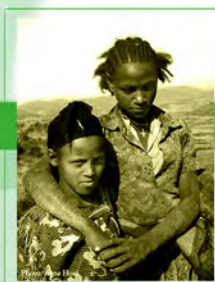


SOCIAL ATLAS

EASTERN NILE BASIN COUNTRIES



Eastern Nile Technical Regional Office
ENTRO



SOCIAL ATLAS

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INTRODUCTION

The Nile Basin Initiative (NBI), a partnership of the riparian states of the Nile, seeks to develop the Nile River in a cooperative manner, share substantial socio-economic benefits, and promote regional peace and security. Towards this end, the riparian states agreed on a shared vision: “to achieve sustainable socioeconomic development through the equitable utilization of, and benefit from, the common Nile Basin water resources,” and a Strategic Action Program to translate this vision into concrete activities and projects.

The Eastern Nile (EN) countries, comprising of Egypt, Ethiopia and Sudan, are pursuing cooperative development at the sub-basin level through the investment-oriented Eastern Nile Subsidiary Action Program (ENSAP). ENSAP seeks to realize the NBI Shared Vision for the Eastern Nile region, and is aimed at contributing to the reduction of poverty, economic growth, and the reversal of environmental degradation in the region. To advance the implementation of ENSAP, the EN countries established an institution, The Eastern Nile Technical Regional Office (ENTRO).

It is widely agreed that there is an important and strong linkage between the use and condition of the resources of the sub-basin and socio economic development of the people residing within the basin. Social issues such as poverty, education, economic growth all affect (in one way or another) the way people exploit and manage the resources of the basin. The conditions of the basin in turn have implications on how successful people are in raising their standard of living and bring about related social improvements.

The social conditions of people living within the sub basin are bound together by the river they share. Therefore a sub-basin wide perspective of the social issues is useful for gaining greater understanding of socioeconomic conditions within each country of the basin. A perspective on social issues that encompasses the entire sub-basin is also important for the planning, development and management of the river and its resources, because social development is often the desired end result of such activities.

Poverty in the Eastern Nile Basin Countries in general and in Ethiopia and Sudan in particular is broad, deep and structural. Malnutrition and undernourishment are immense. Ethiopia and Sudan have extremely low GDP per capita. The proportion of people living in absolute poverty (expressed in terms of both calorie intake and income per capita) in the region is among the highest in the world.

Social indicators also reflect poverty to be widespread in the region. Life expectancy at birth is among the lowest in the world. Prevalence of infant and maternal mortality in the region is very high.

The literacy rate in the region is very low. Primary and secondary school enrollment ratios are far below the averages for developing countries, thus a very low level of human capital formation. A significantly higher proportion of the population in the region does not have access to safe water sources and to improved sanitation. While the countries are progres-

sively narrowing the gender gap in primary education, striking disparities between males and females still persist.

Population growth rate is also among the highest in the developing countries and is likely to pose an enormous threat to the development efforts in the region, and more especially on the reduction of poverty, leading to high dependency ratios, and pressures on natural resources and strains on the education and health systems.

This Social Atlas was thus conceived to increase our understanding of the region by presenting geographically disaggregated data of major social issues across the entire basin. It is expected that the Atlas will facilitate cross-border planning on a regional scale, especially in the context of the development plans. The Atlas forms part of ENTRO's effort to provide base line information of the sub-basin and will also serve as an outreach material.

The Atlas provides different maps depicting major social indicators in the Eastern Nile Basin disaggregated by major political divisions in the countries. These include demographic and socioeconomic issues such as population size and growth rates; unemployment; living standards; health; education; and related indicators.

The Social Atlas is by no means comprehensive and detail enough. Key social indicators such as household sizes, fertility rates, income per capita, sources of income, etc are not included. This is partly because of lack of comparable region-level data across the countries and partly due to the use of inconsistent definitions and methodologies in presenting social data by different sources. In the case of the former, country-level data were utilized to provide indication on the magnitude of the problem.

ENTRO has a plan to improve the coverage and level of detail in the near future. To help us improve on the Atlas, readers are kindly requested to address their comments and suggestions to ENTRO. Your comments and suggestions will be invaluable inputs in improving the Atlas in subsequent editions.



ACKNOWLEDGMENT

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COUNTRY OVERVIEW:

EGYPT



Country Overview: Egypt

Egypt, officially the Arab Republic of Egypt, is found in northeastern Africa and southwestern Asia. Most of the country lies in Africa, but the easternmost portion of Egypt, the Sinai Peninsula, is usually considered part of Asia; it forms the only land bridge between the two continents.

Egypt is bounded on the north by the Mediterranean Sea; on the east by the Gaza Strip, Israel, and the Red Sea; on the south by Sudan; and on the west by Libya. The country has a maximum length from north to south of 1,105 km and a maximum width, near the southern border, of 1,129 km. It has a total area of 997,739 sq km.



Most of Egypt's terrain is desert, divided into two unequal parts by the Nile River. Less than one-tenth of the land area of Egypt is settled or under cultivation. This territory consists of the valley and delta of the Nile, a number of desert oases, and land along the Suez Canal, which connects the Mediterranean with the Gulf of Suez, an arm of the Red Sea.

More than 90 percent of the country consists of desert areas, including the Libyan Desert (also known as the Western Desert) in the west, a part of the Sahara, and the Arabian Desert (also called the Eastern Desert), which borders the Red Sea and the Gulf of Suez, in the east. The Libyan Desert includes a vast sandy expanse called the Great Sand Sea. Located there are several depressions with elevations below sea level, including the Qattara Depression, which has an area of about 18,000 sq km and reaches a depth of 133m below sea level. Also found in the Libyan Desert are the oases of Siwa, Bahariyah, Farafra, Dakhla, and Kharijah.



Egyptian Pyramids
Located on the west bank of the Nile River on the outskirts of Cairo, the pyramids at Giza, rank as some of the best-known monuments in the world. The ancient Egyptians constructed the pyramids to serve as royal tombs. Built without the use of cranes, pulleys, or lifting tackle, the massive structures stand as testaments to the engineering skills of their makers.

Much of the Arabian Desert occupies a plateau that rises gradually east from the Nile Valley to elevations of about 600m in the east and is broken along the Red Sea coast by jagged peaks as high as 2,100m above sea level. In the extreme south, along the border with Sudan, is the Nubian Desert, an extensive region of rocky and sandy plains and dunes. The Sinai Peninsula consists of sandy desert in the north and rugged mountains in the south, with summits looming more than 2,100m above the Red Sea. Mount Catherine (Jabal Katrinah), the highest elevation in Egypt, is on the Sinai Peninsula, as is Mount Sinai (Jabal Musá).

The Nile enters Egypt from Sudan and flows north for 1,545 km to the Mediterranean

Sea. For its entire length from the southern border to Cairo, the Nile flows through a narrow valley lined by cliffs. Lake Nasser, a huge reservoir formed by the Aswān High Dam, extends south across the Sudan border. The lake is 480 km long and is 16 km across at its widest point. Most of the lake lies in Egypt. South of a point near the town of Idfū, the Nile Valley is rarely more than 3 km wide. From Idfū to Cairo, the valley averages 23 km in width, with most of the arable portion on the western side. In the vicinity of Cairo the valley merges with the delta, a fan-shaped plain, the perimeter of which occupies about 250 km of the Mediterranean coastline. Silt deposited by the Rosetta, Damietta, and other distributaries has made the delta the most fertile region in the country. However, the Aswān High Dam has reduced the flow of the Nile, causing the salty waters of the Mediterranean to erode land along the coast near the Nile. A series of four shallow, brackish lakes extends along the seaward extremity of the delta. Another larger lake, Birkat Qārūn, is situated inland in the desert north of the town of Al Fayyūm. Geographically and traditionally, the land along the Nile is divided into two regions, Lower Egypt and Upper Egypt, the former consisting of the delta area and the latter comprising the valley south of Cairo.



*Nile River at Aswān
The waters of the mighty Nile flow past the high banks at Aswān in Upper Egypt. The Aswān High Dam was completed in 1970. The large dam project increased the country's amount of arable land and provided much-needed additional electricity.*

Although Egypt has 2,450 km of coastline, two-thirds of which are on the Red Sea, indentations suitable as harbors are confined to the delta. The Isthmus of Suez, which connects the Sinai Peninsula with the African mainland, is traversed from the Mediterranean to the Gulf of Suez by the Suez Canal.

The climate of Egypt is characterized by a hot season from May to September and a cool season from November to March. Extreme temperatures during both seasons are moderated by the prevailing northern winds. In the coastal regions average annual temperatures range from a maximum of 37° C (99° F) to a minimum of 14° C (57° F). Wide variations of temperature occur in the deserts, ranging from a maximum of 46° C (114° F) during daylight hours to a minimum of 6° C (42° F) during the night. During the winter season desert nighttime temperatures often

drop to 0° C (32° F). The most humid area is along the Mediterranean coast, where the average annual rainfall is about 200 mm. Precipitation decreases rapidly to the south; Cairo receives on average only 25 mm of rain a year, and in many desert locations it may rain only once in several years.

Egypt has a wide variety of mineral deposits, some of which, such as gold and red granite, have been exploited since ancient times. The chief mineral resource of



*Cairo
Cairo lies on the Nile River in the northern part of the country. The tall Cairo Tower, right, was completed in 1957 on Zam'lik, an island in the center of the city.*

contemporary value is petroleum, found mainly in the Red Sea coastal region, at Al 'Alamayn (El 'Alamein) on the Mediterranean, and on the Sinai Peninsula. Other minerals include phosphates, manganese, iron ore, and uranium. Natural gas is also extracted.

The vegetation of Egypt is confined largely to the Nile Delta, the Nile Valley, and the oases. The most widespread of the few indigenous trees is the date palm. Others include the sycamore, tamarisk, acacia, and carob. Trees that have been introduced from other lands include the cypress, elm, eucalyptus, mimosa, and myrtle, as well as various types of fruit trees. The alluvial soils of Egypt, especially in the delta, sustain a broad variety of plant life, including grapes, many kinds of vegetables, and flowers such as the lotus, jasmine, and rose. In the arid regions alfa grass and several species of thorn are common. Papyrus, once prevalent along the banks of the Nile, is now limited to the extreme south of the country.

Because of its arid climate, Egypt has few indigenous wild animals. Gazelles are found in the deserts, and the desert fox, hyena, jackal, wild ass, boar, and jerboa inhabit various areas, mainly the delta and the mountains along the Red Sea. Among the reptiles of Egypt are lizards and several kinds of poisonous snakes, including the asp and the horned viper. The crocodile and hippopotamus, common in the lower Nile and the Nile Delta in antiquity, are now largely restricted to the Upper Nile. Birdlife is abundant, especially in the Nile Delta and Nile Valley. The country has 153 known species of birds, including the sunbird, golden oriole, egret, hoopoe, plover, pelican, flamingo, heron, stork, quail, and snipe. Birds of prey found in Egypt include eagles, falcons, vultures, owls, kites, and hawks. Many species of insects live in Egypt. Beetles,



Egyptian Agriculture
Egyptian farmland yields rank among the highest in the world.



Nile River, Africa

The Nile provides a vital source of transportation.

mosquitoes, flies, and fleas are especially numerous; the ichneumon, a parasitic insect, occurs in various areas, especially the delta. Scorpions are found in desert areas. Some 70 species of fish live in the Nile and in the deltaic lakes.

Egypt has many environmental problems, and some of them complicate efforts to promote economic and social development. The primary issues are water quality and quantity, soil loss, urban growth, air pollution, and the environmental effects of tourism.

Egypt gets almost all of its water from the Nile. The quality of the river water is

seriously threatened by untreated industrial and agricultural wastes, sewage, and municipal wastewater. In addition, the Aswān High Dam, which was completed in 1970, has reduced the flow of the Nile and trapped the nutrient-rich silt, which once fertilized the country's farmland, behind it. To compensate for the loss of the silt, farmers make more use of chemical fertilizers, which add to the water pollution. To increase crop yields they use modern herbicides and pesticides, which also contribute to the pollution. Furthermore, the reduced flow of the river increases the concentration of pollutants in the remaining river water. The reduced amount of silt deposited in the Nile Delta has caused the delta to shrink, resulting in coastal erosion that threatens the lagoons that are important sources of fish. Finally, year-round irrigation, using the water impounded behind the Aswān High Dam, causes salts to accumulate in the soil, leading to the loss of some agricultural land.

The size and rapid growth of Egypt's population have caused additional environmental problems. The expansion of urban areas into nearby farming areas infringes on the already limited agricultural land in the Nile Delta and Valley.



Mount Sinai

At 2,637 m, the top of Mount Sinai offers a spectacular view of the surrounding jagged peaks and steep slopes. The summit of the mountain, venerated by Jews and Christians as the site where Moses received the Ten Commandments from God, draws crowds of pilgrims and tourists every year.

Tourism provides an important source of revenue for economic growth. However, poorly controlled construction and waste disposal in new tourist centers along the eastern coast have seriously degraded the water quality of the Red Sea. In addition, large concentrations of tourists threaten the fragile desert areas and the marine corals along the coast.

The population of Egypt is 74,718,797 (2003 estimate). The people live almost exclusively in the Nile Valley, the Nile Delta, the Suez Canal region, and the northern coastal region of the Sinai Peninsula. There are small communities in the oases of the Libyan Desert and in the oil-drilling and mining towns of the Arabian Desert. There is also a small population of nomadic Bedouins.

Cairo is Egypt's capital and largest city. Cairo serves as the commercial, administrative, and tourist center of Egypt. Other major cities include Giza, Alexandria, and Port Said. Giza is the location of three of Egypt's most famous pyramids. Alexandria is Egypt's principal Mediterranean seaport. Port Said, located at the northern entrance to the Suez Canal, is the site of an important free trade zone and various shipping services.

In 2001 the agricultural sector (including fishing) contributed 17 percent of the GDP. Before industrialization, agriculture provided most of Egypt's exports, but by 1999 it contributed only 8 percent of the exports. The most important crops include cotton, cereals, fruits and vegetables, and animal fodder. Egypt's area of cultivable land is small but highly fertile. It is located for the most part along the Nile and in the Nile Delta. Yields are high, and almost every piece of land grows at least two crops a year. The country ceased to be self-sufficient in cereals at the beginning of the 20th century, although it still exports some poultry, fruits, vegetables, sugar, and rice. It now imports about a quarter of the cereals it needs and a much higher proportion of the meat and dairy products.

Egypt's labor force of 25.2 million is 69 percent male and 31 percent female. The largest proportion of the labor force works in agriculture or fishing, which employ 30 percent of all workers. The services sector employs 48 percent, and industry (including manufacturing and construction) employs the remaining 22 percent.

Fishing is a significant industry in Egypt. Large quantities of fish live in the Nile, the Mediterranean Sea, and the Red Sea.

Industry, including manufacturing, mining, and construction, contributed 33 percent of the GDP in 2001. The main manufactured goods are textiles, chemicals, metals, and petroleum products. Petroleum is Egypt's most important mineral product. It is a major source of export earnings. The main oil and gas fields are located along the Red Sea coast and in the Libyan Desert. Other minerals produced in Egypt include phosphate rock, iron ore, and salt.

Services contributed 50 percent of the GDP in 2001. Important services include government social services such as health and education, financial services, and personal services. In 2001, 4.4 million tourists visited Egypt, providing \$3.8 billion in revenues.

Egypt is self-sufficient in energy. Its main sources of electricity are hydroelectric power plants at the Aswān High Dam and steam-driven power plants that burn natural gas. Egypt's own oil and natural gas provide almost all of the country's fuel needs. Pipelines supply gas to all major urban centers.

