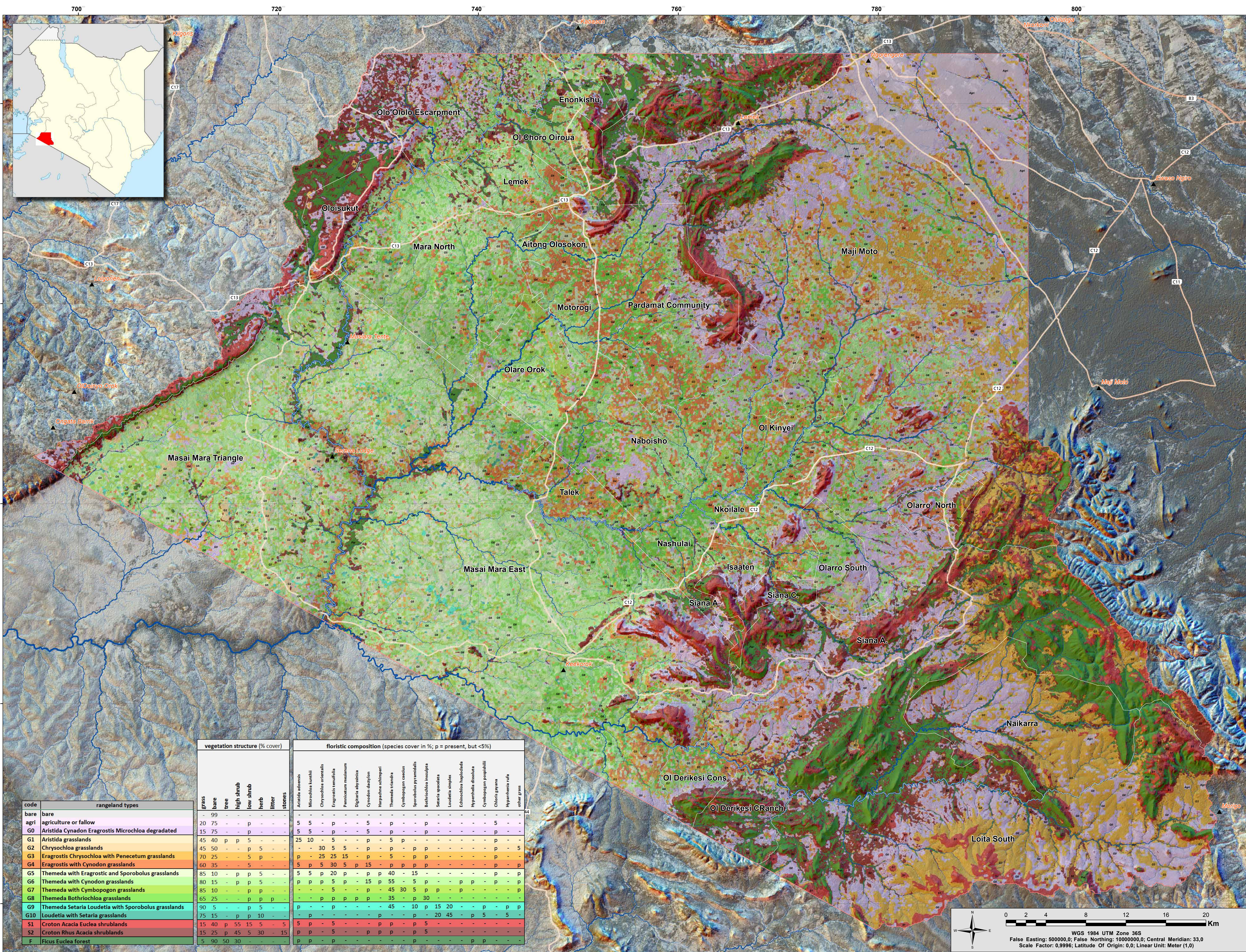


Vegetation map of the Middle Mara Basin, Kenya

with emphasis on rangeland grasses



vegetation structure (% cover)								floristic composition (species cover in %; p = present, but <5%)																		
grass	tree	high shrub	low shrub	herb	litter	stones		<i>Aristida adensis</i>	<i>Microchloa kunthii</i>	<i>Chrysochloa orientalis</i>	<i>Eragrostis tenuifolia</i>	<i>Pennisetum medianum</i>	<i>Cynodon dactylon</i>	<i>Harpachne schimperii</i>	<i>Themeda triandra</i>	<i>Cymbopogon ventriosus</i>	<i>Sporobolus pyramidalis</i>	<i>Bothriochloa insculpta</i>	<i>Setaria grandis</i>	<i>Loudetia simplex</i>	<i>Etilobolus lepidophyllus</i>	<i>Hyparrhenia distachya</i>	<i>Cymbopogon prorepens</i>	<i>Chloris gayana</i>	<i>Hyparrhenia rufa</i>	other grass
99								-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20								u	u	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15								5	5	p	-	-	p	-	-	p	-	p	-	-	-	-	-	p	-	-
45	40	p	5	-	-	-		25	10	-	5	-	p	-	5	p	-	-	-	-	-	-	-	-	-	-
45	50		p	5	-	-		-	-	30	5	5	-	p	-	5	p	p	-	-	-	-	-	p	-	5
70	35		5	p	-	-		5	5	p	5	30	5	p	-	5	p	p	-	-	-	-	-	-	-	-
85	10	p	p	5	-	-		5	5	p	20	p	-	p	-	40	-	15	-	-	-	-	-	p	-	p
80	15	p		5	-	-		-	-	p	5	p	-	15	5	5	5	p	-	p	p	-	p	p	-	p
85	10		p	p	-	-		-	-	5	p	-	-	-	-	45	30	p	-	p	p	-	-	p	-	p
