

Section A: Reference Maps

A.1 Geographical Overview of Kenya

Kenya is located on the east coast of Africa, approximately between latitudes 4° North and 4° South and longitudes 34° East and 41° East, with the equator running almost straight through the middle of the country as shown in the location map of Africa (Map A.1). Kenya borders Somalia to the east, Ethiopia to the north, South Sudan to the north west, Uganda to the west, Tanzania to the south and the Indian Ocean to the south east.

The territorial area of Kenya is 591,970 sq. km divided into land area and water area. The major part of the inland water surface area is covered by a portion of Lakes Victoria and Turkana. Most of the land area is classified as Arid and Semi-Arid Land (ASAL). The remaining area, about one-eighth of the country, is classified as non-arid and arable land which sustains a largely agricultural Kenyan economy and human population. The Kenyan coastline is approximately 536 kilometres long facing the Indian Ocean, it serves as a means of international maritime contact.

Map A 1 Locational Map of Kenya



A.2 Topography

Kenya is characterized by a tremendous topographical diversity, ranging from glaciated mountains to a true desert landscape. The elevation varies greatly from sea level at the Indian Ocean to 5,199 m at the Batian Peak of Mount Kenya. The Great Rift Valley is a major feature running from Lake Turkana in the North to Lake Natron on the Kenyan – Tanzanian border in the South. Map A.2 shows the topography and major physical features within the country which include:

The Great Rift Valley

This is part of the East African Rift System, which cuts through the continent from Ethiopia to Mozambique. This massive natural trench is bordered by steep escarpments. The valley floor is home to active shield volcanoes and a series of lakes. It exists on the divergent boundary between the Nubian and Somali tectonic plates.

Mount Kenya

Mount Kenya is the second-highest peak in Africa, after Mount Kilimanjaro. It has three peaks i.e. Batian (5,199m), Nelion (5,188m) and Lenana (4,985m).

Chyulu Hills

The mountainous range of Chyulu Hills form an impressive 100 km long volcanic field in the South Eastern part of Kenya. The Chyulu Hills National Park consists of rolling hills, lush vegetation and is also a wildlife paradise where one can spot buffaloes, elephants, eland, bushbuck and a host of reptiles.

Lake Nakuru National Park

It is home to thousands of flamingos. This national park has huge ecological diversity. The landscape has several habitats ranging from the lake itself to neighbouring escarpments and picture-perfect ridges.

Aberdare National Park

The sweeping views of the 160 km long Aberdare Range are spectacular. Peaks soar up to 3,500 m above sea level and valleys fall and rise; between them, Karuru Falls, the longest waterfall in the country at 273 m is found within the Aberdares. The park is full of wildlife, including elephants, buffalos, lions, elands, sykes and colobus monkeys.

Lake Victoria

It is the largest lake in Africa and chief reservoir of the Nile, lying mainly in Tanzania and Uganda but bordering on Kenya. Its area is 69,484 sq. km. It is the second largest freshwater lake in the world, exceeded in size only by Lake Superior in North America. It is an irregular quadrilateral in shape, and its shores, save on the west, are deeply indented. Its greatest length from north to south is 337 kms and its greatest breadth is 240 kms. Its coastline exceeds 3,220 kms.

Maasai Mara National Reserve

The Maasai Mara National Reserve is on the floor of the Great Rift Valley in Narok County. An expansive protected area covering 1,510 sq. km, the reserve is named in honor of the Maasai people, who are its ancestral inhabitants. It is home to lions, leopards, cheetahs, wildebeests and elephants, which make it one of the most important wildlife conservation areas on the continent. The Maasai Mara is home to one of the seven wonders of the world, the annual wildebeest migration.

