

FIGURES

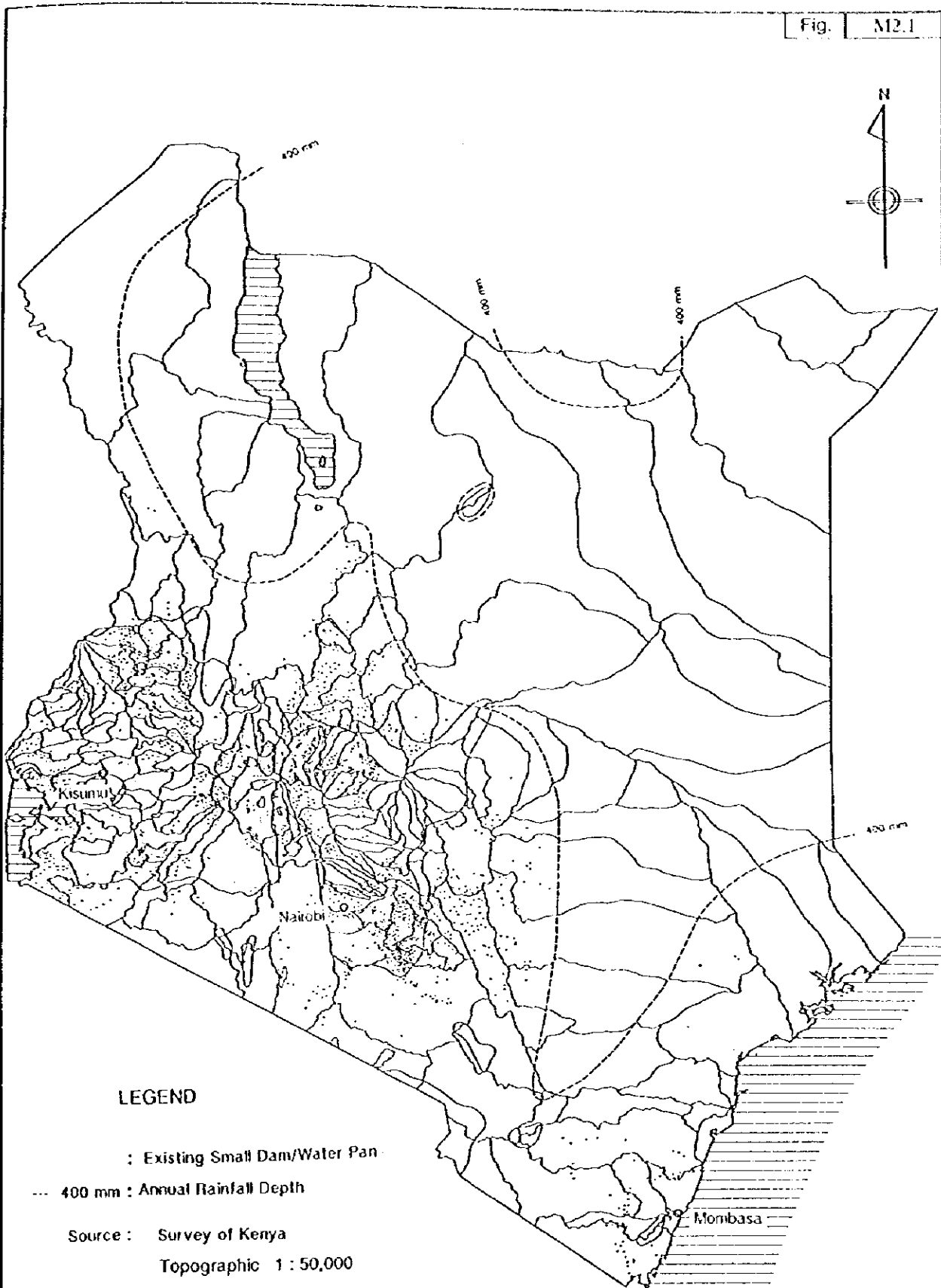
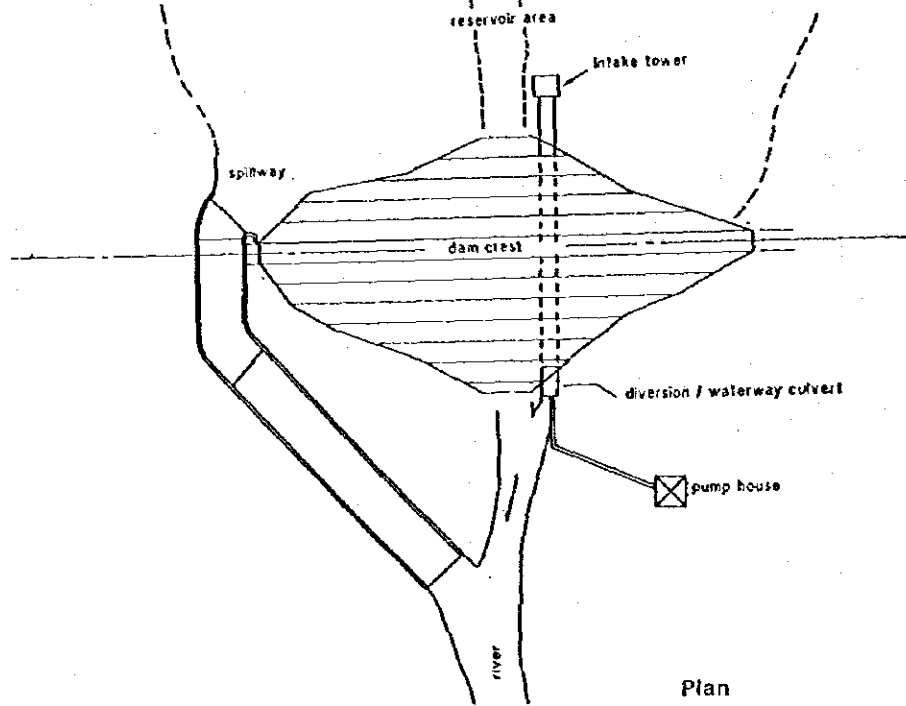
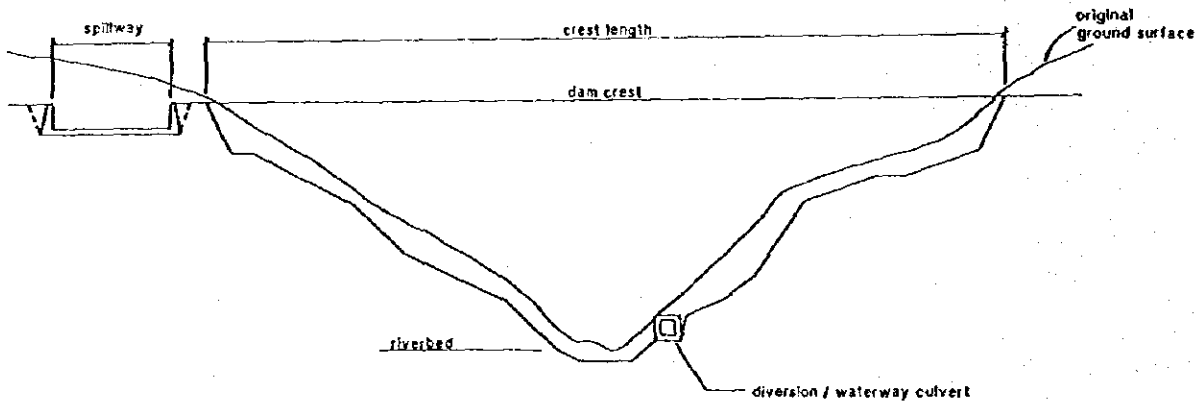


Figure M2.1 Location of Existing Small Dam/Pan

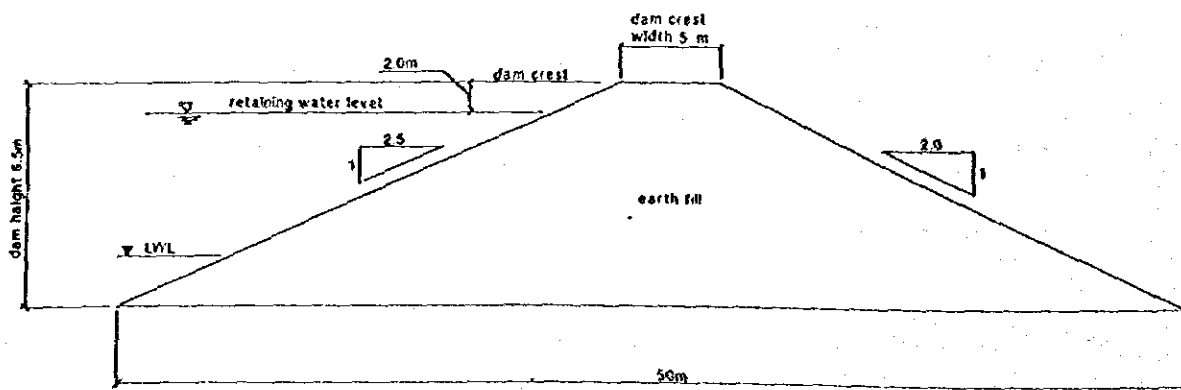
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Plan



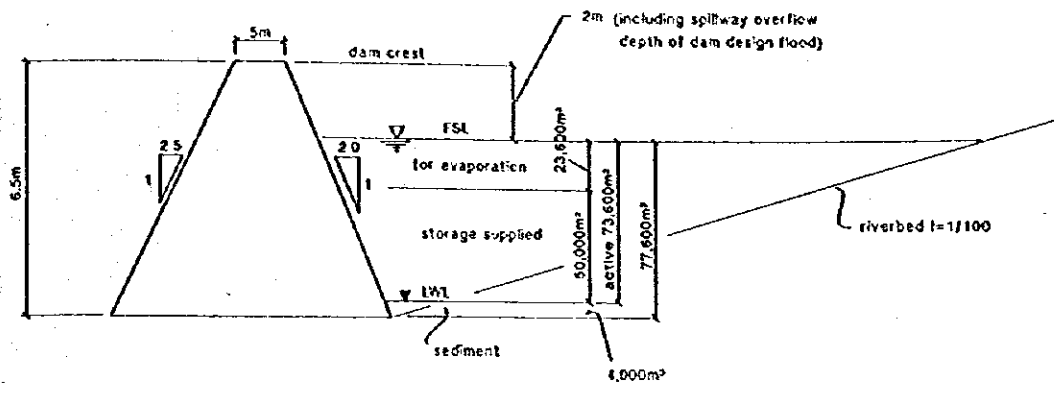
Profile along Dam Axis



Typical Cross Section

Figure M2.2 Typical Layout of Small Dam

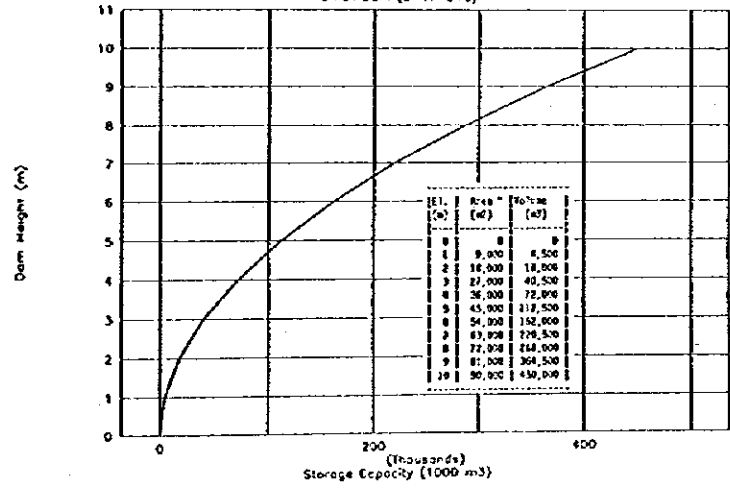
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Longitudinal Section of Typical Small Dam and Reservoir

Reservoir Storage Capacity

Small Dam (3-TY-SML)



Reservoir Surface Area

Small Dam (3-TYSMA)