60	25		p	p	p	-		p	-	p	p	p	-	-	-	30	-	-	-	-	-	-	-	-	-	-
90	5			5	-	-		p	-	p	-	-	-	-	-	45	-	10	-	p	15	20	-	p	-	p
75	15		p	10	-	-		-	-	-	-	-	-	p	-	-	-	-	-	20	45	-	p	5	-	5
15	40	p	55	15	5	5		5	p	-	5	-	-	p	-	p	5	5	-	-	-	-	-	-	-	-
15	25	p	45	5	30	15		p	p	-	p	-	p	p	-	p	p	p	-	-	-	-	-	-	-	-
5	90	50	30	-	-	-		p	p	p	p	p	p	p	p	p	p	p	-	-	-	-	p	p	p	-

Dominant rangeland grass species



Red oat grass - Olperesi
Themeda triandra
(high grazing value, a climax grass)



Cough grass - Ekaimurui
Cynodon dactylon
(pioneer, high grazing value, extreme valuable for grazing)



Creeping grass
Chrysochloa orientalis
(too short, low value, palatable when good growth)



Bristle or Arrow grass
Setaria sphacelata
(high grazing value, a climax grass)



Pinhole grass
Bothriochloa insculpta
(average value, low leafy sward for grazing)



Rhodes grass
Chloris gayana
(High grazing value, on well drained soils)



Common russet grass
Loudetia simplex
(low value climax grass)



Pincushin grass
Microchloa kunthii
(low grazing value, of no importance)



Rabbit tail grass
Pennisetum medianum
(low value, only when young, in later stages starchy and unpalatable)



Three awn grass
Aristida adensis
(low grazing value, only when young, unpalatable at later stages)



Red bunny tails grass
Eragrostis tenuifolia
(low grazing value, due to hard wiry leaves)