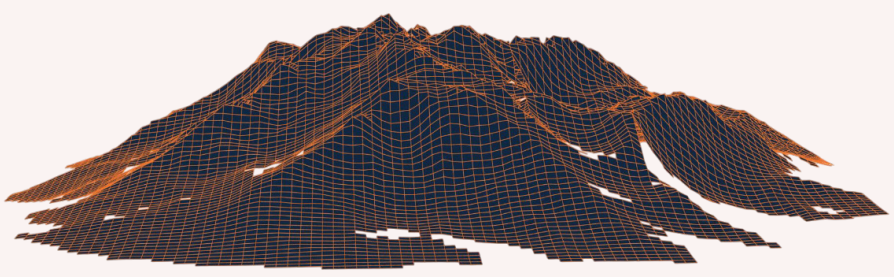
Lamu

Lamu is a small coastal town on the shores of the Indian Ocean. It is the oldest continuously inhabited town in Kenya, dating back to the 1370s. A UNESCO World Heritage site, Lamu is an island where cars are not allowed. The major mode of transport through the distinctly narrow alleyways is by donkeys. The landscape is all sea and mangrove and the nearby Manda Bay is a haven for snorkelling due to its rich corals.

Hell's Gate National Park

Named after the intense geothermal activity in the area, Hell's Gate National Park sits in Naivasha, a 90-minute drive from Nairobi. The landscape is rugged with stark rock towers, water-gouged gorges and towering cliffs. Activities in the area include mountain biking and rock climbing.

The first geothermal power station in Africa, Olkaria, is also within the park.



3,500m

Peak heights of the 160 km Aberdare range above sea level. Karuru Falls, the longest waterfall in the country at 273 m is found within the Aberdares. The park is full of wildlife, including elephants, buffalos, lions, elands, sykes and colobus monkeys