Egypt has 5,024 km of railroads. The principal line links Aswān and towns north of it in the Nile Valley to Alexandria on the Mediterranean coast. The inland waterways of Egypt are used extensively for transportation. These waterways include the Nile, which is navigable throughout its course in the country; about 1,600 km of shipping canals; and more than 17,700 km of irrigation canals in the Nile Delta.



Egypt: Selected Indicators

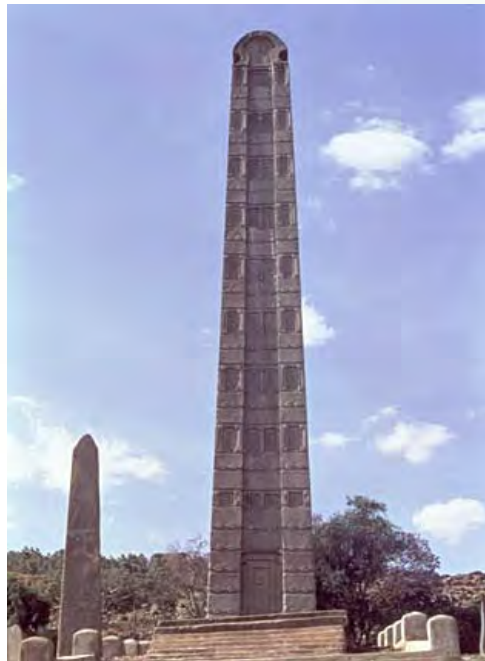
Indicator	Value	Year
Official Name:	Arab Republic of Egypt	
Capital	Cairo	
Area	997,739 sq km	
POPULATION		
Total population	74.7 million	2003 (estimate)
Population growth rate	1.88 percent	2003 (estimate)
Projected population in 2025	103.4 million	
Population density	75 persons per sq km	2003 (estimate)
Urban Population	43 percent	2001 (estimate)
HEALTH AND EDUCATION		
Life expectancy		
Total	70.4 years	2003 (estimate)
Female	73 years	2003 (estimate)
Male	67.9 years	2003 (estimate)
Infant mortality rate	35 deaths per 1,000 live births	2003 (estimate)
Population per physician	1,573 people	1999
Population per hospital bed	476 people	1997
Literacy rate		
Total	57.7 percent	2003 (estimate)
Female	46.9 percent	2003 (estimate)
Male	68.3 percent	2003 (estimate)
Number of students per teacher, primary school	23 students per teacher	1999-2000
ECONOMY		
Gross domestic product (GDP, in U.S.\$)	\$98 billion	2001
GDP per capita (U.S.\$)	\$1,510	2001
GDP by economic sector		
Agriculture, forestry, fishing	16.8 percent	2001
Industry	33.1 percent	2001
Services	50.1 percent	2001
Employment		
Number of workers	25.2 million	2001
Workforce share of economic sector		
Agriculture, forestry, fishing	30 percent	1998
Industry	22 percent	1998
Services	48 percent	1998
Unemployment rate	8.2 percent	1998
ENERGY, COMMUNICATIONS, AND TRANSPORTATION		
Electricity production		
Thermal sources	81.03 percent	2001
Hydroelectric sources	18.97 percent	2001
Nuclear sources	0 percent	2001
Geothermal, solar, and wind sources	0 percent	2001
Number of radios per 1,000 people	317	1997
Number of telephones per 1,000 people	104	2001
Number of televisions per 1,000 people	175	2000 (estimate)
Number of Internet hosts per 10,000 people	0.28	2001
Daily newspaper circulation per 1,000 people	31	1999
Number of motor vehicles per 1,000 people	30	1997
Paved road as a share of total roads	78 percent	1999

Source: Encarta 2003.



COUNTRY OVERVIEW:

ETHIOPIA

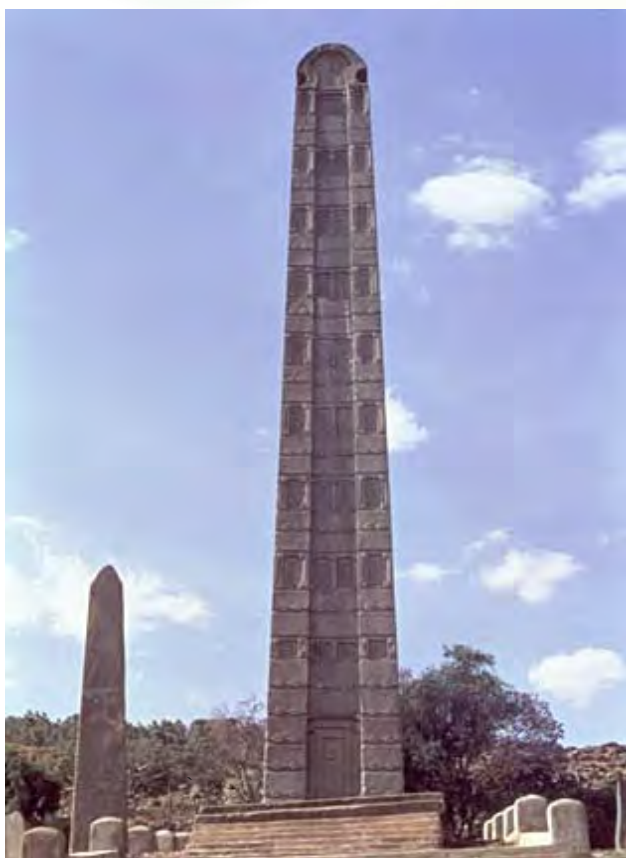


Country Overview: Ethiopia

Ethiopia, officially the Federal Democratic Republic of Ethiopia, is found in northeastern Africa. It is bounded on the northeast by Eritrea and Djibouti, on the east and southeast by Somalia, on the southwest by Kenya, and on the west and northwest by Sudan.

Ethiopia is the oldest independent nation in Africa. It was home to the powerful Christian kingdom of Aksum in the first centuries AD and became a Christian empire in the 15th century.

Ethiopia covers an area of 1,133,380 sq km. The heart of the country is a high tableland, known as the Ethiopian Plateau, that covers more than half the total area of the country. The plateau is split diagonally in a



Giant Stelae of Aksum

Massive stone towers, called stelae, mark the tombs of 3rd- and 4th-century kings of Aksum, in what is now northern Ethiopia. Some stelae, like the one shown here, were carved to resemble palaces, with false windows and doors.

northeastern to southwestern direction by the Great Rift Valley. Although the average elevation of the plateau is about 1,680 m, it is cut by many rivers and deep valleys, some of which are 600m below the level of the plateau. The area is capped by mountains, the highest of which is Ras Dashen (4,620 m). These heights and indentations occur in northern Ethiopia, in the region surrounding Lake T'ana (the lake in which the Blue Nile rises). The northeastern edges of the plateau are marked by steep escarpments, which drop some 1,200 m or more to the Denakil Desert. Along the western fringe the plateau descends less abruptly to the desert of Sudan. Along the southern and southwestern limits, the plateau lowers toward Lake Turkana.

The climate of Ethiopia varies mainly according to elevation. The tropical zone below approximately 1,800 m has an average annual temperature of about 27°C (about 80°F) and receives less than about 500mm of rain annually. The subtropical zone, which includes most of the highland plateau and is between about 1,800

and 2,400m in elevation, has an average temperature of about 22°C (about 72°F) with an annual rainfall ranging from about 500 to 1,500mm. Above approximately 2,400m is a temperate zone with an average temperature of about 16°C (about 61°F) and an annual rainfall between about 1,300 and 1,800mm. The principal rainy season occurs between mid-June and September, followed by a dry season that may be interrupted in February or March by a short rainy season.

The resources of Ethiopia are primarily agricultural. The plateau area is fertile and largely undeveloped. The wide range of soils, climate, and elevations permits the production of a diversified range of agricultural commodities.

A variety of mineral deposits exist; iron, copper, petroleum, salt, potash, gold, and platinum are the principal ones that have been commercially exploited.

The great variations in elevation are directly reflected in the kind of vegetation found in Ethiopia. The lower areas of the tropical zone have sparse vegetation consisting of desert shrubs, thornbushes, and coarse savanna grasses. In the valleys and ravines almost every form of African vegetation grows profusely. The temperate zone is largely covered with grassland. Afro-alpine vegetation is found on the highest slopes.

The larger species of African wildlife are native to most parts of the country. These include the giraffe, leopard, hippopotamus, lion, elephant, antelope, and rhinoceros. The caracal, jackal, hyena, and various species of monkey are common. The country is home to 813 bird species. Birds of prey include the eagle, hawk, and vulture. Heron, parrot, and such game birds as the snipe, partridge, teal, pigeon, and bustard are found in abundance. Among the many varieties of insects are the locust and tsetse fly.

The highland of Ethiopia is made up of folded and fractured crystalline rocks capped by sedimentary limestone and sandstone and by thick layers of volcanic lava. Soil erosion is a major problem in Ethiopia. Deforestation, overgrazing, and poor land management accelerated the rate of erosion. Many farmers in Ethiopia's highlands cultivate sloped or hilly land, causing topsoil to wash away during the torrential rains of the rainy season. The rains also leach the highland soils of much fertility, particularly those soils overlying crystalline rocks.

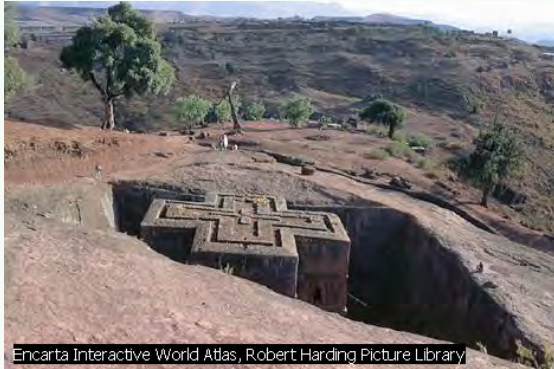
In 2003, the population of Ethiopia was estimated at 66.6 million, yielding an overall density of 59 persons per sq km.

Ethiopia is divided into nine regions composed of specific ethnic groups. These are: Tigray; Afar; Amhara; Oromiya; Somalia; Benishangul-Gumuz; Gambella; Harari; and the Southern Nations, Nationalities and Peoples, which comprises about 41 ethnic groups. Addis Ababa is the largest city in Ethiopia.



Tisisat Falls

From Lake T'ana in northwest Ethiopia, the waters of the Blue Nile travel about 32 kilometers before plunging over spectacular Tisissat Falls. One of Ethiopia's major rivers, the Blue Nile arcs to the southeast from Lake T'ana, then flows west into Sudan, and finally north to Khartoum, where it merges with the White Nile.



Encarta Interactive World Atlas, Robert Harding Picture Library

In the late 12th or early 13th century King Lalibela of Ethiopia constructed a series of 11 churches of pure rock. Their tops are at ground level, and each structure is surrounded by a trench 12 meters deep. With intricate details carved into the walls, elaborate windows, ledges, and ridges, the structures appear to be built of brick. Each church includes a complex system of trenches, passageways, and drainage tunnels. The rock-hewn churches at Lalibela were designated a World Heritage Site in 1978.

About 40 percent of the people of Ethiopia are Christians, and Christianity is predominant in the north. All the southern regions have Muslim majorities, who represent about 45 percent of the country's population. The south also contains considerable numbers of animists.

In 2003, about 43 percent of the adult population could read and write. Although free education exists from primary school through the college level, regular school facilities are able to enroll only 71 percent of the children of school age. In the 2000 school year 6.7 million students attended primary schools. The number of students enrolled in secondary schools was 1.50 million.

Ethiopia is one of the world's poorest nations, with a per-capita gross domestic product (GDP of \$90 a year in 2001). The economy of Ethiopia remains heavily dependent on the earnings of the agricultural sector.

Agriculture by traditional methods, including the raising of livestock, is the most characteristic form of Ethiopian economic activity. The most important food crops grown primarily for local consumption are cereal grains. Periodic droughts have greatly reduced agricultural output and forced Ethiopia to import basic foodstuffs.

Coffee remains Ethiopia's most important commodity. About one-fourth of the population is engaged in its production. In 2002 the livestock population included 34.5 million cattle, 23 million sheep, 17 million goats, 56 million poultry birds, and smaller numbers of horses, mules, donkeys, and camels. About one-third of the cattle are oxen used for heavy labor. Sheep and goats are raised primarily for skins and meat.



Strategic Position of Addis Ababa

Addis Ababa, Ethiopia's capital and largest city, lies on the southern slopes of the Entoto Mountains in an area marked by deep ravines. Located in the center of the country, the city is a major commercial center and has one of the largest open-air markets in Africa, the Mercato. Addis Ababa is also an important hub for African politics and headquarters for African Union (AU) and the United Nations (UN) Economic Commission for Africa

Although many mineral deposits exist in Ethiopia, small quantities of gold and platinum are mined, and deposits of petroleum and natural gas have been found. About 110,000 metric tons of salt were mined annually in the early 1990s. Ethiopia also has considerable untapped deposits of high-quality potash.

Manufacturing is primarily oriented toward the processing of agricultural commodities. Ethiopia has great potential for producing hydroelectricity. In 2001 annual production of electricity was 1.7 billion kilowatt-hours of which 98 percent was generated by hydroelectric facilities.



Simple Farming Methods in Ethiopia

Animals are still used as beasts of burden on many Ethiopian farms. Traditional agriculture is the most common form of economic activity in Ethiopia.

Ethiopia: Selected Indicators

Indicator	Value	Year
Official Name:	Federal Democratic Republic of Ethiopia	
Capital	Addis Ababa	
Area	1,333,380 sq km	
POPULATION		
Total population	66.6 million	2003 (estimate)
Population growth rate	1.96 percent	2003 (estimate)
Projected population in 2025	91.2 million	
Population density	59 persons per sq km	2003 (estimate)
Urban Population	16 percent	2001 (estimate)
HEALTH AND EDUCATION		
Life expectancy		
Total	41.2 years	2003 (estimate)
Female	42.1 years	2003 (estimate)
Male	40.4 years	2003 (estimate)
Infant mortality rate	103 deaths per 1,000 live births	2003 (estimate)
Population per physician	35,096 people	1994
Population per hospital bed	4,141 people	1990
Literacy rate		
Total	42.7 percent	2003 (estimate)
Female	35.1 percent	2003 (estimate)
Male	50.3 percent	2003 (estimate)
Number of students per teacher, primary school	38 students per teacher	1997
ECONOMY		
Gross domestic product (GDP, in U.S.\$)	\$6.2 billion	2001
GDP per capita (U.S.\$)	\$90	2001
GDP by economic sector		
Agriculture, forestry, fishing	52.3 percent	2001
Industry	11.1 percent	2001
Services	36.5 percent	2001
Employment		
Number of workers	28.3 million	2001
Workforce share of economic sector		
Agriculture, forestry, fishing	89 percent	1995
Industry	2 percent	1995
Services	10 percent	1995
Unemployment rate	No data	
ENERGY, COMMUNICATIONS, AND TRANSPORTATION		
Electricity production		
Thermal sources	1.25 percent	2001
Hydroelectric sources	97.58 percent	2001
Nuclear sources	0 percent	2001
Geothermal, solar, and wind sources	1.17 percent	2001
Number of radios per 1,000 people	200	2001(estimate)
Number of telephones per 1,000 people	4	2001
Number of televisions per 1,000 people	6	2000(estimate)
Number of Internet hosts per 10,000 people	0.01	2001
Daily newspaper circulation per 1,000 people	0.4	1998
Number of motor vehicles per 1,000 people	1.4	1998
Paved road as a share of total roads	12 percent	2000

Source : Encarta 2003.