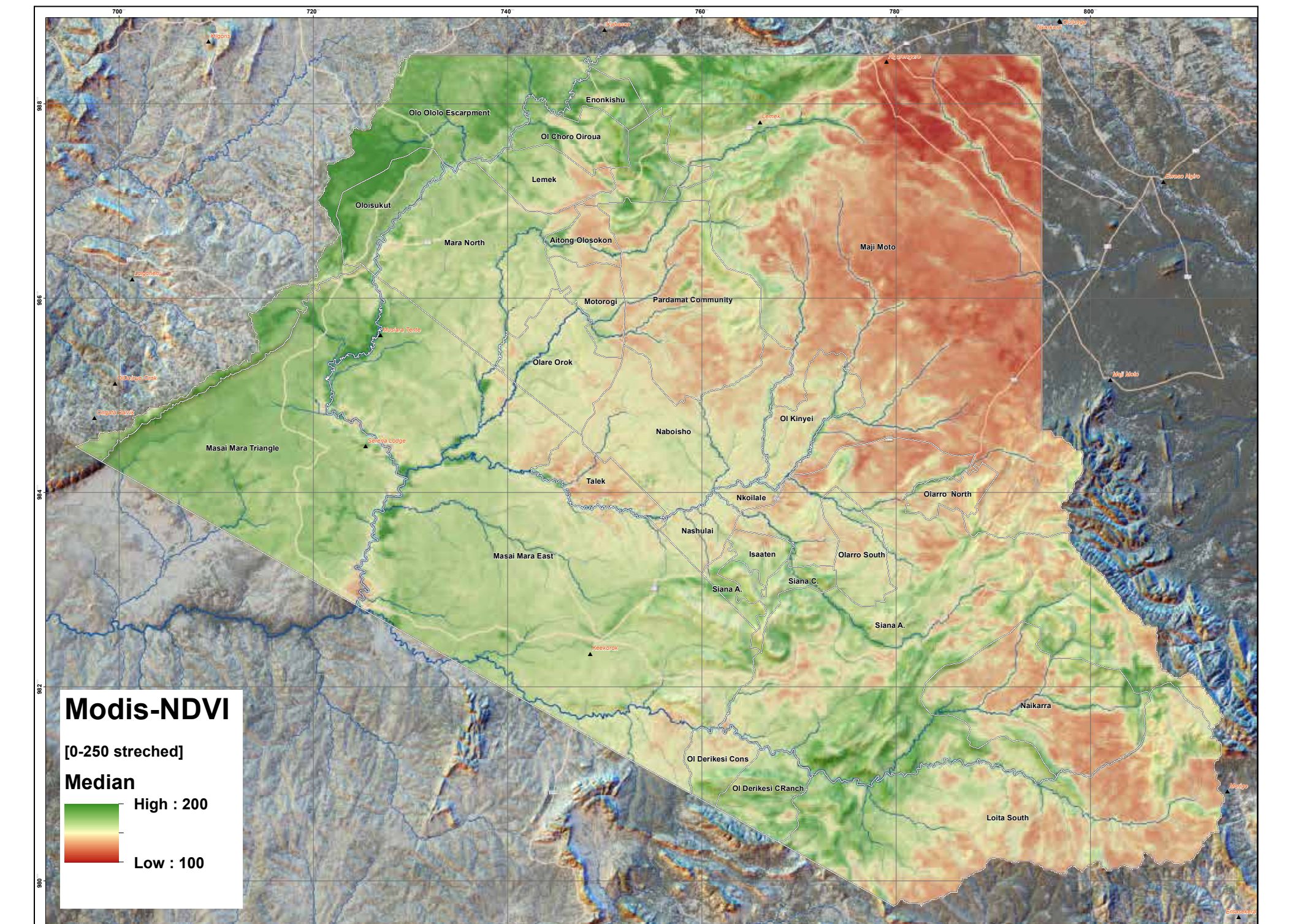
Cattail dropseed - Olpikigoi
Sporobolus pyramidalis
(unpalatable, a weed in good pasture)

