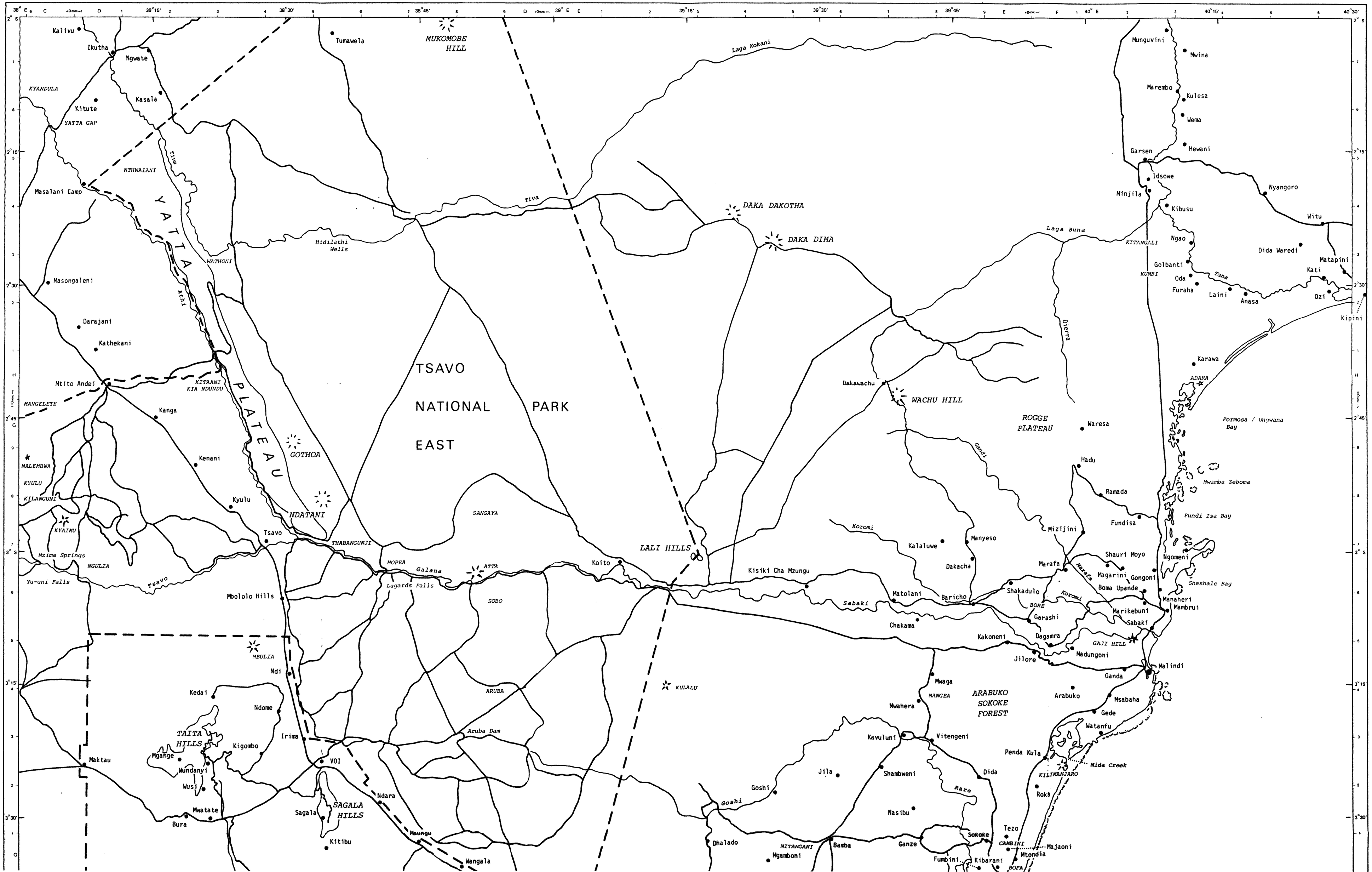
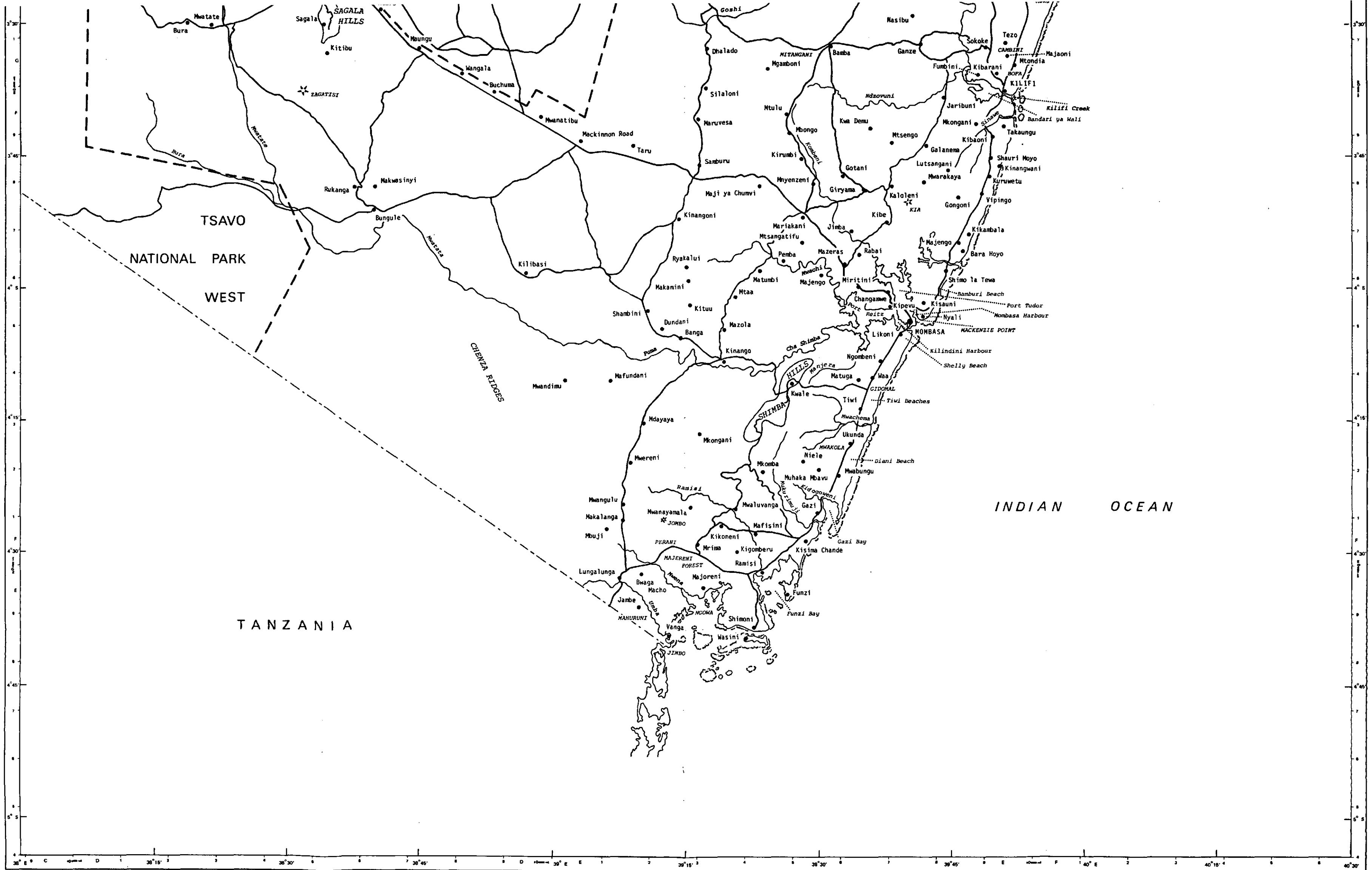
Base map derived of topographical maps scale 1:250,000 Series Y503
Sheets SA-37-10, SA-37-11, SA-37-14, SA-37-15, SB-37-02, SB-37-03
Edition 2-SK, 3-SK, 3-SK, 3-SK, 1-TSD, 3-SK respectively