COUNTRY OVERVIEW:

SUDAN



Country Overview: Sudan

Sudan, republic in northeastern Africa, the largest country of the African continent. It is bounded on the north by Egypt; on the east by the Red Sea, Eritrea, and Ethiopia; on the south by Kenya, Uganda, and Democratic Republic of the Congo; and on the west by the Central African Republic, Chad, and Libya. Sudan has a total area of 2,505,800 sq km.

Sudan has a maximum length from north to south of more than 2,250 km; the extreme width of the country is about 1,730 km. It is divided into three separate natural regions, ranging from desert in the north, covering about 30 percent of all Sudan, through a vast semiarid region of steppes and low mountains in central Sudan, to a region of vast



Pyramids of Meroe

The pyramids of Meroe were built by the Kush people of ancient Sudan to house the remains of their kings. The Kush civilization thrived along the Nile River from sometime after 2600 BC, when Egypt conquered ancient settlements along the river, until the collapse of the Kush around AD 350. The Kush civilization developed independently of Egypt but was influenced greatly by ancient Egyptian culture. At one point, for nearly 100 years, the Kush even controlled their northern neighbors.

swamps (the As Sudd region) and rain forest in the south. Major topographical features of Sudan are the Nile River, its headstreams the White Nile and Blue Nile, and the tributaries of these rivers. The White Nile traverses the country from the Uganda border to a point near Khartoum, where it joins the Blue Nile to form the Nile proper. The Blue Nile rises in the Ethiopian Plateau and flows across east central Sudan. Of the Nile tributaries the most important is the 'Aṭbarah, which also rises in the Ethiopian Plateau. The Libyan Desert, a barren

waste broken by rugged uplands, covers most of Sudan west of the Nile proper. The Nubian Desert lies in the region east of the Nile proper and the 'Aṭbarah. The Red Sea Hills are located along the coast. The highest point in Sudan, Kinyeti (3,187 m, is in the southeast.

Sudan has a tropical climate. Seasonal variations are most sharply defined in the desert zones, where winter temperatures as low as 4°C (40°F) are common, particularly after sunset. Summer temperatures often exceed 40°C (110°F) in the desert zones, and rainfall is negligible. Dust storms, called haboobs, frequently occur. High temperatures also prevail to the south throughout the central plains region, but the humidity is generally low. In the vicinity of Khartoum the average annual temperature is about 27°C (about 80°F); and annual rainfall, most of which occurs between mid-June and September, is about 250 mm (about 10 in). Equatorial climatic conditions prevail in southern Sudan. In this region the average annual temperature is about 29°C (about 85°F), annual rainfall is more than 1,000 mm, and the humidity is excessive.

The primary natural resources of Sudan are water, supplied by the Nile River system,



Vast Swampland of Sudan

The As Sudd, which means barrier, is a vast, desolate swampland in south central Sudan. On its northerly course through Sudan, the White Nile—also called Bahr el-Jebel River—overflows into a saucer like clay pan.

and fertile soil. Large areas of cultivable land are situated in the region between the Blue Nile and the 'Aṭbarah and between the Blue Nile and the White Nile. Other cultivable land is in the narrow Nile Valley and in the valleys of the plains region. Irrigation is extensively employed in these areas. The country also has vast areas of grasslands and forests, including acacia forests, the source of gum arabic. Small deposits of many different minerals occur, the most important of which are chromium, copper, and iron ore. Petroleum was discovered in western Sudan in the late 1970s and early 1980s.

Vegetation is sparse in the desert zones of Sudan. Various species of acacia occur in the regions contiguous to the Nile Valley. Large forested areas are found in central Sudan, especially in the river valleys. Among the most common trees are the hashab, talh, heglig, and several species of acacia, notably suntu, laot, and kittr. Trees such as ebony, silag, and baobab are common in the Blue Nile Valley. Ebony, mahogany, and other varieties of timber trees are found in the White Nile Basin. Other species of indigenous vegetation include cotton, papyrus, castor-oil plants, and rubber plants.

Animal life is abundant in the plains and equatorial regions of Sudan. Elephants are numerous in the southern forests, and crocodiles and hippopotamuses abound in the rivers. Other large animals include giraffes, leopards, and lions. Monkeys, various species of tropical birds, and poisonous reptiles are also found, and insects—especially mosquitoes, seroot flies, and tsetse flies—infest the equatorial belt.

Scarce resources, drought, and civil war led to widespread famine and environmental destruction in Sudan during the 1990s. Sudan has designated 3.4 percent (2000) of its land as protected areas, but poaching threatens animal populations in these areas and throughout the country.

Sudan has ratified international agreements protecting biodiversity, endangered species, and the ozone layer. The country is party to the World Heritage Convention and the African Convention on the Conservation of Nature and Natural Resources. Sudan also participates in the UNESCO Man and the Biosphere Program.

Some 70 percent of economically active people are engaged in agricultural or pastoral activities, another 22 are employed in services, and only 9 percent have jobs in manufacturing, construction, and mining.

The 2003 estimated population was 38,114,160, giving the country an overall population density of 15 persons per sq km. The most densely settled area is at the juncture of the White Nile and the Blue Nile. Sudan's population is growing at a rate of 2.71 percent (2003) annually.

Sudan is divided into 26 states. The principal city is Khartoum, the capital; other major cities include Omdurman and Khartoum North, major industrial centers, and Port Sudan, a seaport



Palace in Khartoum
The Republican Palace stands in the Sudanese capital city of Khartoum.

on the Red Sea.

Agriculture continues to dominate the economy of Sudan. The majority of Sudan's population derives its living from crop farming or grazing, but only 7 percent of the country's land area is cultivated.

Crop production in 2002 included large quantities of cereal grains, such as sorghum and wheat (4 million metric tons); root crops, such as potatoes and yams (171,300 metric tons); fruits, such as dates (979,860 metric tons); and pulses (271,000 metric tons). Sugarcane, processed into sugar by local industry, is also grown. Cotton is Sudan's leading cash crop; it is produced in large amounts in the Al Jazirah (Gezira) region between the Blue Nile and White Nile. The livestock population in 2002 included 38.3 million cattle, 47 million sheep, 40 million goats, 3.2 million camels, and 38 million poultry.

The major forest product of Sudan is gum arabic. In the early 1990s about 40,000 metric tons of gum arabic were produced annually, about four-fifths of the world's supply. Other forestry products include beeswax, tannin, senna, and timber, especially mahogany. The production of timber in 2001 was 19 million cubic meters (673 million cubic feet); nearly all of the forest harvest is used for fuel. Fishing is carried on along the rivers and on the coast; the catch in 1999 amounted to 50,500 metric tons.



Sudan's Traditional Housing
The traditional dwellings of central and southern Sudan are round, with conical roofs, and made from locally available materials. In the north, traditional houses are built from sun-baked bricks and have flat roofs.

Small amounts of chromium, manganese, and mica are produced. Other exploited minerals include gold, magnesite, and salt.

Sudanese manufacturing is in the early stages of development and largely confined to the processing of agricultural products. Textile and paper mills and sugar and petroleum refineries have been established; a number of factories also produce consumer goods such as cigarettes, beverages, and shoes. Construction materials such as cement are manufactured as well.

In 2001 Sudan produced 2.4 billion kilowatt-hours of electricity. Supplies of hydroelectricity from large installations at Khashm al Qirbah and Sennar are supplemented by thermal electricity produced in facilities burning refined petroleum.

The Sudanese railroad system, comprising 4,599 km of track, links most of the major cities and towns. Supplementing the railroad system is traffic on 5,300 km of navigable waterways and 11,900 km of roads.



Village on the Nile, Sudan

The Nile River is the most dominant physical feature in Sudan. The Nile and its tributaries are valued for providing much of the irrigation. Small villages, such as this Shilluk settlement, use water from the river for subsistence farming.

Sudan: Selected Indicators

Indicator	Value	Year
Official Name:	Republic of Sudan	
Capital	Khartoum	
Area	2,505.800 sq km	

POPULATION

Total population	38.1 million	2003 (estimate)
Population growth rate	2.71 percent	2003 (estimate)
Projected population in 2025	81.3 million	2003 (estimate)
Population density	15 persons per sq km	2003 (estimate)
Urban Population	37 percent	2003 (estimate)

HEALTH AND EDUCATION

Life expectancy		
Total	57.7 years	2003 (estimate)
Female	58.9 years	2003 (estimate)
Male	56.6 years	2003 (estimate)
Infant mortality rate	66 deaths per 1,000 live births	2003 (estimate)
Population per physician	11,112 people	1996
Population per hospital bed	919 people	1990
Literacy rate		
Total	61.1 percent	2003 (estimate)
Female	50.5 percent	2003 (estimate)
Male	71.8 percent	2003 (estimate)
Number of students per teacher, primary school	27 students per teacher	1999-2000

ECONOMY

Gross domestic product (GDP, in U.S.\$)	\$13 billion	2001
GDP per capita (U.S.\$)	\$400	2001
GDP by economic sector		
Agriculture, forestry, fishing	38.9 percent	2001
Industry	18.8 percent	2001
Services	42.4 percent	2001
Employment		
Number of workers	12.8 million	2001
Workforce share of economic sector		
Agriculture, forestry, fishing	70 percent	1990
Industry	9 percent	1990
Services	22 percent	1990
Unemployment rate	No Data	1998

ENERGY, COMMUNICATIONS, AND TRANSPORTATION

Electricity production		
Thermal sources	52.09 percent	1990
Hydroelectric sources	47.91 percent	1990
Nuclear sources	0 percent	1990
Geothermal, solar, and wind sources	0 percent	1990
Number of radios per 1,000 people	406	2000(estimate)
Number of telephones per 1,000 people	14	2001
Number of televisions per 1,000 people	239	2000 (estimate)
Number of Internet hosts per 10,000 people	0	1999
Daily newspaper circulation per 1,000 people	27	1996
Number of motor vehicles per 1,000 people	12	1997
Paved road as a share of total roads	36 percent	1999

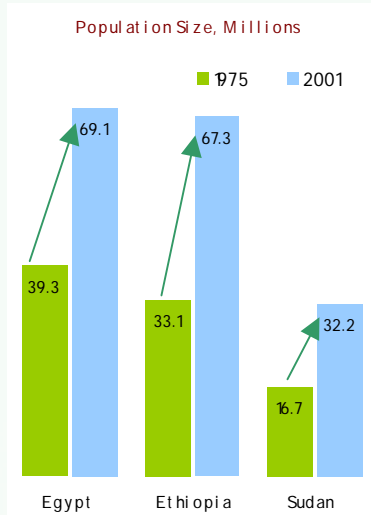
Source : Ecarta 2003.



Population

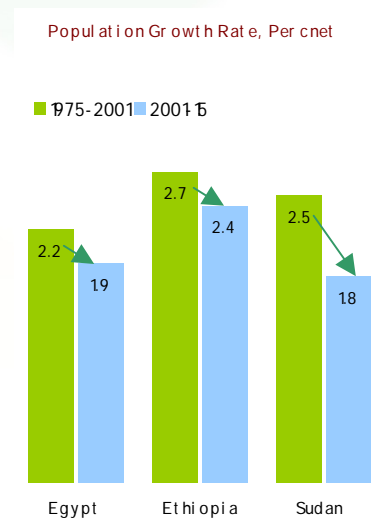
Map 1: Population Size

Population Size



The map shows the distribution of people in the region. Egypt with a total population of 69.1 million in 2001 makes up approximately 41 percent and Ethiopia and Sudan, with their respective populations of 67.3 million and 32.2 million in 2003, accounted for approximately 40 and 19 percent of the total population of the sub-basin countries.

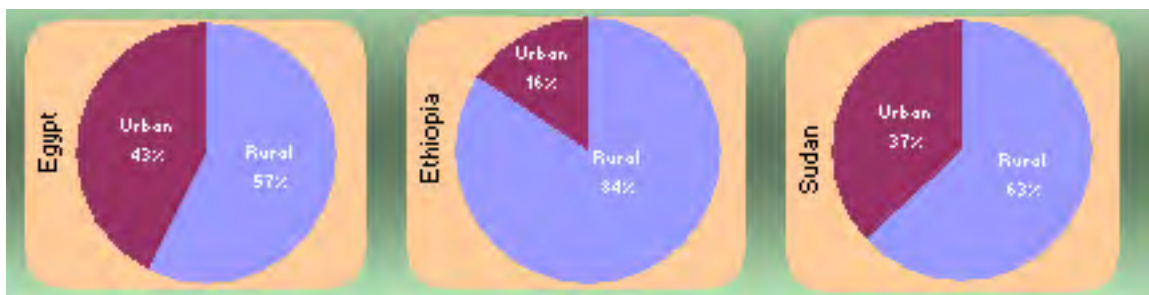
The populations of Egypt, Ethiopia and Sudan in 1975 were 39.3 million, 33.1 million and 17.7 million, respectively, and have shown overall growth rates of 76 percent, 103 percent, and 92.8 percent over the period 1975 to 2001.



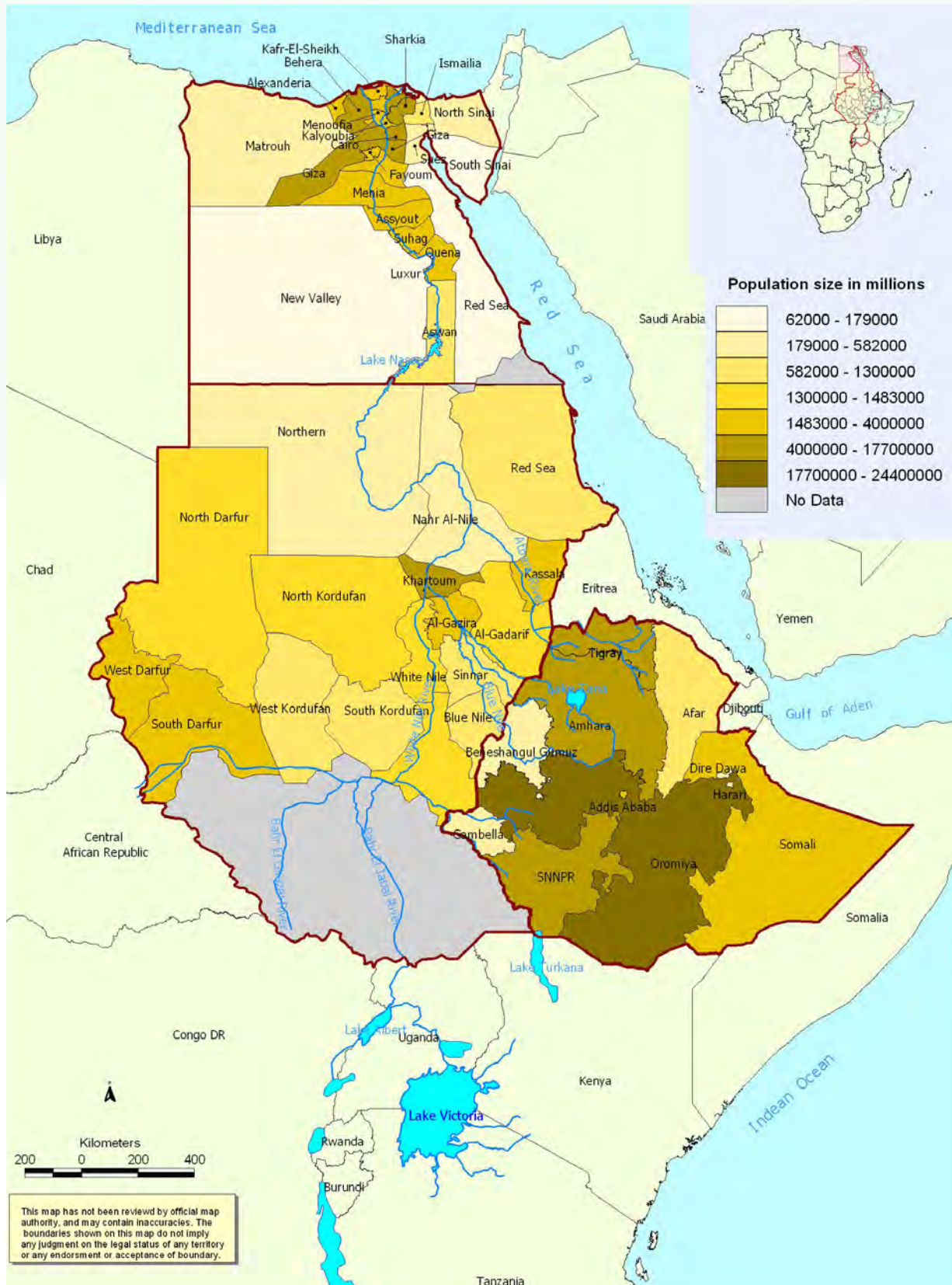
Population growth rate in Ethiopia is the highest (2.4 percent), followed by 1.9 in Egypt and 1.8 percent in Sudan.

