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資料-1

調査団員氏名

調査団員氏名

第1回現地調査（インセプションレポート説明および現地調査：2000年4月9日 - 5月28日）

担当	氏名	所属
調査団長	山本敬子	国際協力総合研修所 国際協力専門員
調整団員	鈴木勉	国際協力事業団 無償資金協力部監理課
業務主任 / 給水計画	坂元雅信	日本工営株式会社
上水道事業計画	堂屋光弘	株式会社日水コン
施設計画（河川、水資源）	荻野正之	日本工営株式会社
管路計画	岡崎浩一	株式会社日水コン
施設計画（浄水施設） / 水質調査	南清文	株式会社日水コン
調達計画 / 積算	岡田徳治	日本工営株式会社

第2回現地調査（中間報告書説明および現地調査：2000年9月5日 - 10月30日）

担当	氏名	所属
調査団長	山本敬子	国際協力総合研修所 国際協力専門員
調整団員	栗栖昌紀	国際協力事業団 無償資金協力部業務第1課
業務主任 / 給水計画	坂元雅信	日本工営株式会社
上水道事業計画	堂屋光弘	株式会社日水コン
施設計画（河川、水資源）	荻野正之	日本工営株式会社
管路計画	岡崎浩一	株式会社日水コン

基本設計概要書説明（基本設計概要説明：2001年2月10日 - 2月24日）

担当	氏名	所属
調査団長	牛木久雄	国際協力総合研修所 国際協力専門員
調整団員	栗栖昌紀	国際協力事業団 無償資金協力部業務第1課
業務主任 / 給水計画	坂元雅信	日本工営株式会社
上水道事業計画	堂屋光弘	株式会社日水コン
管路計画	岡崎浩一	株式会社日水コン

資料2
調査日程

調査日程

第1回現地調査（インセプションレポート説明および現地調査：2000年4月9日 - 5月28日）

日順	日付	曜日	調査団員	宿泊先	活動内容
1	4/9	日	山本 / 鈴木 / 坂元 / 堂屋	機 中	移動（東京 - ロンドン - ナイロビ）
2	4/10	月	山本 / 鈴木 / 坂元 / 堂屋	ナイロビ	移動（ナイロビ着） インセプション・レポート協議
3	4/11	火	山本 / 鈴木 / 坂元 / 堂屋	ナイロビ	大使館および JICA ケニア事務所表敬 インセプション・レポート協議
4	4/12	水	山本 / 鈴木 / 坂元 / 堂屋	ナイロビ	インセプション・レポート協議
5	4/13	木	山本 / 鈴木 / 坂元 / 堂屋	メル -	移動（ナイロビ - メルー） メル - 給水施設視察
6	4/14	金	山本 / 鈴木 / 坂元 / 堂屋	メル -	メル - 給水施設視察
			荻野 / 岡崎 / 南	機 中	移動（東京 - ロンドン - ナイロビ）
7	4/15	土	山本 / 鈴木 / 坂元 / 堂屋	メル -	メル - 給水施設視察
			荻野 / 岡崎 / 南	ナイロビ	移動（ナイロビ着）
8	4/16	日	山本 / 鈴木 / 坂元 / 堂屋	ナイロビ	移動（メル - ナイロビ）
			荻野 / 岡崎 / 南	ナイロビ	資料整理
9	4/17	月	山本 / 鈴木 / 坂元 / 堂屋 / 荻野 / 岡崎 / 南	ナイロビ	議事録協議
10	4/18	火	山本 / 鈴木 / 坂元 / 堂屋 / 荻野 / 岡崎 / 南	ナイロビ	議事録協議
11	4/19	水	山本 / 鈴木 / 坂元 / 堂屋 / 荻野 / 岡崎 / 南	ナイロビ	議事録調印
12	4/20	木	山本 / 鈴木	機 中	移動（ナイロビ - チュリッヒ）
			坂元 / 堂屋 / 荻野 / 岡崎 / 南	ナイロビ	環境・天然資源省と資料収集に関し打合せ
13	4/21	金	山本 / 鈴木	機 中	移動（チュリッヒ - 東京）
			坂元 / 堂屋 / 荻野 / 岡崎 / 南	ナイロビ	環境・天然資源省と資料収集に関し打合せ
			岡 田	機 中	移動（東京 - ロンドン - ナイロビ）
14	4/22	土	山本 / 鈴木	東 京	移動（東京着）
			坂元 / 堂屋 / 荻野 / 岡崎 / 南	ナイロビ	資料収集・整理
			岡 田	ナイロビ	移動（ナイロビ着）
15	4/23	日	坂元 / 堂屋 / 荻野 / 岡崎 / 南 / 岡田	ナイロビ	団内打合せ
16	4/24	月	坂元 / 堂屋 / 荻野 / 岡崎 / 南 / 岡田	メル -	移動（ナイロビ - メルー）
17	4/25	月	坂元 / 堂屋 / 荻野 / 岡崎 / 南 / 岡田	メル -	現地踏査、コミュニティ給水調査、水質調査、 資料収集・整理、解析・検討
・	・	・	・	・	現地踏査、コミュニティ給水調査、水質調査、 資料収集・整理、解析・検討
・	・	・	・	・	・
・	・	・	・	・	・
39	5/17	水	坂元 / 堂屋 / 荻野 / 岡崎 / 南 / 岡田	ナイロビ	移動（メル - ナイロビ）
40	5/18	木	坂元 / 堂屋 / 荻野 / 岡崎 / 南	ナイロビ	解析・検討およびテクニカル・ノート作成
			岡田	機 中	移動（ナイロビ - ロンドン）
41	5/19	金	坂元 / 堂屋 / 荻野 / 岡崎 / 南	ナイロビ	解析・検討およびテクニカル・ノート作成
			岡田	機 中	移動（ロンドン - 東京）
42	5/20	土	坂元 / 堂屋 / 荻野 / 岡崎 / 南	ナイロビ	解析・検討およびテクニカル・ノート作成
			岡田	東 京	移動（東京着）
43	5/21	日	坂元 / 堂屋 / 荻野 / 岡崎 / 南	ナイロビ	解析・検討およびテクニカル・ノート作成
44	5/22	月	坂元 / 堂屋 / 荻野 / 岡崎 / 南	ナイロビ	解析・検討およびテクニカル・ノート作成
45	5/23	火	坂元 / 堂屋 / 荻野 / 岡崎 / 南	ナイロビ	環境・天然資源省とテクニカル・ノートの内容 に関する協議
46	5/24	水	坂元 / 堂屋 / 荻野 / 岡崎 / 南	ナイロビ	環境・天然資源省とテクニカル・ノートの内容 に関する協議
47	5/25	木	坂元 / 堂屋 / 荻野 / 岡崎 / 南	ナイロビ	JICA ケニア事務所へ現地調査結果説明
48	5/26	金	坂元 / 堂屋 / 荻野 / 岡崎 / 南	機 中	移動（ナイロビ - ロンドン）

日順	日付	曜日	調査団員	宿泊先	活動内容
49	5/27	土	坂元 / 堂屋 / 荻野 / 岡崎 / 南	機 中	移動（ロンドン - 東京）
50	5/28	日	坂元 / 堂屋 / 荻野 / 岡崎 / 南	東 京	移動（東京着）

第2回現地調査（中間報告書説明および現地調査：2000年9月5日 - 10月30日）

日順	日付	曜日	調査団員	宿泊先	活動内容
1	9/5	火	山本 / 栗栖 / 坂元 / 堂屋 / 岡崎	機 中	移動（東京 - ロンドン - ナイロビ）
2	9/6	水	山本 / 栗栖 / 坂元 / 堂屋 / 岡崎	ナイロビ	移動（ナイロビ着） 大使館、JICA ケニア事務所表敬 環境・天然資源省表敬
3	9/7	木	山本 / 栗栖 / 坂元 / 堂屋 / 岡崎	ナイロビ	中間報告書協議
4	9/8	金	山本 / 栗栖 / 坂元 / 堂屋 / 岡崎	メル -	メル市給水施設視察
5	9/9	土	山本 / 栗栖 / 坂元 / 堂屋 / 岡崎	メル -	メル市給水施設視察
6	9/10	日	山本 / 栗栖 / 坂元 / 堂屋 / 岡崎	ナイロビ	移動（メル - ナイロビ）
7	9/11	月	山本 / 栗栖 / 坂元 / 堂屋 / 岡崎	ナイロビ	議事録協議
8	9/12	火	山本 / 栗栖 / 坂元 / 堂屋 / 岡崎	ナイロビ	議事録協議
9	9/13	水	山本 / 栗栖 / 坂元 / 堂屋 / 岡崎	ナイロビ	議事録協議
10	9/14	木	山本 / 栗栖 / 坂元 / 堂屋 / 岡崎	ナイロビ	議事録調印
11	9/15	金	山本 / 栗栖 / 坂元 / 岡崎 堂屋	ナイロビ ナイロビ	大使館、JICA ケニア事務所報告 環境・天然資源省コアチーム会議出席
12	9/16	土	山本 / 栗栖 坂元 / 堂屋 / 岡崎	機 中 ナイロビ	移動（ナイロビ - ロンドン） 団内打合せ
13	9/17	日	山本 / 栗栖 堂屋 / 岡崎 坂元	機 中 メル - 機 中	移動（ロンドン - 東京） 移動（ナイロビ - メル） 移動（ナイロビ - ロンドン）
14	9/18	月	山本 / 栗栖 坂元 堂屋 / 岡崎	東 京 機 中 メル -	移動（東京着） 移動（ロンドン - 東京） 現地踏査、資料収集、解析・検討、自然条件 調査監督
15	9/19	火	坂元 堂屋 / 岡崎	機 中 メル -	移動（東京着） 現地踏査、資料収集、解析・検討、自然条件 調査監督
.	.	.	.	.	現地踏査、資料収集、解析・検討、自然条件 調査監督
24	9/28	木	堂屋 / 岡崎	ナイロビ	移動（メル - ナイロビ）
25	9/29	金	堂屋 / 岡崎	ナイロビ	環境・天然資源省コアチーム会議出席
26	9/30	土	堂屋 岡崎	メル - ナイロビ	移動（ナイロビ - メル） 環境・天然資源省へ調査結果報告・協議
27	10/1	日	堂屋 岡崎	メル - ナイロビ	現地踏査、資料収集、解析・検討、自然条件 調査監督 環境・天然資源省へ調査結果報告・協議
28	10/2	月	堂屋 岡崎	メル - 機 中	現地踏査、資料収集、解析・検討、自然条件 調査監督 移動（ナイロビ - ロンドン）
29	10/3	火	堂屋 岡崎	メル - 機 中	現地踏査、資料収集、解析・検討、自然条件 調査監督 移動（ロンドン - 東京）
30	10/4	水	堂屋 岡崎	メル - 機 中	現地踏査、資料収集、解析・検討、自然条件 調査監督 移動（東京着）
31	10/5	木	堂屋	メル -	現地踏査、資料収集、解析・検討、自然条件 調査監督
.	.	.	.	.	現地踏査、資料収集、解析・検討、自然条件 調査監督
41	10/15	日	堂屋	ナイロビ	移動（メル - ナイロビ）

日順	日付	曜日	調査団員	宿 泊 先	活動内容
42	10/16	月	堂屋	ナイロビ	環境・天然資源省へ調査結果報告・協議
			荻野	機 中	移動(東京-ロンドン-ナイロビ)
43	10/17	火	堂屋	機 中	移動(ナイロビ-ロンドン)
			荻野	ナイロビ	移動(ナイロビ着)
44	10/18	水	堂屋	機 中	移動(ロンドン-東京)
			荻野	ナイロビ	自然条件調査(業者との打合せ)
45	10/19	木	堂屋	東 京	移動(東京着)
			荻野	メ ル -	移動(ナイロビ-メルー)
・	・	・	・	・	現地踏査、資料収集、解析・検討、自然条件調査監督
51	10/25	月	荻野	ナイロビ	移動(メルー-ナイロビ)
52	10/26	火	荻野	ナイロビ	テクニカル・ノート作成
53	10/27	水	荻野	ナイロビ	環境・天然資源省へ調査結果報告・協議
54	10/28	木	荻野	機 中	JICA ケニア事務所報告 移動(ナイロビ-ロンドン)
55	10/29	金	荻野	機 中	移動(ロンドン-東京)
56	10/30	土	荻野	東 京	移動(東京着)

基本設計概要書説明(基本設計概要説明:2001年2月10日-2月24日)

日順	日付	曜日	調査団員	宿 泊 先	活動内容
1	2/10	土	坂元/堂屋/岡崎	機 中	移動(東京-ロンドン-ナイロビ)
2	2/11	日	坂元/堂屋/岡崎	ナイロビ	移動(ナイロビ着) 団内打合せ
3	2/12	月	坂元/堂屋/岡崎	ナイロビ	JICA ケニア事務所表敬
4	2/13	火	坂元/堂屋/岡崎	ナイロビ	基本設計概要書協議
5	2/14	水	坂元/堂屋/岡崎	ナイロビ	基本設計概要書協議
6	2/15	木	坂元/堂屋/岡崎	メ ル -	メルー市給水施設視察
7	2/16	金	坂元/堂屋/岡崎	ナイロビ	メルー市給水施設視察 移動(メルー-ナイロビ)
8	2/17	土	坂元/堂屋/岡崎	ナイロビ	団内打合せ
			牛木/栗栖	機 中	移動(東京-ロンドン-ナイロビ)
9	2/18	日	坂元/堂屋/岡崎	ナイロビ	資料整理、団内打合せ
			牛木/栗栖	ナイロビ	移動(ナイロビ着)
10	2/19	月	牛木/栗栖/坂元/堂屋/岡崎	ナイロビ	JICA ケニア事務所表敬 議事録協議
11	2/20	火	牛木/栗栖/坂元/堂屋/岡崎	ナイロビ	議事録協議
12	2/21	水	牛木/栗栖/坂元/堂屋/岡崎	ナイロビ	議事録調印
13	2/22	木	牛木/栗栖/坂元/堂屋/岡崎	機 中	大使館、JICA ケニア事務所報告 移動(ナイロビ-ロンドン)
14	2/23	金	牛木/栗栖/坂元/堂屋/岡崎	機 中	移動(ロンドン-東京)
15	2/24	土	牛木/栗栖/坂元/堂屋/岡崎	東 京	移動(東京着)

資料3

相手国関係者リスト

相手国関係者リスト

在ケニア日本大使館

青木 盛久
松宮 洋介

特命全権大使
二等書記官

JICA ケニア事務所

橋本 栄治
成瀬 猛
松山 哲
長谷川庄司
石原 平八郎
E. Kinyangi

所長
次長
所員
無償調査員
JICA 専門家（給水計画）
Administration Officer

環境・天然資源省（Ministry of Environment and Natural Resources）

Mohammed Isahakia	Permanent Secretary
K. G. Chesang	Director of Water Development
D. N. Stower	Senior Deputy Director, Water Development
T. W. Wambua	Deputy Director, Water Development
C. M. Mimano	Deputy Director, Water Development
T. W. Kibaki	Project Manager/KJWSP, Water Development
G. N. Karanja	Project Manager/MUWS, Water Development
Irari Wagereka	Project Manager/GDRD, Water Development
E. N. Onguti	Project Economist, Water Development
V. C. N. Njeru	Meru Central District Water Officer