TOPOGRAPHICAL MAP OF SOUTH-EAST KENYA

Appendix II to: The Geomorphology of Southeast Kenya
A.P. Oosterom, 1988





Coast Province Geoscience Research Project
Financed by the Netherlands Foundation for the Advancement of Tropical Research (WOTRO)

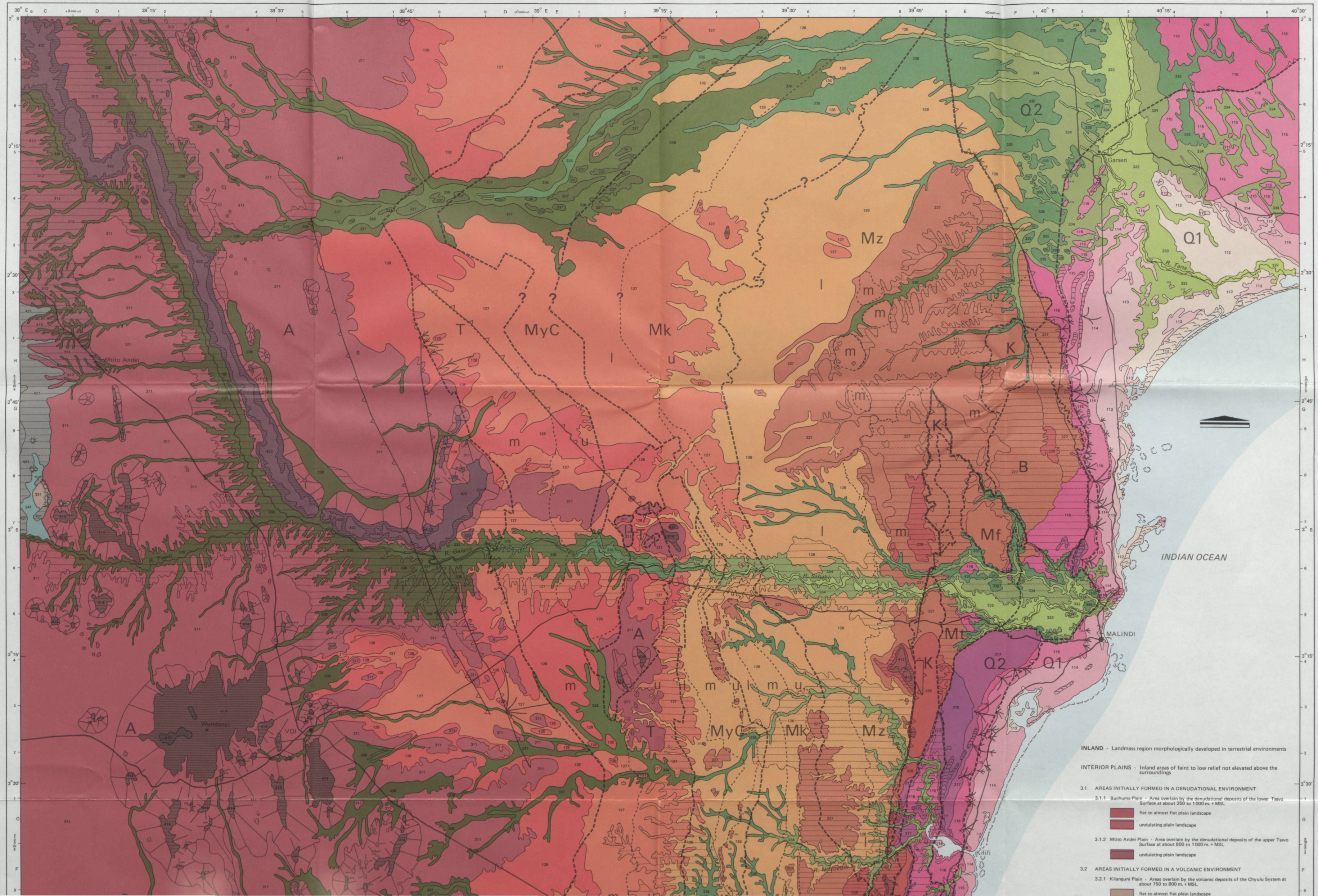
0 5 10 15 20 25 30 35 40 45 50 kilometers