High population growth is likely to result in an enormous threat to the development efforts, and more especially on the reduction of poverty, leading to high dependency ratios, and pressures on natural resources and strains on the education and health systems.

Proportion of Population living in rural and urban areas

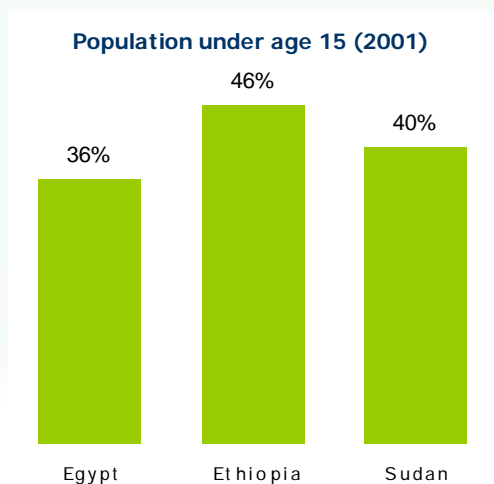


Map 1: Population Size



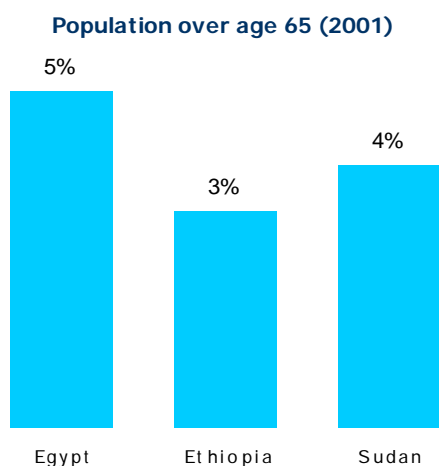
Map 2: Population Age Structure

Distribution of population under age 15



The map shows the distribution of the population under age 15. The age structure of a population affects a nation's key socioeconomic issues. Countries with young populations (high percentage under age 15) need to invest more in schools, while countries with older populations (high percentage ages 65 and over) need to invest more in the health sector.

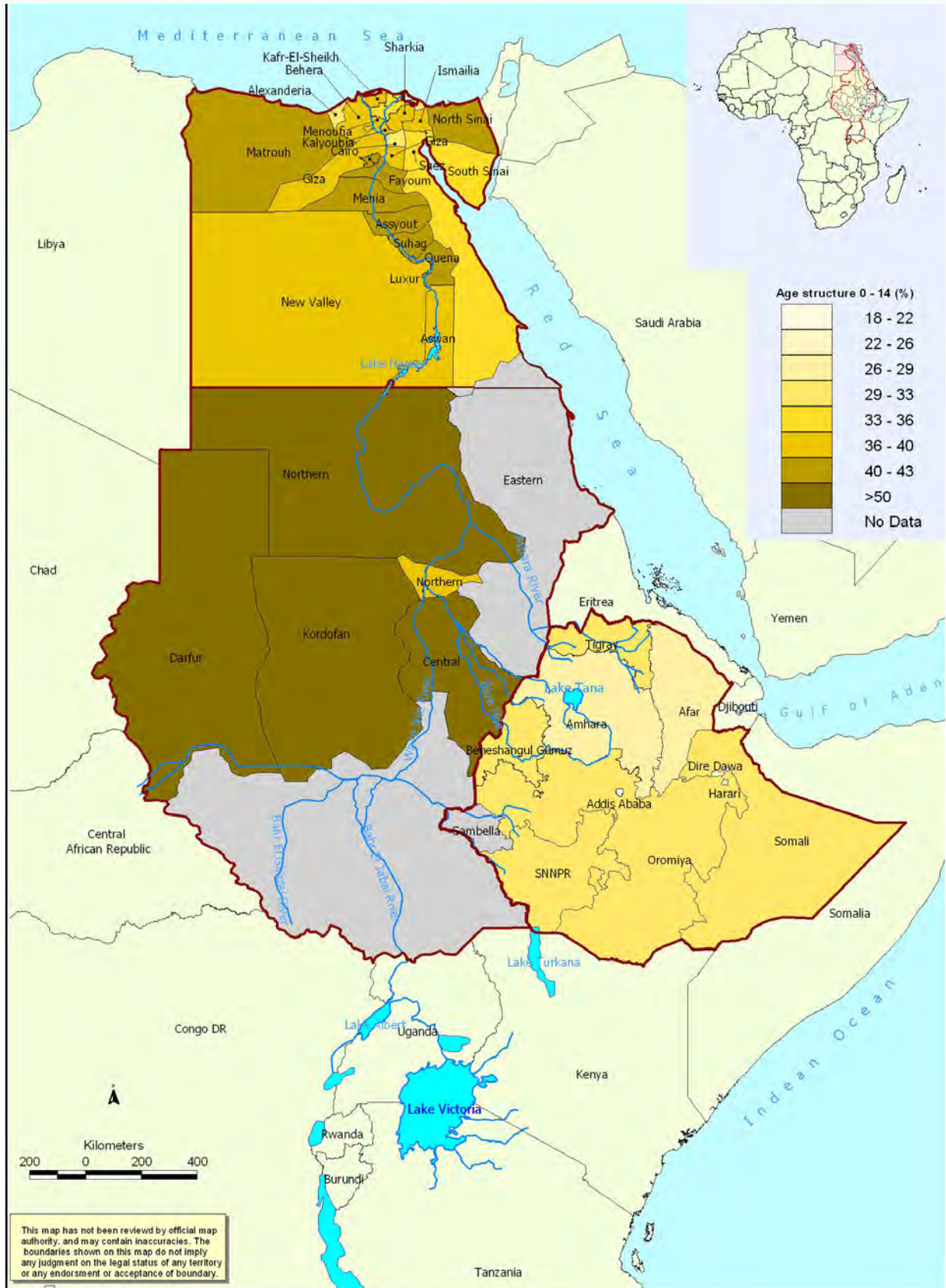
A higher percentage of under age 15 and 65 and over population also means that there is a higher dependency ratio, i.e., higher number of children under 15 years and the elderly who must be supported by working-age adults. A dependency ratio of 100, for example, means that each working adult must, on average, provide for the needs of one other, non-working household member.



The age structures of the population of the sub-basin countries indicate that about 46 percent is under the age of 15 years, compared to 40 percent in Sudan and 36 percent in Egypt.

Egypt has a high proportion of its population over the age of 65 (5 percent), followed by Sudan 4 percent. The figure for Ethiopia is only 3 percent.

Map 2: Population Age Structure

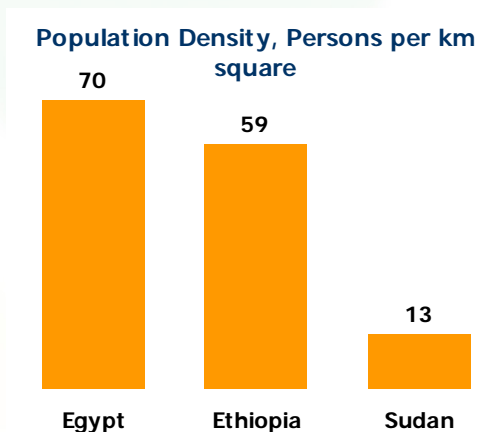


Map 3: Population Density

Number of persons per square kilometer

Population density varies widely across the ENB countries. Egypt and Ethiopia are most populous countries, with generally higher population densities. Overall population density in Egypt is about 70 persons per km², in Ethiopia it is about 60 persons per km², and in Sudan, 13 persons per km².

Much of the land in Egypt is deserted and only 6 percent of the area is inhabited. In terms of population density, this is translated into approximately 1200 persons per km². Very large population of Egypt is concentrated along the Nile Basin. As a result, the eastern Nile sub-basin parts of Egypt have substantially higher population densities.



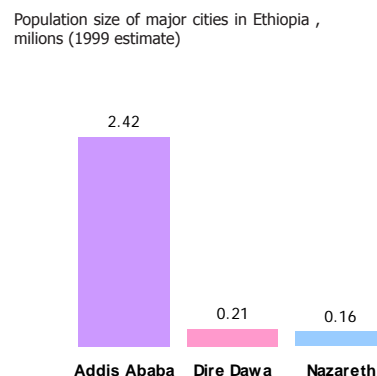
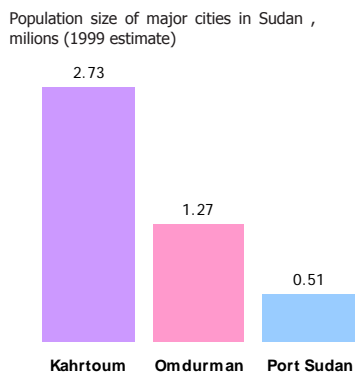
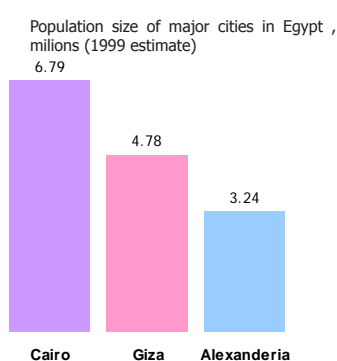
Population densities are comparatively lower in the Southern parts of Sudan and in Ethiopia's regions of Gambella and Benishangul-Gumuz, Amhara and Tigray.

In Ethiopia, a large share of the population is concentrated in the central and southern parts of the country. In the eastern regions Afar and Somali population density is relatively lower.

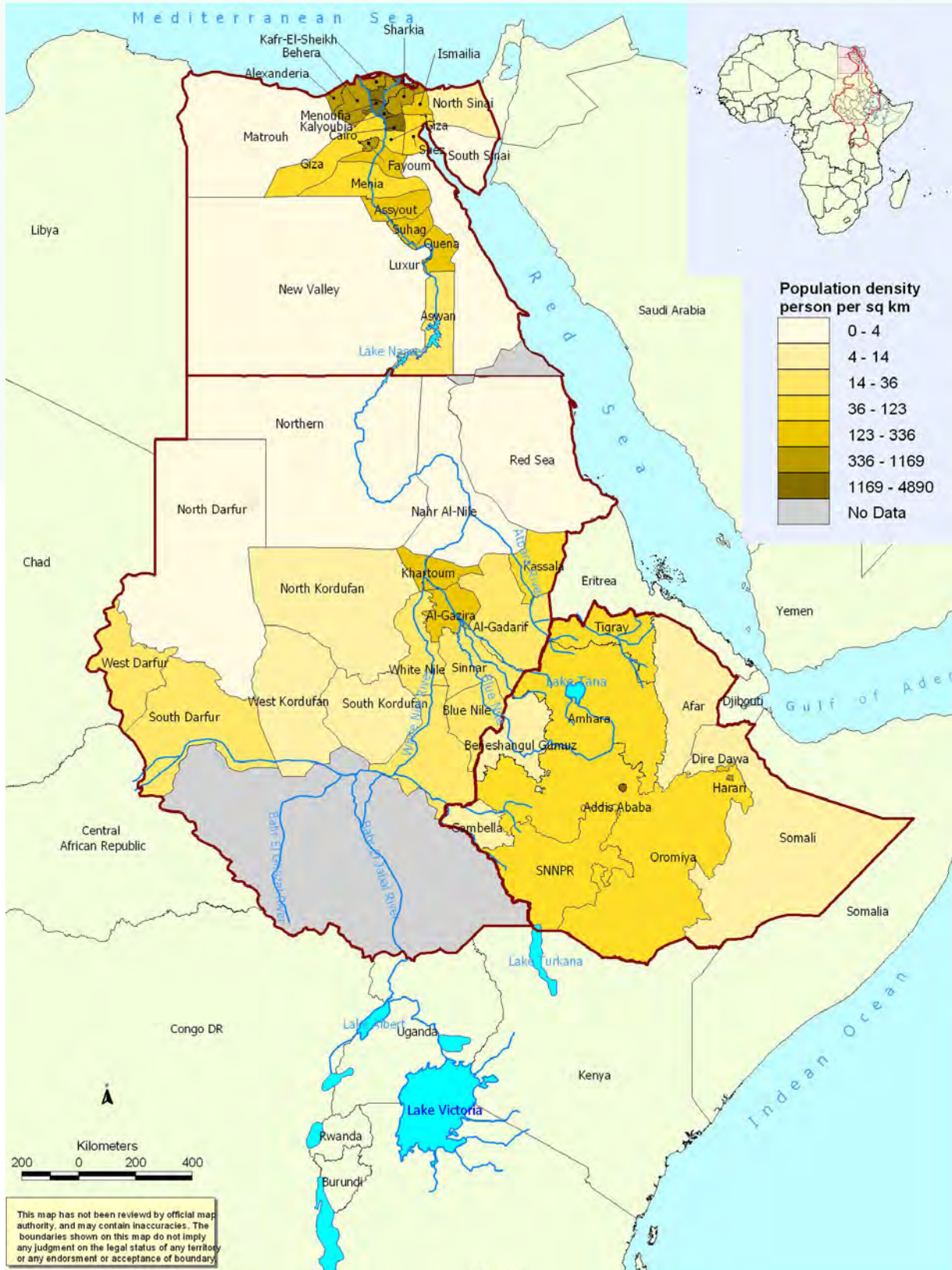
Egypt's capital city, Cairo, is densely populated. In 1998, the city's population was about 6.8 million. Other major cities Giza and Alexandria had population of 4.7 and 3.42

million, respectively. In Sudan, in 2000, an estimated 2.73 million people were living in Khartoum. Other major cities include Omdurman and Port Sudan.

Cities in Ethiopia are less populated. In 1999, an estimated 2.42 million people lived in the capital city, Addis Ababa.



Map 3: Population Density



Map 4: Unemployment

Proportion of labour force unemployed

Unemployment rate covers all people who, during a specified reference period are not employed and are available for work and have taken concrete steps to seek paid employment during the recent period. Labor force consists of those who are employed plus those who are unemployed during the relevant reference period.

