak	U-69	Boreholes	0.62	0.78					●										
520	Rhamu	U-70	Daua River	0.26	0.33					●										
530	Wajir	U-71	Boreholes + Ewaso Ngiro River	1.62	2.04		●			●										
530	Bana	U-72	Boreholes(Lago Bor river)	0.45	0.56		●			●										
530	Bute	U-73	Boreholes + Small Dams	0.15	0.18		●													
610	Manga	U-74	Bunyonyu Dam	0.06	0.07					●										
610	Keroka	U-75	Bunyonyu Dam	0.15	0.19					●										
610	Nyamira + Kebirigo	U-144	Kuja river	0.73	0.92					●										
610	Kisii	U-76	Bunyonyu Dam	3.06	3.85					●										
610	Ogembo	U-77	Kuja river	0.07	0.09	●	●													
620	Maseno	U-78	Edzawa Dam	1.10	1.39					●										
620	Kisumu & + Kiboga	U-79	Kibos dam	37.19	46.85		●													
620	Ahero	U-80	Nyando river	0.64	0.80		●													
620	Muheroni	U-81	Nyando River	0.57	0.72					●										
630	Bondo	U-145	Yala river	0.21	0.26					●										
630	Yala	U-82	Yala river	0.16	0.20					●										
630	Siaya	U-83	Yala River	1.27	1.60					●										
630	Ukwala	U-84	Nzoia River	0.07	0.08					●										
640	Homa Bay	U-85	Lake Victoria	1.65	2.08					●										
640	Migori	U-86	Migori river	0.54	0.68					●										
640	Kehancha + Tarang'anya	U-146	Migori river	0.24	0.30	●	●													
640	Nyabikaye	U-147	Boreholes	0.23	0.29		●													
640	Oyugis	U-148	Isanta river(Awach Tonde)	0.24	0.30					●										
640	Kendu Bay	U-87	Lake Victoria	0.20	0.25					●										
640	Awendo/Sare	U-149	Sare river	0.27	0.34	●	●													
710	Oloitokitok	U-88	Nol-Turesh Spring	0.46	0.58					●										
710	Ngong	U-89	Kerarapon Spring	1.58	1.98					●										
710	Kajiado	U-90	Kiserian P/L	0.64	0.80					●										
710	Namanga	U-91	Namanga Spring	0.51	0.65					●										

Note: ● Construction

付属資料 - 5. 6 下水処理計画 - 実施計画案 (3 / 3)