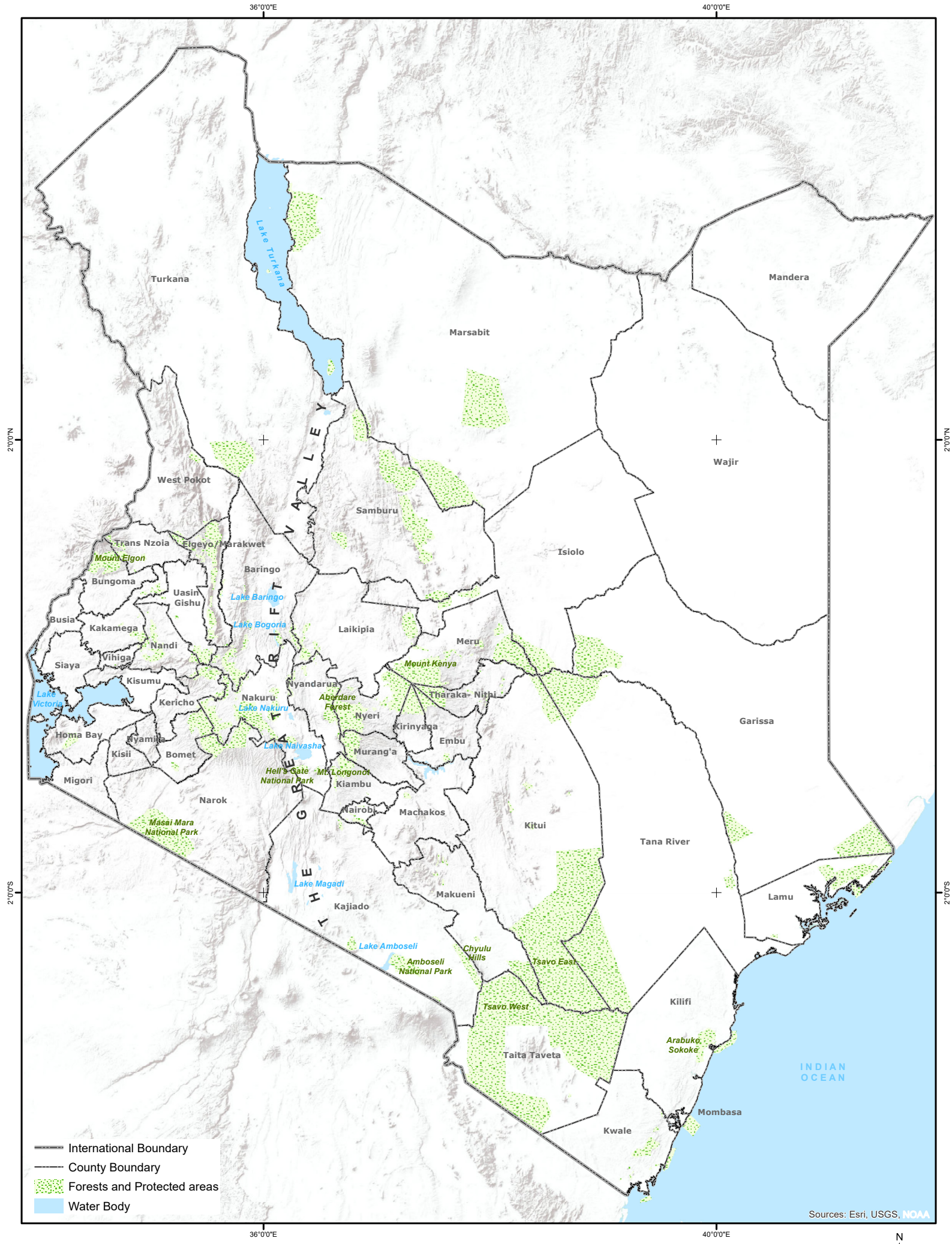




69,484km

Area of Lake victoria, the largest lake in Africa and chief reservoir of the Nile, lying mainly in Tanzania and Uganda but bordering Kenya

Map A2 Topography and major physical features in Kenya



Source: 2019 Kenya Population and Housing Census
Author : Kenya National Bureau of Statistics

1:3,300,000

0 40 80 160 Km

Coordinate Reference System: GCS WGS 1984
Datum: WGS 1984
Units: Decimal Degrees

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This map is Not an authority on Boundaries

A.3 Drainage System

Kenya's water resources are classified into surface water sources and ground water sources represented by lakes, rivers, reservoirs, swamps, springs, dams, water pans and groundwater. The Kenya catchment covers an approximate area of 575,451 km2, which includes Ewaso Nyiro North Basin (210,226 km2), Rift Valley Basin (130,452 km2), Tana River Basin (126,026 km2), Athi River Basin (58,639 km2) and Lake Victoria Basin (50,108 km2) (NWMP, 2013). Map A.3 shows the distribution of the catchment areas and wetlands within the country.

Ewaso Nyiro North Basin

Ewaso Nyiro North basin is located in the north-eastern part of the country. It borders Ethiopia to the north, Somalia to the east, Rift Valley catchment area to the west and Tana River catchment area to the south. The basin covers an approximate area of 210,226 km2 or 37% of the country's total land area. This is the largest drainage system in the country. Most of its rivers originate from the northern slopes of Mount Kenya and the Aberdare Ranges and drain into the Ewaso Ng'iro River and the Lorian Swamp in Isiolo County.

Rift Valley Basin

The Rift Valley basin is located in the central-western part of the country. This is an area of internal drainage discharging into various lakes, i.e. Lake Natron in the south and Lake Turkana in the north. It borders South Sudan and Ethiopia to the north, Tanzania to the south and Uganda to the west, several sub-basins within the basin drain into a number of smaller lakes such as Baringo, Bogoria, Nakuru, Naivasha, Elementaita, and Magadi. It covers an approximate area of 130,452 km2 or 23% of the country's total land area. Its main water sources are the Mau complex and the western slopes of the Aberdare Ranges. Some of the major rivers within the basin are Southern Ewaso Ng'iro, Kerio, and Turkwel.

Tana River Basin

Tana River Basin is located in the south-eastern part of the country. It borders Ewaso Ng'iro North basin to the north, Somalia and Indian Ocean to the east, Athi River Basin to the south and south west and the Rift Valley basin to the west. The Mt. Kenya and the Aberdare Ranges lie within this basin. The Basin covers an approximate area of 126,026 km2 or 22% of the country's total area. Kenya's longest and largest river, the Tana River lies within this basin and it is fed by tributaries coming from the southern and eastern slopes of Mount Kenya, the eastern slopes of the Aberdares, and parts of the Nyambene Hills. The river discharges into the Indian Ocean through the Tana delta in Tana River County at Kipini. Over 65% of Kenya's hydroelectric power is produced along the Tana River, by a series of power stations including Kindaruma, Kamburu, Gitaru, Masinga, and Kiambere.

Athi River Basin

It is located in the southern part of the country and borders the Tana River Basin to the north, the Indian Ocean to the east, Tanzania to the south and the Rift Valley Basin to the west. The basin covers an approximate area of 58,639 km2 or 10% of the country's total land area. The Aberdare Ranges and the Athi River, Kenya's second-longest and second-largest river, lie in this basin. Tributaries coming from the southern end of the Aberdares feed into the Athi River (also known as the Sabaki or Galana River in the coastal region, which finally discharges into the Indian Ocean).