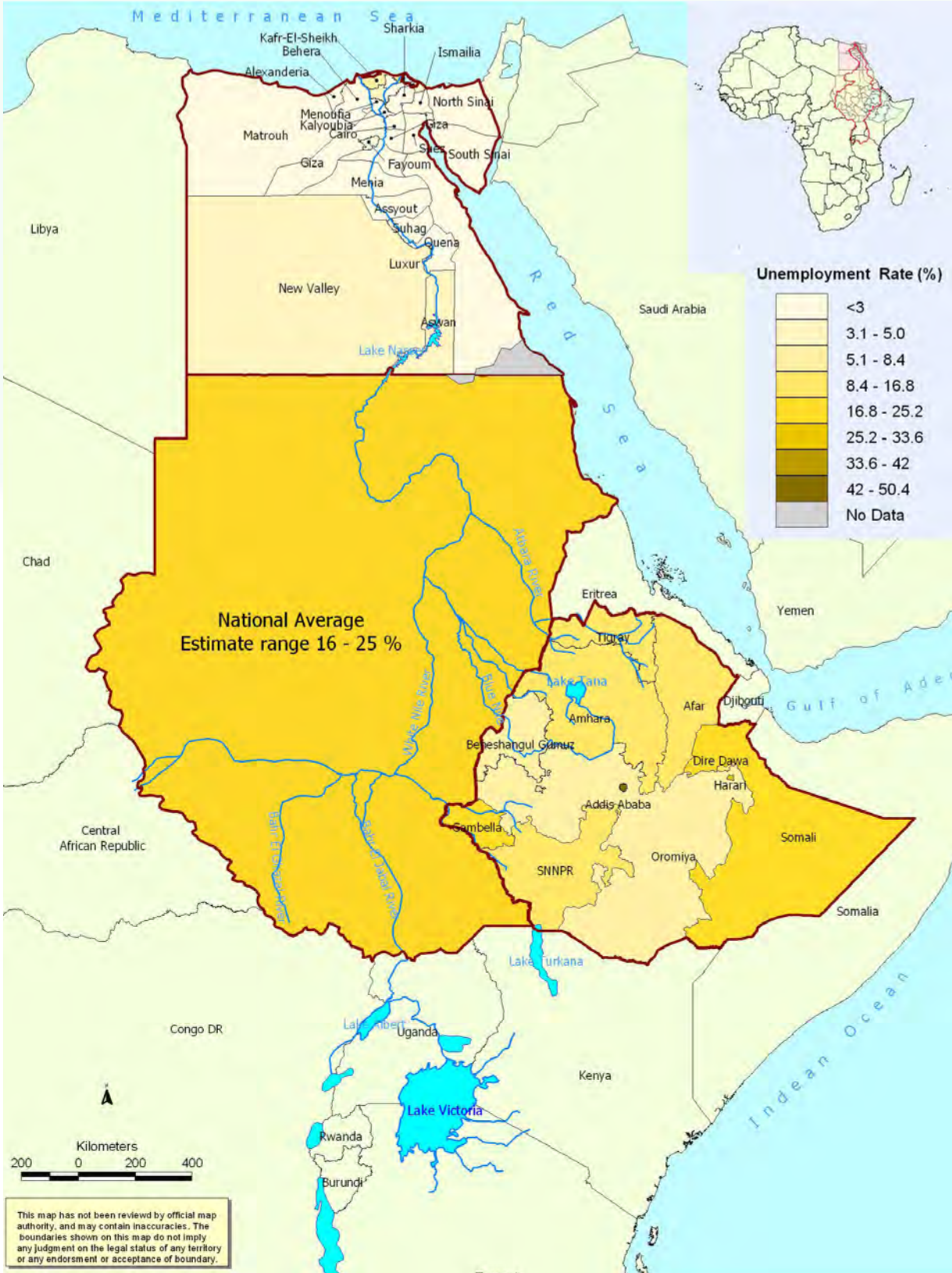
The number of people who are unemployed is divided to the number of the labor force to estimate the unemployment rate.

Data on unemployment rate disaggregated by state for Sudan was not available. However, it is estimated that at national level it ranges from 16 to 25 percent. Unemployment rate in Egypt is significantly lower than those of Ethiopia and Sudan.

Unemployment rate in Egypt ranges from below one percent in South Sina to over 14 percent in Damietta.

In Ethiopia, unemployment rate across regions varies markedly. The highest unemployment rate was in the capital city, Addis Ababa (50.4 percent), followed by Harari (29 percent) and Gambella (23 percent). In the rest of the regions unemployment rate ranges from 18 percent in Somali to 8 percent in Benishangul-Gumuz.

Map 4: Unemployment





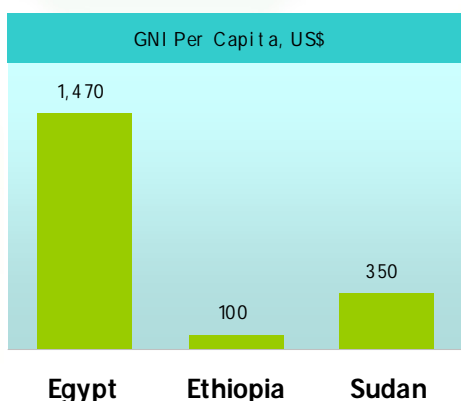
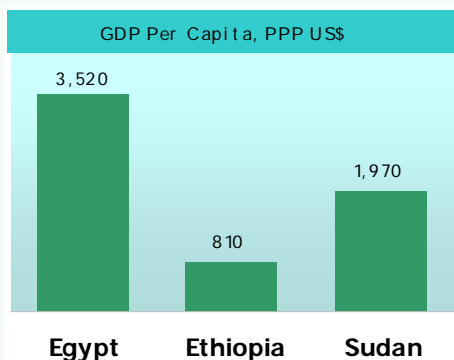
Woman carrying water in a jar near
Alem Kitmama North East of
Addis-Ababa, Ethiopia, Africa

June 2002
Credit line : WHO/P. Virot

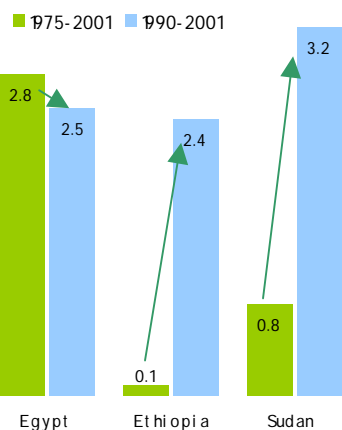


Living Standards

Map 5: Poverty Head Count Index



GDP per capita annual growth rate, per cent



The poverty head count index is a measure of the prevalence of poverty. It indicates the percentage of households who are poor (as defined by the poverty line) as a proportion of total population.

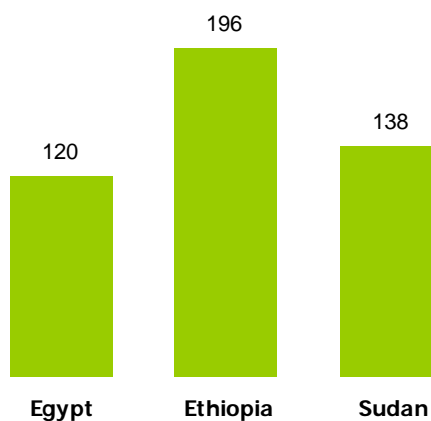
In Ethiopia, a survey on household income, consumption and expenditure indicated that in 2000, the proportion of people living in absolute poverty, measured in terms of food consumption set at a minimum nutrition requirement of 2,200 calories per adult per day, is around 44 percent at national level with 45% in rural and 37% in urban areas.

A significant variation in calorie intake has been observed among regions of Ethiopia. The proportion of people in absolute poverty is 61 percent in Tigray, 56 percent in Afar and 54 percent in Benishangul-Gumuz. On the other hand, the lowest head count indices were in Harari (25.8 percent), Dire Dawa (33.1 percent) and Addis Ababa (36.1 percent).

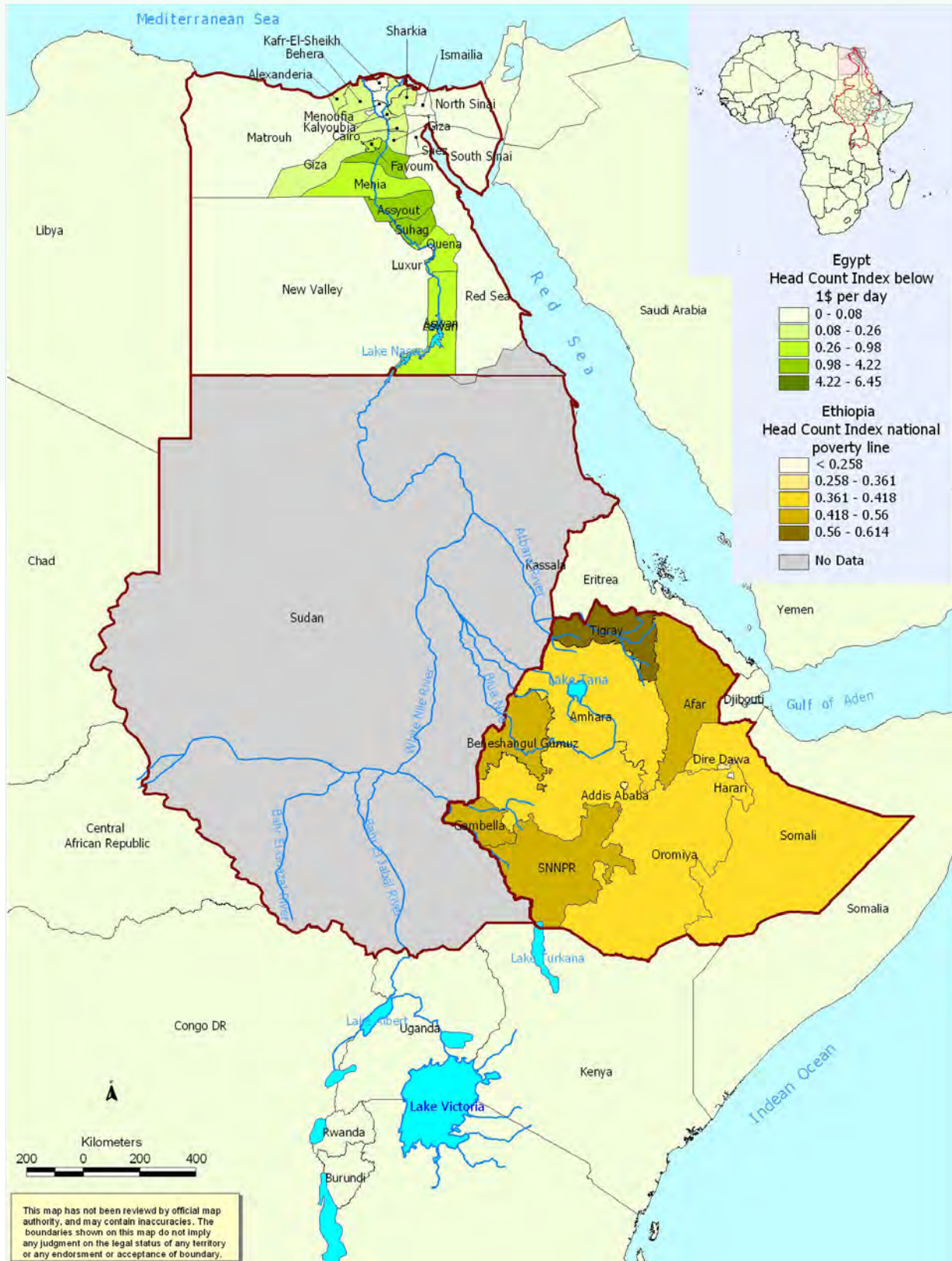
In 1999/2000, overall poverty in Egypt stood at 16.7 percent, using the national lower poverty line. Less than one percent of Egyptians spent less than US\$1 a day at purchasing power parity - while 24.8 percent live on less than US\$2 a day.

The highest poverty incidence is in the Upper rural area (34.2 percent), followed by Upper urban Egypt (19.3 percent), while the lowest is in the Metropolitan region (5.1 percent). Poverty incidence is highest in the governorate of Assiut, followed by Beni Suef and Sohag.

Human Development Index (2001)



Map 5: Poverty Head Count Index



Map 6: Access to Safe Water

Proportion of population with access to safe water source

Improved drinking water sources include piped water, public tap, and boreholes, protected well, protected spring or rainwater. There are striking disparities in access to safe drinking water among the sub-basin countries.

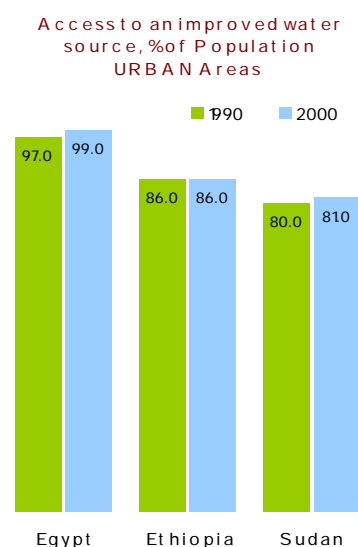
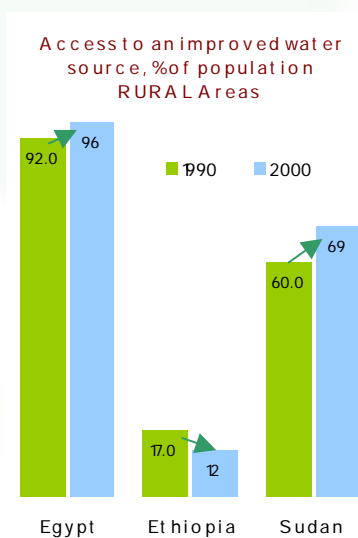
About 97 percent of the population of Egypt and three-fourth of the population of Sudan have access to safe water. In Ethiopia, only one-third of the population obtains water from protected sources.