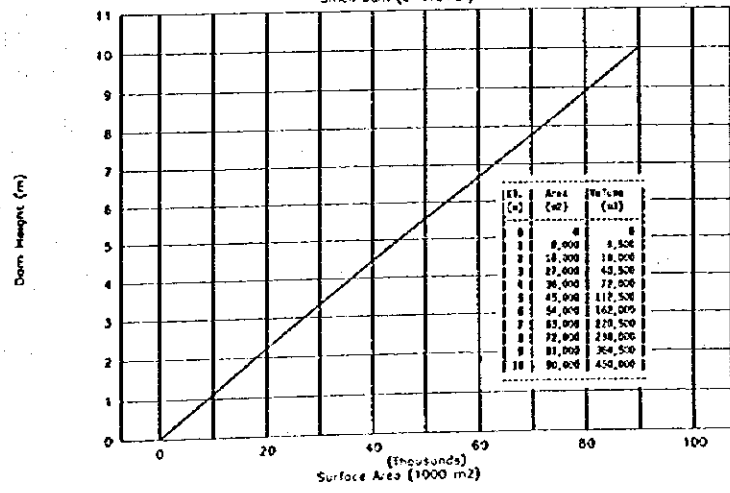
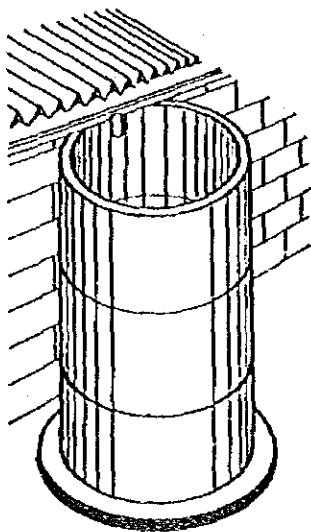
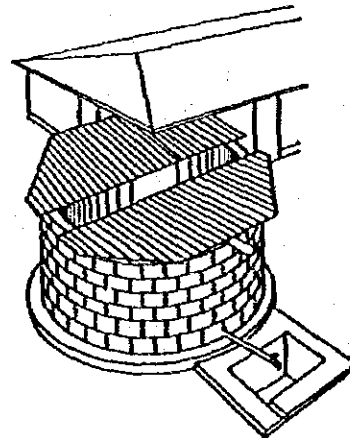


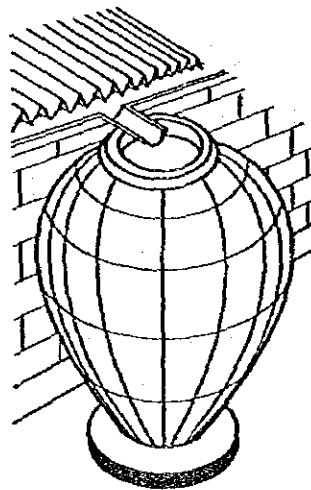
Figure M2.3 Typical Small Dam



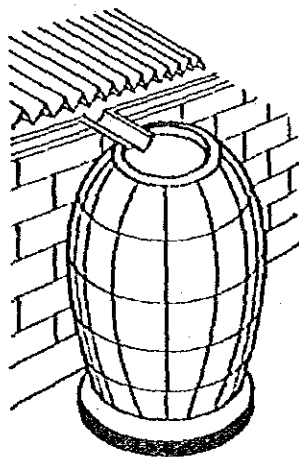
Concrete Ring Tank



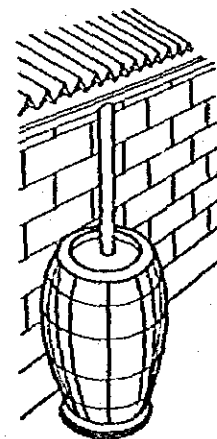
Concrete Block Tank



Granary Basket Tank



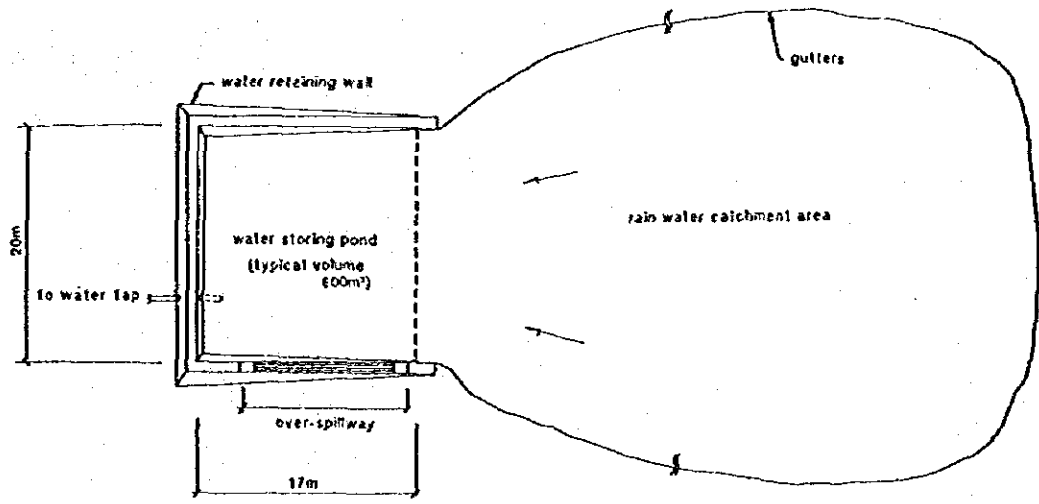
Large Cement Jar



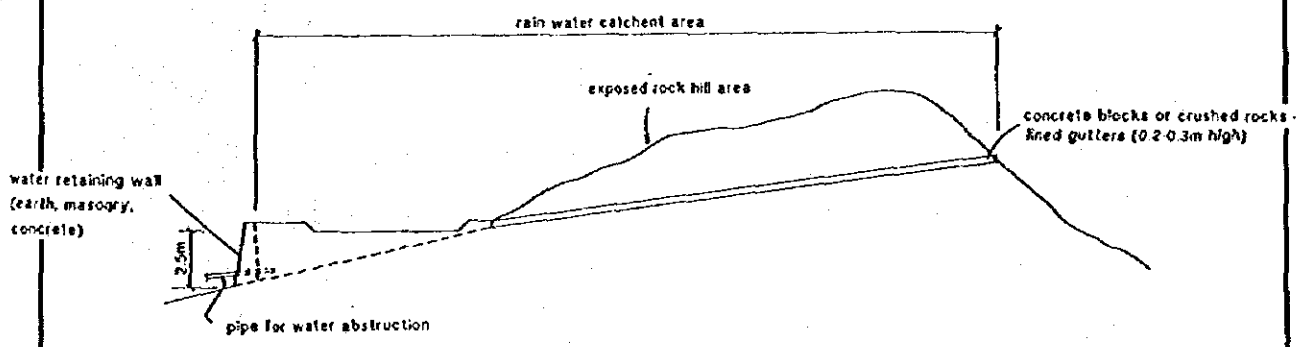
Small Cement Jar

Figure M2.4 Storage Tanks for Roof Catchment

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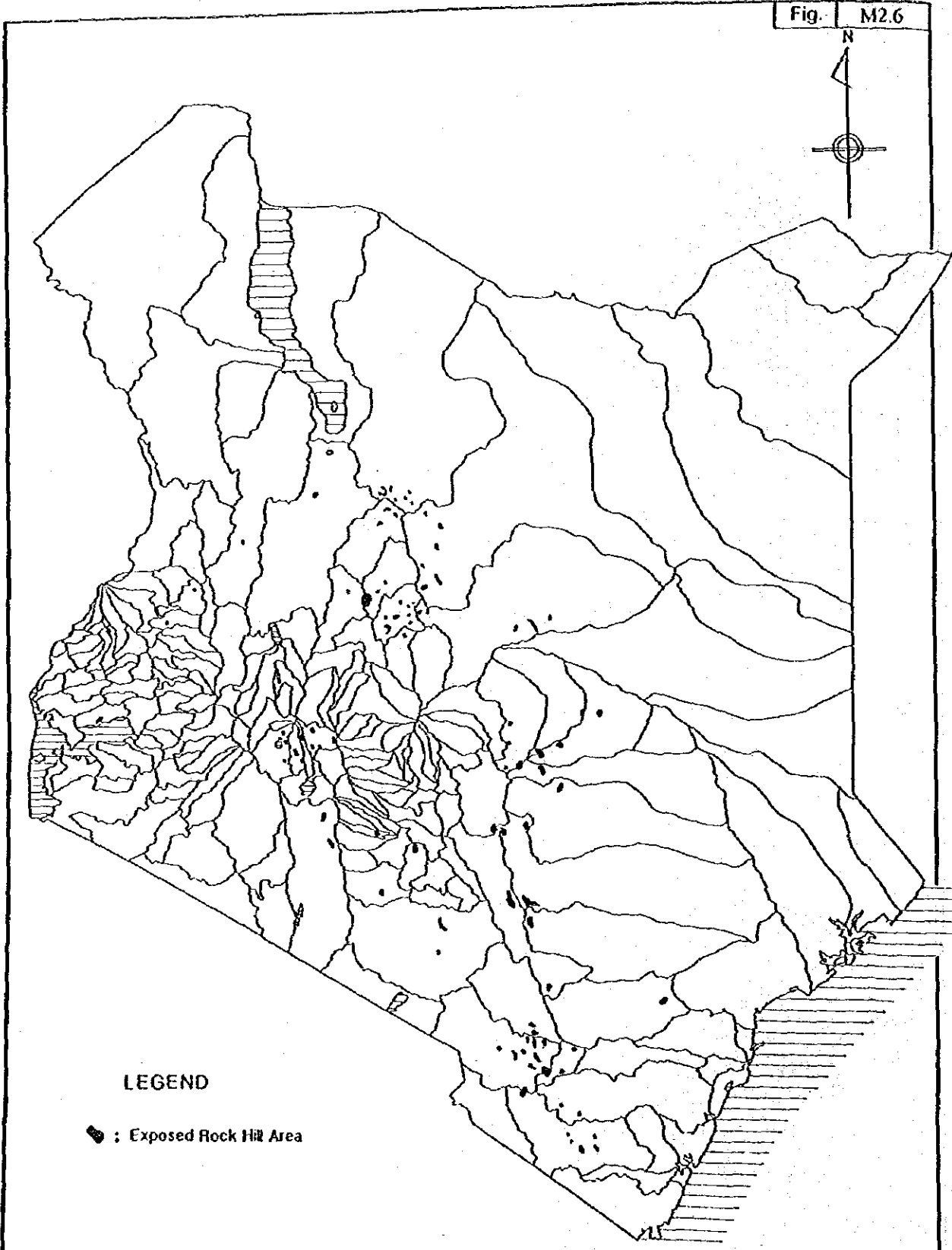
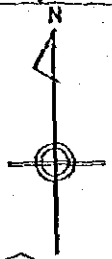