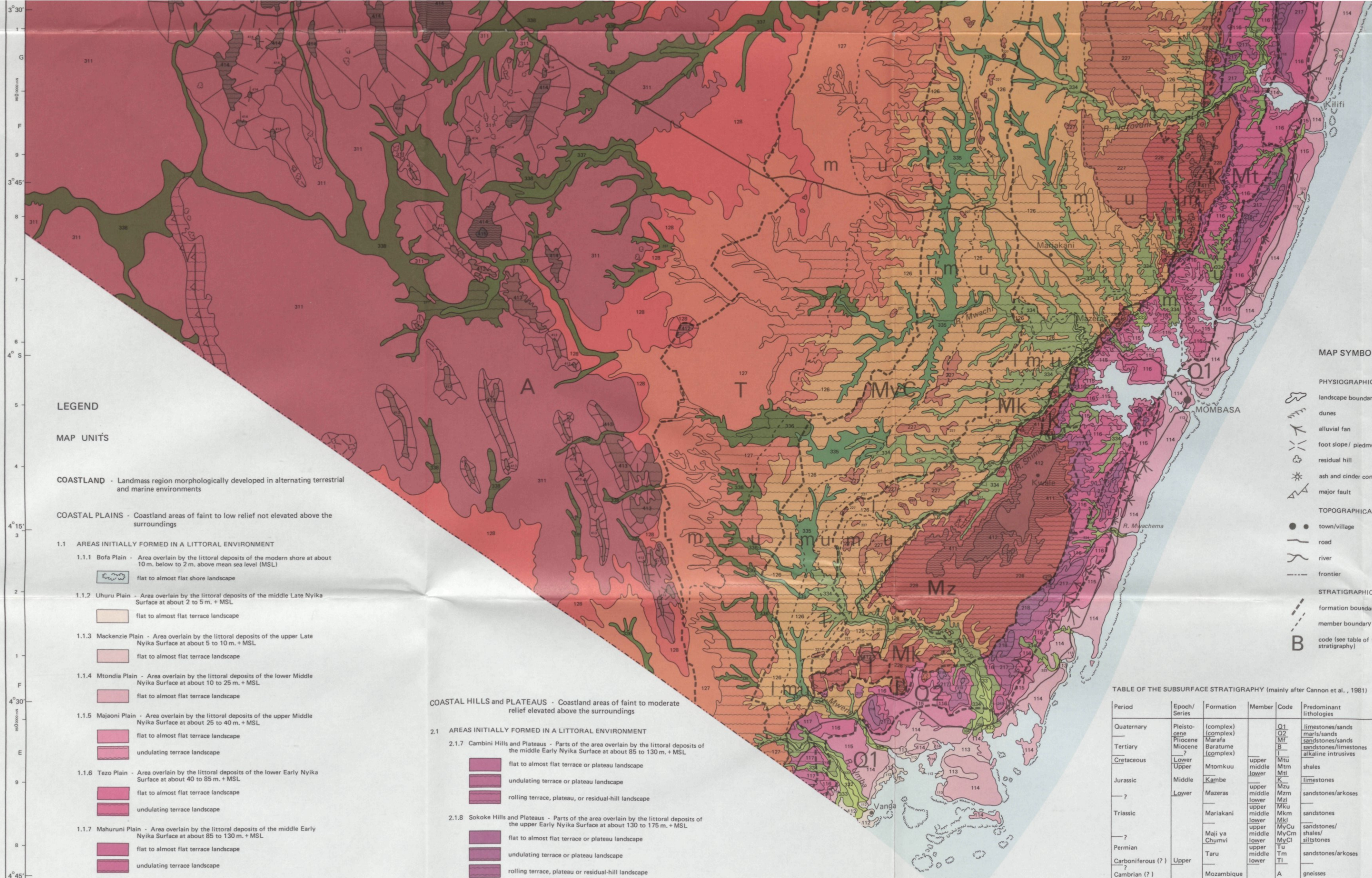
P.G.M. Versteeg

Base map derived of topographical maps scale 1:250,000 Series Y503
Sheets SA-37-10, SA-37-11, SA-37-14, SA-37-15, SB-37-02, SB-37-03
Edition 2-SK, 3-SK, 3-SK, 3-SK, 1-TSD, 3-SK respectively