In Egypt, approximately 99 percent of urban population and 96 percent of the rural

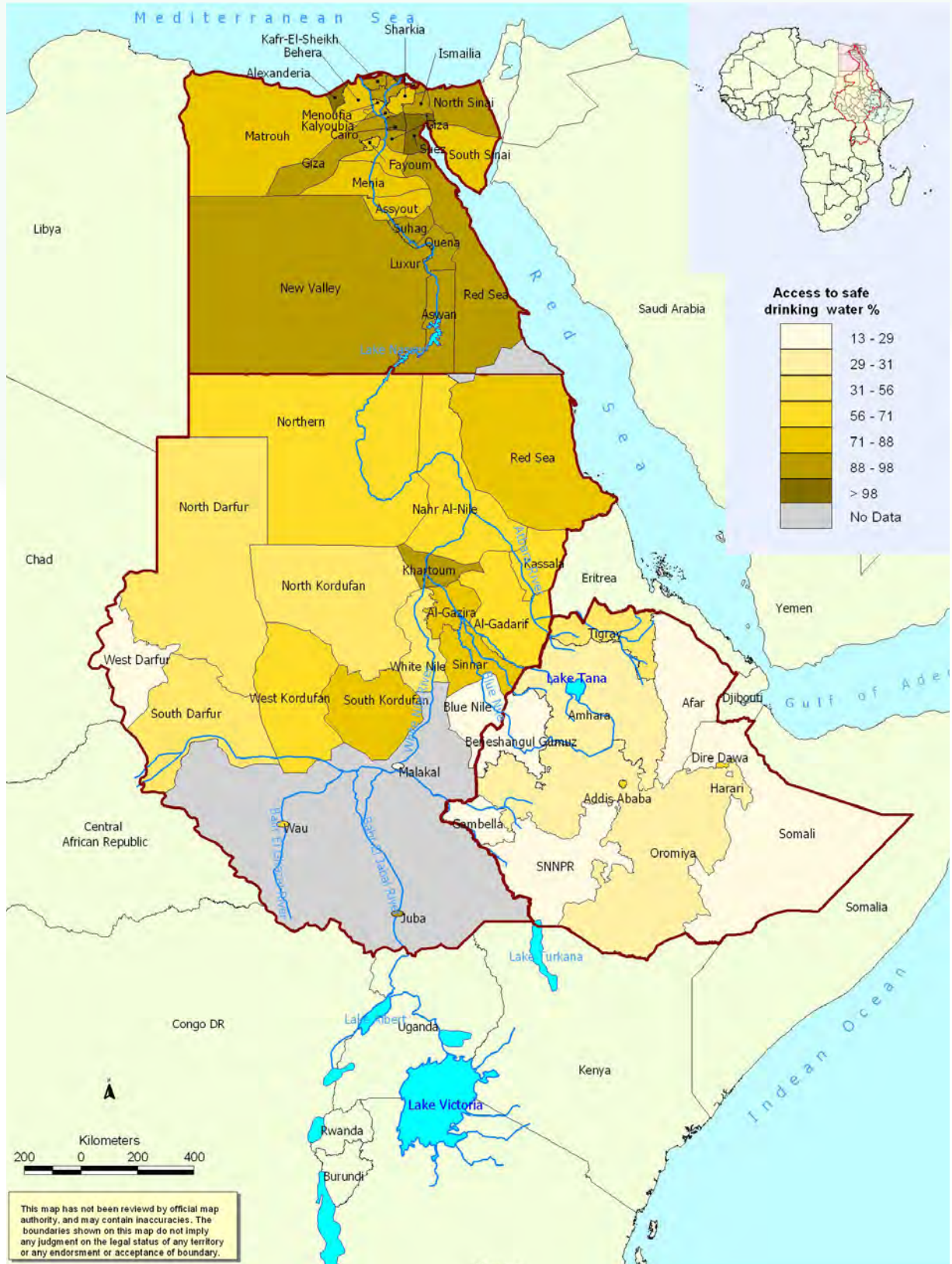
population relies on piped water supply. However, these figures do not reveal the marked disparities that exist among the governorates. Port-Said, Suez, Damietta, Kafr-El-Sheikh, Giza, Fayoum, and Aswan have reached full access to improved water sources. The lowest coverage was in Menia 60.7 percent and Suhag 71.9 percent.

Roughly 79 percent of urban population and only 47 percent rural population in Sudan have access to an improved source of drinking water. The situation in West Darfur is considerably worse than in other states; only 26 percent of the population in this state gets its drinking water from an improved water source.

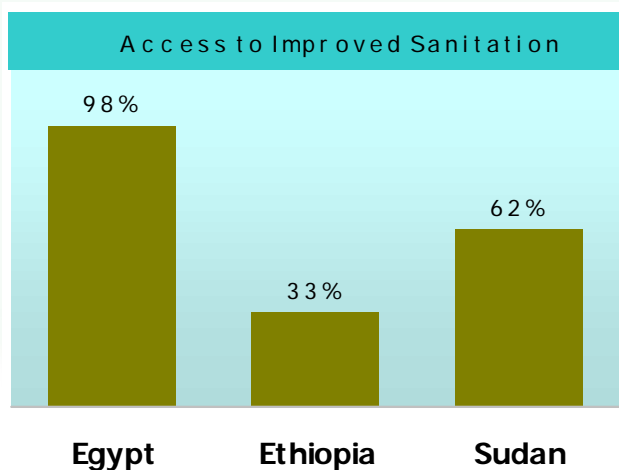
In Ethiopia, there is significant variation in the source of drinking water between urban and rural areas. More than three quarter of the urban population and only 15 percent of rural population has access to improved water sources. Ethiopia's Amhara, Somali, Benishangul-Gumuz and Oromiya regions have the smallest proportion of their populations accessing relatively safe drinking water. Relatively better off regions in this regard are Addis Ababa, Dire Dawa and Harari with approximately 98 percent, 86 percent and 76 percent of their population, respectively, having access to safe water.



Map 6: Access to Safe Water



Map 7: Access to Improved Sanitation

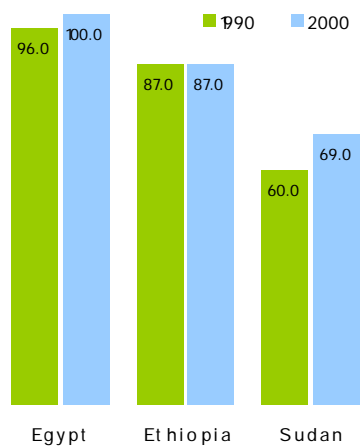


Proportion of population with access to sanitation

Adequate sanitation usually refers to the availability of a latrine in or near the house, or a flush toilet. Access to sanitation is comparatively high in Egypt; about 98 percent of the population uses adequate sanitation. The rate for Sudan is 62 percent and for Ethiopia it is only 33 percent.

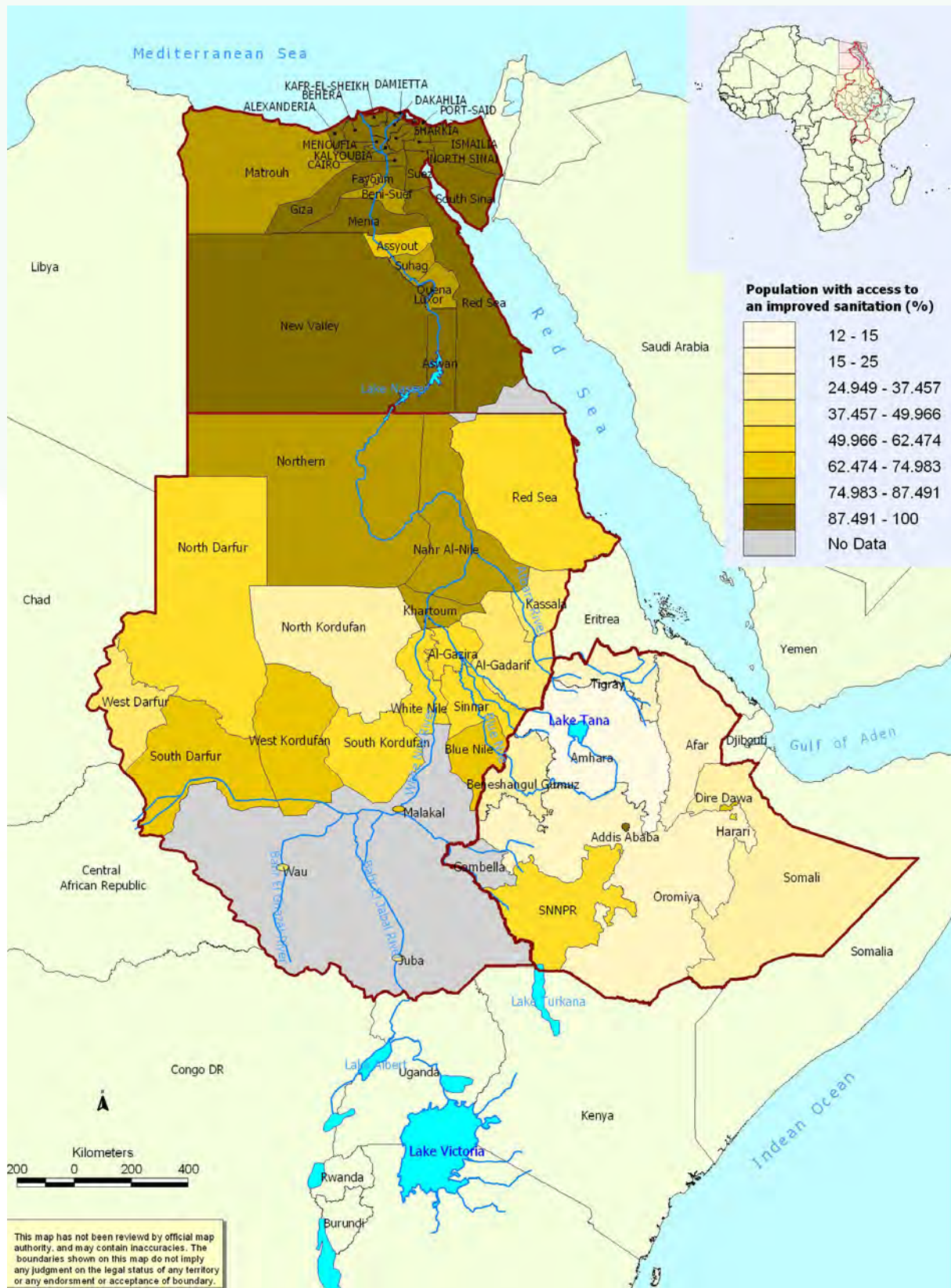
Sixty percent of the population of Sudan has access to sanitary means of excreta disposal with a range in the northern states between 85.6 and 36 percent. Only 46 percent of the rural population has such access. In the major southern towns access to sanitary means of excreta disposal stands at 48 percent.

Access to an improved sanitation
% of Population
URBAN Areas



Access to improved sanitation in Egypt has been progressively expanded in urban areas of Egypt. Over the period 1990 to 2000, the urban dwellers in Egypt have achieved full access. Similarly, Sudan has made some improvements in this regard. The percentage of urban population with access to improved sanitation increased from 60 percent in 1990 to 69 percent in 2000. On the other hand, in Ethiopia, the percentage of urban population with adequate sanitation remained the same at 87 percent.

Map 7: Access to Improved Sanitation







Education

Map 8: Adult Literacy Rate

Proportion of adults able to read and write

Adult literacy rate is the proportions of population over the age 15 years who can read and write.

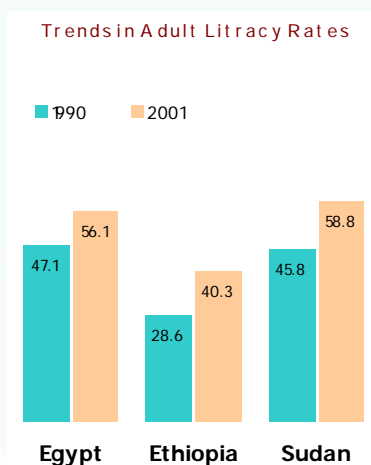
Ethiopia, with an overall rate of 40 percent in 2001, has the lowest adult literacy rate. In Egypt, two-third and 44 percent of all adult men and women, respectively, are literate. Sudan has the literacy rates of 69 percent and 46 percent for men and women, respectively.

In Egypt, there are large differences in adult literacy rates among governorates, with Upper Egypt ranking at the bottom of the list for both males and females especially in the governorates of Beni-Suef, Fayoum, Menia, Assyout, and Sohag.

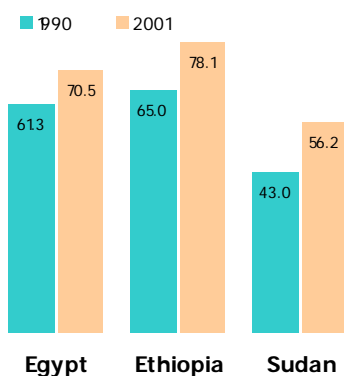
In Sudan the highest literacy rate is in Northern state (72 percent) with a lowest rate in West Darfur (28 percent). The literacy rate in the main towns in the south is 54 percent among males and 52 percent among females.

In Ethiopia, females have attained a much less level of literacy (31 percent) as compared to male (41 percent). Similarly, the urban population is much more advantaged (70.4 percent) than the rural ones (28 percent).

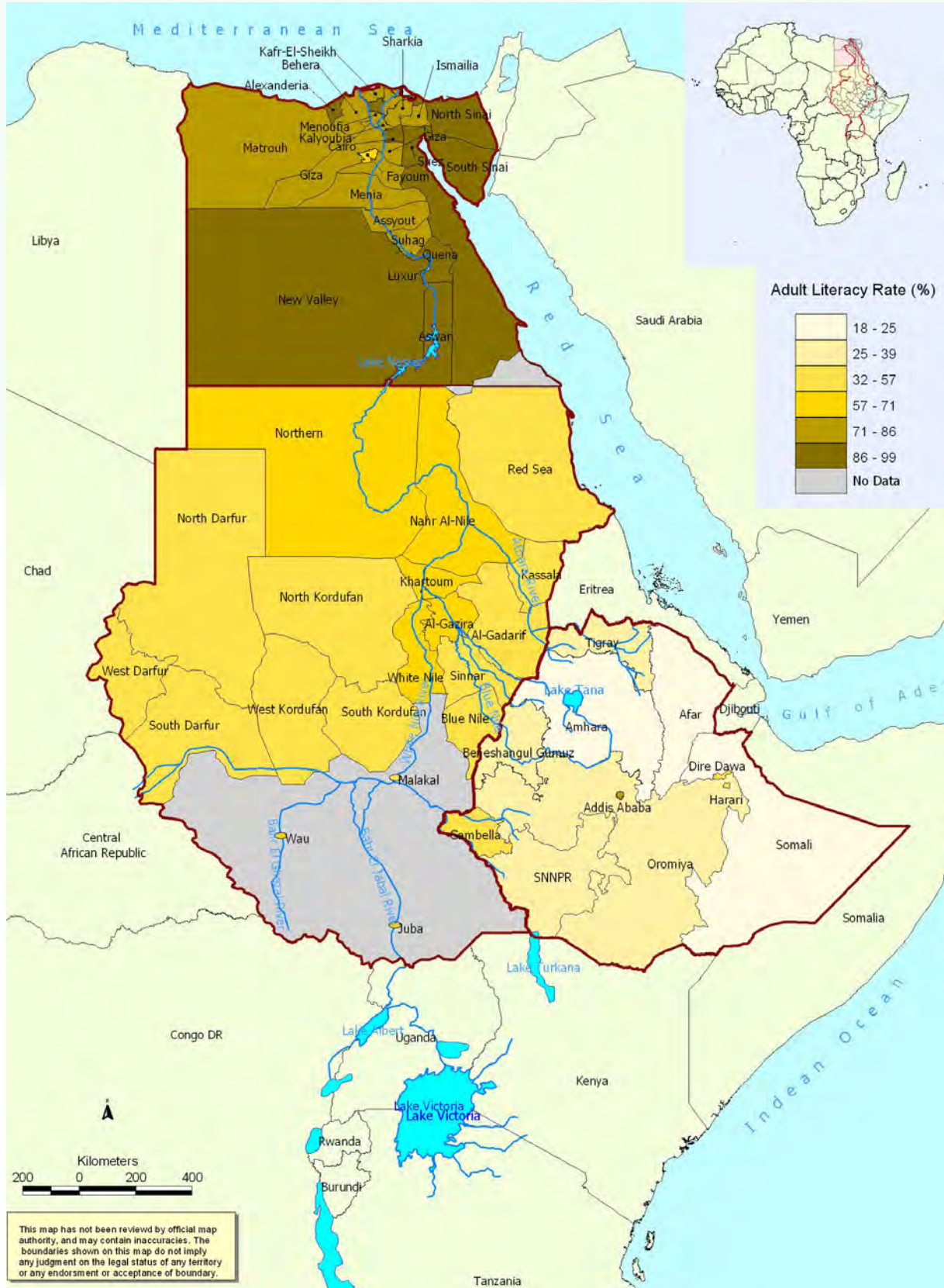
Literacy achievements in Ethiopia vary across regions. Addis Ababa stands in sharp contrast with other regions with a 79 percent literacy rate followed by Harari, Dire Dawa where literacy levels are 50 percent.