国家水保全パイプライン公社（National Water Conservation and Pipeline Corporation）

Yoshihiko Kobayashi JICA 個別専門家（上下水道運営）

メルー中央県（Meru Central District）

W. G. Kerario District Commissioner, Meru Central District

資料-4

当該国の社会経済事情

当該国の社会経済事情

ケニア共和国
Republic of Kenya

一般指標					
政体	共和制	*1	首都	ナイロビ (Nairobi)	*2
元首	大統領/ダニエル・トロイティッチ・アラップ・モイ	*1.3	主要都市名	モンバサ、キスム、ナクル	*3
			雇用総数	14,940千人 (1998年)	*6
独立年月日	1963年12月12日	*3.4	義務教育年数	8年間 (年)	*13
主要民族/部族名	ワコ人21%、ルハ人14%、ルイ人13%等	*1.3	初等教育就学率	84.9% (1997年)	*6
主要言語	スワヒリ語、英語	*1.3	中等教育就学率	24.4% (1997年)	*6
宗教	キリスト教70%、イスラム教6%	*1.3	成人非識字率	17.5% (2000年)	*13
国連加盟年	1963年12月16日	*12	人口密度	51.47人/km2 (1998年)	*6
世銀加盟年	1964年2月3日	*7	人口増加率	3.1% (1980年)	*6
IMF加盟年	1964年2月3日	*7	平均寿命	平均 51.30 男 50.50 女 52.20	*10
国土面積	583.00千km2	*1.6	5歳児未満死亡率	124/1000 (1998年)	*6
総人口	29,295千人 (1998年)	*6	カロリー供給量	1,976.0cal/日/人 (1997年)	*10

経済指標					
通貨単位	ケニア・シリング (Shilling)	*3	貿易量	(1998年)	
為替レート	1 US \$ = 76.95 (2001年 3月)	*8	商品輸出	2,013.1 百万ドル	*15
会計年度	Jun. 30	*6	商品輸入	-3,028.7 百万ドル	*15
国家予算	(1996年)		輸入カバー率	2.4(月) (1998年)	*14
歳入総額	143,088 百万ケニア・シリング*	*9	主要輸出品目	紅茶、コーヒー、園芸作物、石油製品	*1
歳出総額	152,832 百万ケニア・シリング*	*9	主要輸入品目	産業機械、原油、鉄鋼、自動車、食料	*1
総合収支	73.7 百万ドル (1998年)	*15	日本への輸出	26 百万ドル (1999年)	*16
ODA受取額	473.9 百万ドル (1998年)	*18	日本からの輸入	156 百万ドル (1999年)	*16
国内総生産(GDP)	11,578.58 百万ドル (1998年)	*6			
一人当たりGNP	350.0 ドル (1998年)	*6	租外貨準備額	783.1 百万ドル (1998年)	*6
GDP産業別構成	農業 26.1% (1998年)	*6	対外債務残高	7,009.8 百万ドル (1998年)	*6
	鉱工業 16.2% (1998年)	*6	対外債務返済率(DSR)	18.8% (1998年)	*6
	サービス業 57.7% (1998年)	*6	インフレ率 (消費者価格物価上昇率)	18.8% (1990-98年)	*6
産業別雇用	農業 男 18.6% 女 19.8% (1992年)	*6			
	鉱工業 23.1% 9.2% (1992年)	*6	国家開発計画		*11
	サービス業 58.3% 70.9% (1992年)	*6			
実質GDP成長率	2.2% (1990年)	*6			

気象 (1961年～1990年平均)	観測地: ナイロビ (南緯1度19分、東経36度55分、標高1,624m)												
月	1	2	3	4	5	6	7	8	9	10	11	12	平均/計
降水量	39.9	48.3	68.6	152.9	107.5	26.5	12.4	13.3	23.6	43.8	121.2	79.6	737.6 mm
平均気温	19.3	20.1	20.5	20.2	19.1	17.7	16.9	17.2	18.5	19.7	19.3	19.1	19.0℃

- *1 各国概況 (外務省)
- *2 世界の国々一覽表 (外務省)
- *3 世界年鑑2000 (共同通信社)
- *4 最新世界各国要覽10訂版 (東京書籍)
- *5 理科年表2000 (国立天文台編)
- *6 World Development Indicators2000
- *7 The World Bank Public Information Center, International Financial Statistics Yearbook 1998
- *8 Universal Currency Converter

- *9 Government Finances Statistics Yearbook1999 (IMF)
 - *10 Human Development Report2000(UNDP)
 - *11 Country Profile(EIU),外務省資料等
 - *12 United Nations Member States
 - *13 Statistical Yearbook 1999(UNESCO)
 - *14 Global Development Finance2000(WB)
 - *15 International Finances Statistics 2000(IMF)
 - *16 世界各国経済情報ファイル2000(日本貿易振興会)
- 注: 商品輸入については複式簿記の計上方式を採用しているため
支払いはマイナス表記になる

	ケニア共和国
	Republic of Kenya

我が国におけるODAの実績		(資金協力は約束額ベース、単位：億円)					*17
項目	暦年	1995	1996	1997	1998	1999	
技術協力		36.89	38.53	42.83	35.52		
無償資金協力		29.27	39.21	31.18	21.63		
有償資金協力		0.00	156.57	0.00	0.00		
総額		66.16	234.31	74.01	57.15		

当該国に対する我が国ODAの実績		(支出純額、単位：百万ドル)					*17
項目	暦年	1995	1996	1997	1998	1999	
技術協力		46.05	35.18	35.88	31.94		
無償資金協力		47.72	40.94	29.36	8.91		
有償資金協力		104.66	16.70	3.54	11.73		
総額		198.43	92.82	68.78	52.29		

OECD 諸国の経済協力実績		(支出純額、単位：百万ドル)					*18
	贈与 (1) (無償資金協力・ 技術協力)	有償資金協力 (2)	政府開発援助 (ODA) (1)+(2)=(3)	その他政府資金 及び民間資金(4)	経済協力総額 (3)+(4)		
二国間援助 (主要供与国)	268.9	6.4	275.3	118.3	393.6		
1. United Kingdom	46.0	8.1	54.1	-18.1	36.0		
2. Japan	40.9	11.7	52.6	41.2	93.8		
3. Germany	32.0	7.0	39.0	-7.0	32.0		
4. United States	30.7	-0.9	29.8	85.3	115.1		
多国間援助 (主要援助機関)	76.8	124.0	200.8	-73.1	127.7		
1. IDA			108.4	0.0	108.4		
2. EC			42.5	0.0	42.5		
その他	1.5	-3.7	-2.2	0.0	-2.2		
合計	347.2	126.7	473.9	45.2	519.1		

援助受入窓口機関	*19
技術協力：計画・国家開発省，大蔵省	
無償：計画・国家開発省，大蔵省	
協力隊：計画・国家開発省，大蔵省	

*17 我が国の政府開発援助1999(国際協力推進協会)

*18 International Development Statistics (CD-ROM) 2000 OECD

*19 JICA資料

資料-5

協議議事録

**MINUTES OF DISCUSSIONS
ON THE BASIC DESIGN STUDY
FOR THE MERU WATER SUPPLY PROJECT
IN THE REPUBLIC OF KENYA**

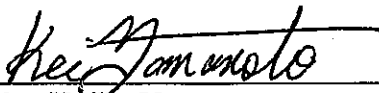
In response to a request from the Government of Republic of Kenya (hereinafter referred to as "GOK"), the Government of Japan (hereinafter referred to as "GOJ") decided to conduct a Basic Design Study for the Meru Water Supply Project in the Republic of Kenya (hereinafter referred to as "the Project") and entrusted the study the Japan International Cooperation Agency (hereinafter referred to as "JICA").

JICA sent to Kenya the Basic Design Study Team (hereinafter referred to as "the Team"), which is headed by Mrs. Keiko Yamamoto, Senior Technical Adviser, JICA, and is scheduled to stay in the country from April 10 to April 20.

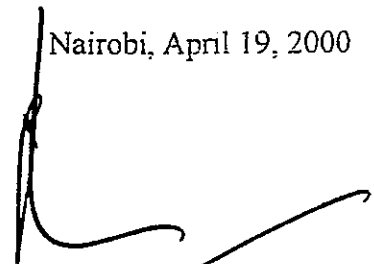
The Team held discussions with the officials concerned of the GOK and conducted a field survey in the study area.

In the course of discussions and field survey, both parties have confirmed the main items described on the attached sheets. The Team will proceed to further work and review the project requested by the GOK for preparing the Basic Design.

Nairobi, April 19, 2000



Mrs. Keiko Yamamoto
Leader,
Basic Design Study Team,
Japan International Cooperation Agency



Dr. Mohammed Isahakia
Permanent Secretary
Ministry of Environment and Natural
Resources

ATTACHMENT

1. Objective

The Objective of the Project is to improve water supply services in Meru Town through construction and rehabilitation of water supply facilities and institutional and organizational capacity building.

2. Study Area

The study area to be covered by the Basic Design Study is shown in Annex-1.

3. Responsible and Implementing Agency

(1) The Responsible Agency of the Project

Ministry of Environment and Natural Resources (hereinafter referred to as "MENR", Annex-2)

(2) The Implementing Agency of the Project

Water Development Department, Ministry of Environment and Natural Resources

4. Items Requested by the Government of Kenya

The items described below were requested by the Kenyan side:

- (1) Intake weir on the Kathita River,
- (2) Raw water conveyance pipeline,
- (3) Water treatment plant,
- (4) Transmission and distribution facilities,
- (5) Rehabilitation of the existing facilities,
- (6) Other facilities and equipment including water meter, relevant to the operation and maintenance, and
- (7) Technical assistance.

5. Changes of the Situation Concerning with the Project

The Kenyan side reported the following issues:

- (1) That the part of the existing facilities in Meru water supply system will be rehabilitated under the El-Nino Infrastructure Rehabilitation Project to be executed by the Office of the President.
- (2) That the MENR has decided to devolve the Meru water supply services to a future local

water supply managing body with full autonomy, based on the National Water Policy issued in 1999.

6. Water Supply to the Communities in the Study Area

Both sides confirmed that it was necessary to supply stable and safe water to the communities in the study area. In order to achieve this objective, it is necessary to sensitize and create awareness of communities, that are relying on their inadequate own water supply system with no treatment, and strengthen public relation capacity of the District Water Office by the Kenyan side.

Therefore, the MENR is required to make a continuous effort on this issue.

7. Review of the Project Requested by the Government of Kenya

The Team presented the Inception Report and held discussion with the officials of MENR.

The both sides agreed that the Team would review the following engineering and institutional issues during the first stage of the field survey on the basis of the present situation described in the items 4, 5 and 6:

- (1) Rehabilitation works of the existing facilities to be done by the Project.
- (2) Feasibility of each distribution main from the view points of needs in the communities for connection with the Meru water supply system,
- (3) Identification of alternative site of the envisaged intake weir and water treatment plant based on hydraulic studies,
- (4) Water demand taking into account needs of communities in the study area,
- (5) Water supply capacity of the facilities of the Project, and
- (6) Institution and organization for operation and maintenance of the Project

8. Sustainability of the Project

The both sides recognized that sound management of the Meru water supply services is highly important as well as improvement of facilities. Accordingly the followings are confirmed by both sides:

- (1) GOK has already established a Project Preparation Unit in the MENR, in order to arrange necessary matters to establish a fully autonomous and self-sufficient water supply managing body of Meru;
- (2) The project must be designed, taking into consideration capacity of a future local water supply managing body such as reliable water supply, service area with higher bill collection and lower operation cost potential, and appropriate personnel deployment for sound management of the Meru water supply services.

- (3) The Kenyan side also requested strongly that GOJ extend technical assistance to build the Kenyan side's institutional capacity to establish, operate, and maintain the organization required for the Project. The Team understood the necessity and announced that the request for technical assistance would be conveyed to JICA Headquarters.

9. Japan's Grant Aid System

- (1) The Kenyan Side understood Japan's Grant Aid Scheme and Procedures explained by the Team as shown in Annex-3 and Annex-4.
- (2) The Kenyan Side agreed that they would take the necessary measures, described in Annex-5, for smooth implementation of the project, as a condition for the Japanese Grant Aid to be implemented.

10. Period of the Study

The Team explained that the study period in Kenya will be divided into two stages because of substantial changes in situations which are recognized by the study team since the JICA M/P Study. The first study will be carried out for the review of the Project and the second study will be carried out for the Basic Design. The Kenyan side agreed on it. Schedule of the study is following.

First stage study : April 10 to May 26

Second stage study : The Kenyan side will be informed in June 2000 through the JICA Nairobi Office.

11. Other Relevant Issues

(1) Action Plan

The Kenyan side reported to the Team their activities of action plan strongly suggested by JICA M/P Study Team in 1997, whose objectives were to improve performance of operation and maintenance described in Annex-6.

The Team appreciated the Kenyan side's efforts, albeit insufficient still, and requested the Kenyan side to continue the efforts. The Kenyan side assured of the continuation.

(2) Forest Land Conservation Area

The Kenyan side promised to clarify the law or regulation of conservation of the forest during the first stage study. The Team will evaluate environmental impact of the Project in the national conservation area.

(3) Study of the communities

The Kenyan side confirmed to carry out the inventory study with the Team to find the water demand and willingness to pay in the study area.

(4) Counterpart Personnel

The Kenyan side agreed to provide necessary counterpart personnel on full time basis to the Team during the period of their investigations in Nairobi and Meru.

(5) Sewerage expansion in Meru Town

The Kenyan side emphasized that expansion of sewerage system in Meru Town would be necessary to take care of increased wastewater.