GEOMORPHOLOGICAL MAP OF SOUTH-EAST KENYA

Appendix I to: The Geomorphology of Southeast Kenya
A.P. Oosterom, 1988





LEGEND

MAP UNITS

COASTLAND - Landmass region morphologically developed in alternating terrestrial and marine environments

COASTAL PLAINS - Coastland areas of faint to low relief not elevated above the surroundings

1.1 AREAS INITIALLY FORMED IN A LITTORAL ENVIRONMENT

1.1.1 Bofa Plain - Area overlain by the littoral deposits of the modern shore at about 10 m. below to 2 m. above mean sea level (MSL)
- flat to almost flat shore landscape

1.1.2 Uhuru Plain - Area overlain by the littoral deposits of the middle Late Nyika Surface at about 2 to 5 m. + MSL
- flat to almost flat terrace landscape

1.1.3 Mackenzie Plain - Area overlain by the littoral deposits of the upper Late Nyika Surface at about 5 to 10 m. + MSL
- flat to almost flat terrace landscape

1.1.4 Mtondia Plain - Area overlain by the littoral deposits of the lower Middle Nyika Surface at about 10 to 25 m. + MSL
- flat to almost flat terrace landscape

1.1.5 Majaoni Plain - Area overlain by the littoral deposits of the upper Middle Nyika Surface at about 25 to 40 m. + MSL
- flat to almost flat terrace landscape
- undulating terrace landscape

1.1.6 Tezo Plain - Area overlain by the littoral deposits of the lower Early Nyika Surface at about 40 to 85 m. + MSL
- flat to almost flat terrace landscape
- undulating terrace landscape

1.1.7 Mahuruni Plain - Area overlain by the littoral deposits of the middle Early Nyika Surface at about 85 to 130 m. + MSL
- flat to almost flat terrace landscape
- undulating terrace landscape

1.2 AREAS INITIALLY FORMED IN A PARALIC ENVIRONMENT

1.2.6 Mitangani Plain - Area overlain by the paralic deposits of the lower Early Nyika Surface at about 50 to 300 m. + MSL
- flat to almost flat plain landscape
- undulating plain landscape
- rolling plain landscape

1.2.7 Samburu Plain - Area overlain by the paralic deposits of the middle Early Nyika Surface at about 100 to 400 m. + MSL
- flat to almost flat plain landscape
- undulating plain landscape

1.2.8 Taru Plain - Area overlain by the paralic deposits of the upper Early Nyika Surface at about 175 to 500 m. + MSL
- flat to almost flat plain landscape
- undulating plain landscape

COASTAL HILLS and PLATEAUS - Coastland areas of faint to moderate relief elevated above the surroundings

2.1 AREAS INITIALLY FORMED IN A LITTORAL ENVIRONMENT

2.1.7 Cambini Hills and Plateaus - Parts of the area overlain by the littoral deposits of the middle Early Nyika Surface at about 85 to 130 m. + MSL
- flat to almost flat terrace or plateau landscape
- undulating terrace or plateau landscape
- rolling terrace, plateau, or residual-hill landscape

2.1.8 Sokoke Hills and Plateaus - Parts of the area overlain by the littoral deposits of the upper Early Nyika Surface at about 130 to 175 m. + MSL
- flat to almost flat terrace or plateau landscape
- undulating terrace or plateau landscape
- rolling terrace, plateau or residual-hill landscape
- hilly terrace, plateau or residual-hill landscape

2.2 AREAS INITIALLY FORMED IN A PARALIC ENVIRONMENT

2.2.7 Bore Hills and Plateaus - Parts of the area overlain by the paralic deposits of the middle Early Nyika Surface at about 85 to 300 m. + MSL
- flat to almost flat plateau landscape
- undulating plateau landscape
- rolling plateau or residual-hill landscape

2.2.8 Mtsengo Hills and Plateaus - Parts of the area overlain by the paralic deposits of the upper Early Nyika Surface at about 150 to 300 m. + MSL
- flat to almost flat plateau landscape
- undulating plateau landscape
- rolling plateau or residual-hill landscape
- hilly plateau or residual-hill landscape