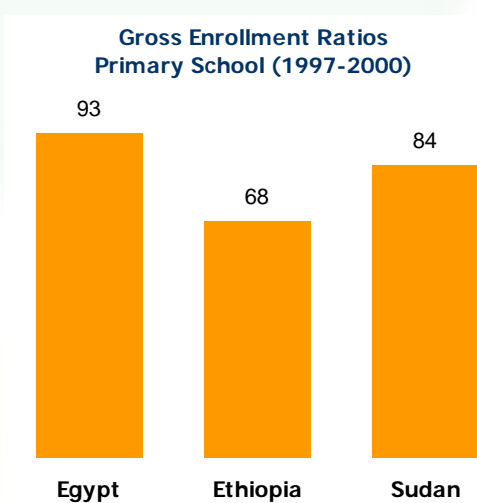
Trends in Youth Literacy Rates



Map 8: Adult Literacy Rate



Map 9: Enrollment Ratio: Primary Education



Primary school gross enrollment ratio

The Gross Enrollment Ratio (GER) is the proportion of total enrollment in primary school, irrespective of age, out of the corresponding school age population. The GER in Egypt was the highest in the region, with 103 for boys and girls, respectively.

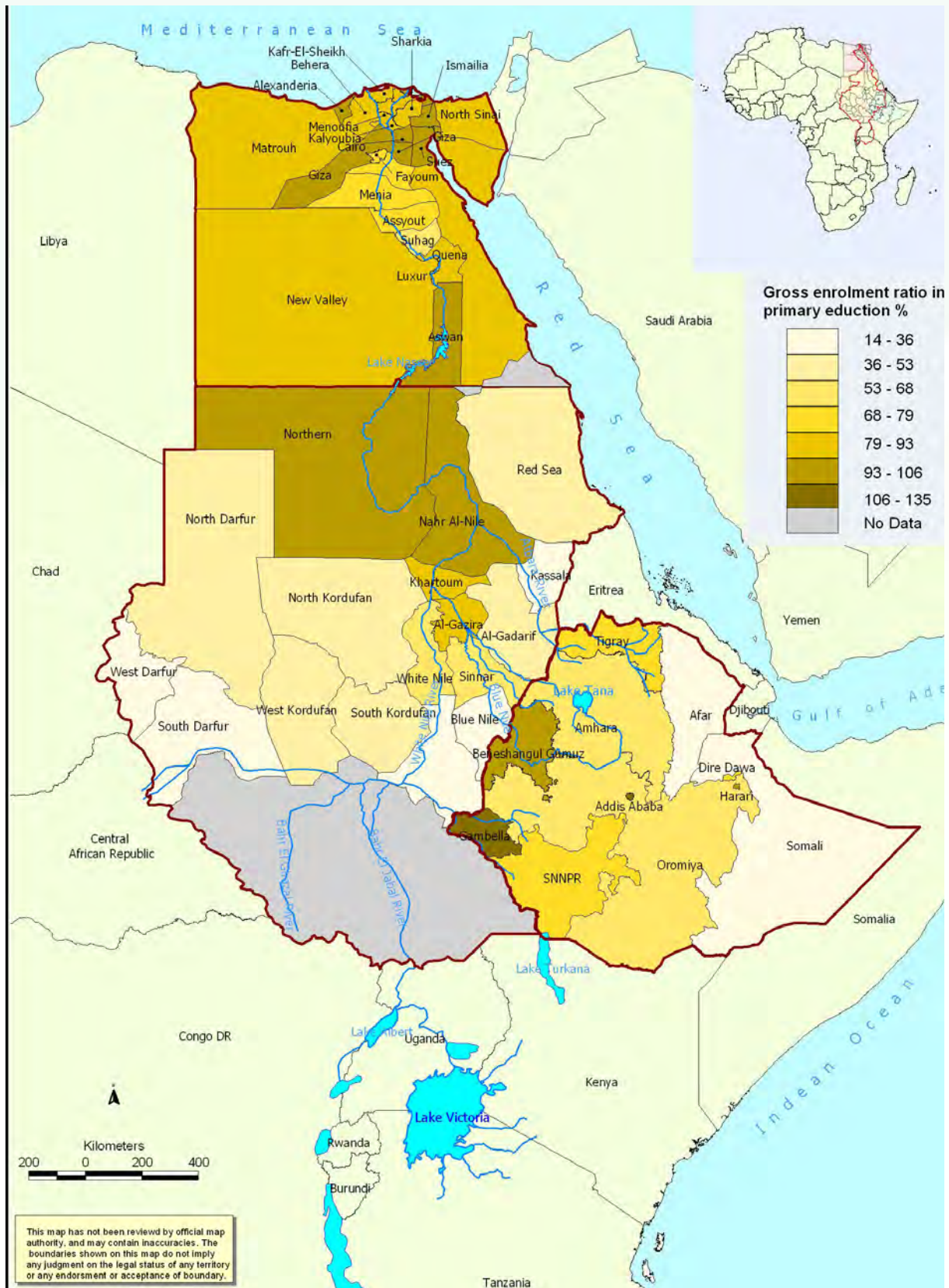
In Egypt, the highest proportion of children not enrolled in basic education is in rural Upper Egypt (24.70 percent) followed by in rural Lower Egypt (20.97 percent).

Forty-seven percent of children of primary school age in Sudan are attending school. School attendance in Southern Darfur is significantly lower than in the rest of the country at 22 percent. At the national level, there is virtually no difference between male and female primary school attendance.

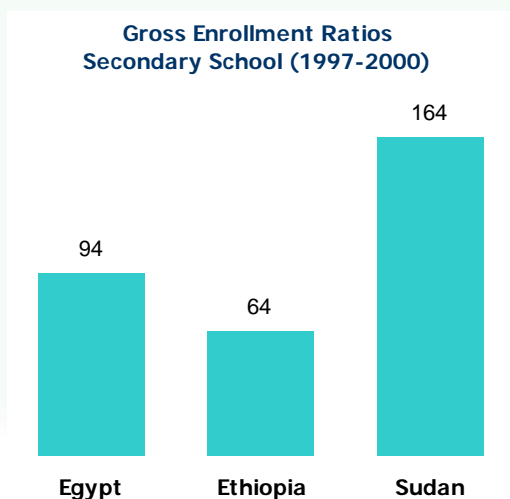
The GER for boys and girls in Ethiopia were 72 and 52 percent, in their respective orders, and for Sudan it was 59 percent and 51 percent.

In Ethiopia, the ratio of female to male enrollment was 0.68 while in Sudan is 0.86. This means that compared to boys, a great majority of the girls do not have access to primary education.

Map 9: Enrollment Ratio: Primary Education



Map 10: Enrolment Ratio: Secondary Education

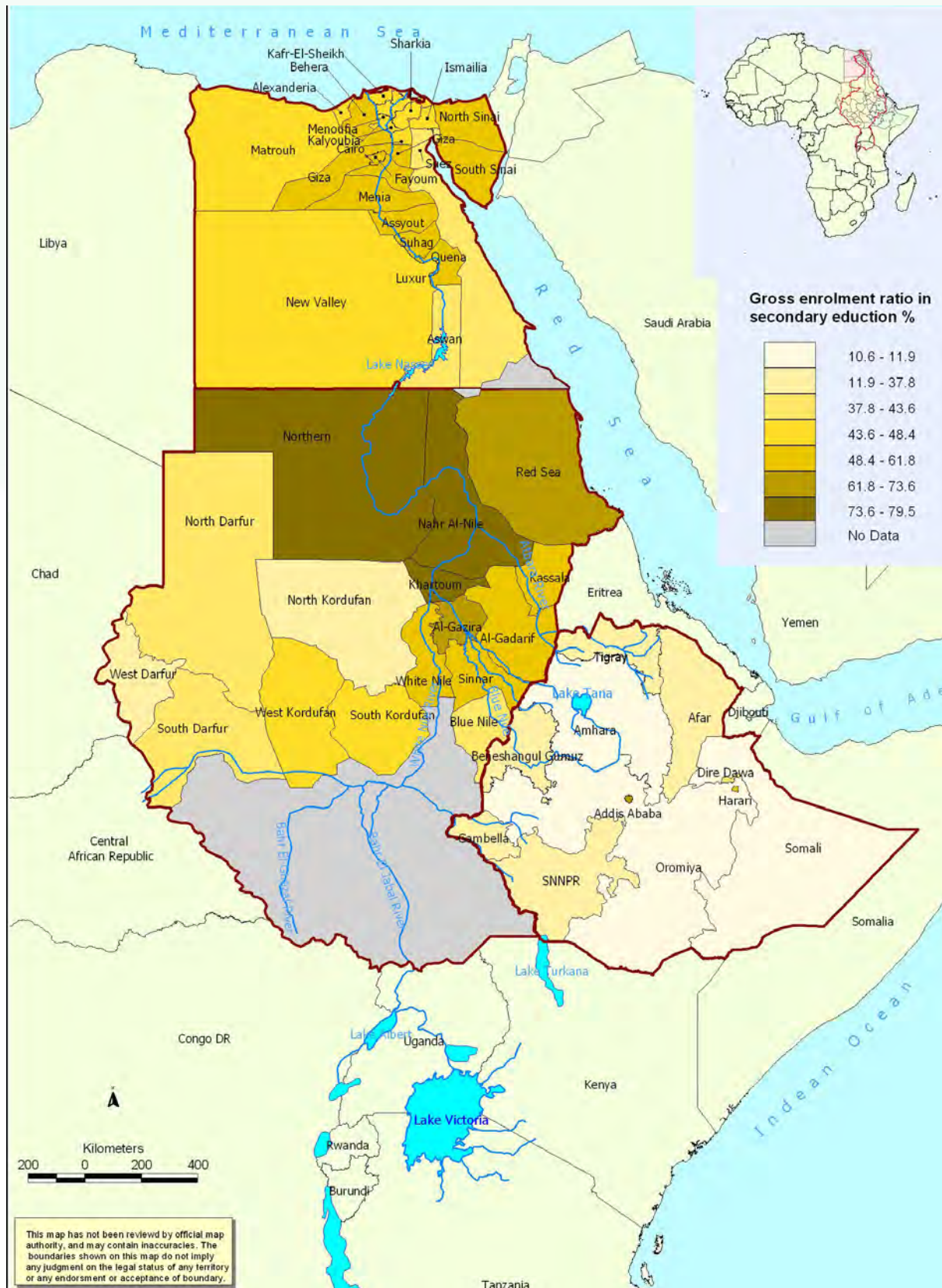


Secondary school gross enrollment ratio

The secondary school Gross Enrollment Ratio (GER) is the proportion of total enrollment in secondary school, irrespective of age, out of the corresponding secondary school age population.

Secondary school gross enrollment ratio was comparatively high in Egypt: 88 percent for boys and 83 percent for girls. In Sudan female secondary enrollment ratio (36 percent) was much higher than for boys (22 percent). In Ethiopia, on the other hand, the rate was 22 percent for male and 14 percent for female.

Map 10: Enrolment Ratio: Secondary Education



Map 11: School Drop out Rate: Primary Education

Primary school drop out rate

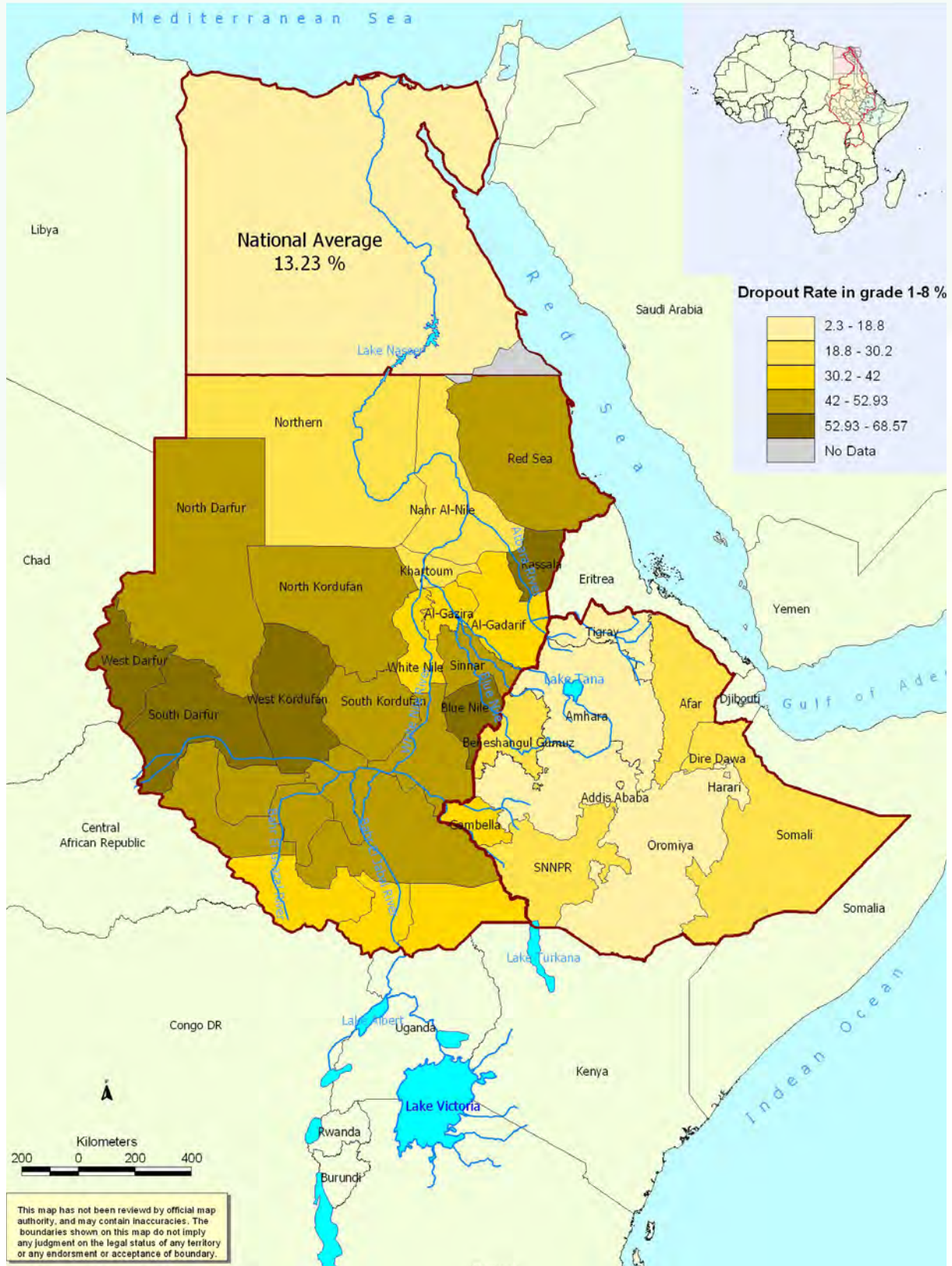
School drop rate helps to understand how the education system in terms of use of available resources and time. This rate is commonly used to measure the efficiency of the education system in producing graduates of a particular education cycle or level. Leaving a school (dropout) before completing a particular cycle or level of education is a waste of resources meaning utilizing more resource than allocated to a student.

The meager resources allocated for education and time will be wasted or underutilized.

Egypt has the lowest school drop out rate in the region. At national level it was about 13 percent. Primary school (Grades 1-8) drop out rates in Sudan were significantly high, with the lowest rate in Gazira (34 percent) and the highest in South Darfur (68 percent).