Longitudinal Section

Figure M2.5 Typical Layout of Rock Catchment

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Fig. M2.6



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◆ : Exposed Rock Hill Area

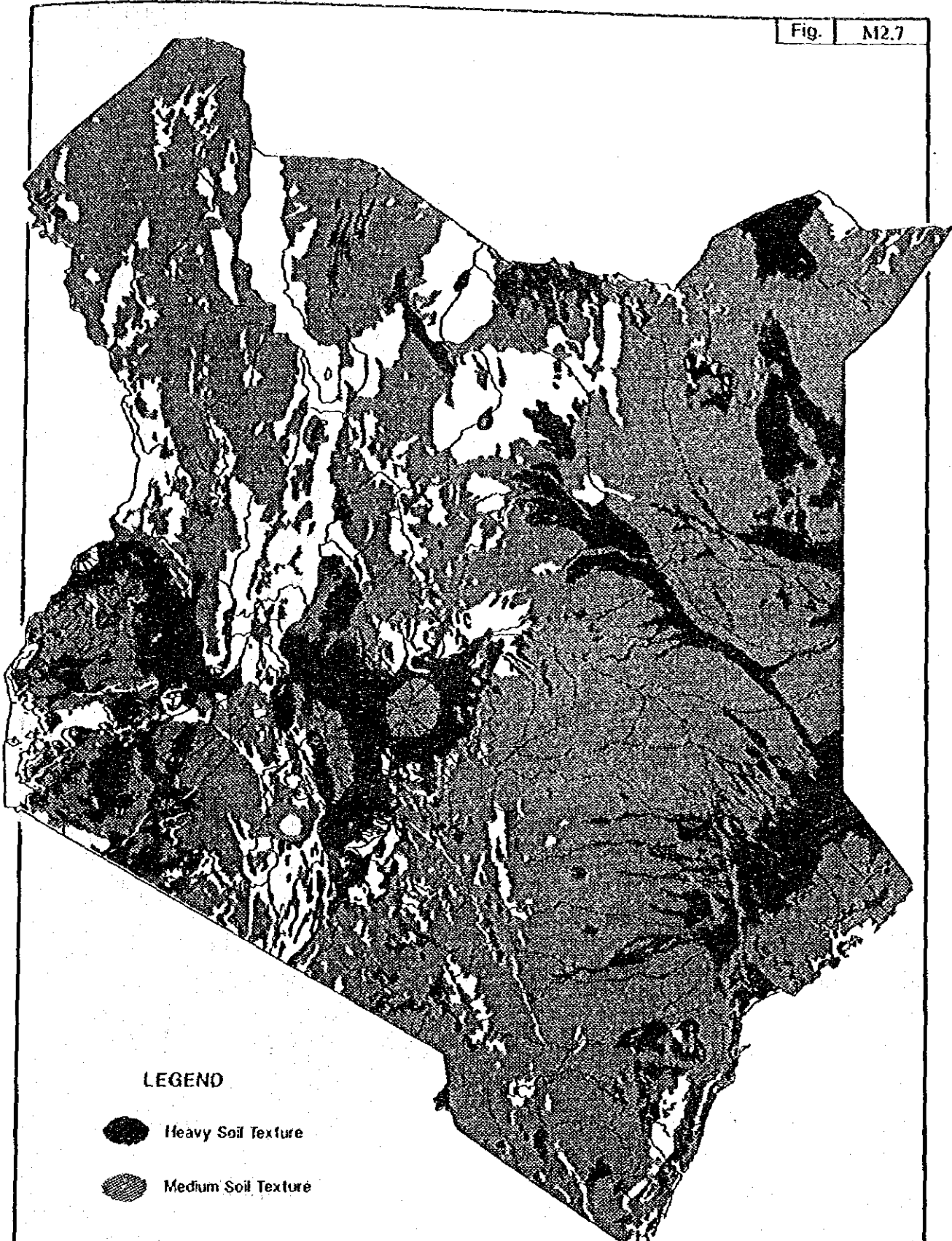
Source : Survey of Kenya
Topographic 1 : 50,000

0 100 200 300 km

Note : Rock hill areas that have not been marked on the topographic maps have not been included.

Figure M2.6 Location of Exposed Rock Hill Areas

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-  Heavy Soil Texture
-  Medium Soil Texture

Note : Heavy and medium textured area are assumed to be suitable area for subsurface dams.

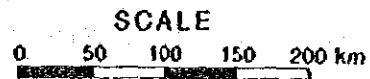
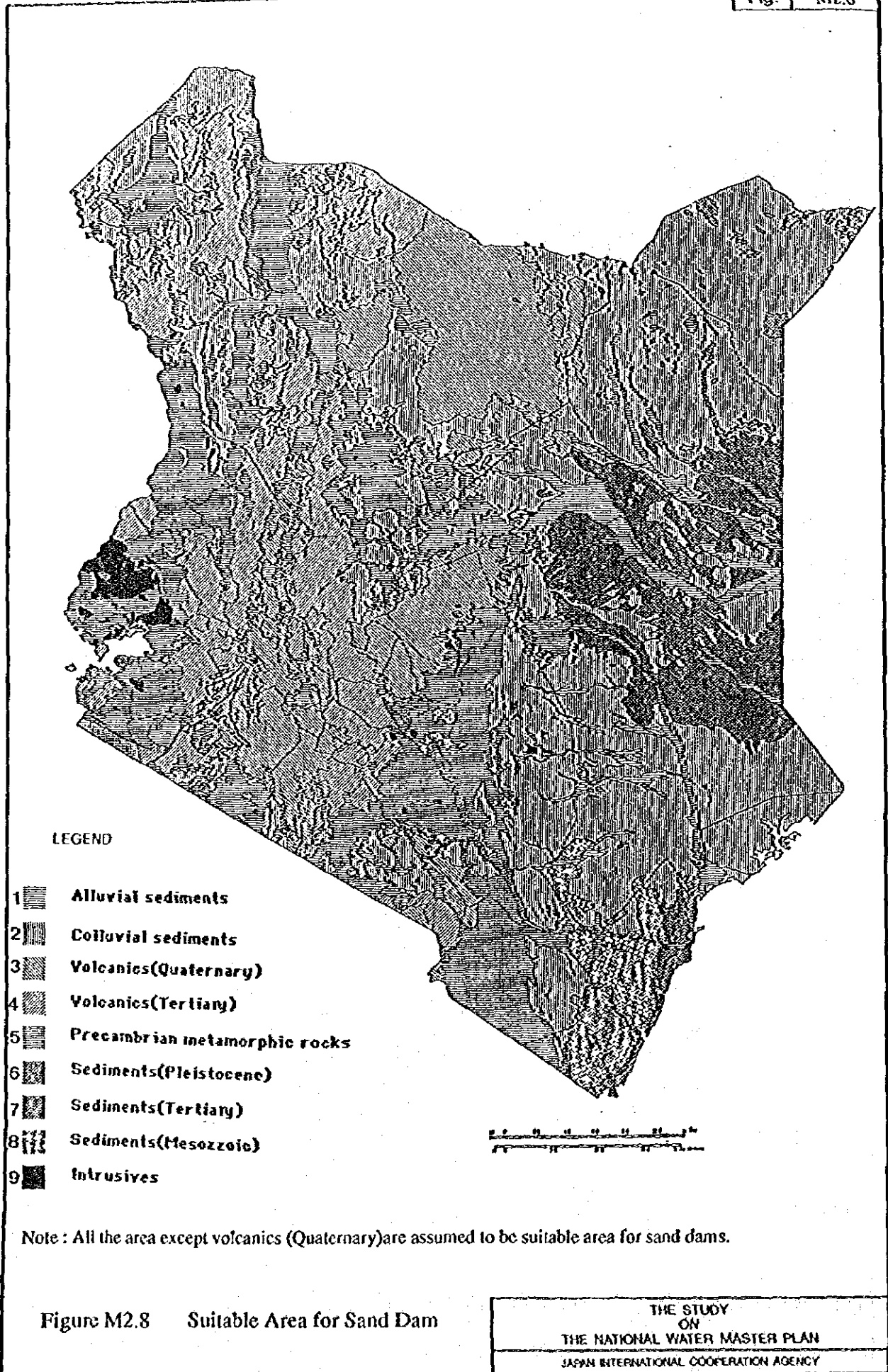
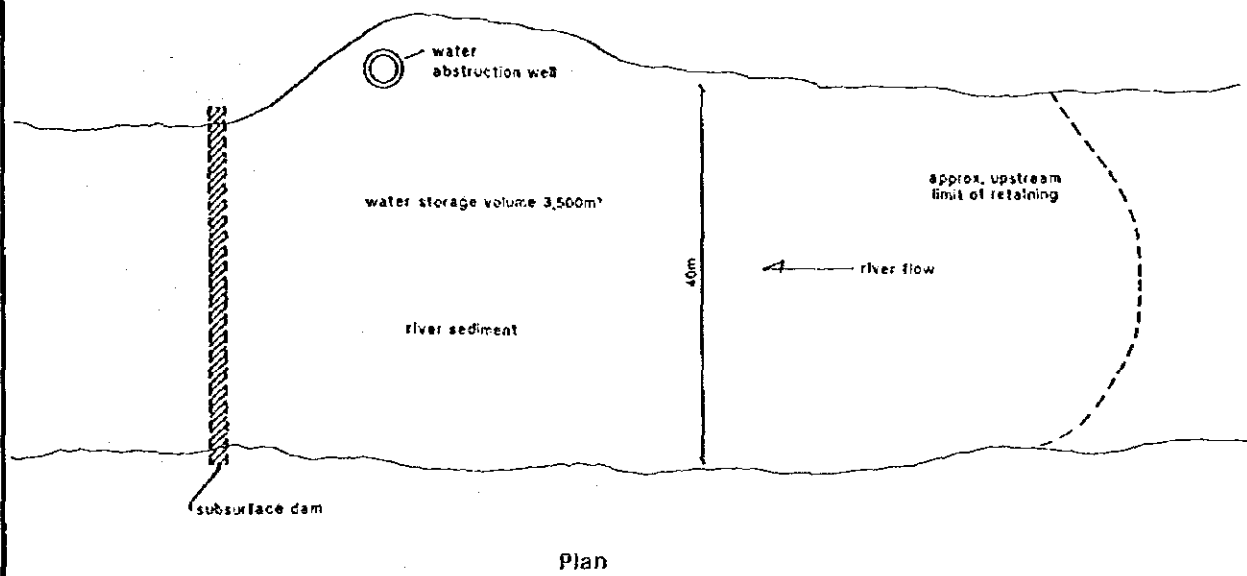


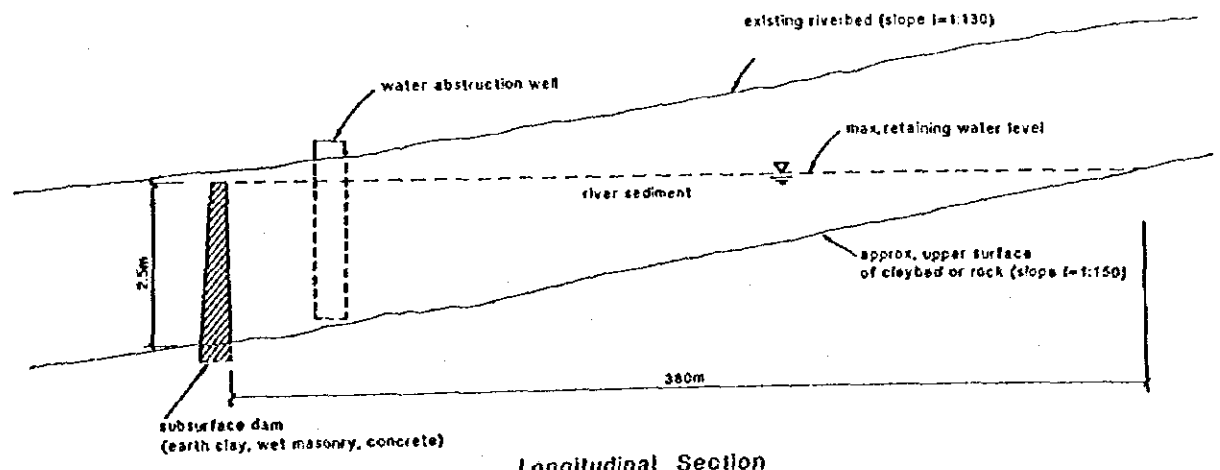
Figure M2.7 Suitable Area for Subsurface Dam

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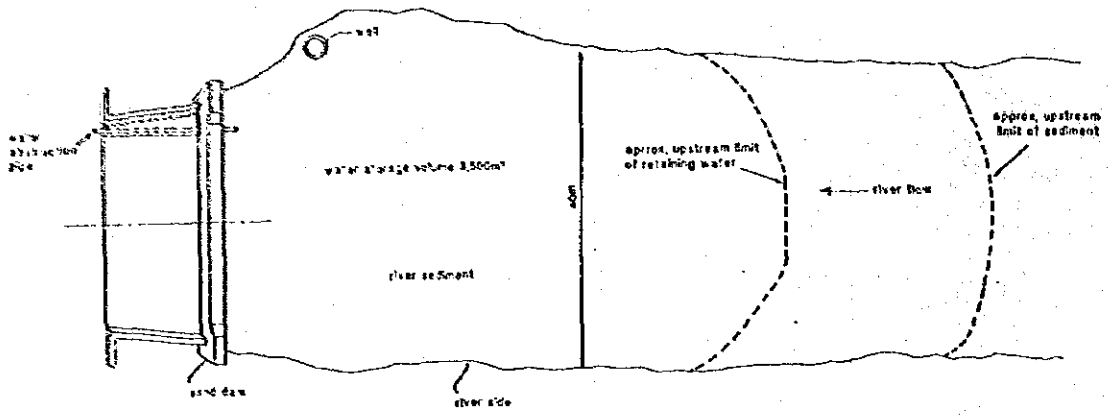
Plan