B-13

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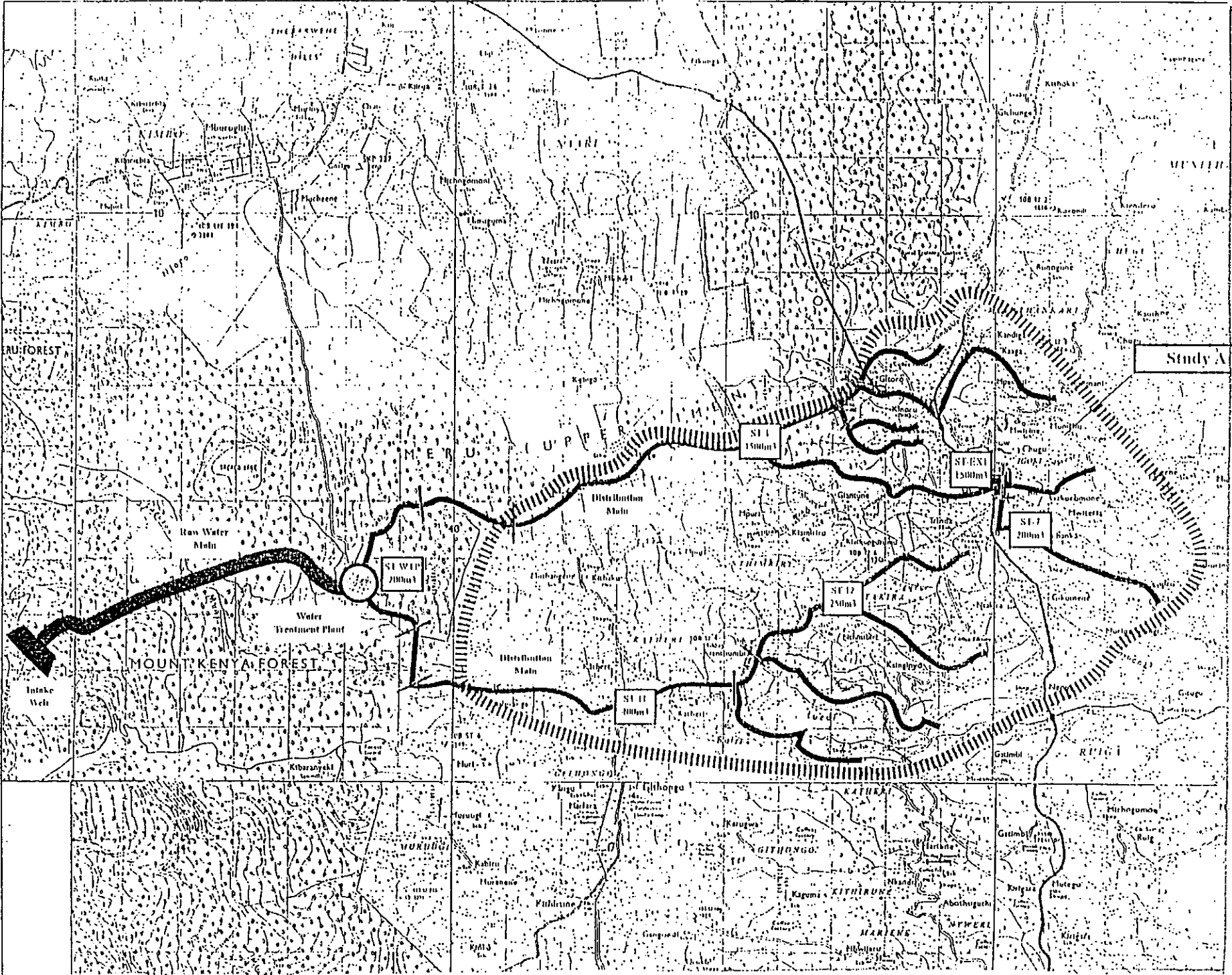
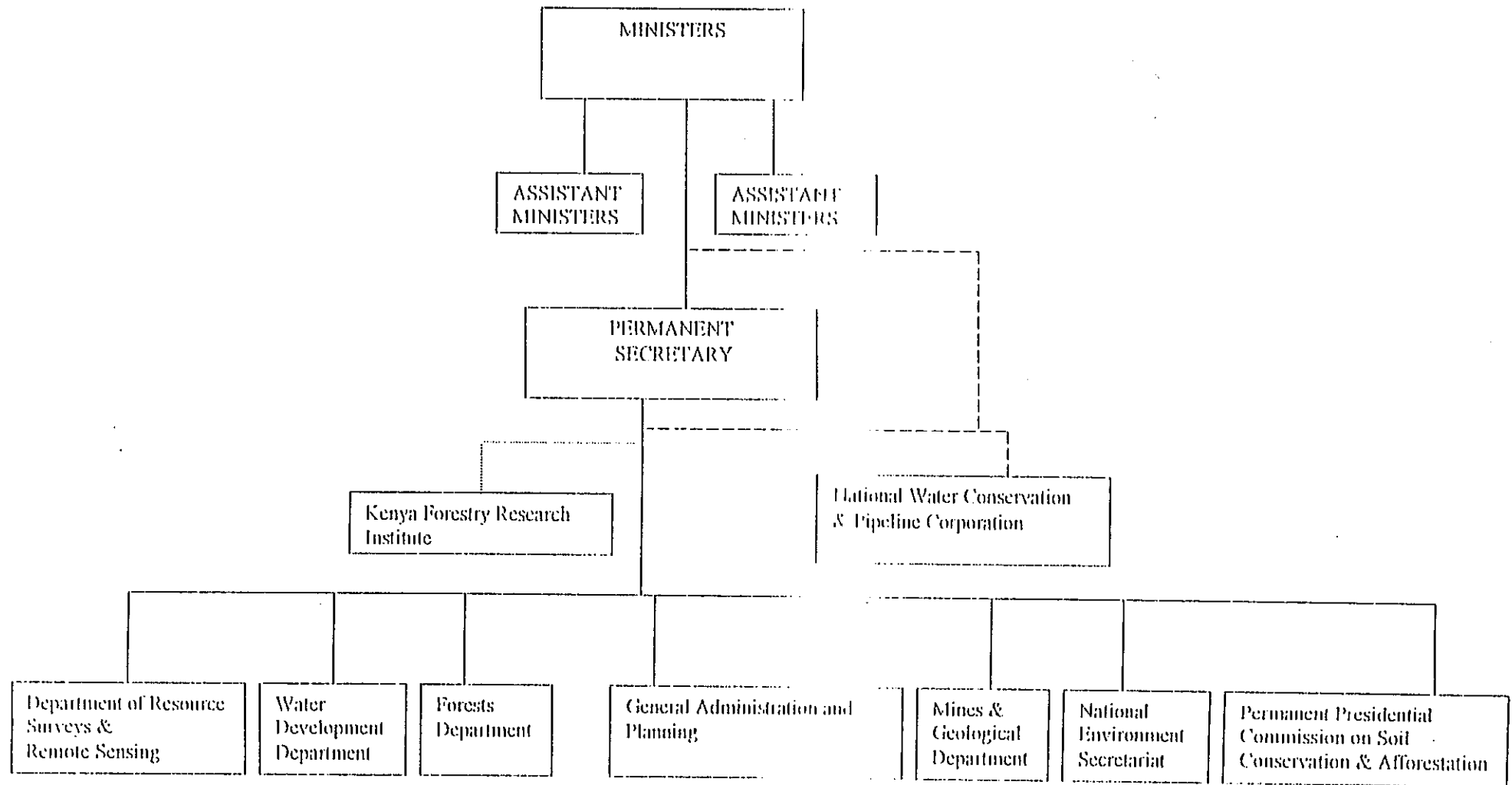


CHART 1: MINISTRY OF ENVIRONMENT AND NATURAL RESOURCES: CURRENT ORGANISATION STRUCTURE



KEY: - - - -
Autonomous

Semi-Autonomous

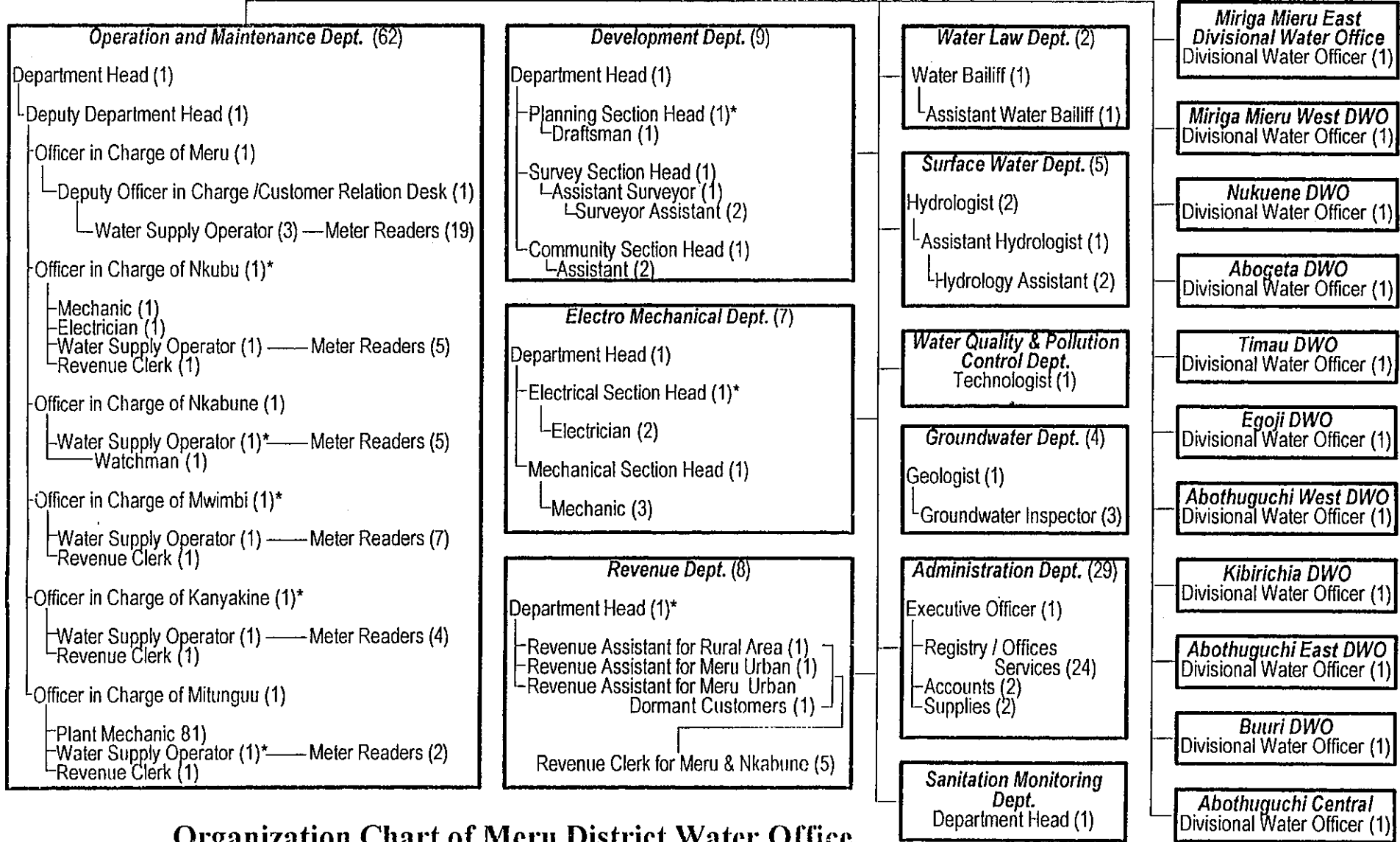
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Meru District Water Office
District Water Officer (1)

-Numbers in parenthesis show the number of employees deployed.
-Positions concurrently occupied are shown by *
-Total staff number as of April 2000 is 140.



Organization Chart of Meru District Water Office

B-15

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Annex-3 JAPAN'S GRANT AID PROGRAM

1. Japan's Grant Aid Procedures

(1) The Japan's Grant Aid Program is executed by the following procedures.

- Application (request made by a recipient country)
- Study (Preliminary Study / Basic Design Study conducted by JICA)
- Appraisal & Approval (Appraisal by the Government of Japan and Approval by the Cabinet of Japan)
- Determination of Implementation (Exchange of Notes between both Governments)
- Implementation (Implementation of the Project)

(2) Firstly, an application or a request for a Grant Aid project submitted by the recipient country is examined by the Government of Japan (the Ministry of Foreign Affairs) to determine whether or not it is eligible for Japan's Grand Aid. If the request is deemed appropriate, the Government of Japan entrusts a study on the request to JICA (Japan International Cooperation Agency).

Secondly, JICA conducts the Study (Basic Design Study), using a Japanese consulting firm

Thirdly, the Government of Japan appraises to see whether or not the project is suitable for Japan's Grant Aid Program, based on the Basic Design Study report prepared by JICA, and the results are then submitted to the Cabinet for approval.

Fourthly, the Project, once approved by the Cabinet, becomes official when pledged by the Exchange of Notes signed by the Governments of Japan and the recipient country.

Finally, for the implementation of the Project, JICA assists the recipient country in such matters as preparing tenders, contracts and so on.

2. Contents of the Study

(1) Contents of the Study

The aim of the Study (hereinafter referred to as "the Study") conducted by JICA on a requested project (hereinafter referred to as "the Project") is to provide a basic document necessary for appraisal of the Project by the Japanese Government. The contents of the Study are as follows:

- a) Confirmation of the background, objectives, and benefits of the requested project and also institutional capacity of agencies concerned of the recipient country necessary for

- project implementation,
- b) Evaluation of the appropriateness of the Project to be implemented under the Grant Aid Scheme from a technical, social and economical point of view,
 - c) Confirmation of items agreed on by both parties concerning the basic concept of the Project,
 - d) Preparation of a basic design of the Project,
 - e) Estimation of costs of the project.

The contents of the original request are not necessarily approved in their initial form as the contents of the Grant Aid project. The Basic Design of the Project is confirmed considering the guidelines of Japan's Grant Aid Scheme.

The Government of Japan requests the Government of the recipient country to take whatever measures are necessary to ensure its self-Reliance in the implementation of the Project. Such measures must be guaranteed even though they may fall outside of the jurisdiction of the organization in the recipient country actually implementing the Project. Therefore, the implementation of the Project is confirmed by all relevant organizations of the recipient country through to Minutes of Discussions.

(2) Selecting (a) Consulting Firm(s)

For smooth implementation of the study, JICA uses (a) registered consulting firm(s). JICA selects (a) firm(s) based on proposals submitted by interested firms. The firm(s) selected carry (ies) out a Basic Design Study and write(s) a report, based upon terms of reference set by JICA.

The consulting firm(s) used for the study is (are) recommended by JICA to the recipient country to also work on the Project's implementation after the Exchange of Notes, in order to maintain technical consistency.

3. Japan's Grant Aid Scheme

(1) What is Grant Aid?

The Grant Aid Program provides a recipient country with non reimbursable funds needed to procure facilities, equipment and services (engineering services and transportation of the products, etc.) for economic and social development of the country under principles in accordance with the relevant laws and regulations of Japan. The Grant Aid is not in a form of donation of materials or such.

(2) Exchange of Notes (E/N)

Japan's Grant Aid is extended in accordance with the Notes exchanged by the two Governments concerned, in which the objectives of the Project, period of execution, conditions and amount of the Grant Aid, etc., are confirmed.

(3) "The period of the Grant Aid" means one Japanese fiscal year which the Cabinet approves the Project for. Within the fiscal year, all procedures such as exchanging of the Notes, concluding contracts with (a) consulting firm(s) and (a) contractor(s) and final payment to them must be completed.

However in case of delays in delivery, installation of construction due to unforeseen factors such as weather, the period of the Grant Aid can be further extended for a maximum of one fiscal year at most by mutual agreement between the two Governments.

(4) Under the Grant, in principle, Japanese products and services including transport or those of the recipient country are to be purchased.

When the two Governments deem it necessary, the Grant may be used for the purchase of products or services of a third country.

However the prime contractors, namely, consulting, contractor and procurement firms, are limited to "Japanese nationals". (The term "Japanese nationals" means persons of Japanese nationality or Japanese corporations controlled by persons of Japanese nationality)

(5) Necessity of the "Verification"

The Government of the recipient country or its designated authority will conclude contracts denominated in Japanese Yen with Japanese nationals. Those contracts shall be verified by the Government of Japan. This "Verification" is deemed necessary to secure accountability to Japanese tax payers.

(6) Undertakings required to the Government of the recipient country

In the Implementation of the Grant Aid Project, the recipient country is required to undertake necessary measures such as the follows:

- a) To secure land necessary for the sites of the project and to clear, level and reclaim the land prior to commencement of the construction work,

- b) To provide facilities for distribution of electricity, water supply and drainage and other incidental facilities in and around the sites,
- c) To secure buildings prior to the installation work in case the Project is providing equipment,
- d) To ensure all the expenses and prompt execution for unloading, customs clearance at the port of disembarkation and internal transportation of the products purchased under the Grant Aid,
- e) To exempt Japanese nationals from customs duties, internal taxes and other fiscal levies which will be imposed in the recipient country with respect to the supply of the products and services under the Verified Contracts,
- f) To accord Japanese nationals whose services may be required in connection with the supply of the products and services under the Verified Contracts, such facilities as may be necessary for their entry into the recipient country and stay therein for the performance of their works.