3.1 AREAS INITIALLY FORMED IN A DENUDATIONAL ENVIRONMENT

3.1.1 Buchuma Plain - Area overlain by the denudational deposits of the lower Tsavo Surface at about 250 to 1000 m. + MSL
- flat to almost flat plain landscape
- undulating plain landscape

3.1.2 Mtito Andei Plain - Area overlain by the denudational deposits of the upper Tsavo Surface at about 800 to 1000 m. + MSL
- undulating plain landscape

3.2 AREAS INITIALLY FORMED IN A VOLCANIC ENVIRONMENT

3.2.1 Kilanguni Plain - Areas overlain by the volcanic deposits of the Chyulu System at about 750 to 800 m. + MSL
- flat to almost flat plain landscape

3.3 AREAS INITIALLY FORMED IN A FLUVIAL ENVIRONMENT

3.3.1 (basin name) I Plain - Area overlain by the fluvial deposits of the modern flood-plains at or above about 0 m. + MSL
- flat to almost flat plain landscape

3.3.2 (basin name) II Plain - Area overlain by the fluvial deposits of the middle Late Nyika Surface at or above about 2 to 5 m. + MSL
- flat to almost flat terrace or plain landscape

3.3.3 (basin name) III Plain - Area overlain by the fluvial deposits of the upper Late Nyika Surface at or above 5 to 10 m. + MSL
- flat to almost flat terrace or plain landscape

3.3.4 (basin name) IV Plain - Area overlain by the fluvial deposits of the lower Middle Nyika Surface at or above about 10 to 25 m. + MSL
- flat to almost flat terrace or plain landscape
- undulating terrace or plain landscape
- rolling terrace or plain landscape

3.3.5 (basin name) V Plain - Area overlain by the fluvial deposits of the upper Middle Nyika Surface at or above about 25 to 40 m. + MSL
- flat to almost flat terrace or plain landscape
- undulating terrace or plain landscape
- rolling terrace or plain landscape

3.3.6 (basin name) VI Plain - Area overlain by the fluvial deposits of the lower Early Nyika Surface at or above 50 to 300 m. + MSL
- flat to almost flat terrace or plain landscape
- undulating terrace or plain landscape

3.3.7 (basin name) VII Plain - Area overlain by the fluvial deposits of the middle Early Nyika Surface at or above about 100 to 400 m. + MSL
- flat to almost flat terrace or plain landscape
- undulating terrace or plain landscape

3.3.8 (basin name) VIII Plain - Area overlain by the fluvial deposits of the upper Early Nyika Surface at or above 175 to 500 m. + MSL
- flat to almost flat terrace or plain landscape
- undulating terrace or plain landscape

3.4 AREAS INITIALLY FORMED IN A LACUSTRINE ENVIRONMENT

3.4.1 Kyulu Plain - Area overlain by undifferentiated lacustrine deposits of a former lake on the Late Tsavo Surface at about 700 m. + MSL
- flat to almost flat plain landscape

INTERIOR HILLS and PLATEAUS - Inland areas of faint to moderate relief elevated above the surroundings

4.1 AREAS INITIALLY FORMED IN A DENUDATIONAL ENVIRONMENT

4.1.1 Majimboni Hills and Plateaus - Parts of the area overlain by the denudational deposits of a Late Pre-Nyika Surface at about 250 to 350 m. + MSL
- steeply dissected plateau or residual-hill landscape

4.1.2 Shimba Hills and Plateaus - Parts of the area overlain by the denudational deposits of an Early Pre-Nyika Surface at about 350 to 900 m. + MSL
- flat to almost flat plateau landscape
- steeply dissected plateau or residual-hill landscape

4.1.3 Zagatisi Hills and Plateaus - Parts of the area overlain by the denudational deposits of a Late Pre-Tsavo Surface at about 700 m. + MSL
- undulating residual-hill landscape

4.1.4 Sagala Hills and Plateaus - Parts of the area overlain by the denudational deposits of a Middle Pre-Tsavo Surface at about 1000 to 2000 m. + MSL
- hilly residual-hill landscape
- steeply dissected residual-hill landscape

4.1.5 Taita Hills and Plateaus - Parts of the area overlain by the denudational deposits of an Early Pre-Tsavo Surface at about 1500 to 2500 m. + MSL
- steeply dissected residual-hill landscape