Lake Victoria Basin

Lake Victoria Basin is located in the western part of the country. It is surrounded by Mt. Elgon, Cherengani Hills and the Mau Forest complex. The basin borders Uganda to the west and faces Lake Victoria in the south-west. It covers an approximate area of 50,108 km2 or 9% of the country's total land area. The main rivers within the basin include Nzoia, Sio, Yala, Nyando, Sondu Miriu and the Mara. The major rivers in the country include:

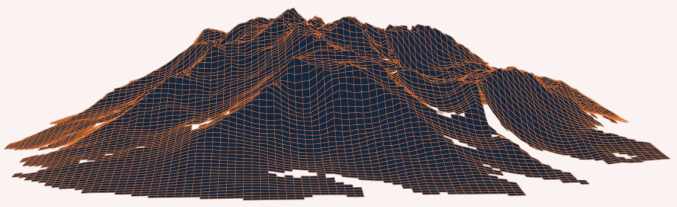
River Tana
The River Tana is the longest river in Kenya - stretching over 1,000 km from the Aberdare Ranges to the Indian Ocean. The River's Delta supports a range of habitats as it winds its way to the ocean such as mangroves, palm savannah, grasslands, forest patches and sand dunes. The river is significant for fishing, domestic water source and developments in the modern era which include irrigation, hydro-electric power tapping, and small-scale navigation.

Ewaso Ng'iro
From its source waters in Mount Kenya, the Ewaso Ng'iro River stretches for 700 km and eventually joins the Jubba River in Somalia. The banks of the river support a broad range of wildlife including elephants, buffalos, rhinos, cheetahs, leopards and zebras. The river has however been affected by degradation of its catchment areas. Recent drought periods have taken their toll on the amount of water flowing through the river.

Athi-Galana-Sabaki
The Athi-Galana-Sabaki River is one of the most significant rivers in Kenya at a length of 390 km. The River begins as Athi River at the mouth and drains into the Indian Ocean as Galana River, otherwise known as Sabaki River. The river has been significant throughout history for local communities through fishing.

Mara
The Mara River flows for 394 km from the Mau Escarpment and drains into Lake Victoria, stretching through both Kenya and Tanzania. The river supports the local community, predominantly Maasai, economically through small-scale agriculture and livestock herding. The river flows through the Maasai Mara Game Reserve in Kenya providing an ecosystem for wildlife in the Maasai Mara.