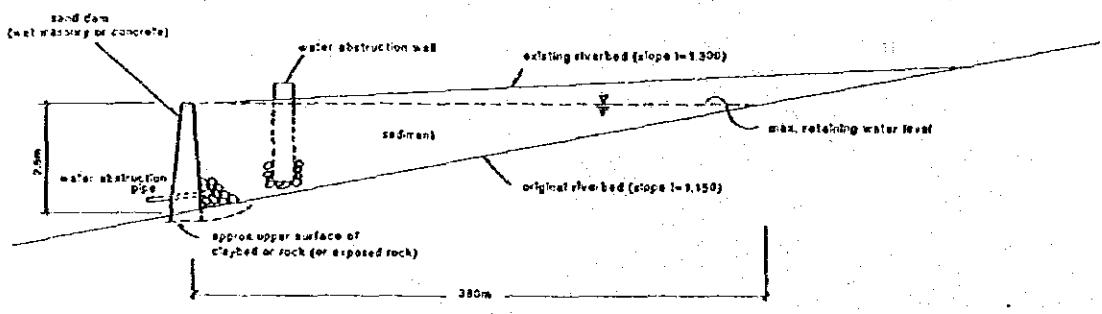
Longitudinal Section

Figure M2.9 Typical Layout of Subsurface Dam

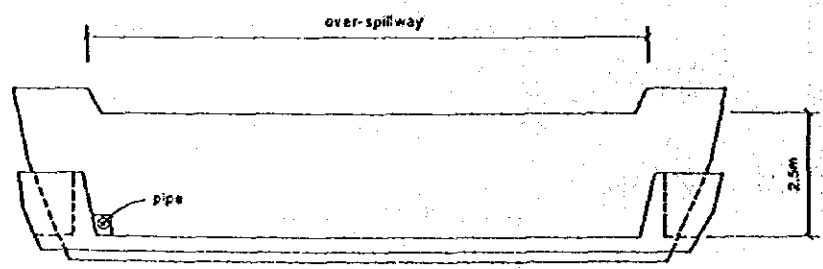
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Longitudinal Section



Downstream View

Figure M2.10 Typical Layout of Sand Dam

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Concept of Minimum Flow

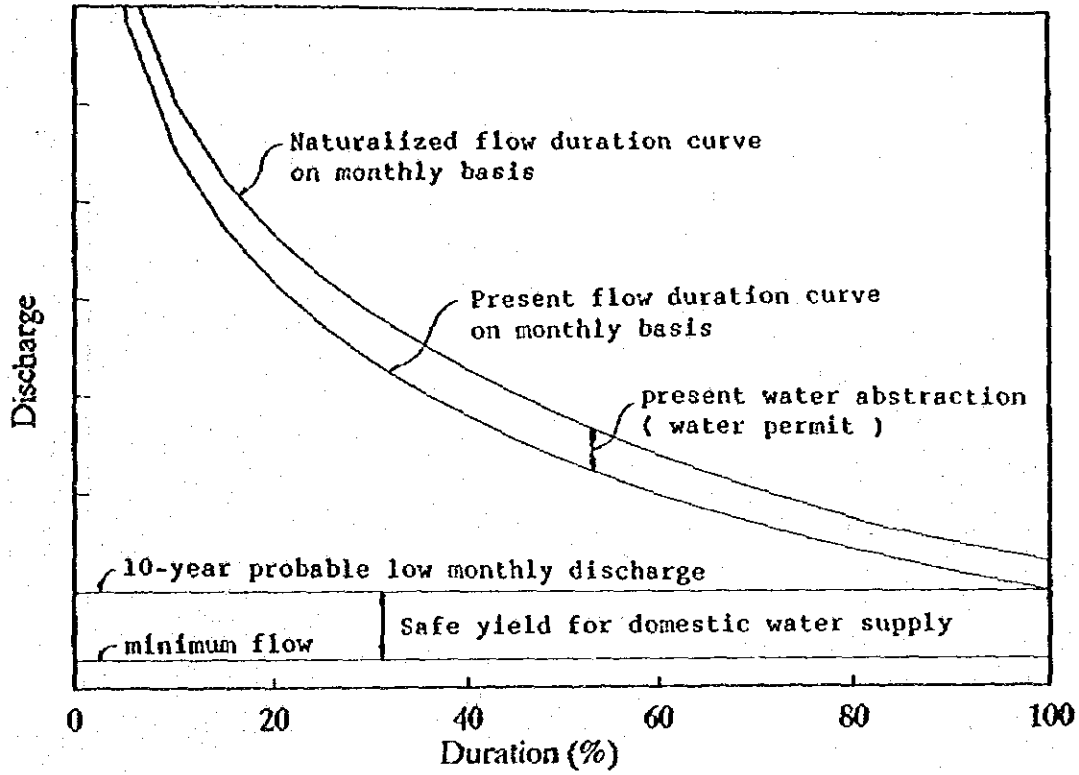


Figure M4.1 Concept of Minimum Flow

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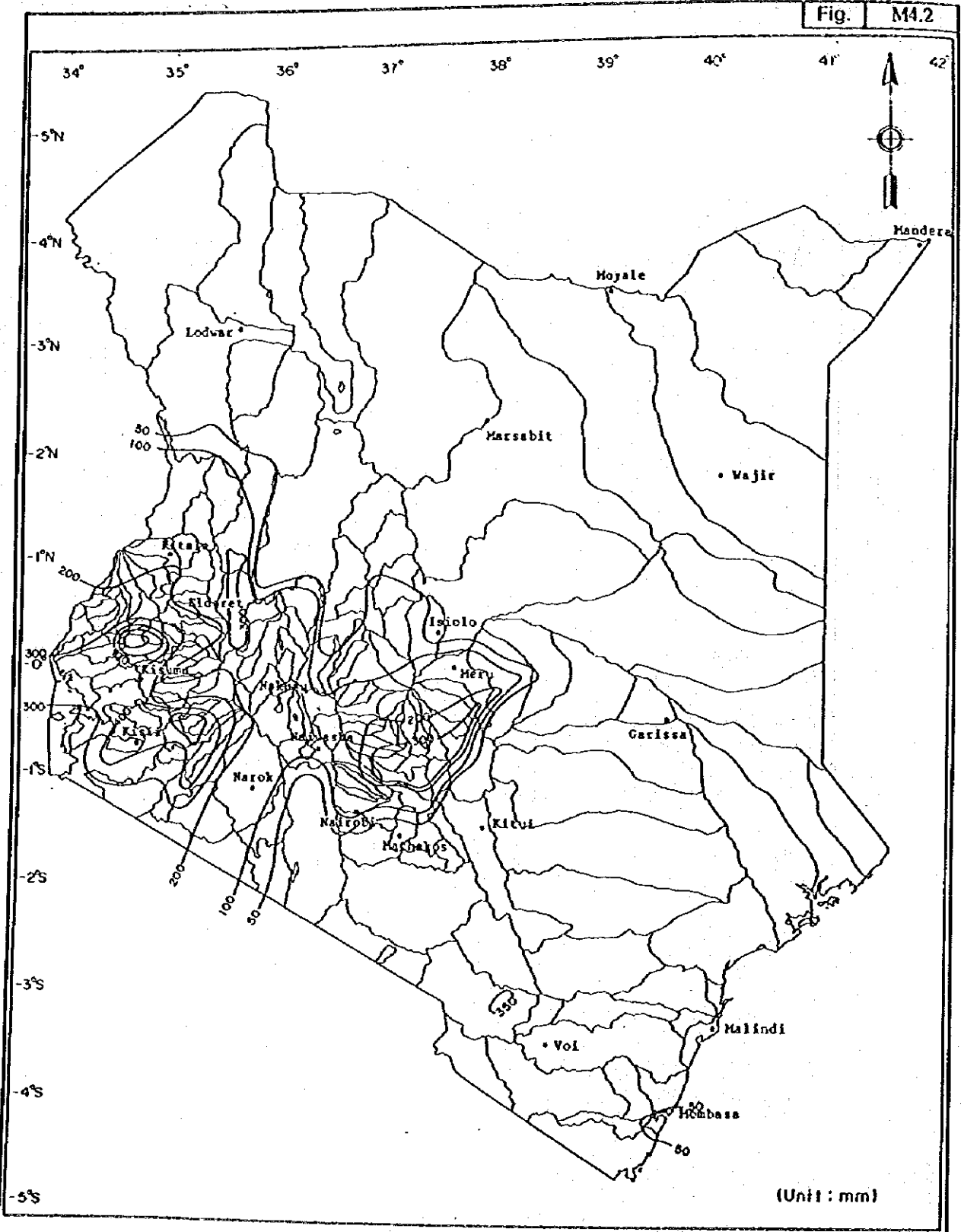