District Code	Urban Name	City Code	Future Raw Water Source	Cost (million)		Implementation Schedule														
				US\$	K£	93	95	2000		2	4	6	8	10						
710	Magadi	U-92	Oloibortoto river	0.30	0.38			•	•											
720	Seik	U-93	Kipsonoi river	0.39	0.49			•	•											
720	Kericho	U-94	Dimlich Dam, Kinugung Dam	9.72	12.24			•	•											
720	Kipkelion	U-95	Nyando river	0.17	0.21			•	•											
720	Londiani	U-96	Londiani dam	0.24	0.30			•	•											
730	Nanyuki	U-97	Liki river	2.20	2.77					•	•									
730	Rumuruti	U-150	Rumuruti Dam + Borehole	0.18	0.23		•	•												
730	Nyahururu	U-98	Nyahururu dam + Borehole	1.26	1.58					•	•									
740	Gitgil	U-99	Turasha P/L & Malewa Dam	1.37	1.73					•	•									
740	Naivasha	U-100	Turasha P/L & Malewa Dam	7.07	8.91					•	•									
740	Njoro	U-101	Itare Dam	0.86	1.08					•	•									
740	Elburgon	U-102	Itare Dam	1.17	1.47					•	•									
740	Molo	U-103	Itare Dam	1.03	1.29					•	•									
740	Nakuru	U-104	Turasha P/L + Malewa Dam + Itare Dam	55.47	69.89		•	•												
750	Narek	U-105	Upper Narek Dam	1.51	1.91							•	•							
750	Nairagie Ngare	U-106	Nasampelai river	0.05	0.06							•	•							
750	Kilgoris	U-151	Poreko river	0.33	0.42					•	•									
750	Lolkorian	U-152	Migori river	0.17	0.22					•	•									
760	Kitale	U-107	Koitobos river	9.43	11.88							•	•							
760	Kiminiini/Saboti+Spr.Kita	U-108	Kabewyan river	0.10	0.13		•	•												
760	Endebess/Kwanza	U-109	Koitobos river	0.17	0.21		•	•												
770	Moi's Bridge	U-153	Nzoia river	0.22	0.28			•	•											
770	Turbo	U-154	Sosiani river	0.30	0.38					•	•									
770	Eldoret	U-110	Moiben Dam + Nzoia river	17.50	22.05					•	•									
770	Burnt Forest	U-111	Kipkaren river	0.16	0.20					•	•									
810	Kabarnet	U-112	Kirandich Dam	0.71	0.89		•	•												
810	Maji Mazuri	U-113	Maji Mazuri river	0.39	0.50					•	•									
810	Eldama Ravine	U-114	Chemususu Dam	0.43	0.54							•	•							
810	Mogotio	U-115	Molo river /Chemususu Dam	0.22	0.28							•	•							
810	Marigat	U-155	Perkorra river	0.20	0.25					•	•									
820	Itea+Tambach	U-116	Moiben Dam	0.45	0.57					•	•									
830	Nandi Hills	U-117	Mokong River	0.10	0.12					•	•									
830	Kapsabet+Baraton	U-118	Mokong river	1.14	1.43							•	•							
840	Maralal	U-119	Loikas/Yamo river	1.50	1.89							•	•							
840	Wamba	U-120	Boreholes	0.32	0.40		•	•												
840	Baragoi	U-121	Boreholes + Sub-surface dam	0.28	0.35		•	•												
850	Lodwar	U-122	Boreholes & sub-surface dam	0.81	1.02		•	•												
860	Kapenguria/Makutano	U-123	Kapenguria River	0.96	1.21					•	•									
910	Bungoma	U-124	Kuywa River	2.80	3.52							•	•							
910	Kimiliti	U-125	Kimiliti River	0.63	0.79					•	•									
910	Webuye	U-126	Nzoia River	2.53	3.18							•	•							
910	Chaptais	U-157	Sasuri river	0.22	0.28		•	•												
920	Busia	U-127	Sio river	1.41	1.78							•	•							
920	Nambale	U-158	Sio river	0.18	0.23							•	•							
930	Luanda	U-128	Edzawa river	0.14	0.17															
930	Vihiga+Majengo	U-129	Edzawa River (Kimendi River)	0.34	0.43					•	•									
930	Kaimosi	U-130	Galagofi river	0.02	0.02															
930	Khayega	U-131	Yala river	0.03	0.04		•	•												
930	Kakunega	U-132	Isiukhu River, Mukulusi Dam	7.76	9.78							•	•							
930	Butere	U-133	Viratsi River	0.17	0.22							•	•							
930	Mumias	U-134	Nzoia River	1.76	2.21							•	•							
				562.81	709.14															

Note: • Construction

付属資料 - 5. 7 開発事業費の算定

Development Sector	Budget Appropriated for	Financial Requirement (Million)					
		1993 - 2000		2001 - 2010		Total	
		US\$	K£	US\$	K£	US\$	K£
1. D&I Water Supply		3,032	3,821	2,756	3,472	5,788	7,293
(1) Urban water supply	MOWD *1	2,047	2,580	1,771	2,231	3,818	4,811
(2) Rural water supply	MOWD *2	985	1,241	985	1,241	1,970	2,482
2. Sewerage Development	MOLG *3	310	390	253	319	563	709
Total		3,342	4,211	3,009	3,791	6,351	8,002

Notes: Executing agencies will be;