(7) "Proper Use"

The recipient country is required to maintain and use facilities constructed and equipment purchased under the Grant Aid properly and effectively and to assign the necessary staff for operation and maintenance of them as well as to bear all expenses other than those to be covered by the Grant Aid.

(8) Re-export

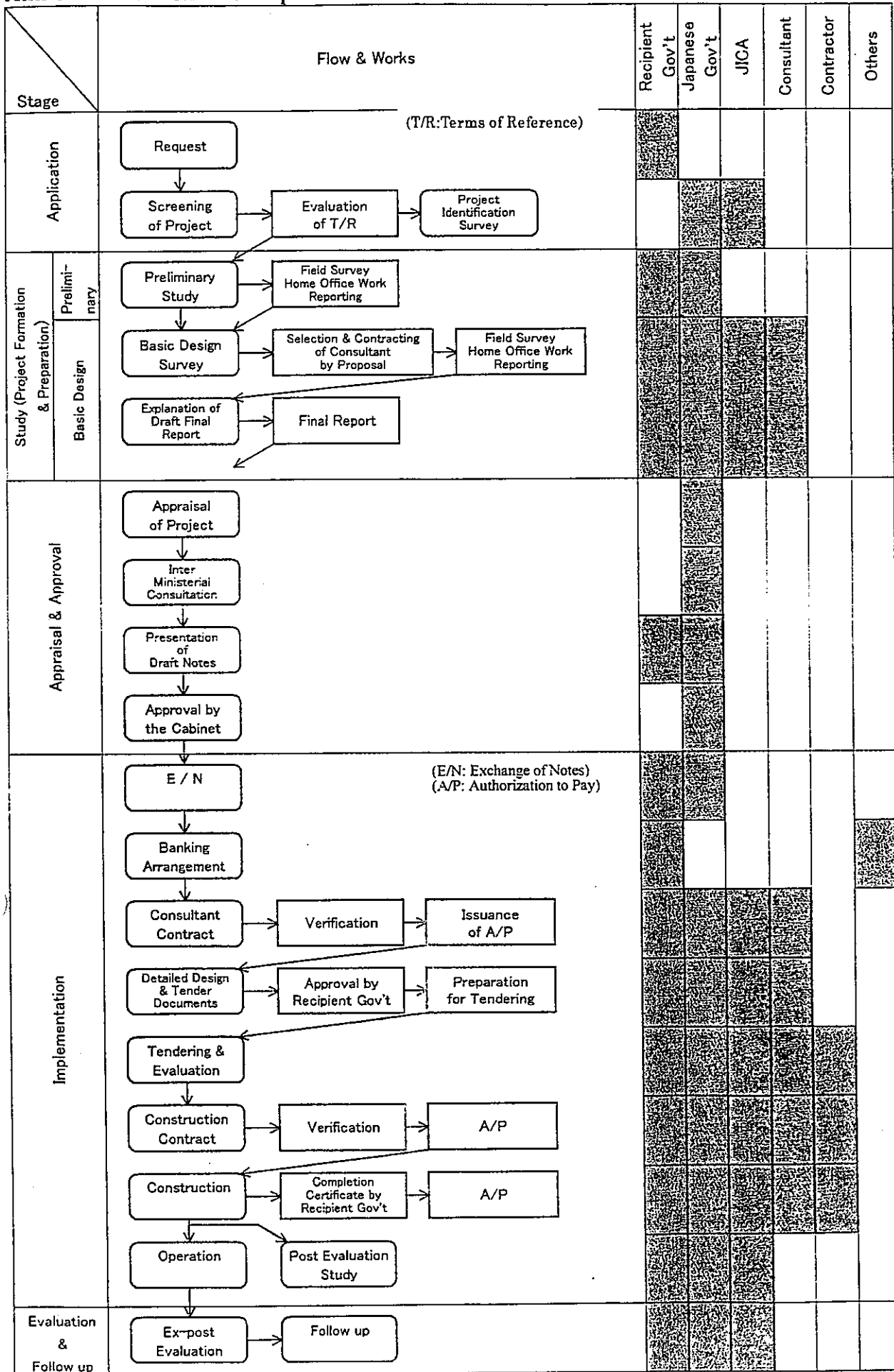
The products purchased under the Grant Aid shall not be re-exported from the recipient country.

(9) Banking Arrangement (B/A)

- a) The Government of the recipient country or its designated authority should open an account in the name of the Government of the recipient country in a bank in Japan (hereinafter referred to as "the Bank"). The Government of Japan will execute the Grant Aid by making payments in Japanese yen to cover the obligations incurred by Government of the recipient country or its designated authority under the Verified Contracts.
- b) The payments will be made when payment requests are presented by the Bank to the Government of Japan under an Authorization to pay issued by the Government of the recipient country or its designated authority.

S *M.F.*

Annex-4 Flow Chart of Japan's Grant Aid Procedures



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Annex-5 Necessary measures to be taken by the Government of Kenya on condition that Japan's Grant Aid is extended.

1. To secure land necessary for the sites of the Project and to clear, level and reclaim the land prior to commencement of the construction work.
2. To bear commissions to the Japanese bank to execute the banking services based upon the banking arrangement.
3. To ensure prompt unloading and customs clearance at port of disembarkation in Kenya and facilitate internal transportation therein of the products purchased under the Grant.
4. To ensure the customs clearance at the port, inland transportation from the port to each site, and to bear the cost for bonded storage at the port.
5. To exempt Japanese nationals from custom duties, internal taxes and other fiscal levies which may be imposed in Kenya with respect to the supply of the products and services under the verified contracts. And to take necessary measures for such tax exemption.
6. To accord Japanese nationals, whose services may be required in connection with the supply of products and services under the verified contracts, such facilities as may be necessary for their entry into Kenya and stay therein for the performance of their work.
7. To use and maintain properly and effectively all the equipment purchased and facilities constructed under the Grant.
8. To bear all the expenses other than those covered by the Grant, necessary for the execution of the Project.
9. To provide necessary data and information for the project.
10. To assign exclusive counterpart engineers and technicians for the Project.

5 M.T.

Annex - 6 Progress of Action Plan

Activity	Before Action Plan		After Action Plan		Comment
	Data	Period	Data	Period	
1) Metering system improvement					
1.1) Number of connection on ledger	3,002	As of Jul. 1998	3,805	As of Apr. 7, 2000	Satisfactory progress
1.2) Number of connection on field inventory *a	0	As of Jul. 1998	2,816	As of Apr. 7, 2000	Satisfactory progress
1.3) Number of meter on field inventory *a	0	As of Jul. 1998	2,092	As of Apr. 7, 2000	Satisfactory progress
1.4) Number of meter repaired	no records	As of Jul. 1998	6 per month	During Mar. 2000	Recording system established
2) Billing and collection system improvement					
2.1) Block mapping	Started	In Oct. 1998	90% progress	As of Mar. 2000	Satisfactory progress
2.2) Billing	Ksh 2,415,700 per 3 months	Jan.-Mar. 1998	Ksh 3,816,939 per 3 months	Jan.-Mar. 2000	Water tariff increased in Jan. 2000
2.3) Collection	Ksh 1,056,982 per 3 months	Jan.-Mar. 1998	Ksh 2,031,571 per 3 months	Jan.-Mar. 2000	
2.4) Collection efficiency	43.8%	Jan.-Mar. 1998	53.2%	Jan.-Mar. 2000	Improved
3) Illegal connection prevention					
3.1) Number of illegal connection identified	17 per month *b	Oct. 98 to Jan. 99	95 per month	During Mar. 2000	Productivity increased
3.2) Number of illegal connection disconnected	17 per month *b	Oct. 98 to Jan. 99	33 per month	During Mar. 2000	
4) Customer relation improvement					
4.1) Consumer Relation Desk	Inexistent	Before Oct. 1998	Established *c	Nov. 1998	Realized as scheduled
4.2) Number of complaint received	60 per 4 months	Nov. 98- Feb. 99	358 per 4 months	Nov. 99- Feb. 00	Satisfactory progress
5) Institutional capacity building					
5.1) Consumer Relation Desk	Inexistent	Before Oct. 1998	Established *c	Nov. 1998	Realized as scheduled
5.2) Leak Detection Unit	Inexistent	Before Sep. 1998	Established *d	Oct. 1998	Realized as scheduled
5.3) Meter Reading Unit	14 staff	As of Oct. 1998	19 staff	As of Mar. 2000	Staff increased

Note:

*a Reconciliation of field data and ledgers still going on.

*b Monthly average between Oct. 98 and Jan. 99

*c One staff is concurrently deployed.

*d Four staffs are concurrently deployed.

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**MINUTES OF DISCUSSIONS
ON THE BASIC DESIGN STUDY
FOR THE MERU WATER SUPPLY PROJECT
IN THE REPUBLIC OF KENYA**

In response to a request from the Government of Republic of Kenya (hereinafter referred to as "GOK"), the Government of Japan (hereinafter referred to as "GOJ") decided to conduct a Basic Design Study for the Meru Water Supply Project in the Republic of Kenya (hereinafter referred to as "the Project") and entrusted the study to the Japan International Cooperation Agency (hereinafter referred to as "JICA").

JICA sent to Kenya the Basic Design Study Team (hereinafter referred to as "the Team"), which is headed by Mrs. Keiko Yamamoto, Senior Technical Adviser, JICA, and is scheduled to stay in the country from September 6 to September 16.

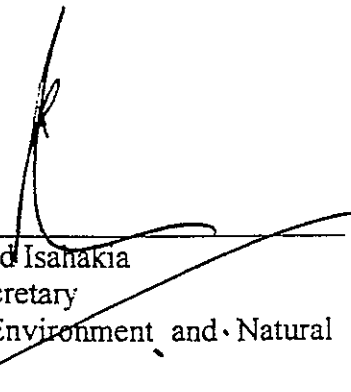
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Nairobi, September 14, 2000



Mrs. Keiko Yamamoto
Leader,
Basic Design Study Team,
Japan International Cooperation Agency



Dr. Mohammed Isahakia
Permanent Secretary
Ministry of Environment and Natural
Resources

ATTACHMENT

1. Objective

The Objective of the Project is to improve water supply services in Meru Town through construction and rehabilitation of water supply facilities and institutional and organizational capacity building.

2. Study Area

The study area to be covered by the Basic Design Study is shown in ANNEX-1.

3. Responsible and Implementing Agency

(1) The Responsible Agency of the Project

Ministry of Environment and Natural Resources (hereinafter referred to as "MENR", Annex-2)

(2) The Implementing Agency of the Project

Water Development Department, MENR

4. Items Requested by the Government of Kenya

After the discussion on Interim Report, GOK finally requested the following items:

(1) Improvement of the existing water supply system

a. Intake facilities and raw water transmission mains

- Installation of new valves on the Kathita and Gatabora raw water mains,
- River crossings on raw water transmission main, and
- Replacement of uPVC pipes on the Kathita and Gatabora raw water mains.

b. Water Treatment Plant

- Construction of new backwash tanks,
- Improvement of chemical dosing equipments,
- Installation of new control valves,
- Installation of new flow meters, and
- Construction of new tanks at the water treatment plant.

c. Pipeline network

- Replacement of the existing distribution pipes, and expansion of pipeline including construction of new break pressure tanks and reservoirs in the proposed new supply area,
- Replacement of rising main from water treatment plant to high level tanks, and
- Installation of new flow meters and valves for management of a zonal distribution system.

d. Rehabilitation of workshop building

(2) Supplies of equipment for operation and maintenance

- a. Vehicles and motor bikes for effective revenue collection, patrol and maintenance for pipe network,
- b. Workshop tools for repair of mechanical and electrical equipment including repairing and testing equipment for water meter,
- c. Laboratory instruments for water quality tests,
- d. Equipment for leakage control,
- e. Water meters for replacement of the existing meters broken or out of order,
- f. Topographic survey equipment
- g. Earthwork tools for maintenance, and
- h. Spare parts for mechanical and electrical equipment of the Meru water supply including water meter.

(3) Technical assistance for capacity building of the envisaged autonomous managing body during implementation stage of the Project

JICA will assess the appropriateness of the request and will recommend to GOJ for approval.

5. Japan's Grant Aid Scheme

- (1) GOK understood the Japan's Grant Aid scheme and procedures explained by Team as shown in Annex-3 and Annex-4.
- (2) GOK will take the necessary measures, described in Annex-5, for smooth implementation of the Project, as a condition for the Japanese Grant Aid to be implemented.
- (3) Both Sides recognized that GOK has a responsibility to provide the office for a new management body.

6. Schedule of the Study

- (1) The consultants will conduct further studies in Kenya until October 30, 2000.
- (2) JICA will prepare a draft report in English and dispatch a mission in order to explain its contents in January 2001.
- (3) In case that the contents of the draft report are accepted in principle by GOK, JICA will complete the final report and send it to GOK by the end of March 2000.

7. Other Relevant Issues

- (1) Action Plan for Improvement of Operation and Maintenance in Meru Water Supply

MENR reported to the Team their activities of action plan for improving performance of operation and maintenance of Meru Water Supply.

Japanese Side appreciated the MENR's efforts, albeit insufficient still, and requested the MENR to continue the efforts. The MENR assured of the continuation.

- (2) Water Supply Development Plan in the Study Area

Japanese Side explained that the Water Supply Development Plan in the Study Area has been reviewed and that this Project is formulated by focusing on the existing service area including potential supply area from the existing water supply facilities. MENR understood it.

MENR strongly requested JICA to reconsider the area marked in green and also understood necessity of another request for future expansion project.

- (3) El-Nino Project

MENR confirmed to submit the officially approved monthly progress report of construction works of the El-Nino project to JICA Kenya Office.

- (4) Final Report for Establishment of a New Managing Body for Meru Water Supply

MENR explained that the Project Preparation Unit has established the "Core Team" in September 2000. The MENR also explained the proposed action plan of the Core Team for establishing a full autonomous body for Meru Water Supply, as given in Annex-6 and 7.

MENR will submit the proposed action plan to the Core Team for discussion and adoption

The agreed plan will be submitted to JICA Kenya Office by 20th September 2000.

MENR will determine the type of new managing body by December 2000.