Synoptic table of the floristic classification

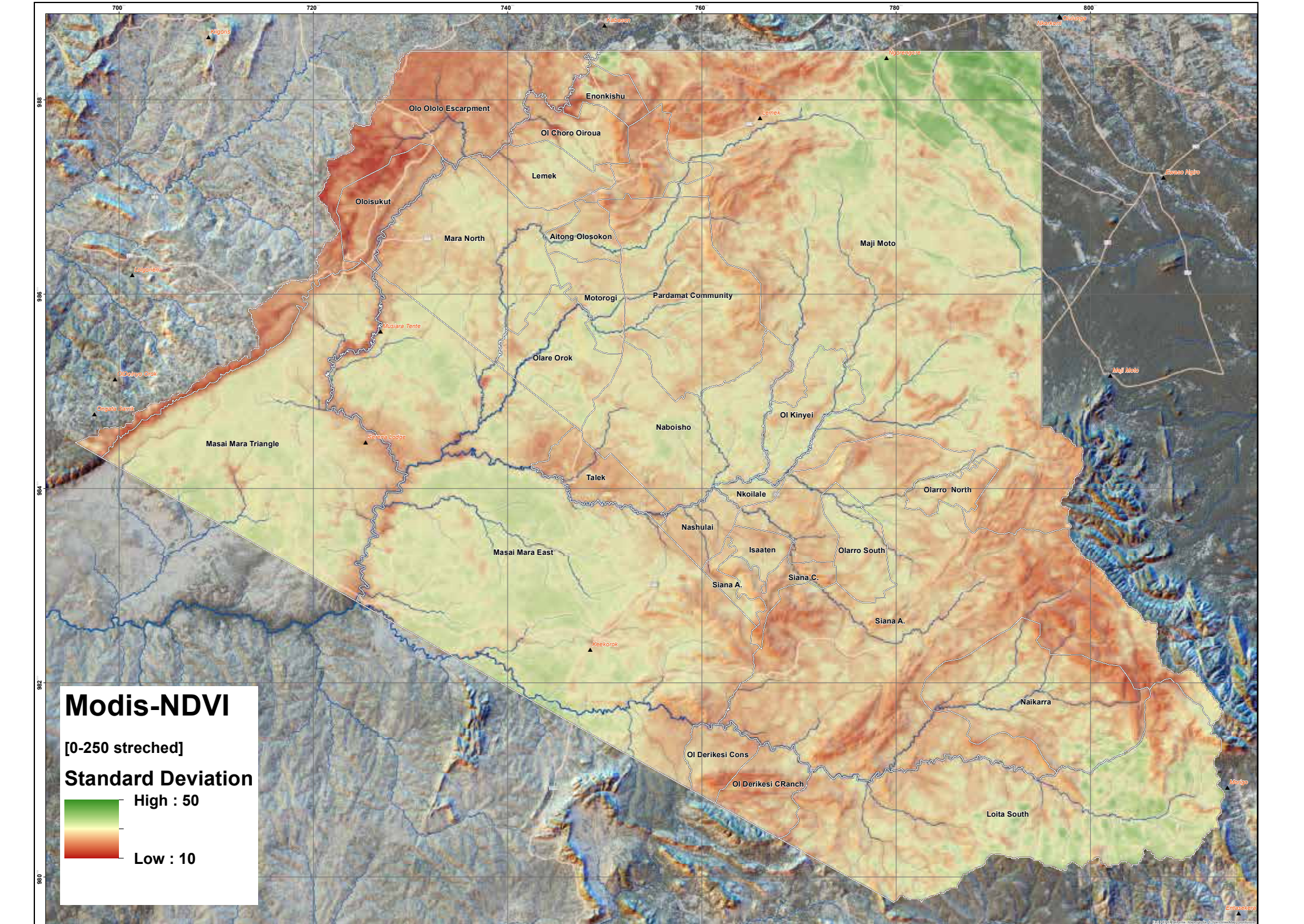
		rangelands types									
code	G0	G1	G2	G3	G4	G5	G6	G7	G8	G9	G10
name	Aristida Cynodon grassland (typical degraded)	Aristida Cynodon grassland (typical degraded)	Chrysochloa Eragrostis grassland (typical degraded)	Chrysochloa Eragrostis grassland (typical degraded)	Eragrostis Cynodon grassland (typical degraded)	Themeda Cynodon grassland (typical degraded)	Themeda Cymbopogon grassland (typical degraded)	Themeda Bothriochloa grassland (typical degraded)	Themeda Setaria grassland (typical degraded)	Loudetia Setaria grassland (typical degraded)	
Number of field samples	5	6	7	10	88	36	15	28	15	10	
grass cover (%)	(5) 15 (20)	(35) 45 (65)	(35) 45 (60)	(25) 70 (95)	(25) 60 (85)	(50) 85 (100)	(35) 80 (100)	(70) 85 (100)	(40) 65 (80)	(60) 90 (100)	(45) 75 (100)
prevailing soil texture	lc c	lc c	lc c	lc c	lc c	lc c	lc c	c	lc c	lc c	sl sc
prevailing human impact	+++	++	+++	+++	++	++	++	-	-	+	-
characteristic species											
Aristida adensis											
Microchloa kunthii											
Chrysochloa orientalis											
Eragrostis tenuifolia											
Pennisetum medianum											
Digitaria abyssinica											
Cynodon dactylon											
Harpachne schimperii											
Themeda triandra											
Cymbopogon caesus											
Sporobolus pyramidalis											
Bothriochloa insculpta											
Setaria sphacelata											
Loudetia simplex											
Chloris gayana											
abundance symbols											human impact
dominant (cover relative to other species)											-
high cover (on average >20%) or co-dominant											+
high cover (on average >20%) or co-dominant											++
high cover (on average >20%)											+++
low cover (on average <20%)											-
low cover (on average between 5 - 20%)											+
low cover (on average between 0 - 5%)											++
soil texture											human impact
s sandy											-
sc sandy clay loam											+
l loam											++
cl loamy clay											+++
c clay											+++