*1 : MOWD, NWPC, Municipalities (NCC, etc)

*2 : MOWD, NWPC, County councils, NGO, etc

*3 : Municipal and urban councils under technical assistance by MOWD

付属資料 - 5. 8 研究事業費年間支出計画

(Unit: million US\$)

Development Sector	Year												Total						
	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004		2005	2006	2007	2008	2009	2010
1 D&I Water Supply	537.9	537.9	424.7	424.7	293.1	293.1	260.5	260.5	264.6	264.6	306.5	306.5	280.6	280.6	261.4	261.4	265.1	265.0	1,943
(1) Urban water supply	414.7	414.7	301.6	301.6	169.9	169.9	137.4	137.4	166.0	166.0	208.0	208.0	182.1	182.1	162.9	162.9	166.6	166.6	3,818
(2) Rural water supply	123.2	123.2	123.2	123.2	123.2	123.2	123.2	123.2	98.5	98.5	98.5	98.5	98.5	98.5	98.5	98.5	98.5	98.5	1,970
2 Sewerage Development (for 158 urban centres)	74.9	74.9	47.6	47.6	14.5	14.5	17.8	17.8	22.6	22.6	22.8	22.8	36.8	36.8	24.1	24.1	20.3	20.3	563
Total	612.7	612.7	472.3	472.3	307.6	307.6	278.3	278.3	287.2	287.2	329.3	329.3	317.3	317.3	285.5	285.5	285.4	285.4	6,351

付属資料－6

今後の調査研究プログラムの提言

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付属資料-6. 1 個別プロジェクトの投資前調査及び設計-実施計画案 (1/3)

Description	Executing Agency	Cost (million)		Implementation Schedule																
		US\$	K£	93	95	2000					2	4	6	8	10					
1. D&I Water Supply																				
(1) Urban water supply *1	MOWD	259.41	326.85																	
(2) Rural water supply	MOWD	197.05	248.29																	
Sub-Total of Item 1.		456.46	575.14																	
2. Sewerage Development	MOLG	52.87	66.62																	
3. Irrigation Development																				
(1) Major irrigation projects	MORD																			
- Kano Plain	MORD	11.63	14.65	★	★															
- Bunyala Ext.	MORD	0.93	1.17	☆	☆	★	★													
- Mwea Ext.	MORD	4.78	6.02	☆	★	★	★													
- Kunati	MORD	0.26	0.33	☆	☆	★	★													
- Lower Kuja	MORD	0.42	0.53			☆	★	★												
- Lower Rupigazi	MORD	0.45	0.57			☆	☆	☆	★	★										
- Kanzalu	MORD	2.86	3.60			☆	☆	☆	★	★										
- Kimira	MORD	1.36	1.71			☆	☆	☆	★	★										
- Yala Swamp	MORD	4.88	6.14			☆	☆	☆	★	★										
- Aror	MORD	0.47	0.60			☆	☆	☆	★	★										
- Sabaki Ext.	MORD	1.49	1.87			☆	☆	☆	★	★										
- Thanantu	MORD	1.30	1.64			☆	☆	☆	★	★										
- Kibwezi Ext.	MORD	17.04	21.47			☆	☆	☆	★	★										
- Upper Nzoia	MORD	6.60	8.32			☆	☆	☆	★	★										
- Turkwel	MORD	0.13	0.17					☆	☆	☆										
- Taveta	MORD	0.89	1.13					☆	☆	☆										
- Lower E.Ngiro	MORD	4.28	5.39					☆	☆	☆										
(2) Small irrigation schemes	MOA	0.77	0.97																	
Sub-Total of Item 3.		60.53	76.27																	
4. Livestock Water																				
(1) Source development	MOLD	50.24	63.30																	
(2) Water points in nomadic pasturage land	MOLD	5.48	6.90																	
Sub-Total of Item 4.		55.72	70.20																	

Note: ☆ Study ★ Design Study/Design Continues intermittently
 *1 excluding the cost of groundwater source development schemes