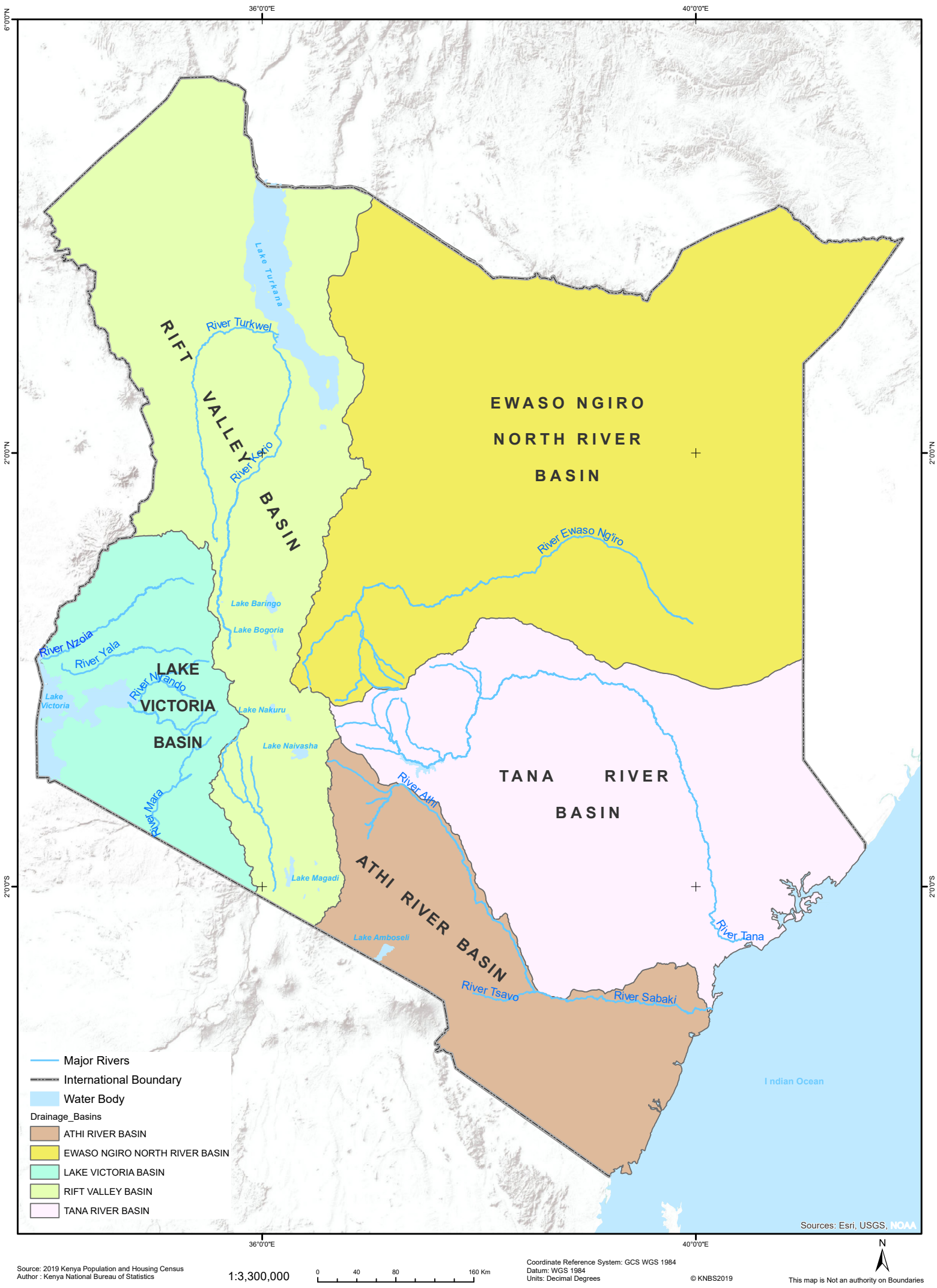
River Nzoia
Rising from the Cherangany Hills, the Nzoia River flows for 257 km into Lake Victoria near the town of Port Victoria. With an annual discharge of about 3,721 million cubic metres annually, Nzoia River is the second largest river in the country by discharge. The river provides water for irrigation thus contributing to the Western Region's good agricultural production.



700km

Length of the Ewaso Ng'iro river from it's source waters in Mt. Kenya to the Jubba River in Somalia