4.2 AREAS INITIALLY FORMED IN A VOLCANIC ENVIRONMENT

4.2.1 Chyulu Hills and Plateaus - Parts of the area overlain by the volcanic deposits of of the Chyulu System at about 750 to 1500 m. + MSL
- undulating lava-plateau landscape
- hilly ash- and cinder-cone landscape

4.2.2 Yatta Hills and Plateaus - Parts of the area overlain by the volcanic deposits of the Yatta System at about 400 to 950 m. + MSL
- flat to almost flat lava-plateau and -mesa landscape
- steeply dissected scarp landscape

MAP SYMBOLS

PHYSIOGRAPHICAL SYMBOLS
- landscape boundary
- dunes
- alluvial fan
- foot slope / piedmont plain
- residual hill
- ash and cinder cone
- major fault

TOPOGRAPHICAL SYMBOLS
- town/village
- road
- river
- frontier

STRATIGRAPHICAL SYMBOLS
- formation boundary
- member boundary
- B — code (see table of the subsurface stratigraphy)

TABLE OF THE SUBSURFACE STRATIGRAPHY (mainly after Cannon et al., 1981)

Period	Epoch/ Series	Formation	Member	Code	Predominant lithologies	Depositional environment
Quaternary	Pleisto-cene	(complex)		Q1	limestones/sands	marine
—	Pliocene	(complex)		Q2	marls/sands	—
Tertiary	Miocene	Marafa		Mf	sandstones/sands	fluvial (?)
	?	Baratume		B	sandstones/limestones	marine
Cretaceous	Lower	(complex)		I	alkaline intrusives	—
	Upper	Mtomkuu	upper	Mtu	shales	marine
			middle	Mtm		
			lower	Mtl		
Jurassic	Middle	Kambe	—	K	limestones	—
	Lower	Mazeras	upper	Mzu	sandstones/arkoses	deltaic
— ?			middle	Mzm		
			lower	Mzl	—	
Triassic		Mariakani	upper	Mku	sandstones	—
			middle	Mkm		
			lower	Mkl	—	
— ?		Maji ya Chumvi	upper	MyCu	sandstones/ shales/ siltstones	lacustrine
			middle	MyCm		
			lower	MyCl		
Permian		Taru	upper	Tu	sandstones/arkoses	fluvial
			middle	Tm		
Carboniferous (?)	Upper	—	lower	Tl	—	glacial (?)
?						
Cambrian (?)		Mozambique belt		A	gneisses	—
Precambrian				—	—	

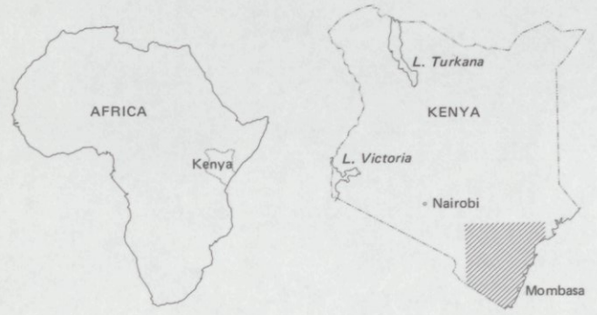
KEY TO RELIEF CLASSES

Class	Relief (m/km²)
faint	0 - 30
low	30 - 75
moderate	75 - 300

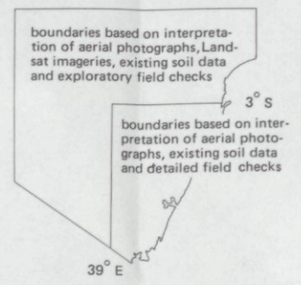
KEY TO SLOPE CLASSES

Class	Slope (%)
flat to almost flat	0 - 2
undulating	2 - 8
rolling	8 - 16
hilly	16 - 30
steeply dissected	more than 30

MAP LOCATION



MAP RELIABILITY



0 5 10 15 20 25 30 35 40 45 50 kilometers

SCALE 1:500,000

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Survey and map compilation (1978 to 1982) A.P. Oosterom
Cartography and lithography O.D. Jeronimus
DRUK: ECI - RIJSWIJK (Z.H.)