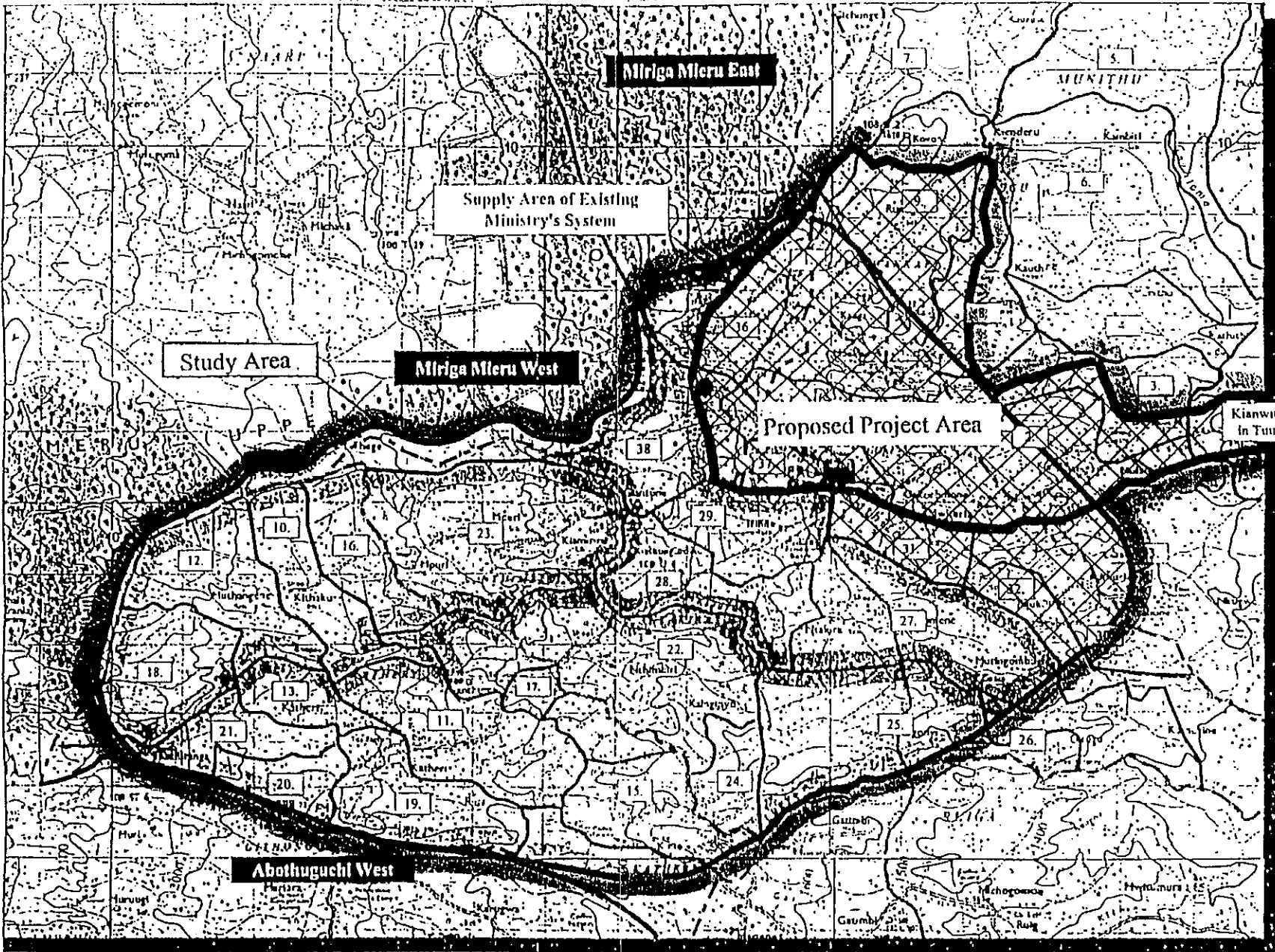
Japanese Side requested GOK to exert effort to have it registered by March 2001.

MENR confirmed to submit the report including the determination of type of new managing body approved by GOK to JICA Kenya Office by 5th January 2001.

(5) Sewerage expansion in Meru Municipality

MENR recognized the need for improvement of sewerage system in Meru Municipality, but it was clarified that this is the responsibility of GOK as it is not covered under the Project.

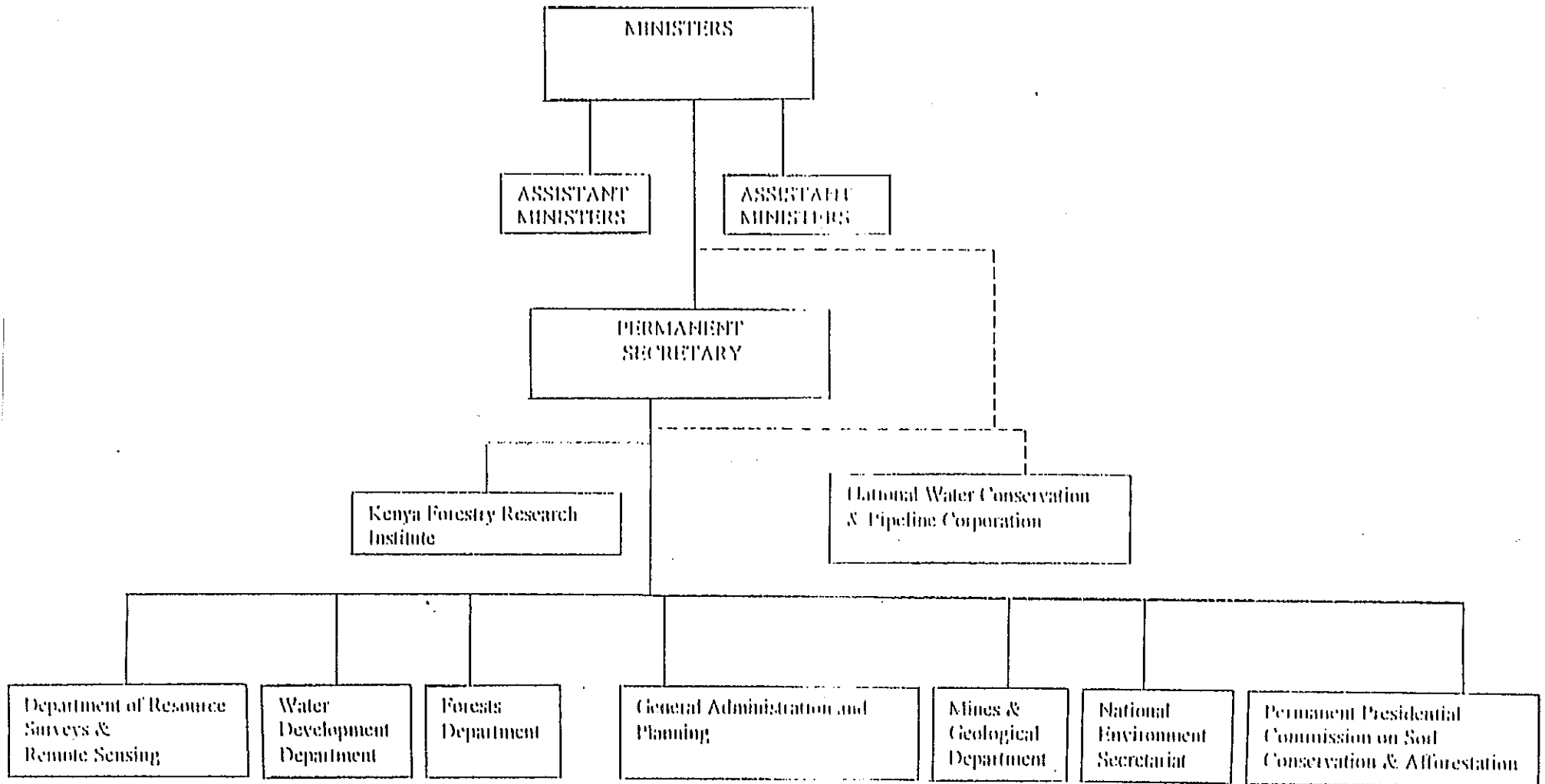
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B-28

15

CHART 1: MINISTRY OF ENVIRONMENT AND NATURAL RESOURCES: CURRENT ORGANISATION STRUCTURE



KEY: - - - - - Autonomous
 - Semi-Autonomous

B-29

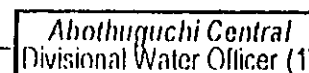
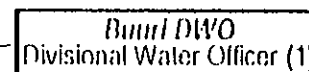
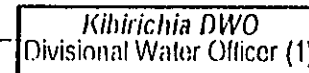
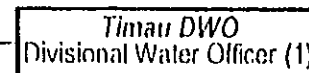
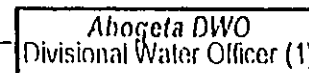
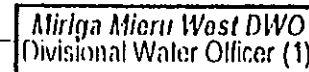
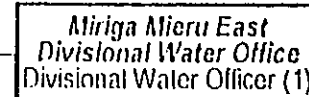
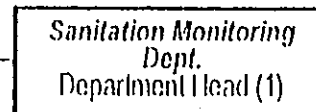
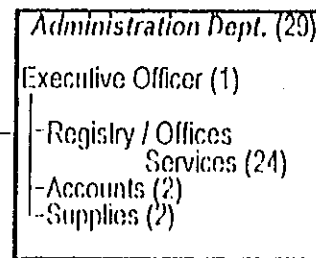
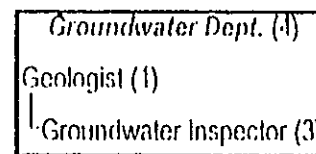
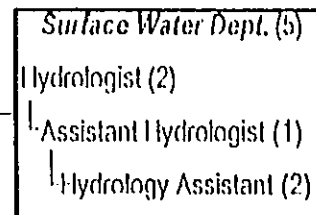
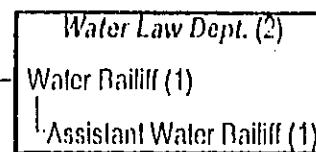
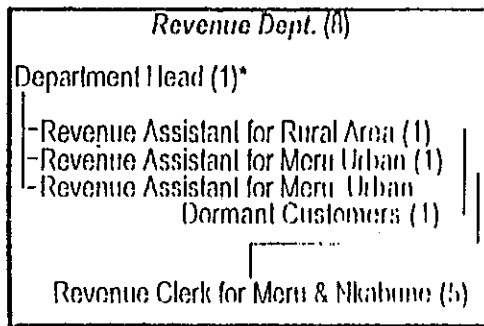
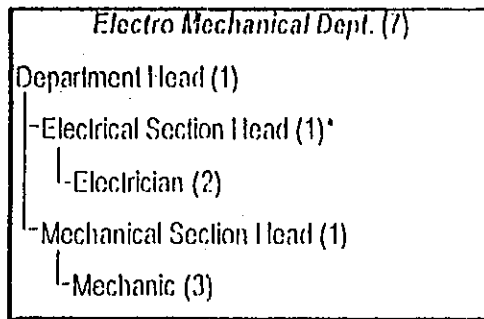
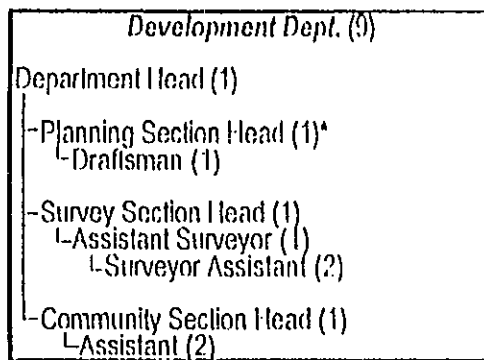
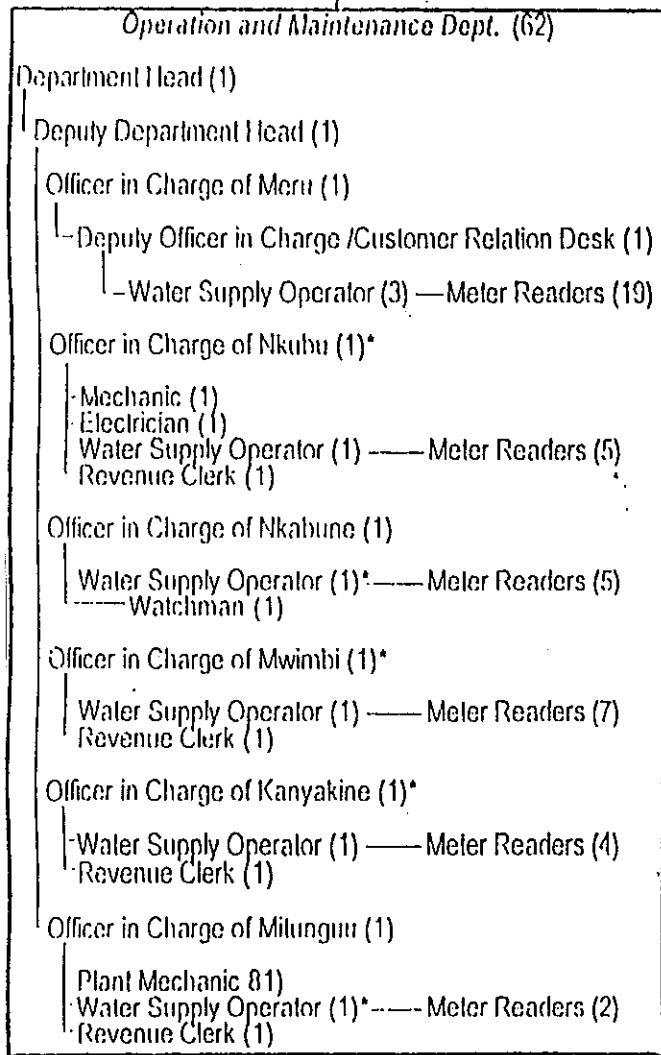
Annex-2 (1)

Meru District Water Office
District Water Officer (1)

Numbers in parentheses show the number of employees deployed

Positions concurrently occupied are shown by *

Total staff number as of April 2000 is 140



Organization Chart of Meru District Water Office

Annex-3 JAPAN'S GRANT AID PROGRAM

1. Japan's Grant Aid Procedures

(1) The Japan's Grant Aid Program is executed by the following procedures.

- Application (request made by a recipient country)
- Study (Preliminary Study / Basic Design Study conducted by JICA)
- Appraisal & Approval (Appraisal by the Government of Japan and Approval by the Cabinet of Japan)
- Determination of Implementation (Exchange of Notes between both Governments)
- Implementation (Implementation of the Project)

(2) Firstly, an application or a request for a Grant Aid project submitted by the recipient country is examined by the Government of Japan (the Ministry of Foreign Affairs) to determine whether or not it is eligible for Japan's Grant Aid. If the request is deemed appropriate, the Government of Japan entrusts a study on the request to JICA (Japan International Cooperation Agency).

Secondly, JICA conducts the Study (Basic Design Study), using a Japanese consulting firm

Thirdly, the Government of Japan appraises to see whether or not the project is suitable for Japan's Grant Aid Program, based on the Basic Design Study report prepared by JICA, and the results are then submitted to the Cabinet for approval.

Fourthly, the Project, once approved by the Cabinet, becomes official when pledged by the Exchange of Notes signed by the Governments of Japan and the recipient country.

Finally, for the implementation of the Project, JICA assists the recipient country in such matters as preparing tenders, contracts and so on.

2. Contents of the Study

(1) Contents of the Study

The aim of the Study (hereinafter referred to as "the Study") conducted by JICA on a requested project (hereinafter referred to as "the Project") is to provide a basic document necessary for appraisal of the Project by the Japanese Government. The contents of the Study are as follows:

- a) Confirmation of the background, objectives, and benefits of the requested project and also institutional capacity of agencies concerned of the recipient country necessary for

- project implementation,
- b) Evaluation of the appropriateness of the Project to be implemented under the Grant Aid Scheme from a technical, social and economical point of view,
 - c) Confirmation of items agreed on by both parties concerning the basic concept of the Project,
 - d) Preparation of a basic design of the Project,
 - e) Estimation of costs of the project.

The contents of the original request are not necessarily approved in their initial form as the contents of the Grant Aid project. The Basic Design of the Project is confirmed considering the guidelines of Japan's Grant Aid Scheme.