Figure M4.2 Annual Mean Runoff Depth

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Fig. M4.3

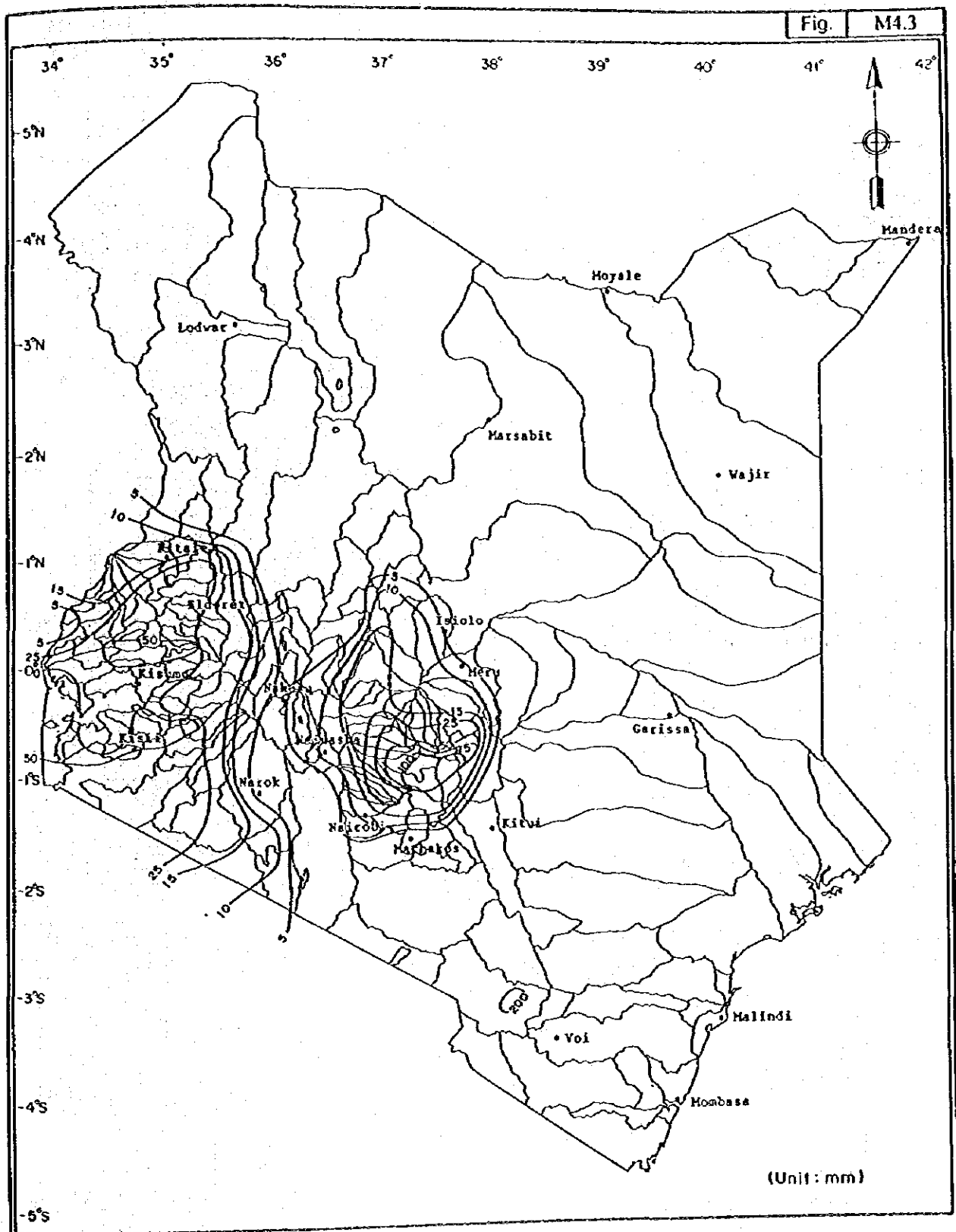
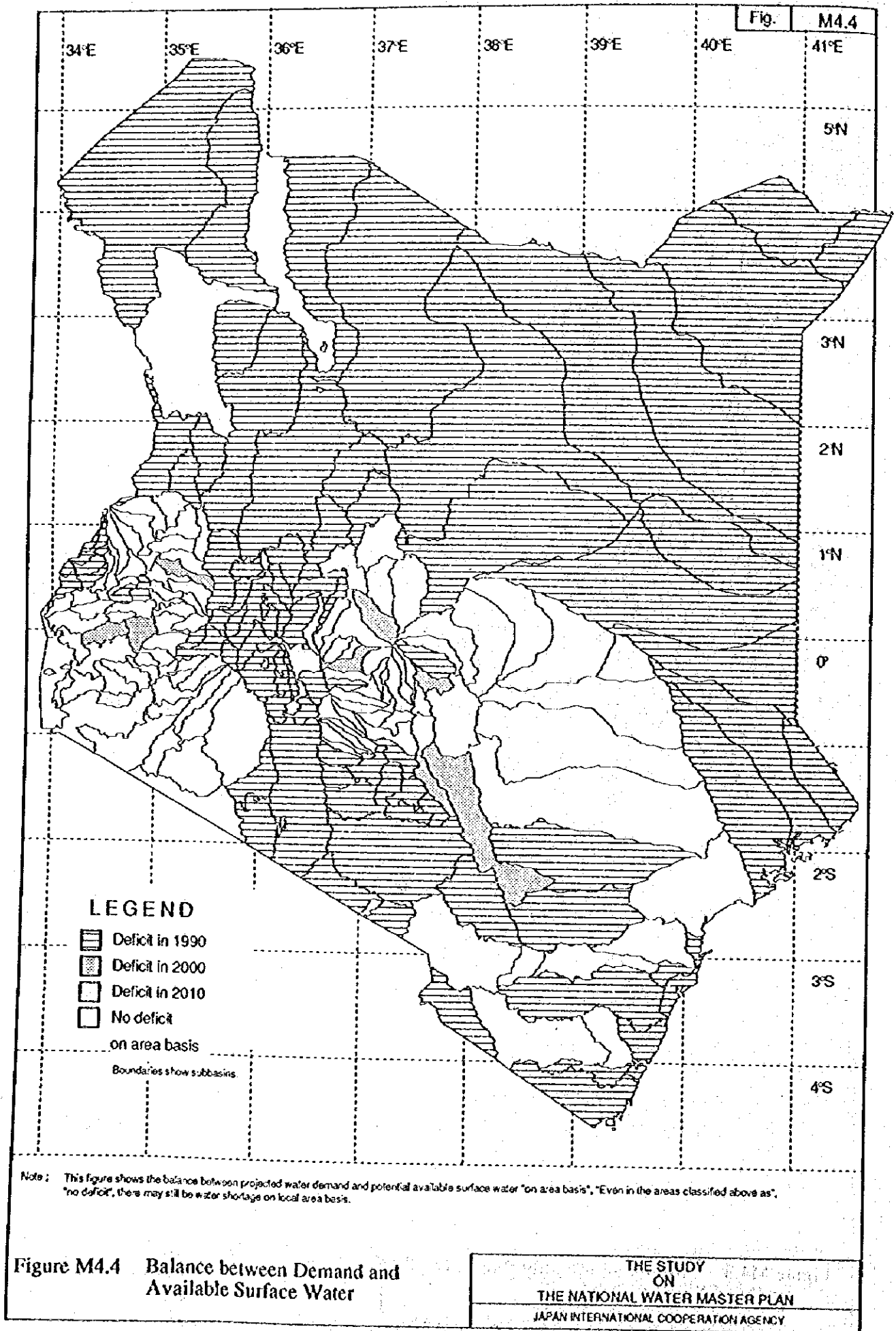
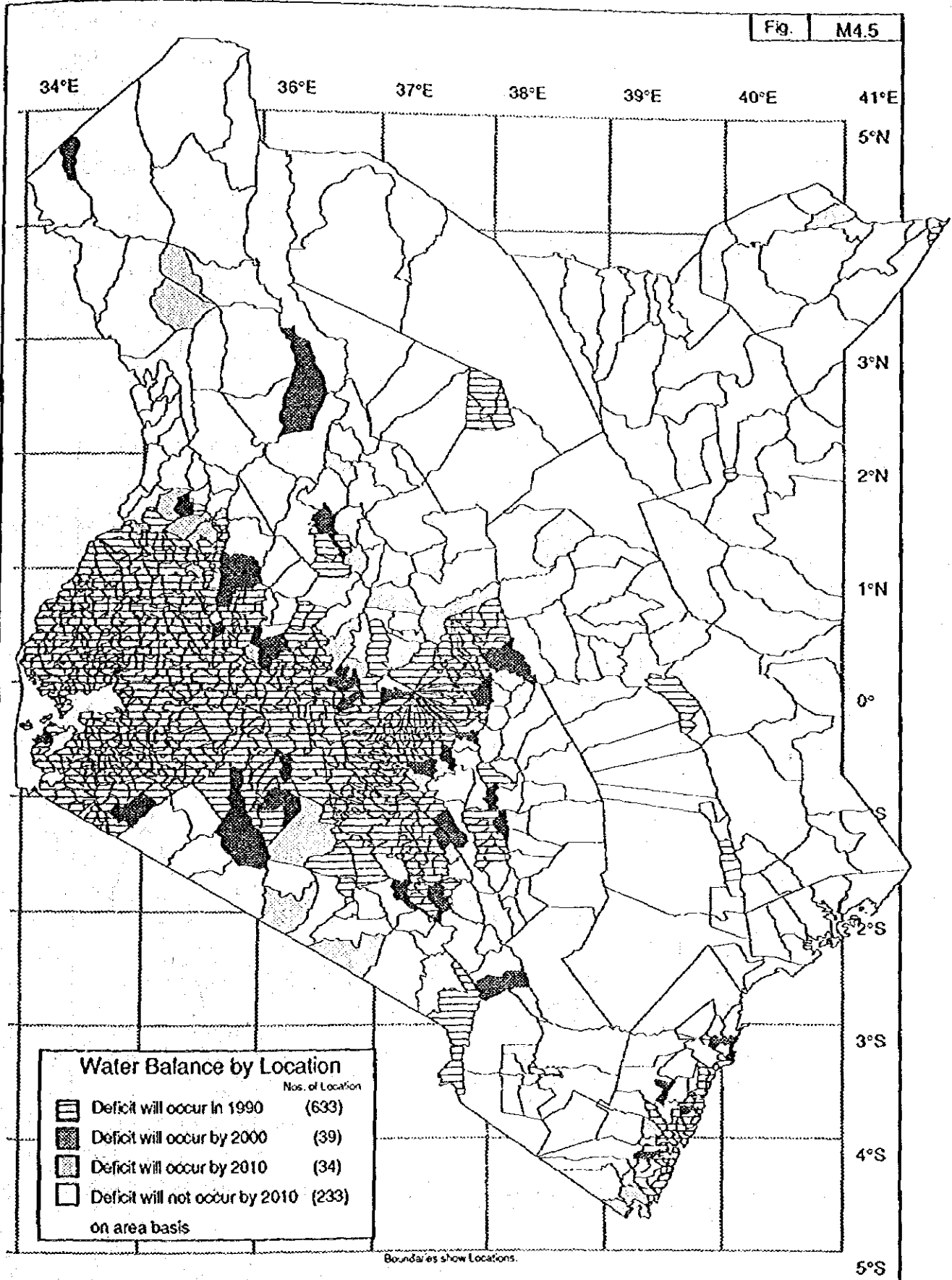


Figure M4.3 Minimum Monthly Runoff Depth

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Water Balance by Location	
	Nos. of Location
	Deficit will occur in 1990 (633)
	Deficit will occur by 2000 (39)
	Deficit will occur by 2010 (34)
	Deficit will not occur by 2010 (233)

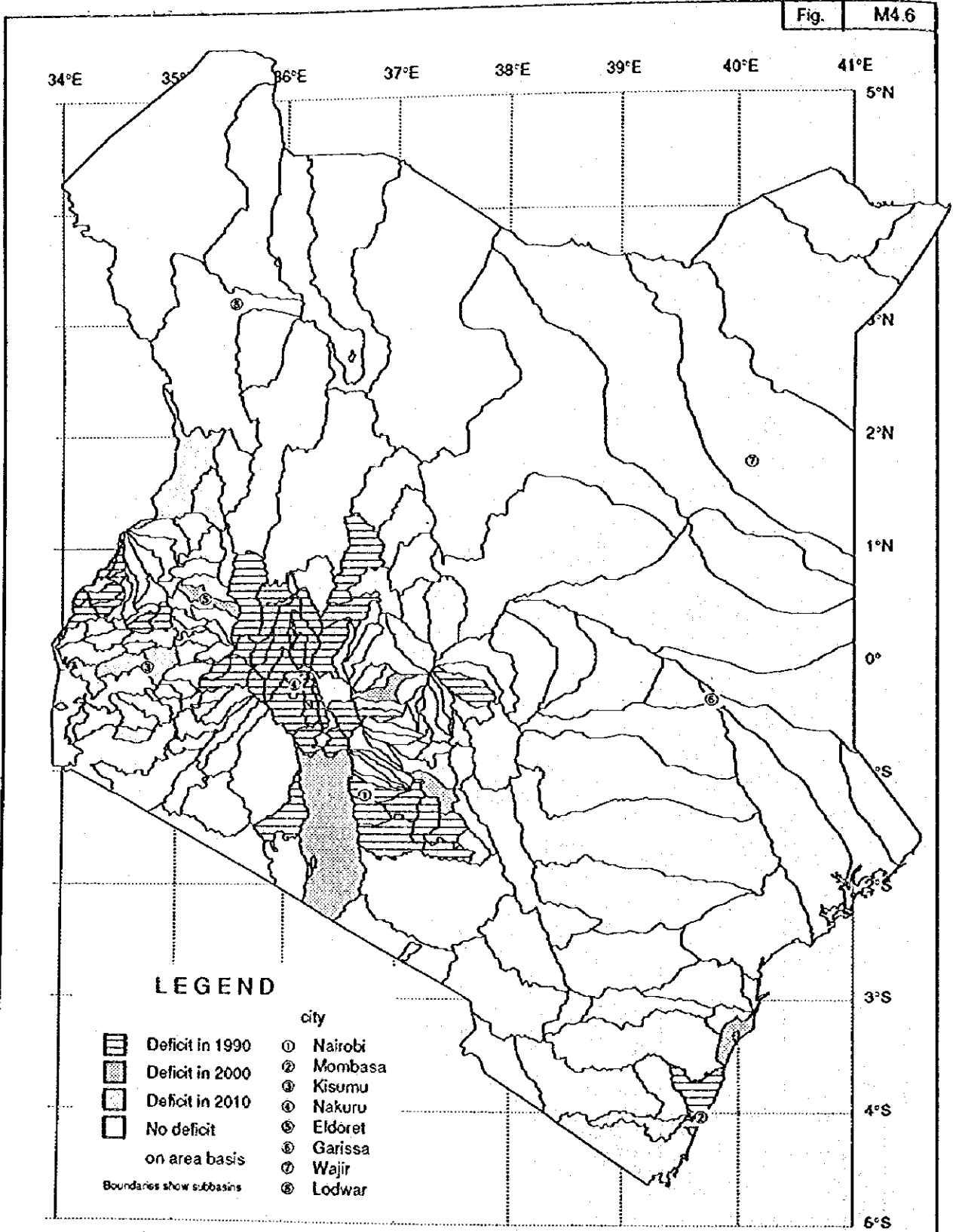
on area basis

Boundaries show Locations.