Map A3 Distribution of drainage basins and wetlands within the country

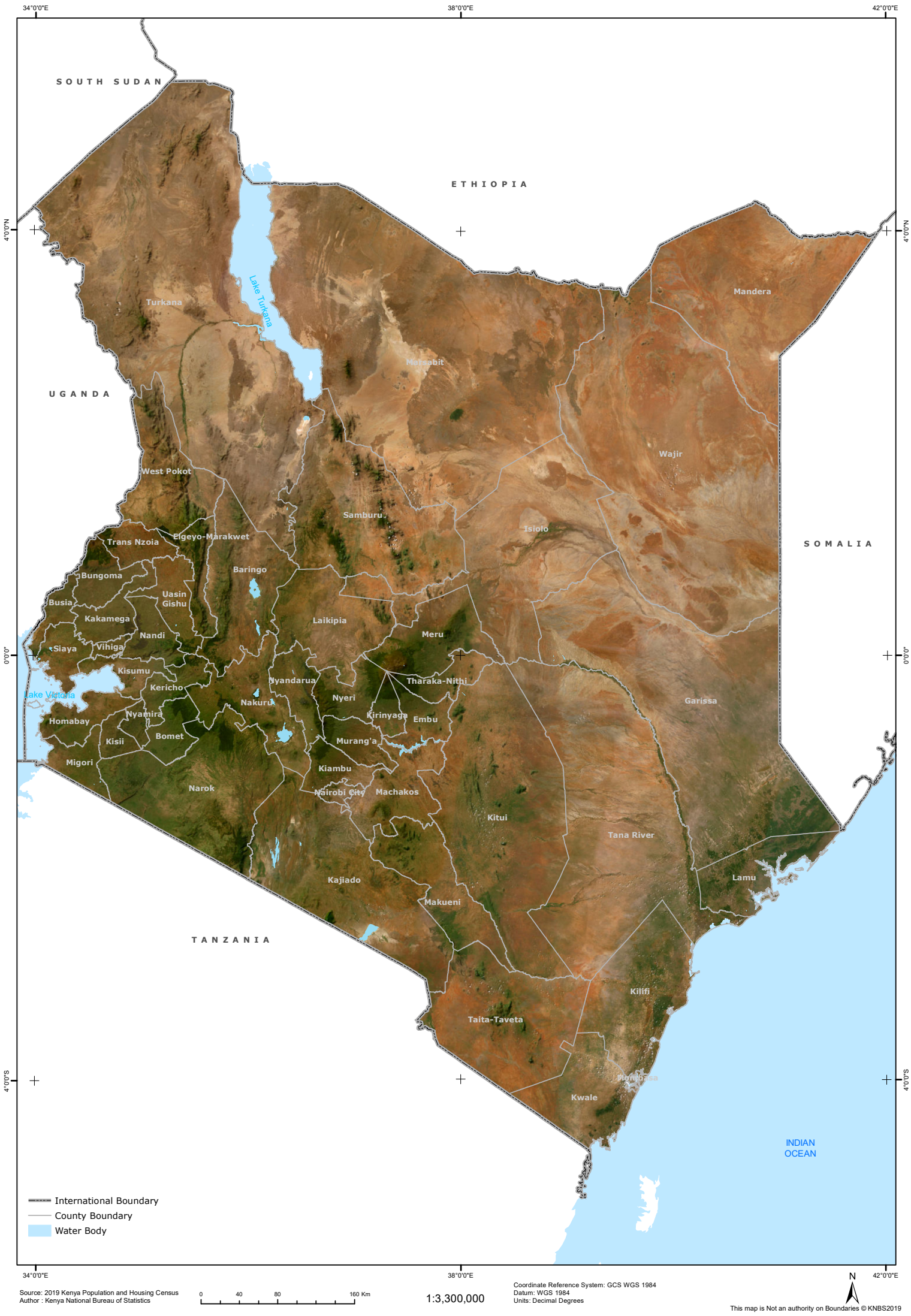




A.4 Kenya from space

Kenya as viewed from space shows a variety of land cover. Map A.4 displays a natural colour satellite imagery of Kenya and the surrounding areas. The imagery shows some basic categories of land cover types. The darker green colour depicts the ever-green forests around Mt Kenya, Aberdare Ranges (the central parts of the country), Mau Forest, Cherangany Hills, and Nandi Escarpment (in the Rift Valley), Kakamega Forest and Mt Elgon Forest to the west. These are areas of high potential and population density. The riverine vegetation can also be seen along River Tana, Galana and Athi to the East and River Turkwel to the North of the country. Brownish colour shows semi-arid areas and are mainly covered by shrubs and savannah grassland. Light blue colour indicates open waters, i.e., Lakes Turkana and Victoria and the Indian Ocean. Along the Rift Valley, are several lakes starting from Lake Turkana in the North and ending with Lake Natron to the south of the Kenya –Tanzania border. Map A.4 also shows the 47 counties and their respective headquarters.

Map A4 Kenya from space



A.5 Relief and Transportation Network

Kenya emerged as a viable state due to the transportation infrastructure developed both before and after independence. Initially, towns in Kenya were linked via the colonial era railway line running from Mombasa to the western part of the country. Over the years, roads have become a major link between urban and rural areas.

The heavily utilized trunk and primary roads were upgraded from dirt to bitumen and gravel after independence. As this network was expanded, freight traffic within Kenya as well as to Tanzania, Uganda, Sudan (including the current South Sudan), and Ethiopia increased rapidly necessitating the need for improvement of these road networks.