The Government of Japan requests the Government of the recipient country to take whatever measures are necessary to ensure its self-Reliance in the implementation of the Project. Such measures must be guaranteed even though they may fall outside of the jurisdiction of the organization in the recipient country actually implementing the Project. Therefore, the implementation of the Project is confirmed by all relevant organizations of the recipient country through to Minutes of Discussions.

(2) Selecting (a) Consulting Firm(s)

For smooth implementation of the study, JICA uses (a) registered consulting firm(s). JICA selects (a) firm(s) based on proposals submitted by interested firms. The firm(s) selected carry (ies) out a Basic Design Study and write(s) a report, based upon terms of reference set by JICA.

The consulting firm(s) used for the study is (are) recommended by JICA to the recipient country to also work on the Project's implementation after the Exchange of Notes, in order to maintain technical consistency.

3. Japan's Grant Aid Scheme

(1) What is Grant Aid?

The Grant Aid Program provides a recipient country with non reimbursable funds needed to procure facilities, equipment and services (engineering services and transportation of the products, etc.) for economic and social development of the country under principles in accordance with the relevant laws and regulations of Japan. The Grant Aid is not in a form of donation of materials or such.

(2) Exchange of Notes (E/N)

Japan's Grant Aid is extended in accordance with the Notes exchanged by the two Governments concerned, in which the objectives of the Project, period of execution, conditions and amount of the Grant Aid, etc., are confirmed.

(3) "The period of the Grant Aid" means one Japanese fiscal year which the Cabinet approves the Project for. Within the fiscal year, all procedures such as exchanging of the Notes, concluding contracts with (a) consulting firm(s) and (a) contractor(s) and final payment to them must be completed.

However in case of delays in delivery, installation of construction due to unforeseen factors such as weather, the period of the Grant Aid can be further extended for a maximum of one fiscal year at most by mutual agreement between the two Governments.

(4) Under the Grant, in principle, Japanese products and services including transport or those of the recipient country are to be purchased.

When the two Governments deem it necessary, the Grant may be used for the purchase of products or services of a third country.

However the prime contractors, namely, consulting, contractor and procurement firms, are limited to "Japanese nationals". (The term "Japanese nationals" means persons of Japanese nationality or Japanese corporations controlled by persons of Japanese nationality)

(5) Necessity of the "Verification"

The Government of the recipient country or its designated authority will conclude contracts denominated in Japanese Yen with Japanese nationals. Those contracts shall be verified by the Government of Japan. This "Verification" is deemed necessary to secure accountability to Japanese tax payers.

(6) Undertakings required to the Government of the recipient country

In the Implementation of the Grant Aid Project, the recipient country is required to undertake necessary measures such as the follows:

- a) To secure land necessary for the sites of the project and to clear, level and reclaim the land prior to commencement of the construction work,

- b) To provide facilities for distribution of electricity, water supply and drainage and other incidental facilities in and around the sites,
- c) To secure buildings prior to the installation work in case the Project is providing equipment,
- d) To ensure all the expenses and prompt execution for unloading, customs clearance at the port of disembarkation and internal transportation of the products purchased under the Grant Aid,
- e) To exempt Japanese nationals from customs duties, internal taxes and other fiscal levies which will be imposed in the recipient country with respect to the supply of the products and services under the Verified Contracts,
- f) To accord Japanese nationals whose services may be required in connection with the supply of the products and services under the Verified Contracts, such facilities as may be necessary for their entry into the recipient country and stay therein for the performance of their works.

(7) "Proper Use"

The recipient country is required to maintain and use facilities constructed and equipment purchased under the Grant Aid properly and effectively and to assign the necessary staff for operation and maintenance of them as well as to bear all expenses other than those to be covered by the Grant Aid.

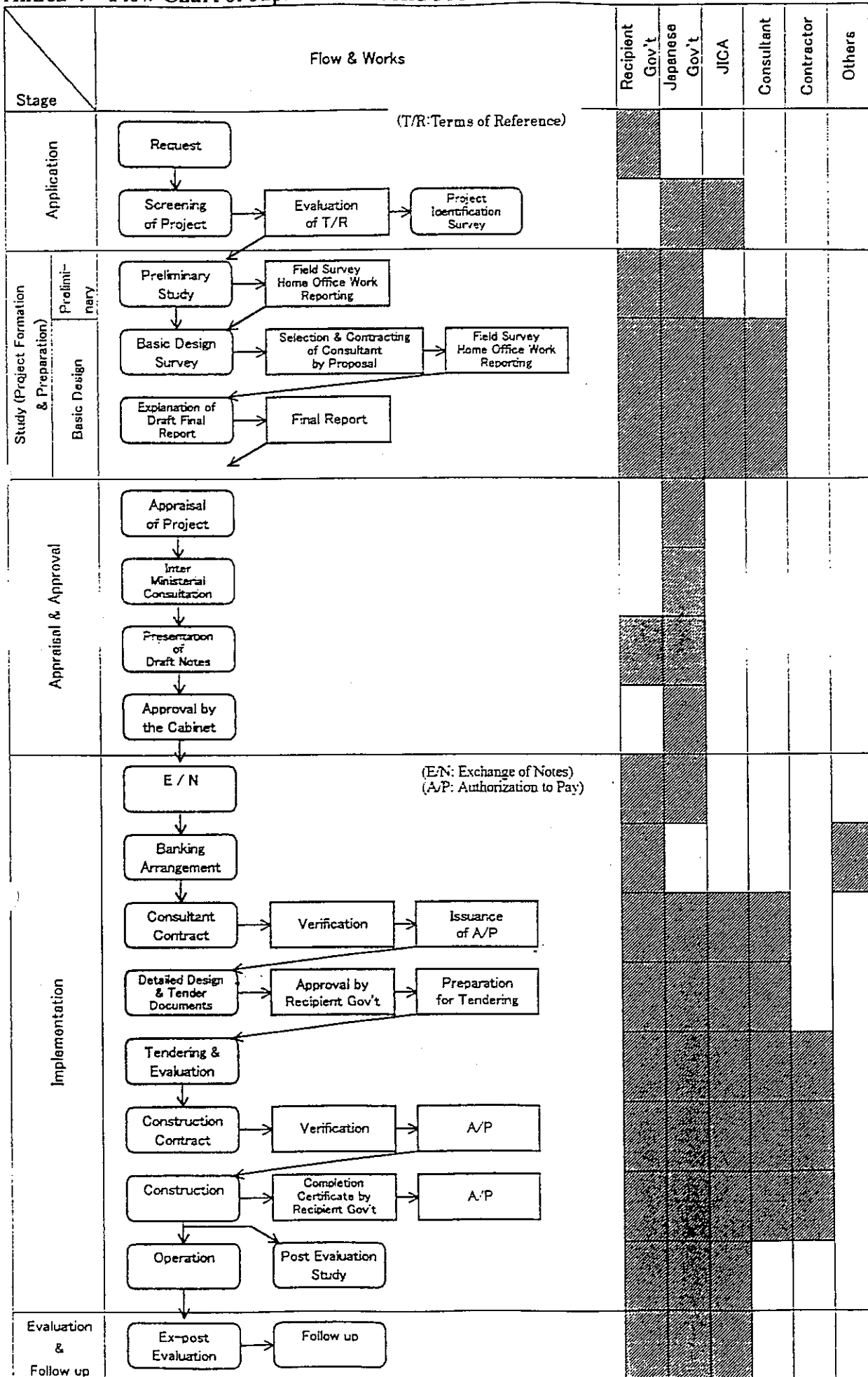
(8) Re-export

The products purchased under the Grant Aid shall not be re-exported from the recipient country.

(9) Banking Arrangement (B/A)

- a) The Government of the recipient country or its designated authority should open an account in the name of the Government of the recipient country in a bank in Japan (hereinafter referred to as "the Bank"). The Government of Japan will execute the Grant Aid by making payments in Japanese yen to cover the obligations incurred by Government of the recipient country or its designated authority under the Verified Contracts.
- b) The payments will be made when payment requests are presented by the Bank to the Government of Japan under an Authorization to pay issued by the Government of the recipient country or its designated authority.

Annex-4 Flow Chart of Japan's Grant Aid Procedures



Annex-5 Necessary measures to be taken by the Government of the Kenya on condition that Japan's Grant Aid is extended.

1. To secure land necessary for the sites of the Project and to clear, level and reclaim the land prior to commencement of the construction work.
2. To bear commissions to the Japanese foreign exchange bank to execute the banking services based upon the banking arrangement.
3. To ensure prompt unloading and customs clearance at port of disembarkation in the Kenya and facilitate internal transportation therein of the products purchased under the Grant.
4. To ensure the customs clearance at the port, inland transportation from the port to each site, and to bear the cost for bonded storage at the port.
5. To exempt Japanese nationals from custom duties, internal taxes and other fiscal levies which may be imposed in the Kenya with respect to the supply of the products and services under the verified contracts. And to take necessary measures for such tax exemption.
6. To accord Japanese nationals, whose services may be required in connection with the supply of products and services under the verified contracts, such facilities as may be necessary for their entry into the Kenya and stay therein for the performance of their work.
7. To use and maintain properly and effectively all the equipment purchased and facilities constructed under the Grant.
8. To bear all the expenses other than those covered by the Grant, necessary for the execution of the Project.
9. To provide necessary data and information for the project.
10. To assign exclusive counterpart engineers and technicians for the Project.

Annex-6 Proposed Action Plan for Establishment of an Autonomous Managing Body for Meru Water Supply

- (1) Objective of an action plan is to establish a full autonomous body for Meru Water Supply, defined as follows:
- a. There is no external interference in affairs of "body".
 - b. All decisions regarding affairs of "body" are made by management and or board.
 - c. Management and/or board is responsible for policy of "body".
 - d. "Body" can collect tariffs and utilize them for water supply operation and sanitation operation.
 - e. Transparency and accountability have to be maintained.
 - f. "Body" can receive bilateral finance and technical assistance under guarantee of GOK.
- (2) The Core Team is composed of officials of the relevant agencies as follows:

Name of Members	Organization	Position
1. Mr. K. G. Chesang	MENR	DWD
2. Mr. D. N. Stower	MENR	SDD/WRD
3. Mr. H. Ishihara	MENR	JICA Expert
4. Mr. S. M. Wambua	MENR	DD/OM
5. Mr. T. W. Kibaki	MENR	Program Manager, KJWSP
6. Mr. S. Thuo	MENR	Japan Desk Officer
7. Mr. C. N. Mimano	MENR	DD/PD
8. Mr. E. Onguti	MENR	Principal Economist
9. Mr. G. N. Karanja	MENR	Project Manager
10. Mr. Irari Wagereka	MENR	Project Manager
11. To be nominated	Meru Municipal Council	Town Clerk
12. To be nominated	Meru County Council	County Clerk
13. To be nominated	UDD/MoLG	
14. To be nominated	A. G. Office	
15. To be nominated	Treasury	
16. To be nominated	Meru Central District Water Office	

- (3) The main subjects to be assessed by Core Team are;
- a. Determination of type of managing body.
 - b. Legal preparation for establishment.
 - c. Organization structuring and staff planning of a project management unit and supporting staff.
 - d. Financial planing, and
 - e. Registration of a new managing body.

**MINUTES OF DISCUSSIONS
ON THE BASIC DESIGN STUDY
FOR THE MERU WATER SUPPLY PROJECT
IN THE REPUBLIC OF KENYA**

In response to a request from the Government of Republic of Kenya (hereinafter referred to as "GOK"), the Government of Japan (hereinafter referred to as "GOJ") decided to conduct a Basic Design Study on the Meru Water Supply Project in the Republic of Kenya (hereinafter referred to as "the Project") and entrusted the study to the Japan International Cooperation Agency (hereinafter referred to as "JICA").

JICA sent to Kenya the Basic Design Study Team (hereinafter referred to as "the Team"), which is headed by Mr. Hisao Wushiki, Senior Advisor, JICA, and is scheduled to stay in the country from February 11 to February 22, 2001

The Team held discussions with the officials concerned of the GOK and conducted a field survey in the study area.

In the course of discussions and field survey, both parties have confirmed the main items described on the attached sheets. The Team will proceed to further work and review the project requested by the GOK for preparing the Basic Design.

Nairobi, February 21, 2001

Mr. Hisao Wushiki
Leader,
Basic Design Study Team,
Japan International Cooperation Agency

Dr. Mohammed Isahakia
Permanent Secretary
Ministry of Environment and Natural
Resources

Mr. Martin Oduor Otieno
Permanent Secretary
Ministry of Finance and Planning

ATTACHMENT

1. Components of the Draft Final Report

The Government of Kenya agreed and accepted in principle of the components of the draft final report of the Basic Design Study on Meru Water Supply explained by the Study Team.

2. Japan's Grant Aid Scheme

Kenyan side understands the Japan's Grant Aid Scheme and the necessary measures to be taken by the Government of Kenya as explained by the Team and described in Annexes 1 to 3 of the Minutes of Discussions signed by both parties on 21 February, 2001.

3. Schedule of the Study

JICA will complete the final report in accordance with the confirmed items and send it to the Government of Kenya by the end of March 2001.

4. Other Relevant Issues

- (1) The Kenyan side requested the Japanese side for technical assistance including counterpart training in strengthening of New Management Body of water supply system in Meru Town, as one of the components of the Grant-Aid Scheme.

The Kenyan side agreed provision of counterpart personnel required for assistance of the Project.

- (2) The Team explained the Draft Final Report of the Basic Design Study on Meru Water Supply to the Kenyan side. Both parties agreed that this draft final report should not be duplicated or released to any outside parties without prior written consensus.
- (3) The Kenyan side explained the progress of activities of the Preparatory Unit of the MENR for implementation of New Management Body for Meru water supply. Registration of the trust corporation (New Management Body) for Meru water supply will be completed by the end of March 2001, but it will require some time to make the body operational. Therefore, schedule of setting-up of New Management Body for Meru water supply has been revised as shown in Annex 4.

The Japanese side requested the Kenyan side to send evidence of registration including full copy of application documents soon after the registration in April 2001 through JICA Kenya Office in Nairobi.

Both parties understood that operation plan would have an important role for sustaining the New Management Body. The Preparatory Unit has responsibility to conduct transitional arrangements as a part of operation plan, scheduled in Annex 4. The Kenyan side agreed to

submit the monthly progress report of the activities in this Annex 4 to the JICA Kenya Office.

- (4) Both parties agreed that the Counterpart Fund is one of the financial sources for initial operation of New Management Body.
- (5) The Kenyan side agreed to secure necessary land for implementation of the Project under the Grant-Aid Scheme.

The Kenyan side agreed to avail approval letter for use of required government lands such as sites required for distribution tanks and pipeline network along the existing roads in Meru Town.

- (6) The Government of Kenya will exempt goods and services required for the Project from all taxes including VAT.
- (7) Both parties agreed that this Project would execute the rehabilitation and improvement works of the existing facilities in Meru water supply, avoiding duplication with the works of the El-Nino Infrastructure Rehabilitation Project.

The Japanese side will assess and verify the monthly progress report of the El-Nino Infrastructure Rehabilitation Project in February 2001, attached in Annex 5, and finalize the project components of the Grant-Aid in Japan.

- (8) The Kenyan side confirmed that they are finalizing the Poverty Reduction Strategy Programme (PRSP) to include this Project, as reflected in the current Medium Term Expenditure Framework (MTEF) Budget.