Products generated using NDVI data of MODIS-Terra satellite imagery

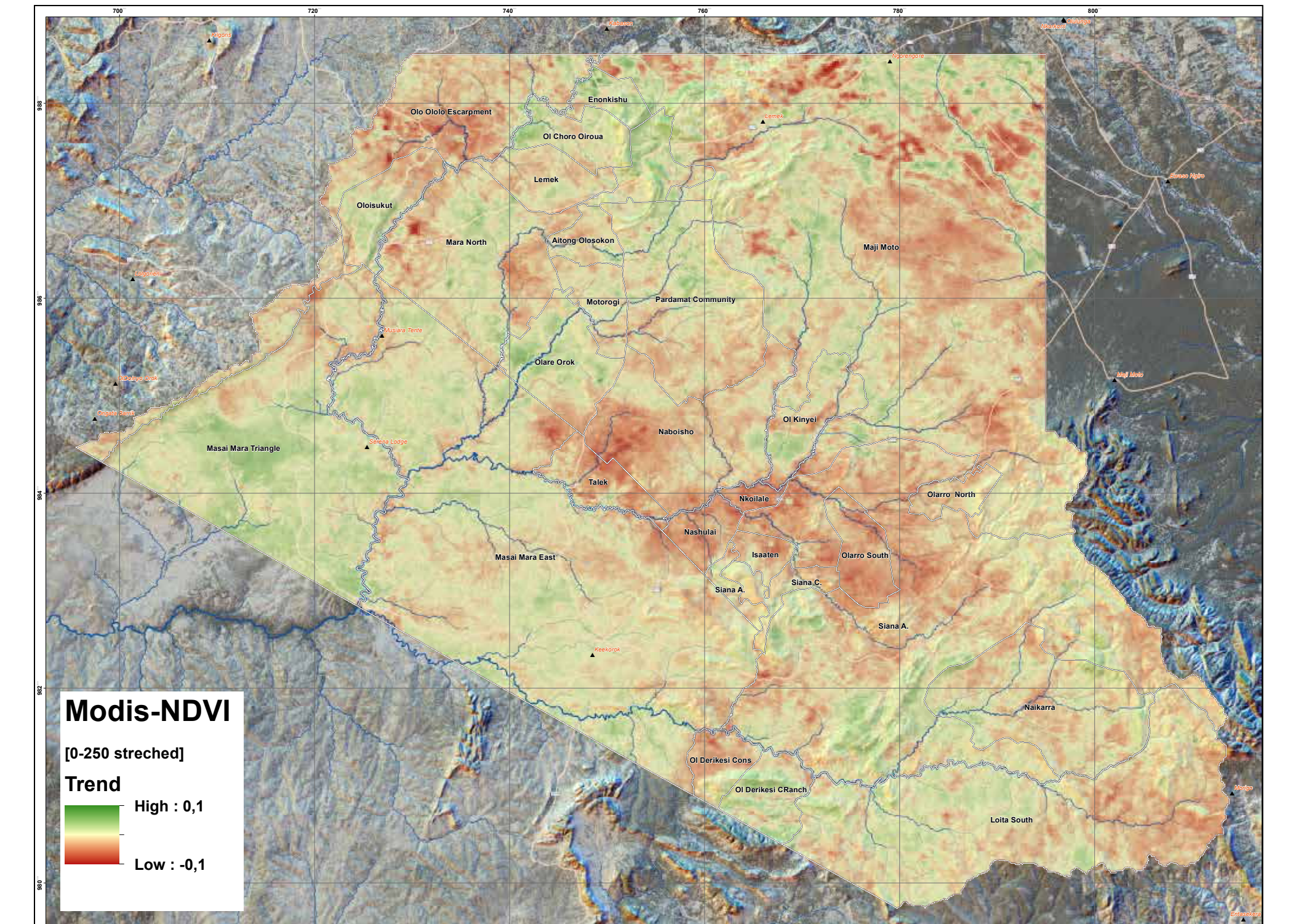
- NDVI is an Index representing the greenness of the land cover (vegetation)
- The NDVI data were rescaled from 0 to 255 (DN-Values)
- Spatial resolution: 250m pixels
- Temporal resolution: 16 daily, i.e. 23 images per year
- Number of years covered: 14 (Jan-2000 to Dec-2013)



The long-term Median of all NDVI measurements by pixel
Indicates the spatial differences in overall greenness of the vegetation: Denser, more perennial vegetation presents a higher median value. Lower values represent poorer/poorly vegetated areas.



The long-term Standard Deviation of all NDVI measurements by pixel
Indicates the difference in greenness of the vegetation during seasons and years: A high SD-value indicates big fluctuations in greenness, e.g. agriculture fields are or bare or cropped. A low value indicates little or no fluctuations in greenness, e.g. evergreen forest or year-around bare soils.



The long-term Trend of sequential NDVI measurements by pixel
Indicates the gradual (16-day steps) overall change in greenness of the vegetation during the 14 years studied: a high positive value (0.1) indicates a positive change (increase) in greenness, e.g. improving/recovering grasslands or bush-encroachment into grasslands, a negative value indicates a decrease (degradation) in greenness e.g., overgrazed/degrading grasslands or an abrupt change from grasslands to agriculture.

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Version 20 -11-2017

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