Railways, the second most important mode of transport after roads, are operated by Kenya Railways. The Standard Gauge Railway (SGR) connecting Mombasa city with Nairobi, the country's capital and largest city, is one of the country's most significant infrastructure projects. It runs parallel to the metre gauge railway built by the British during colonial rule. From Nairobi, the SGR extended to Suswa in the Rift Valley. The metre gauge railway line runs northwest from Mombasa through Nairobi, Nakuru, and Eldoret to the Ugandan border. Major branch lines run from Nakuru to Kisumu on Lake Victoria and from Nairobi to Nanyuki near Mount Kenya, and another goes into Tanzania through the Taveta border point.

Privatization of Kenya Railways began early in the 21st century, and efforts were undertaken to make the railways more competitive in the freight market. Apart from the Standard Gauge Railway, passenger service constitutes a very small share of the metre gauge railway business.

The strategic location of Kenya on the western shores of the Indian Ocean, with easy connections to different parts of Africa, the Middle East, and Asia, has greatly enhanced the role of Mombasa, the country's principal port, which handles the bulk of the import and export traffic not only of Kenya, but also of Burundi, Rwanda, Uganda and the eastern part of the Democratic Republic of the Congo.

The ports of Lamu and Malindi serve mainly the coastal trade and fisheries while the port of Kisumu serves mainly the East African trade.

International airports exist in Nairobi, Mombasa, Kisumu and Eldoret. There are domestic airports at Lodwar, Magadi, Marsabit, Lokichogio and Malindi and many smaller airfields throughout the country. Map A.5 shows the relief and transportation network within the country.

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Map A5 Relief and Transportation Network