Annex-1 JAPAN'S GRANT AID PROGRAM

1. *Japan's Grant Aid Procedures*

- (1) The Japan's Grant Aid Program is executed by the following procedures.
- Application (request made by a recipient country)
 - Study (Preliminary Study / Basic Design Study conducted by JICA)
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 - Implementation (Implementation of the Project)
- (2) Firstly, an application or a request for a Grant Aid project submitted by the recipient country is examined by the Government of Japan (the Ministry of Foreign Affairs) to determine whether or not it is eligible for Japan's Grand Aid. If the request is deemed appropriate, the Government of Japan entrusts a study on the request to JICA (Japan International Cooperation Agency).

Secondly, JICA conducts the Study (Basic Design Study), using a Japanese consulting firm

Thirdly, the Government of Japan appraises to see whether or not the project is suitable for Japan's Grant Aid Program, based on the Basic Design Study report prepared by JICA, and the results are then submitted to the Cabinet for approval.

Fourthly, the Project, once approved by the Cabinet, becomes official when pledged by the Exchange of Notes signed by the Governments of Japan and the recipient country.

Finally, for the implementation of the Project, JICA assists the recipient country in such matters as preparing tenders, contracts and so on.

2. *Contents of the Study*

(1) Contents of the Study

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- a) Confirmation of the background, objectives, and benefits of the requested project and also institutional capacity of agencies concerned of the recipient country necessary for project implementation,
- b) Evaluation of the appropriateness of the Project to be implemented under the Grant

Aid Scheme from a technical, social and economical point of view,

- c) Confirmation of items agreed on by both parties concerning the basic concept of the Project,
- d) Preparation of a basic design of the Project,
- e) Estimation of costs of the project.

The contents of the original request are not necessarily approved in their initial form as the contents of the Grant Aid project. The Basic Design of the Project is confirmed considering the guidelines of Japan's Grant Aid Scheme.

The Government of Japan requests the Government of the recipient country to take whatever measures are necessary to ensure its self-reliance in the implementation of the Project. Such measures must be guaranteed even though they may fall outside of the jurisdiction of the organization in the recipient country actually implementing the Project. Therefore, the implementation of the Project is confirmed by all relevant organizations of the recipient country through to Minutes of Discussions.

(2) Selecting (a) Consulting Firm(s)

For smooth implementation of the study, JICA uses (a) registered consulting firm(s). JICA selects (a) firm(s) based on proposals submitted by interested firms. The firm(s) selected carry (ies) out a Basic Design Study and write(s) a report, based upon terms of reference set by JICA.

The consulting firm(s) used for the study is (are) recommended by JICA to the recipient country to also work on the Project's implementation after the Exchange of Notes, in order to maintain technical consistency.

3. *Japan's Grant Aid Scheme*

(1) What is Grant Aid ?

The Grant Aid Program provides a recipient country with non reimbursable funds needed to procure facilities, equipment and services (engineering services and transportation of the products, etc.) for economic and social development of the country under principles in accordance with the relevant laws and regulations of Japan. The Grant Aid is not in a form of donation of materials or such.

(2) Exchange of Notes (E/N)

Japan's Grant Aid is extended in accordance with the Notes exchanged by the two Governments concerned, in which the objectives of the Project, period of execution,

conditions and amount of the Grant Aid, etc., are confirmed.

- (3) "The period of the Grant Aid" means one Japanese fiscal year which the Cabinet approves the Project for. Within the fiscal year, all procedures such as exchanging of the Notes, concluding contracts with (a) consulting firm(s) and (a) contractor(s) and final payment to them must be completed.

However in case of delays in delivery, installation of construction due to unforeseen factors such as weather, the period of the Grant Aid can be further extended for a maximum of one fiscal year at most by mutual agreement between the two Governments.

- (4) Under the Grant, in principle, Japanese products and services including transport or those of the recipient country are to be purchased.

When the two Governments deem it necessary, the Grant may be used for the purchase of products or services of a third country.

However the prime contractors, namely, consulting, contractor and procurement firms, are limited to "Japanese nationals". (The term "Japanese nationals" means persons of Japanese nationality or Japanese corporations controlled by persons of Japanese nationality)

- (5) Necessity of the "Verification"

The Government of the recipient country or its designated authority will conclude contracts denominated in Japanese Yen with Japanese nationals. Those contracts shall be verified by the Government of Japan. This "Verification" is deemed necessary to secure accountability to Japanese tax payers.

- (6) Undertakings required to the Government of the recipient country

In the Implementation of the Grant Aid Project, the recipient country is required to undertake necessary measures such as the follows:

- a) To secure land necessary for the sites of the project and to clear, level and reclaim the land prior to commencement of the construction work,
- b) To provide facilities for distribution of electricity, water supply and drainage and other incidental facilities in and around the sites,
- c) To secure buildings prior to the installation work in case the Project is providing equipment,
- d) To ensure all the expenses and prompt execution for unloading, customs clearance at the port of disembarkation and internal transportation of the products purchased under the Grant Aid,

- e) To exempt Japanese nationals from customs duties, internal taxes and other fiscal levies which will be imposed in the recipient country with respect to the supply of the products and services under the Verified Contracts,
- f) To accord Japanese nationals whose services may be required in connection with the supply of the products and services under the Verified Contracts, such facilities as may be necessary for their entry into the recipient country and stay therein for the performance of their works.

(7) "Proper Use"

The recipient country is required to maintain and use facilities constructed and equipment purchased under the Grant Aid properly and effectively and to assign the necessary staff for operation and maintenance of them as well as to bear all expenses other than those to be covered by the Grant Aid.

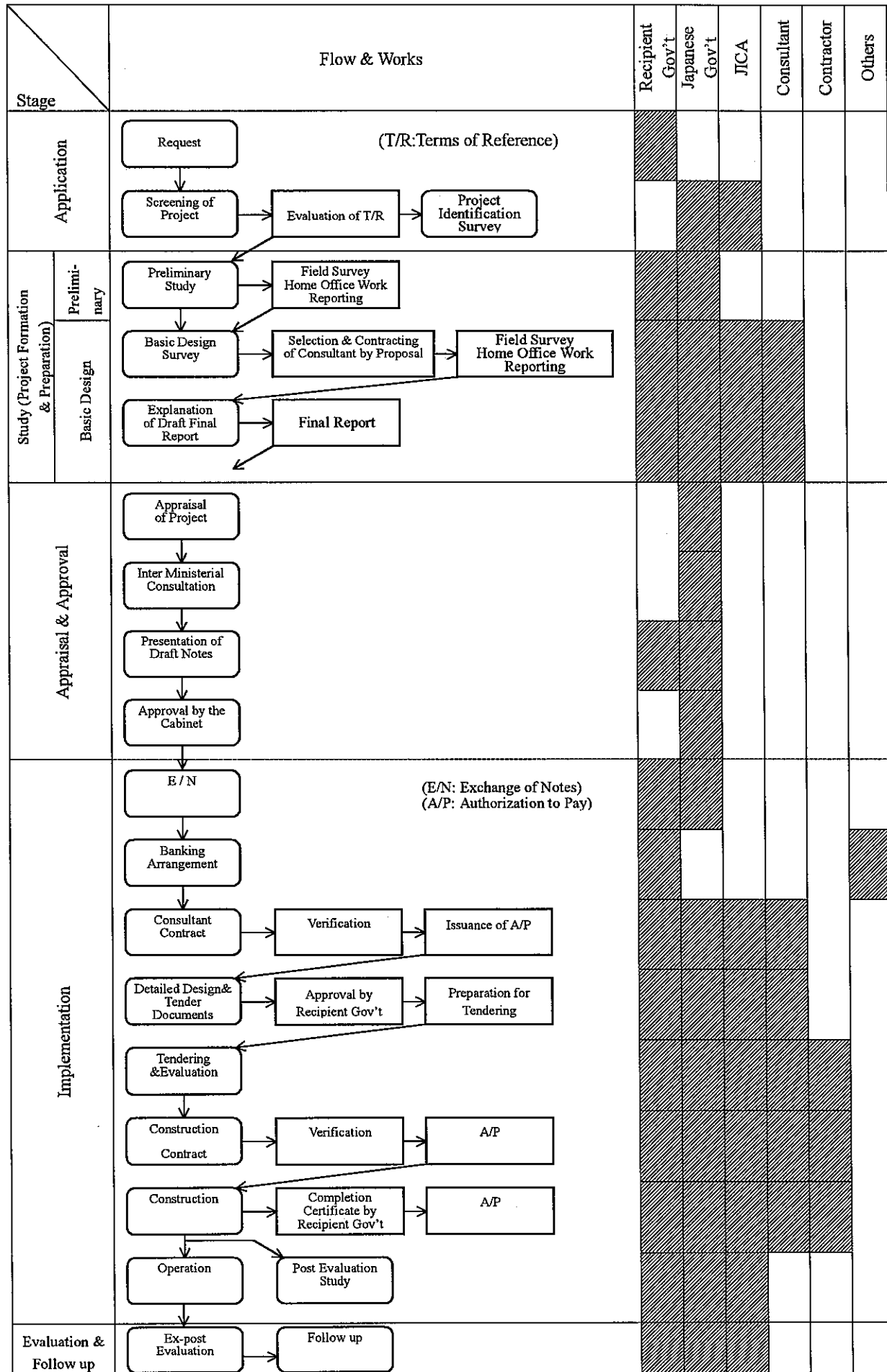
(8) Re-export

The products purchased under the Grant Aid shall not be re-exported from the recipient country.

(9) Banking Arrangement (B/A)

- a) The Government of the recipient country or its designated authority should open an account in the name of the Government of the recipient country in a bank in Japan (hereinafter referred to as "the Bank"). The Government of Japan will execute the Grant Aid by making payments in Japanese yen to cover the obligations incurred by Government of the recipient country or its designated authority under the Verified Contracts.
- b) The payments will be made when payment requests are presented by the Bank to the Government of Japan under an Authorization to pay issued by the Government of the recipient country or its designated authority.

Annex-2 Flow Chart of Japan's Grant Aid Procedures



Annex-3 Necessary measures to be taken by the Government of the Kenya on condition that Japan's Grant Aid is extended.

1. To secure land necessary for the sites of the Project and to clear, level and reclaim the land prior to commencement of the construction work,
2. To bear commissions to the Japanese foreign exchange bank to execute the banking services based upon the banking arrangement,
3. To ensure prompt unloading and customs clearance at port of disembarkation in the Kenya and facilitate internal transportation therein of the products purchased under the Grant,
4. To ensure the customs clearance at the port, inland transportation from the port to each site, and to bear the cost for bonded storage at the port,
5. To exempt Japanese nationals from custom duties, internal taxes and other fiscal levies which may be imposed in the Kenya with respect to the supply of the products and services under the verified contracts. And to take necessary measures for such tax exemption,
6. To accord Japanese nationals, whose services may be required in connection with the supply of products and services under the verified contracts, such facilities as may be necessary for their entry into the Kenya and stay therein for the performance of their work,
7. To use and maintain properly and effectively all the equipment purchased and facilities constructed under the Grant,
8. To bear all the expenses other than those covered by the Grant, necessary for the execution of the Project,
9. To provide necessary data and information for the project, and
10. To assign exclusive counterpart engineers and technicians for the Project.

Annex 4 Transitional Arrangements And Time Frame

Year 2001

	3	4	5	6	7
1	Registration of Trust Fund				
1.1		▼			▼
2	Registration of New Managing Body				
2.1		▼			
2.2			▼		
3	Asset / Debt transfer confirmation				
3.1				▼	
3.2		▼			
3.3		▼			
4	Confirmation of Initial financing				
4.1	▼				
4.2		▼			
5	Preparatory works to make the Body operational				
5.1				▼	
5.2					▼
5.3					
5.3.1				▼	
5.3.2				▼	
5.3.3				▼	
5.3.4				▼	
5.4					
5.4.1					▼
5.4.2					▼
5.4.3				▼	
5.4.4					▼
5.4.5					▼
5.4.6					▼
6	Legal appointment as water undertaker				
				▼	

▼ Event deadline ■ Event



OFFICE OF THE PRESIDENT

EL NINO EMERGENCY PROJECT (ENEP)
VIEW PARK TOWERS, UTALI LANE-OFF UHURU HIGHWAY

Telegraphic Address: "RAIS"
Telephone: Nairobi 253640
Fax: (254) - 02 - 253637
When replying please quote
Ref. No. EIRP/WSS/PW26A/Vol.III/(19)

P. O. BOX 40213
NAIROBI

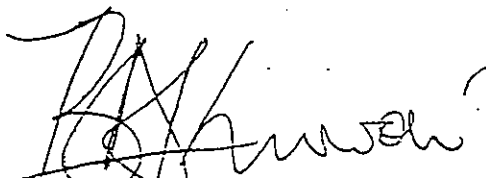
February 9, 2001

The Director
Water Development
Ministry of Environment and
Natural Resources
P.O. Box 30521
NAIROBI

**RE: EL NINO INFRASTRUCTURE REHABILITATION PROJECT
REHABILITATION OF WATER AND SANITATION
FACILITIES IN MERU DISTRICT
CONTRACT NO. EIRP/WSS/PW26
REHABILITATION WORKS**

We are in receipt of your letter WD/3/3/156 Vol.III/(82) dated 13th November 2000 on the above subject.

Attached find a list of works which are being executed under the above contract for your records.



ENG. D.K. BARASA
FOR: PROJECT MANAGER

Enc.,

EL-NIÑO EMERGENCY PROJECT

MERU CENTRAL DISTRICT WATER SUPPLIES

INTAKE WORKS

GATOBORA STREAM, SPRING INTAKE, ASK INTAKE

- desilting of the intake pool
- fencing of the intake
- provision of fine and coarse intake screens
- refurbishment of the intake structure

Works not done due to limitation of funds

- Additional desilting of the intake pool
- Extension of the fencing at the intake.

Summary of works carried out

- Desilting of intake pool
- Replacement of valves, fine and coarse screens
- Protection works upstream and downstream of intake
- Repair of intake structure
- Fencing works
- Regrading of the access road to the intake.

RAW WATER MAINS

KATHITA RAW WATER MAIN

Summary of works carried out:

- Construction of steel bridge for the pipe support on Kathita river crossing.
- Protection work at the river crossing
- Replacement of the damaged pipes at the river crossing

Works not done due to limitation of funds

- Salvaging of old pipes at the river crossing.
- Protection of exposed steel pipes particularly at the river crossings.
- Replacement of air valves and ball float valves for BFTs.

GATOBORA RAW WATER MAIN

Summary of works carried out:

Replacement of pipes at the rope bridge section

- Construction of rope bridge pipe support at the landslide section
- Replacement of some air valves, sluice valves on the raw water main.

Works not done due to limitation of funds

- Salvaging of old uPVC pipes on the new rope bridge section
- Rehabilitation of some sections of the pipeline.

ASK RAW WATER MAIN

Summary of works carried out:

- Replacement of some damaged uPVC, G.I. sections with steel pipes.

Works not done due to limitation of funds

- Replacement of some uPVC pipes with G.I. pipes and provision of pipe supports at Gatobora river crossing.
- Replacement of air valves and provision of chambers.