Note: This figure shows the balance between projected water demand and maximum exploitable groundwater "on area basis". Even in the areas classified above as "no deficit", there may still be water shortage on local area basis.

Figure M4.5 Balance between Demand and Maximum Exploitable Groundwater

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Note: This figure shows the balance between projected water demand and potential available water "on a 'rea basis". "Even in the areas classified above as", "no deficit", there may still be water shortage on local area basis

Figure M4.6 Balance between Demand and Potential Available Water (Groundwater + Surface Water)

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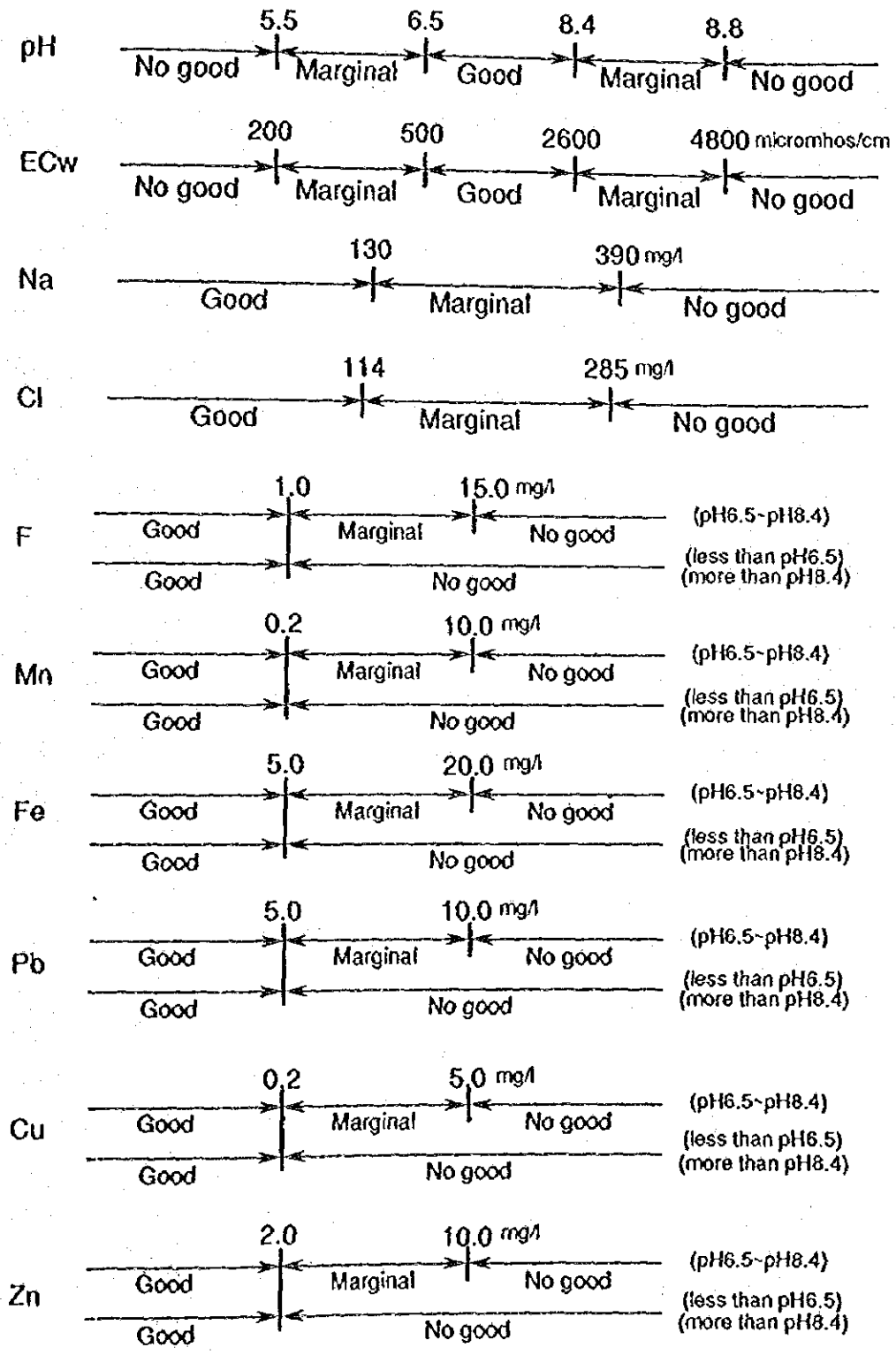


Figure M7.1 Water Quality Evaluation Criteria for Irrigation Water

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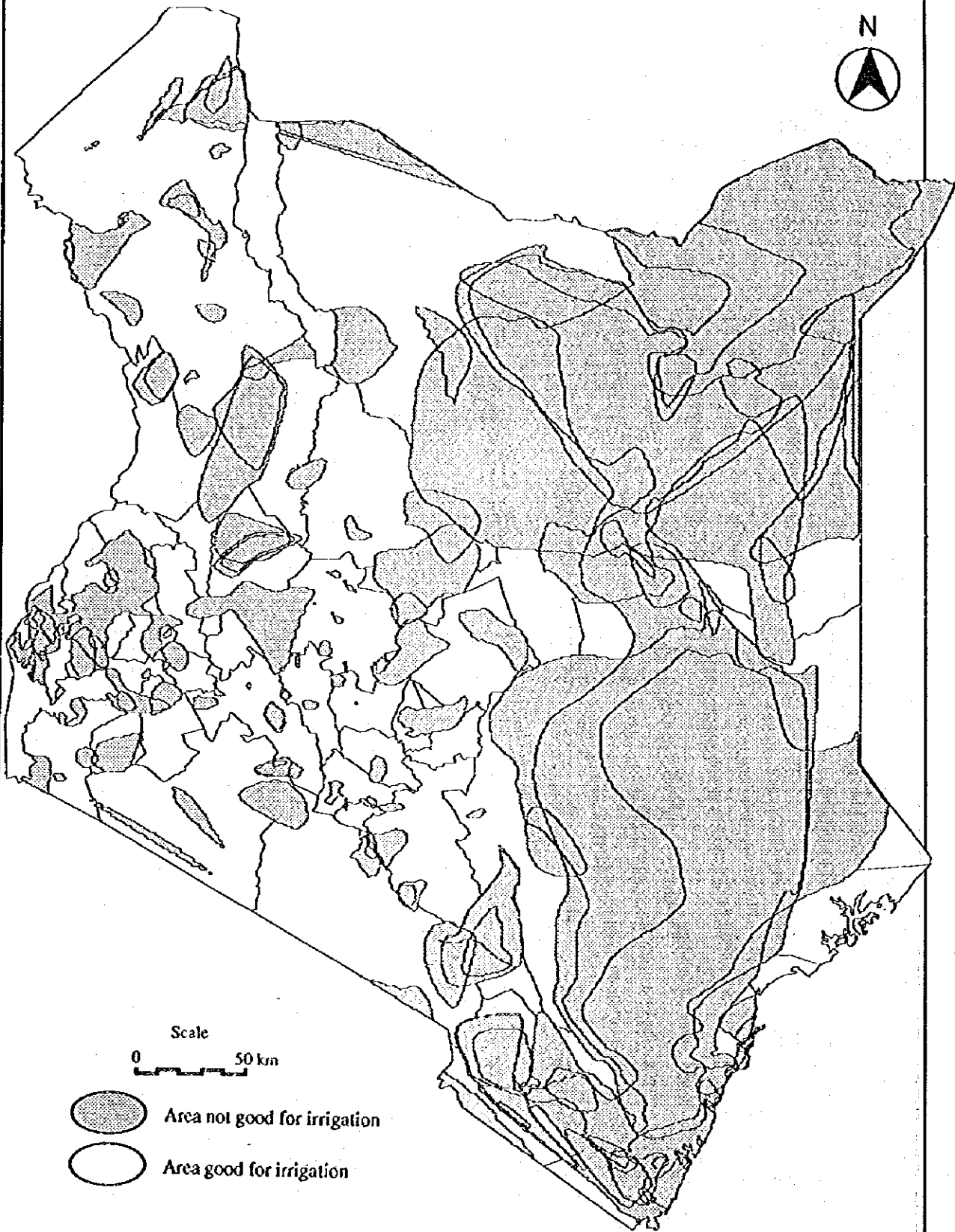


Figure M7.2 Area of Groundwater Unsuitable for Irrigation

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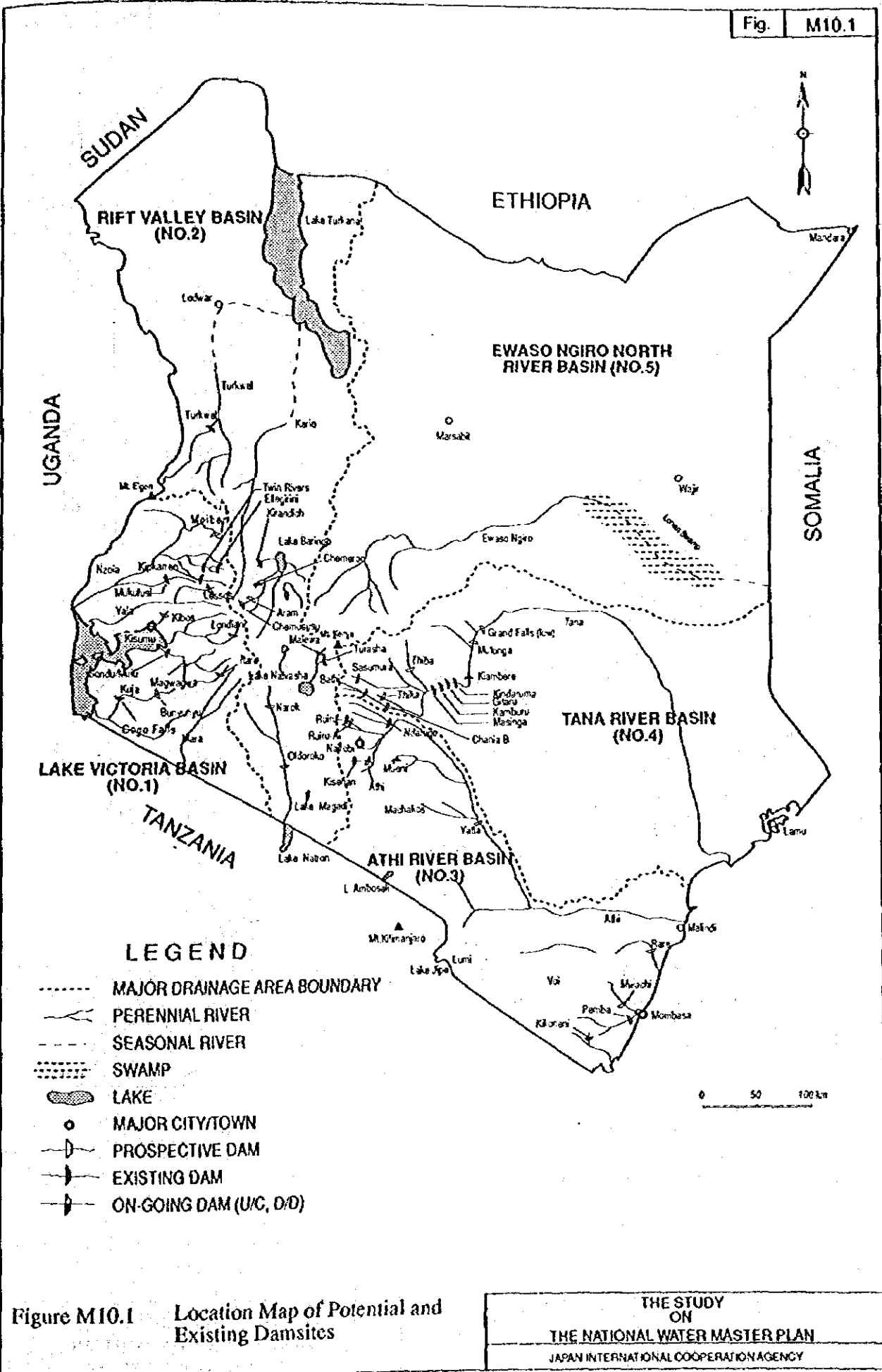
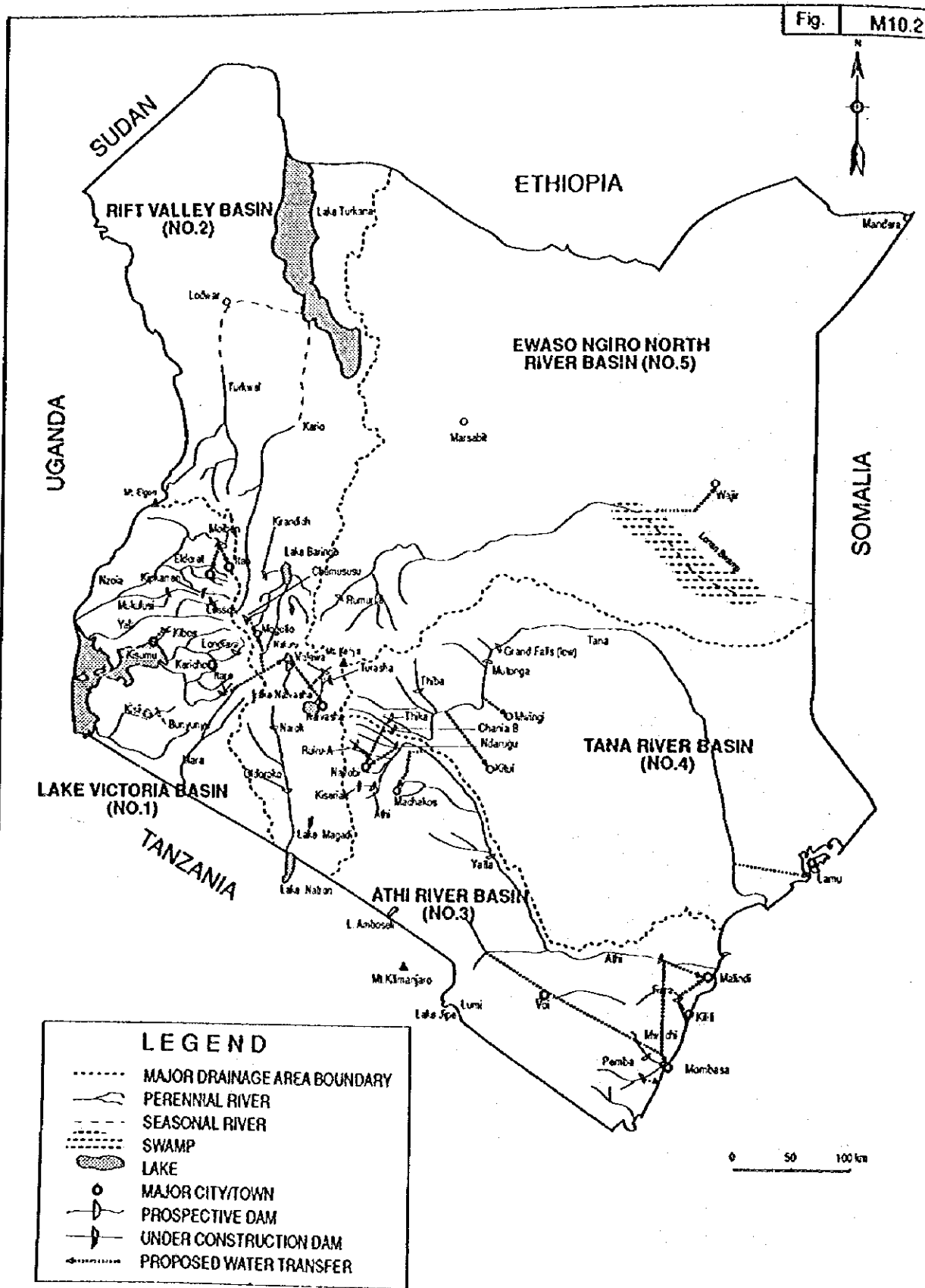