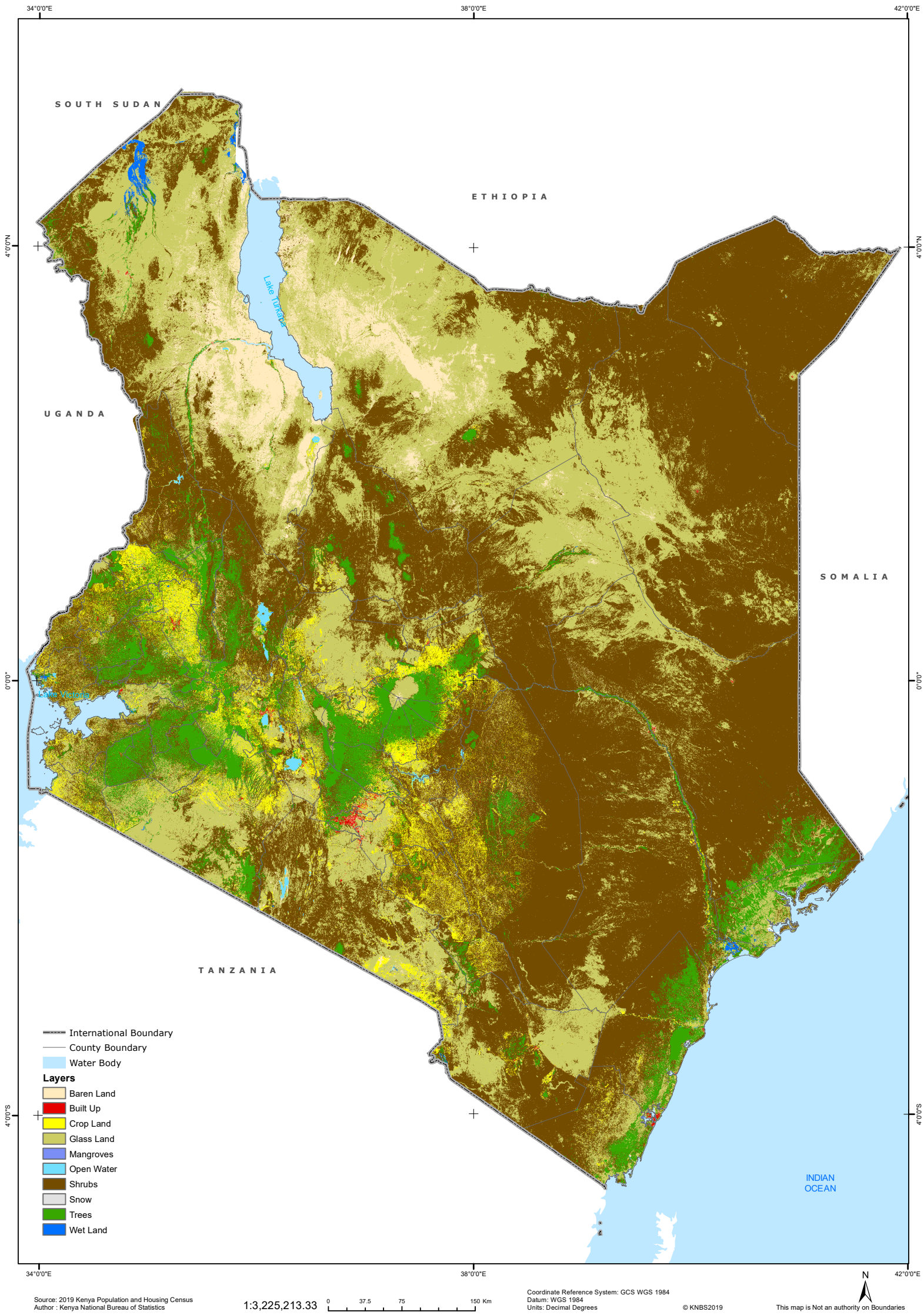
A.6 Kenya Land Cover

Kenya covers a total area of 591,970 km2 and has diverse geographic landscapes, with relief, climatic and ecological extremes affected by altitudes, which vary from sea level at the coast to over 5,199 m above sea level on Mt. Kenya, the highest mountain in the country. The terrain ranges from coastal reefs to inland plains and plateaus with dominant features such as the Great Rift Valley and major highlands which constitute the water towers of the country. Kenya is endowed with various forms of natural resources which heavily support people's livelihoods and contribute to the country's Gross Domestic Product (GDP). Map A.6 shows the diversity of the land coverage in Kenya.

591,970km²

Kenya's total area , which has diverse geographic landscapes, with relief, climatic and ecological extremes affected by altitudes, which vary from sea level at the coast to over 5199 m above sea level. on Mt. Kenya, the highest mountain in the country

Map A6 Kenya Land Cover



Source: 2019 Kenya Population and Housing Census
Author : Kenya National Bureau of Statistics

1:3,225,213.33

0 37.5 75 150 Km

Coordinate Reference System: GCS WGS 1984
Datum: WGS 1984
Units: Decimal Degrees

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This map is Not an authority on Boundaries

A.7 Kenya Counties

The census geographic frame is an exhaustive inventory of all the administrative units within the country. Data is collected exhaustively across all the administrative units. All censuses prior to the enactment of the 2010 constitution were carried out administratively in five hierarchical levels i.e., Province, District, Division, Location and Sub-location. With the enactment of the 2010 Constitution, administrative divisions in Kenya changed to the central government and a devolved county government for each county. Kenya is divided into forty-seven (47) counties which are further subdivided into sub-counties. Each county is headed by a directly elected governor. Map A.7 shows the counties of Kenya while Table 1 shows the County codes and their respective names.

The most populated counties were Nairobi, Kiambu, Nakuru, Kakamega and Bungoma with a population of about 4.34 m, 2.4 m, 2.14 m, 1.86 m and 1.66 m respectively while the least populated counties were Lamu, Isiolo, Samburu, Tana River and Taita/Taveta with a population of about 0.14 m, 0.268 m, 0.31 m, 0.315 and 0.34 m respectively.

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Table 1: County Codes and Names

County Code	County Name	County Code	County Name
01	Mombasa	14	Embu
02	Kwale	15	Kitui
03	Kilifi	16	Machakos
04	Tana River	17	Makueni
05	Lamu	18	Nyandarua
06	Taita/Taveta	19	Nyeri
07	Garissa	20	Kirinyaga
08	Wajir	21	Murang'a
09	Mandera	22	Kiambu
10	Marsabit	23	Turkana
11	Isiolo	24	West Pokot
12	Meru	25	Samburu
13	Thara-ka-Nithi	26	Trans Nzoia

County Code	County Name	County Code	County Name
27	Uasin Gishu	39	Bungoma
28	Elgeyo/ Marakwet	40	Busia
29	Nandi	41	Siaya
30	Baringo	42	Kisumu
31	Laikipia	43	Homa Bay
32	Nakuru	44	Migori
33	Narok	45	Kisii
34	Kajiado	46	Nyamira
35	Kericho	47	Nairobi City
36	Bomet		
37	Kakamega		
38	Vihiga		

Map A7 Kenya Counties