MILIMANI TREATMENT WORKS

OLD CLARIFLOCCULATORS AND SEDIMENTATION BASIN

Summary of works carried out

- desilting of the units
- refurbishment of the underdrain system
- replacement of the media
- repair of leaking walls.
- Rehabilitation of the pipework including valves

Works not done due to limitation of funds

- Construction of a dosing tower, chemical mixing tanks and gravity dosers

1978 FILTER UNITS

Summary of works carried out:

- Desilting of the units
- Repair of the underdrainage system
- Replacement of filter media
- Refurbishment of valves and chambers

Works not done due to limitation of funds

- Construction of flocculators and sedimentation basin
- Modification of the inlet raw water pipework
- Chemical dosing arrangement for the raw water
- White washing of the external surfaces of the filters

1995 COMPOSITE TREATMENT UNITS

Summary of works carried out:

- Construction of a collapsed partition wall

- Desilting of the units
- Replacement of the filter media
- Refurbishment of the underdrain system
- Refurbishment of chambers and repair of valves
- Provision of chemical dosing system.

Works not done due to limitation of funds

- Improvement/rehabilitation of the external surfaces

1980 PRESSED STEEL ELEVATES TANK

Summary of works carried out:

- Repair of the backwash steel tank
- Refurbishment of valves

Works not done due to limitation of funds

- Rehabilitation of the small backwash steel tank

STORAGE TANKS 91, 265 and 455 m³

Summary of works carried out:

- Refurbishment of the inlet and outlet pipework
- Replacement of ball float valves and bulk meters and tank level recorders
- Repair of leaking tank

Works not done due to limitation of funds

- Repair of the leaking underground tank by applying another layer of plaster internally
- Provision of additional storage capacity at the treatment works

PUMPHOUSE

Summary of works carried out

- Repair of the pumphouse
- Supply of 3 No. centrifugal pumps for transfer of water to the high level tanks including associated pipework.
- Switchgear etc. for the pumps

Works not done due to limitation of funds

- New rising main from the pumphouse to Milimani High Level Tanks.

SITE WORKS

Summary of works carried out:

- Rehabilitation of staff houses.
- Repair of roads, fencing etc.

Works not done due to limitation of funds

- Replacement of badly damaged roofs of staff houses
- Refurbishment of electrical sanitation systems for the houses.
- Chemical storage building.
- External security lighting system
- Drainage system for the treatment works site.

NEW COMPOSITE UNITS

Summary of works carried out:

Construction of 2 No. composite units including the following:-

- Inlet, outlet, backwash pipework
- Chemical dosing system for raw water
- Walkways and other associated works

Works not done due to limitation of funds

- Chemical dosing arrangement for the filtered water from the units
- Drainage pipework for the new composite units.

RESERVOIRS AND DISTRIBUTION SYSTEM

High Level Tanks

Summary of works carried out:

Rehabilitation of chambers, tanks, level recorders

Provision of new ball float valves complete with control assemblies

- Refurbishment of pipework, valves etc.
- Provision of chemical dosing arrangement
- Site works including refurbishment of attendant's house

Works not done due to limitation of funds

- Provision of a bulk meter
- Pumping system and additional storage tanks at a much higher level ground for supply of water to high pressure zone.

Electrical works at Miiimani-high level tanks site.

DISTRIBUTION SYSTEM

Summary of works carried out:

- The new Gitoro – Makutano pipeline for supply of water to higher pressure zone.
- Refurbishment of pipework at junctions including replacement of valves, re-construction of chambers.
- Replacement of ball float valves for BPTs
- Replacement of bulk meters

Works not done due to limitation of funds

- Expansion of the distribution system
- Repair of some sections of the pipelines including reconstruction of the remaining valve chambers

Additional Information on the works not done due to limitation of funds

- Two units of chlorine dozers of for the composite units constructed in 1995 in Milimani Treatment Works,
- Two units of sluice valves along the Gatabora Stream Raw Water Main.

資料-6

事前評価表

事前評価表

1. 対象事業名	ケニア共和国 メルー給水計画													
2. わが国が援助することの必要性・妥当性	<p>(1) わが国とケニアは緊密な友好関係を有しており、同国の東アフリカでの地理的、政治経済的な重要性に鑑み、ケニアはアフリカにおけるわが国援助の重点国に位置付けられている。また、貿易・投資面でも、アフリカ諸国の中では南アフリカ共和国に次いでわが国と密接な相互依存関係を有している。</p> <p>(2) 1992年に実施された「ケニア国全国水資源開発調査」は、上水・工業用排水供給を含む6分野を対象とし、2010年を目標年次として実施され、水資源開発に関わるフレームワークを策定した。策定されたマスタープランでは本事業を優先事業の一つとして選定した。このため、JICAは1996年から1997年に亘って「メルー郡給水計画」を実施し、基本計画の策定およびフィージビリティ調査を実施した。フィージビリティ調査では、計画目標年次を2005年とし、導水施設、浄水場、配水施設の計画・提案をしている。同調査は、さらに水道施設運営維持分野に対する国もしくは第三国援助の提供を重点課題として取り上げている。このような背景の中、ケニア政府は、1997年に事業実施に向けて日本政府への援助要請を行うと共に、持続可能な水資源開発および上下水道整備を目指し、「National Water Policy」の作成に着手し、1999年に発効されている。ケニア政府は、National Water Policyに基づき、メルー市給水事業に係る事業運営改善の一環として、独立採算事業体への移行が進められる事となった。</p> <p>(3) 「当該国の社会・経済事情については資料の「社会・経済事情」参照」</p>													
3. 協力対象事業の目的	<p>メルー市およびその周辺地域では公共上水道の普及率は低く、住民の多くは質・量ともに不十分な河川水に依存しており、既存上水道施設も運営・維持管理上の問題から老朽化しており、その機能が著しく低下している。このような状況のもと、給水人口の増加および上水道事業運営の改善（料金徴収率向上および維持管理技術定着）が重要課題となっている。本計画は、既存上水道施設の改修と一部拡張、および上水道事業運営の改善により、同地域において「衛生的で安定した上水供給」を行う事を目的とする。</p> <p><メルー市における給水人口></p> <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th style="width: 30%;"></th> <th style="width: 35%;">メルー市(1999年)</th> <th style="width: 35%;">メルー市(2005年)</th> </tr> </thead> <tbody> <tr> <td>給水人口</td> <td>14,000</td> <td>51,000</td> </tr> </tbody> </table> <p><メルー市における不明水率></p> <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th style="width: 30%;"></th> <th style="width: 35%;">メルー市(1999年)</th> <th style="width: 35%;">メルー市(2005年)</th> </tr> </thead> <tbody> <tr> <td>不明水率</td> <td>65%</td> <td>30%</td> </tr> </tbody> </table>			メルー市(1999年)	メルー市(2005年)	給水人口	14,000	51,000		メルー市(1999年)	メルー市(2005年)	不明水率	65%	30%
	メルー市(1999年)	メルー市(2005年)												
給水人口	14,000	51,000												
	メルー市(1999年)	メルー市(2005年)												
不明水率	65%	30%												

4. 協力対象事業の内容

(1) 対象地域

メルー市及び周辺域

(2) アウトプット

- ① 給水能力の向上
- ② 公衆衛生状況の改善
- ③ 給水人口の増加
- ④ 継続的な運営・維持管理体制の確立

(3) インプット

対象地域において既存上水道の改修と一部拡張、および上水道事業運営の改善を行う。

- ① 導水施設の改修(導水管管路改修・修復工事・導水管付替)
- ② 浄水設備の改修(逆洗浄タンクの新設・薬液注入設備改修・場内流量計設備・場内配管)
- ③ 送・配水管(送水管改修工・配水管改修工・既存給水管現況復旧)
- ④ 再編成される水道事業体の健全運営を目的とする組織強化

(4) 総事業費

概算総事業費：約13.2億円(日本側13.1億円、ケニア側6百万円)

(5) スケジュール

本事業の工期は、実施設計、入札・契約、工事およびソフトコンポーネントを含め24ヶ月で実施する計画である。

(6) 実施体制

ケニア共和国 環境天然資源省水開発局及び県環境天然資源事務所

・施設の運営は、2001年7月に業務が開始される予定の「メルー市上下水道公社」によって行われる。

5. プロジェクトの成果

(1) 給水能力の向上

本事業の実施により、2005年までの水需要の増大に見合った配水容量を確保する事が可能となる。

(2) 公衆衛生状況の改善

基本設計調査で実施した水道水に対して実施した水質調査結果によれば、水道水においてもバクテリアあるいは大腸菌が検出され、また一部に高い濁度が検出されている。事業の実施段階および実施後においては、水処理過程における薬液注入および塩素滅菌の徹底と併せてこれらの技術が事業体に定着する事となるため、信頼性の高い水道水供給が可能となり、公衆衛生の改善効果が期待される。

(3) 給水人口の増加

メルー市における現在の各戸給水人口は14,000人で、本事業の実施により、2005年までに給水人口51,000人(各戸給水:30,600人、コミュニティ給水:20,400人)にする事を計画する。また、本基本設計調査において策定した調査対象地域(85km²)への水道施設拡張に向けて、健全な運営事業体を構築する事により給水人口の増加をさらに高めるための体制が整備される。

(4) 持続的な運営・維持管理体制の確立

本事業の実施においては、独立採算性の水道事業体である「メルー市上下水道公社」が既存施設を含めた給水施設の維持管理を行うため、同公社にソフトコンポーネントを導入し運営面および維持管理面での改善を図り、適切な体制整備を行う。ソフトコンポーネント実施により事業実施後においては、現在65%と高い不明水率は30%まで改善される。また、本基本設計で実施したコミュニティ給水利用者に対して実施したアンケート調査から支払い意志が確認されている。このため、維持管理費は顧客から徴収する水道料金で賄うことが可能となり、継続的な運営・維持管理体制が確立される。

6. 外部要因リスク

(1) 環境・天然資源省事業体設立作業の実施

独立採算事業体のメルー市上下水道公社は7月より業務を開始する予定である。本事業のコンポーネントの一つとして、継続的な事業運営を実現するための運営強化を計画しており、同計画を実施するためには開業のための種々の準備作業が必要である。ケニア国側がこれらの作業を適切に実施する事が必要である。

(2) 独立採算事業体の要員確保

① 有能な幹部社員の雇用

創業初期の事業体運営方針の決定、これに基づく日常業務の指示・総括を行う上で必要である。

② 適切な要員配置(顧客窓口課および検針課)

事業の継続性を左右する料金徴収率の向上を行うために重要である

7. 今後の評価計画

(1) 事後評価に用いる成果指数

① 給水人口の増加(人)

② 対象地域における不明水率(%)

(2) 評価のタイミング

① 事業終了時の全体の事後評価

資料7

収集資料リスト

生産部長	文書管理課長	主管課長	情報管理課長	図書資料室受付印

収集資料リスト

平成12年11月6日 作成

地域	アフリカ	調査団	メルー市給水計画	調査の種類	基本設計調査	作成部課	
国名	ケニア	等名称	基本設計調査	現地調査期間	平成12年4月9日～5月28日 平成12年9月5日～10月30日	担当者氏名	

番号	資料の名称	形態	版型	ページ数	オリジナル コピーの別	部数	収集先名称又は発行機関	寄贈・購入 (価格)の別	取扱 区分	利用 表示	利用者 所属氏名	納入 予定日	納入確認欄
1.	El-nino Infrastructure Rehabilitation Project Construction and Rehabilitation of Water and Sanitation Facilities in Meru Central District Engineering Brief, November 1999	本	A4	60	コピー	1	Office of the President	寄贈					
2.	El-nino Infrastructure Rehabilitation Project Construction and Rehabilitation of Water and Sanitation Facilities in Meru Central District Bid Documents, November 1999	本	A4	380	コピー	1	Office of the President	寄贈					
3.	El-nino Infrastructure Rehabilitation Project Construction and Rehabilitation of Water and Sanitation Facilities in Meru Central District Book of Drawings, November 1999	本	A3	100	コピー	1	Office of the President	寄贈					
4.	El-nino Infrastructure Rehabilitation Project Construction and Rehabilitation of Water and Sanitation Facilities in Meru Central District Engineering Estimates, August 1999	本	A4	110	コピー	1	Office of the President	寄贈					
5.	Kenya Gazette Supplemen Acts, 2000 Nairobi, 14th January 2000	本	B5	175	オリジナル	1	Government Printer	購入					
6.	Laws of Kenya The Water Act, Chapter 372 Revised Edition 1972 (1962)	本	B5	193	オリジナル	1	Government Printer	購入					
7.	Laws of Kenya The Companies Act, Chapter 486 Revised Edition 1978 (1962)	本	B5	571	オリジナル	1	Government Printer	購入					
8.	Laws of Kenya The Companies Act, Chapter 486 Revised Edition 1978 (1962)	本	B5	46	オリジナル	1	Government Printer	購入					
9.	National Development Plan 1997-2001	本	B5	270	オリジナル	1	Government Printer	購入					

生産部長	文書管理課長	主管課長	情報管理課長	図書資料室受付印

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10.	Sessional Paper No.2 of 1996 on Industrial Transformation to the Year 2000 November 1996	本	B5	115	オリジナル	1	Ministry of Commerce and Industry	購入					
11.	Economic Survey 1999	本	A4	197	オリジナル	1	Central Bureau of Statistics	購入					
12.	Statistical Abstract 1998	本	A4	343	オリジナル	1	Central Bureau of Statistics	購入					
13.	1999 Population and Housing Census Volume I Population Distribution by Administrative Areas and Urban Centers	本	A4	440	オリジナル	1	Central Bureau of Statistics	購入					
14.	1999 Population and Housing Census Volume I Socio-economic Profile of the Population	本	A4	370	オリジナル	1	Central Bureau of Statistics	購入					
15.	Environmental Management in Kenya A Guide to the Environmental Management and Coordination Act, 1999	本	A4	109	オリジナル	1	The Center for Research and Education on Environmental Law	購入					
16.	Sessional Paper No.1 of 1999 on National Policy on Water Resources Management and Development April 29, 1999	本	A4	73	コピー	1	Ministry of Water Resources	寄贈					
17.	Ministry of Water Resources Meru Central District Annual Report 1998	バラ	A4	53	コピー	1	Ministry of Water Resources	寄贈					
18.	Ministry of Water Resources Meru Central District Annual Report 1999	バラ	A4	31	コピー	1	Ministry of Water Resources	寄贈					
19.	Kibera Urban Environmental and Sanitation Project Institutional and Financing Arrangements Draft Report 1, 25 May 2000	バラ	A4	55	コピー	1	Development Impact Consulting	寄贈					

生産部長	文書管理課長	主管課長	情報管理課長	図書資料室受付印

収集資料リスト

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20.	Refresher Course for Pump/Chemical Attendants at Machakos District, Part 1 January 1998	本	A4	45	コピー	1	Kenya Water Institute	寄贈					
21.	NWCPC - Experiences in Private Sector Participation	バラ	A4	74	コピー	1	National Water Conservation and Pipeline Corporation	寄贈					
22.	The Kenya Water Institute Courses Offered 2000-2001	本	A4	37	コピー	1	Kenya Water Institute	寄贈					
23.	Water and Sanitation Sector Programmes Coordination Committee, The Urban Water Group, Study Team 1: Commercialization and Private Sector Participation	バラ	A4	78	コピー	1	Ministry of Water Resources	寄贈					
24.	Nyeri Water and Sewerage Company Five-Year Corporate Plan: 2000-2004 November 1999	本	A4	103	コピー	1	Nyeri Water and Sewerage Company	寄贈					
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28.	Municipal Council of Meru 2000/2001 Establishment Budget June 2000	バラ	A4	20	コピー	1	Municipal Council of Meru	寄贈					
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