Figure M10.1 Location Map of Potential and Existing Damsites

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LEGEND

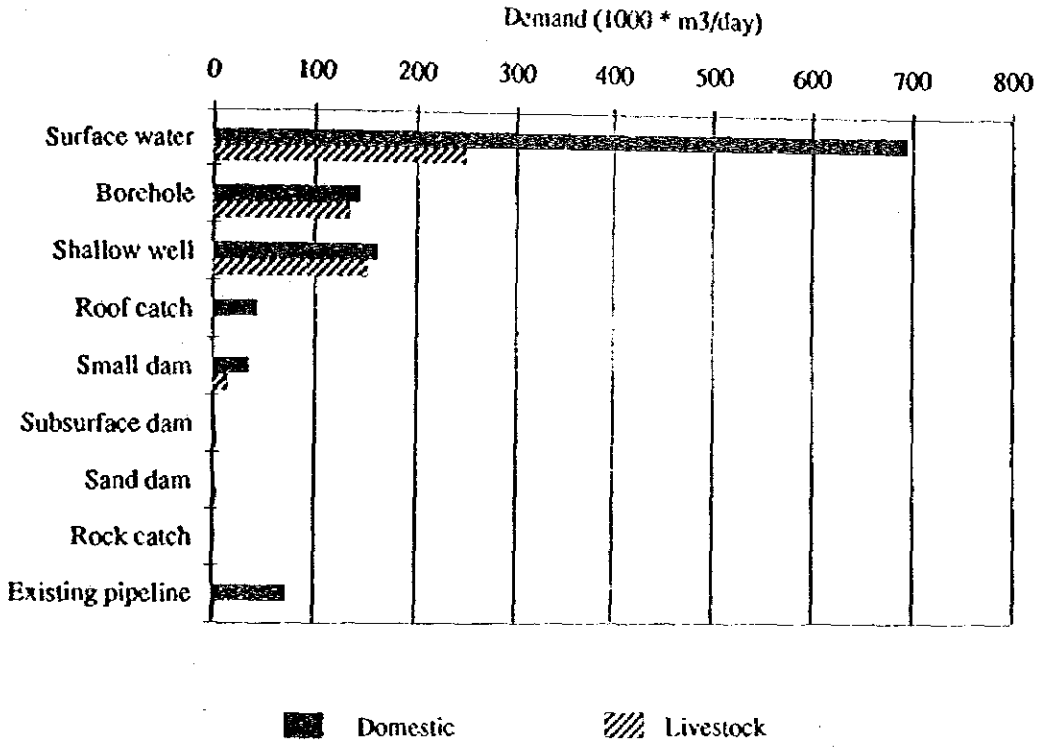
- MAJOR DRAINAGE AREA BOUNDARY
- ~~~~~ PERENNIAL RIVER
- - - - SEASONAL RIVER
- SWAMP
- ▭ LAKE
- MAJOR CITY/TOWN
- △ PROSPECTIVE DAM
- UNDER CONSTRUCTION DAM
- PROPOSED WATER TRANSFER

Note :Water transfer schemes with relatively long pipeline are shown.

Figure M10.2 Water Transfer Scheme

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Rural Water Supply



Water Source Allocation for Rural Water Supply

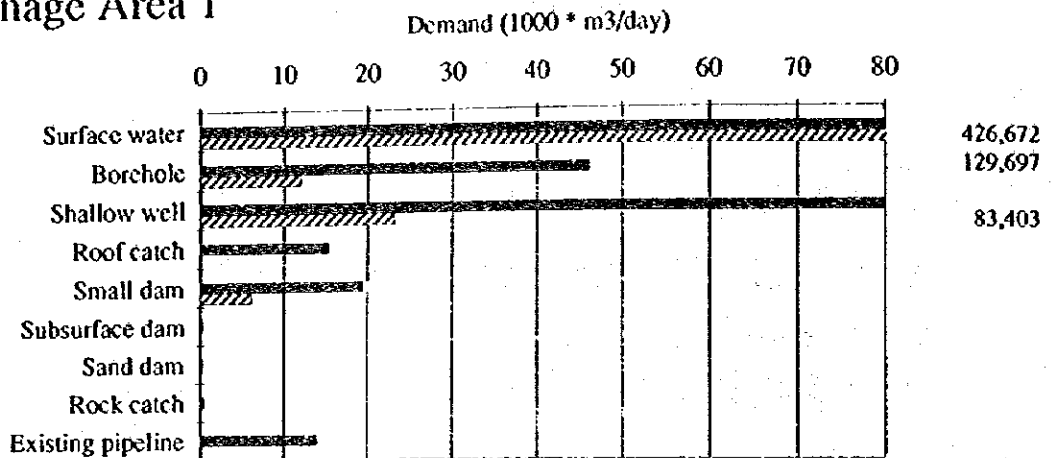
(Unit : m3/day)

Water Source	Domestic	Livestock	Total
Surface water	695,627	248,489	944,116
Borehole	144,530	133,675	278,205
Shallow well	162,142	151,320	313,462
Roof catch	43,876	0	43,876
Small dam	34,977	14,404	49,381
Subsurface dam	2,171	3,473	5,644
Sand dam	1,917	4,256	6,173
Rock catch	2,147	0	2,147
Existing pipeline	72,333	3,114	75,447
Total	1,159,720	558,731	1,718,451

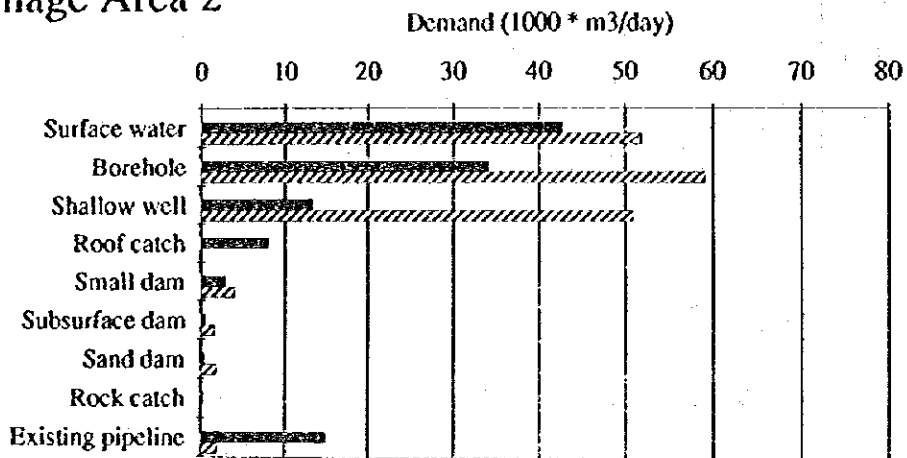
Figure M10.3 Water Source Allocation for Rural Water Supply

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Drainage Area 1



Drainage Area 2



Drainage Area 3

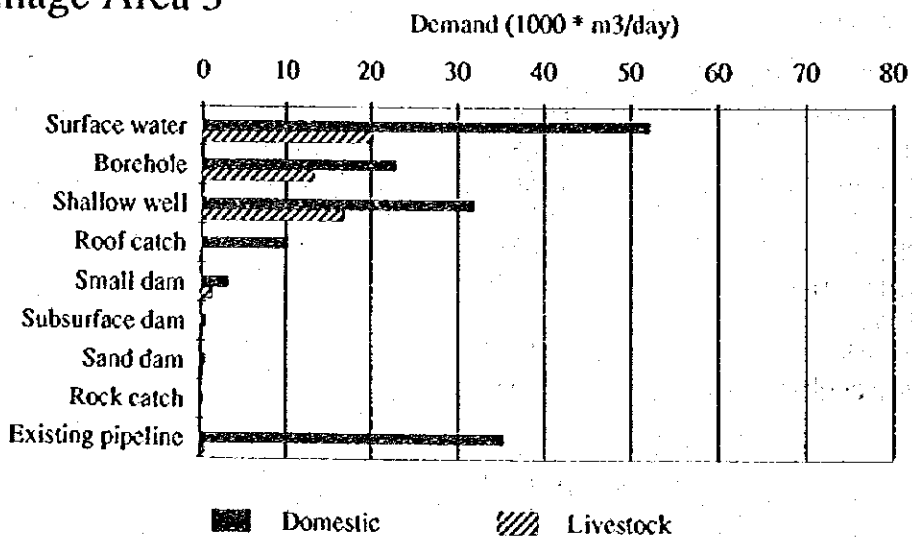
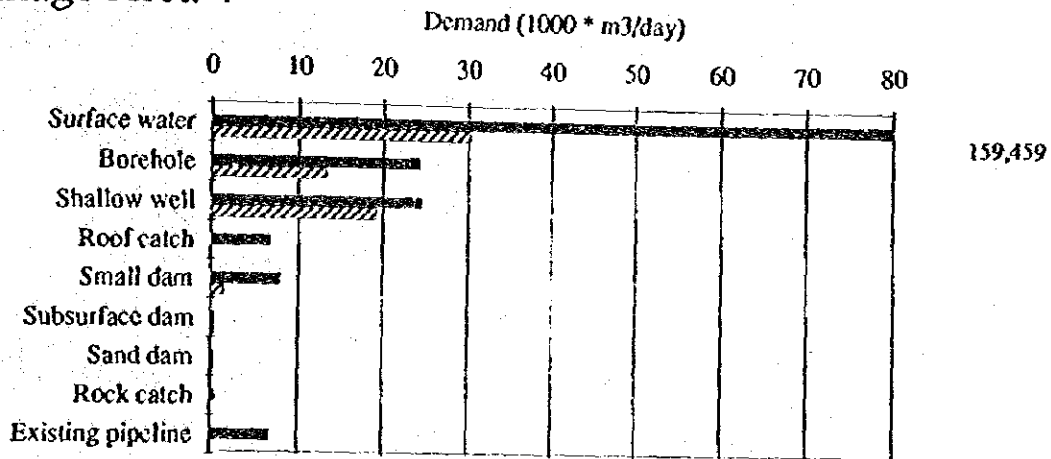


Figure M10.4 Water Source Allocation by Drainage Area (1/2)
(Rural and Livestock Water Supply)

Drainage Area 4



Drainage Area 5

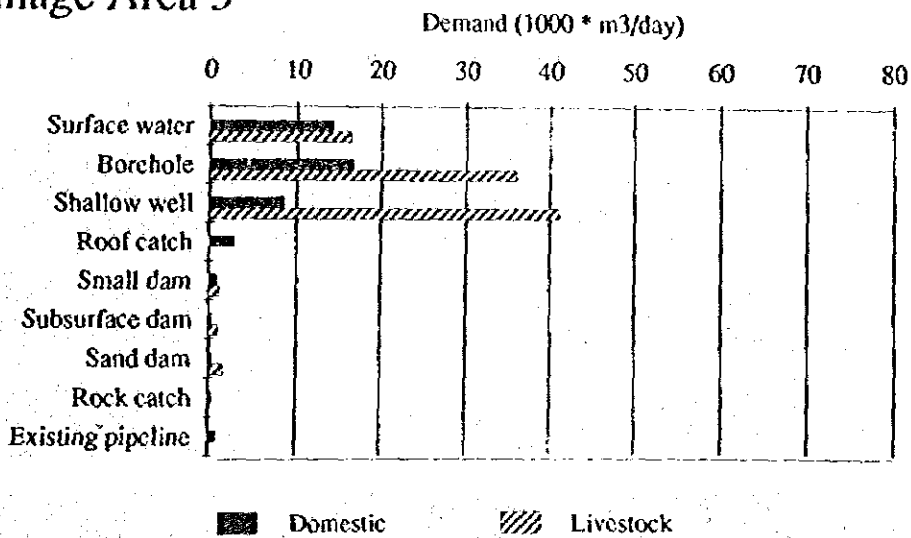
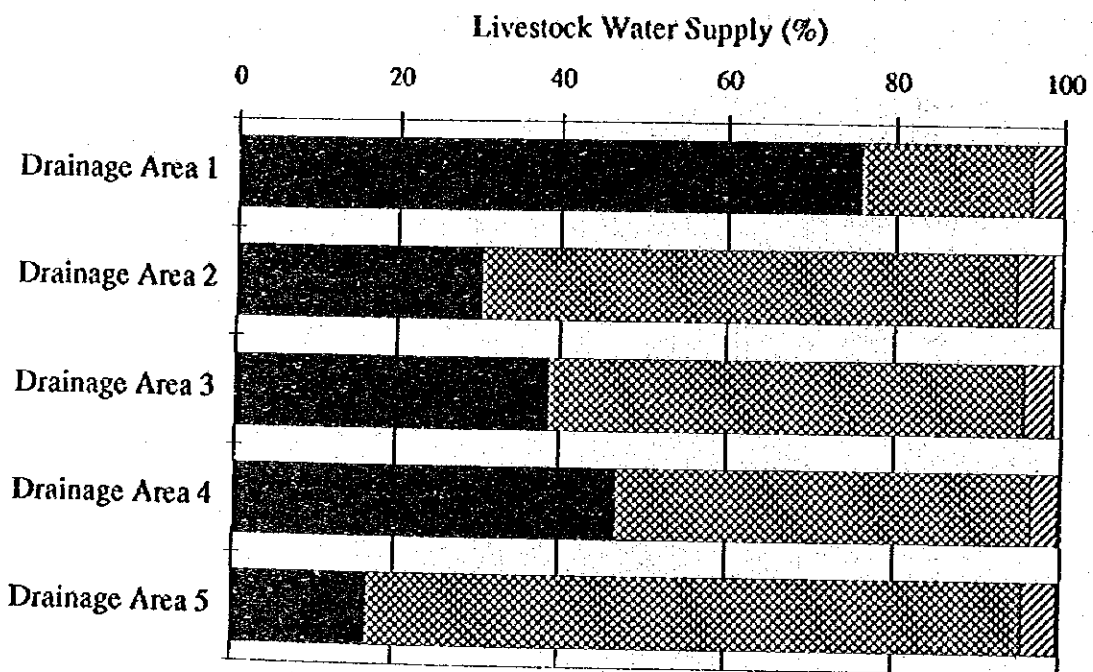
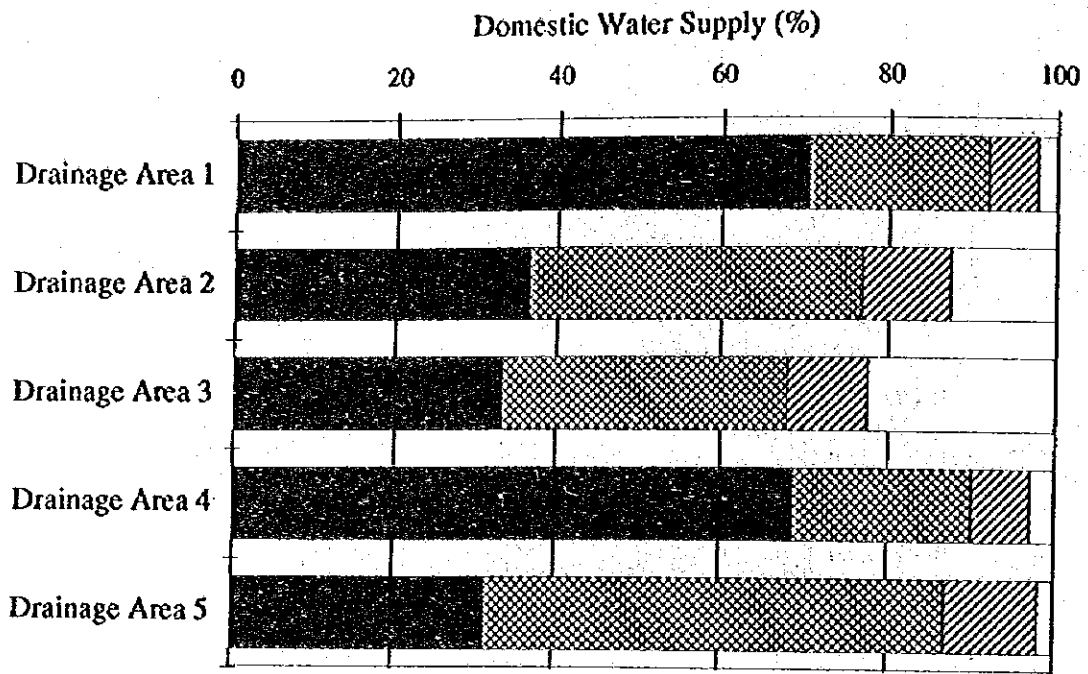


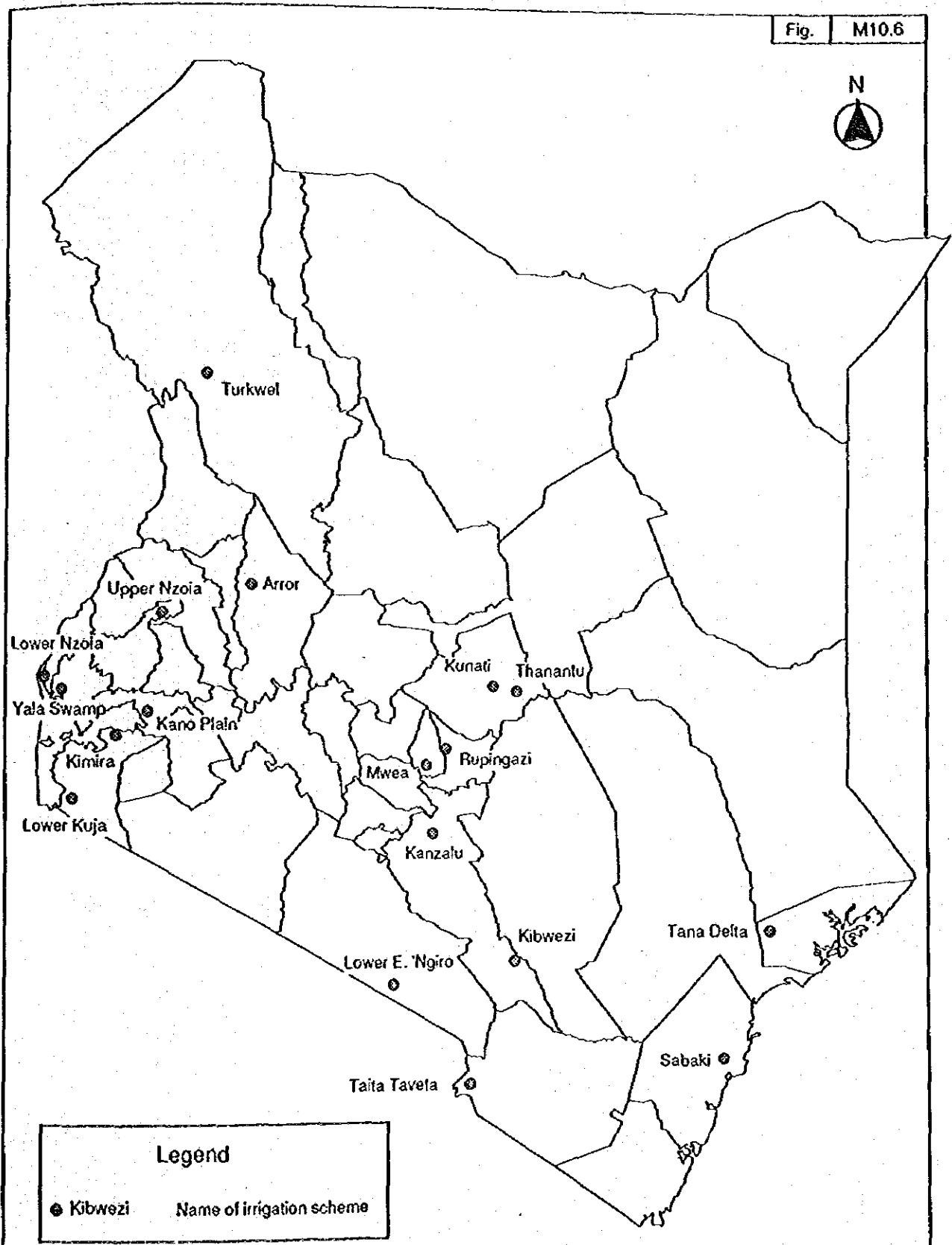
Figure M10.4 Water Source Allocation by Drainage Area (2/2)
(Rural and Livestock Water Supply)



Surface Water	Groundwater
Water harvesting	Exist. pipeline

Figure M10.5 Allocation Ratio of Water Source (Rural and Livestock Water Supply)

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Legend
● Name of irrigation scheme

Figure M10.6 Location Map of Proposed Irrigation Project

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