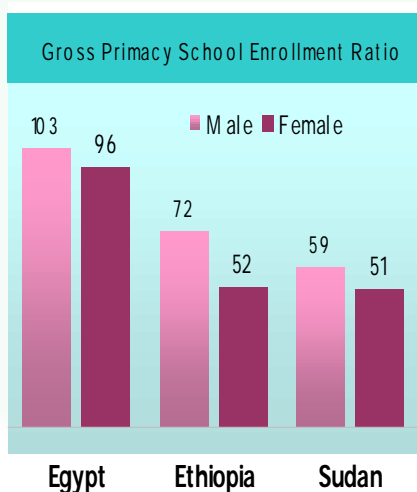
In Ethiopia, primary school drop out rate ranges from 2.1 percent in Addis Ababa, to 22.4 percent in Southern Nations, Nationalities and Peoples region. In Benishangul-Gumuz and Afar regions, primary school dropout rates were 20.4 percent and 19.5 percent, respectively.

Map 11: School Drop out Rate: Primary Education

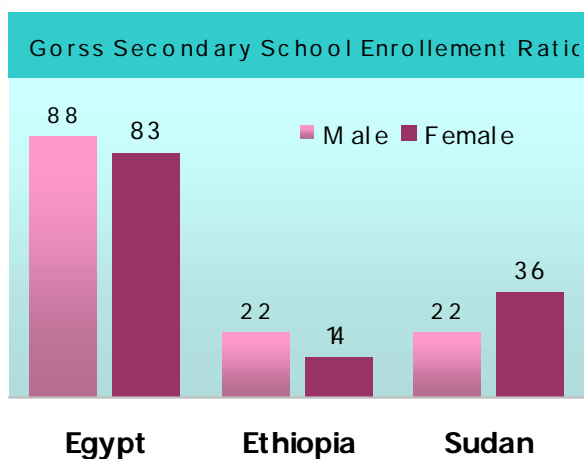


Map 12- Gender Parity Index: Primary Education

Proportion of Girls in Primary Education



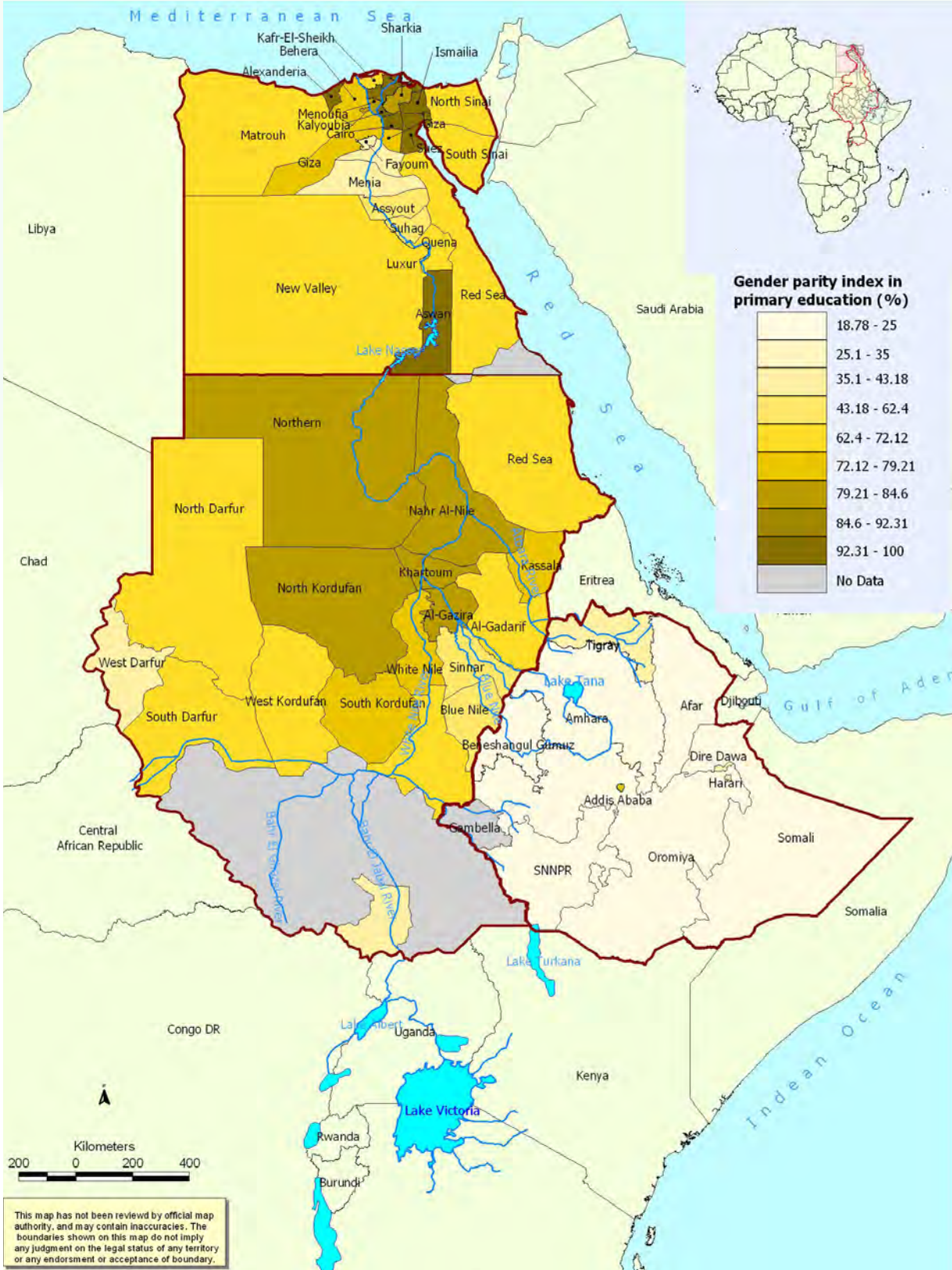
Gender Parity Index (GPI) is the ratio of female to male enrollment. In Egypt, significant progress has been achieved to close the gender gap in school enrollment. The ratio of females to males in primary education increased from 80 percent in 1990/91 to 89 percent in 2000/01. In secondary education, the ratio of females to males increased from 77.0 percent to 99.7 percent during the same period. However, there are still more girls than boys out of school. The net enrollment rate in primary education for girls was still less than that of the boys. In 2001, this ratio fluctuated between 57.9 percent in Fayoum governorate and 100 percent in both Suez and Damietta governorates.



In Ethiopia, over the past few years gross primary and secondary school enrollment ratios have increased for both boys and girls. The growth rate is higher for girls than for boys. The total GER has increased by 107 percent and while girls' enrollment has increased by 119 percent. However, although the national GER for primary school has increased, girls are still more disadvantaged. The GPI in 1999/2000 was 0.7. This means that for every ten boys that were enrolled, there were only 7 girls, showing lower enrollments of girls.

In Sudan a similar trend is observed. Over the last decade, Gender Parity Index (GPI) increased from 0.75 in 1990/01 to 0.82 in 2000/01.

Map 12- Gender Parity Index: Primary Education



A Woman ,who was 7 months pregnant at the time, visits her local health clinic in Cairo, Egypt for routine blood haemoglobin and blood pressure checks.

Copyright: WHO/Heba Farid , 2005
Source:World Health Organisation
www.who.int





Health

Map 13: Life Expectancy

Expected length of life at birth

Life expectancy is the average number of years to be lived by a group of people born in the same year, if mortality at each age remains constant in the future. Life expectancy at birth is a measure of overall quality of life in a country and summarizes the mortality at all ages. It also indicates the potential return on investment in human capital. Low life expectancy levels reflect, among other factors, poor health conditions. High incidence of malaria and other diseases, combined with the lack of adequate health services, are problems affecting life expectancy in the region.

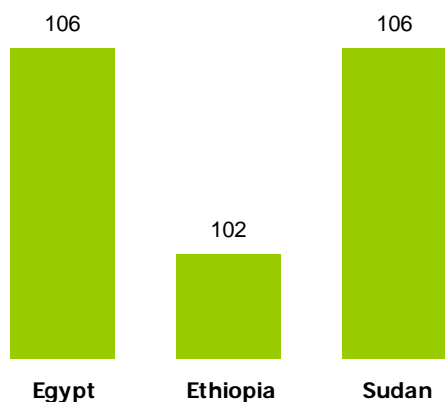
Life expectancy at birth in the sub-basin countries ranges from 69 years in Egypt to 46 years in Ethiopia. The figure for Sudan is 56 years.

Life expectancy trends over the period 1970 to 2005 show that, compared to Ethiopia, Egypt and Sudan made significant improvements. Life expectancy in Egypt increased by 17 years (from 52 years to 69 years), and in Sudan by 12 years (from 44 years to 56 years). In Ethiopia, it increased merely by 4 years (from 42 years to 46 years).

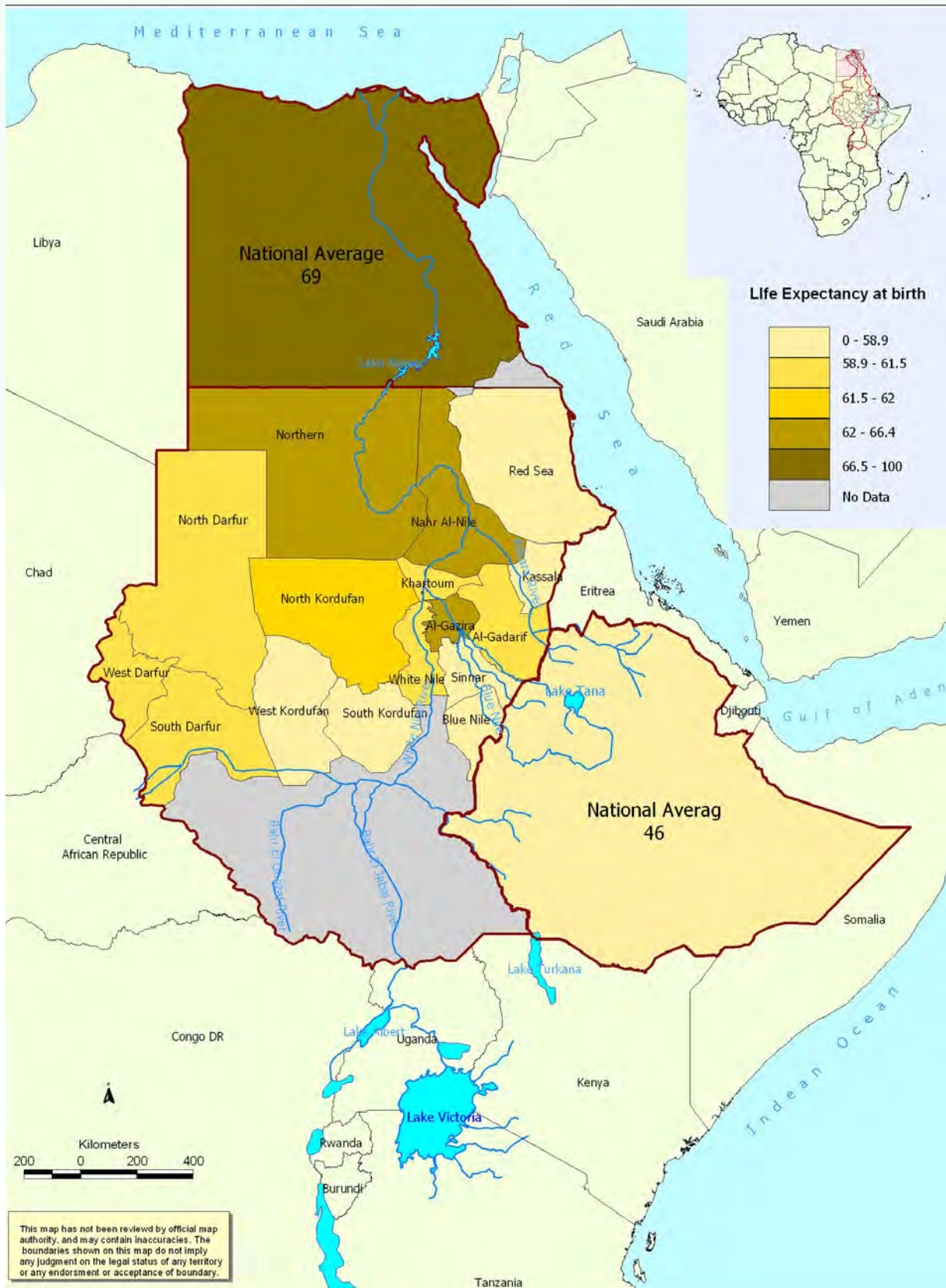
While data on life expectancy levels disaggregated by state are not available, as is the case with other social indicators, it is expected to be lower in rural areas.



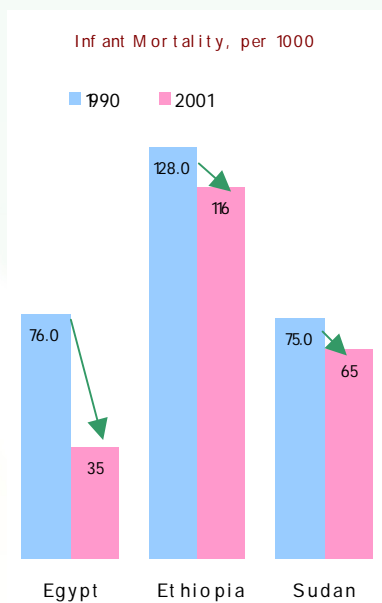
Life expectancy female as a % of males, 2002



Map 13: Life Expectancy



Map 14: Infant Mortality Rate



Deaths in one year per 1,000 live births

Infant Mortality Rate (IMR) is the number of deaths of infants under one year old in a given year per 1,000 live births in the same year and is often used as an indicator of the level of health in a country. Infant mortality differentials in the region are strikingly significant. It ranges from approximately 116 in Ethiopia to only 35 in Egypt.

Over the period 1990 to 2001, Egypt was able to reduce IMR from 76 to 35 deaths per 1000 live births, i.e., by over 50 percent. During the same period, IMR was reduced marginally from 75 to 65 in Sudan and from 128 to 116 in Ethiopia.

In terms of regional variations, Upper Egypt governorates, except Giza, have higher infant mortality rates than Urban and Lower Egypt governorates.

For northern Sudan, infant mortality rate (IMR) is 68 per 1000 live births; 68 in rural and 67 in urban areas; 73 for males and 62 for females.

Ethiopia's Tigray, Amhara, Benishangul-Gumuz, Gambella, and Southern Nations and Nationalities and Peoples regions have higher infant mortality rates.

Map 15: Maternal Mortality Rate

Deaths in one year per 100,000 live births

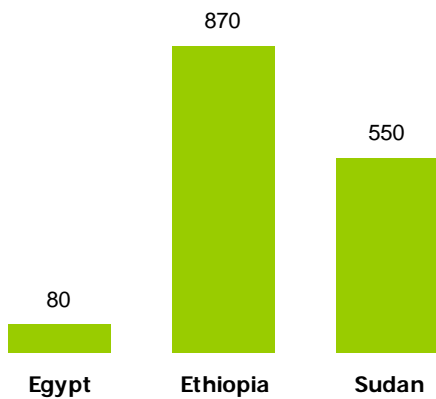
Maternal Mortality Rate (MMR) represents the risk of pregnancy-related deaths associated with each pregnancy. The immediate causes of maternal mortality and morbidity include inadequate care of the mother during pregnancy and delivery. Other factors include women's subordinate status, poor health and inadequate nutrition.

Maternal deaths per 100,000 live births in the sub-basin countries vary significantly. Ethiopia has one of the highest maternal mortality rates in the world. Current estimates point at 1,800 maternal deaths per 100,000 live births. The key factors leading to the maternal deaths in Ethiopia include abortion, obstructed labour, sepsis, hemorrhage and hypertension.

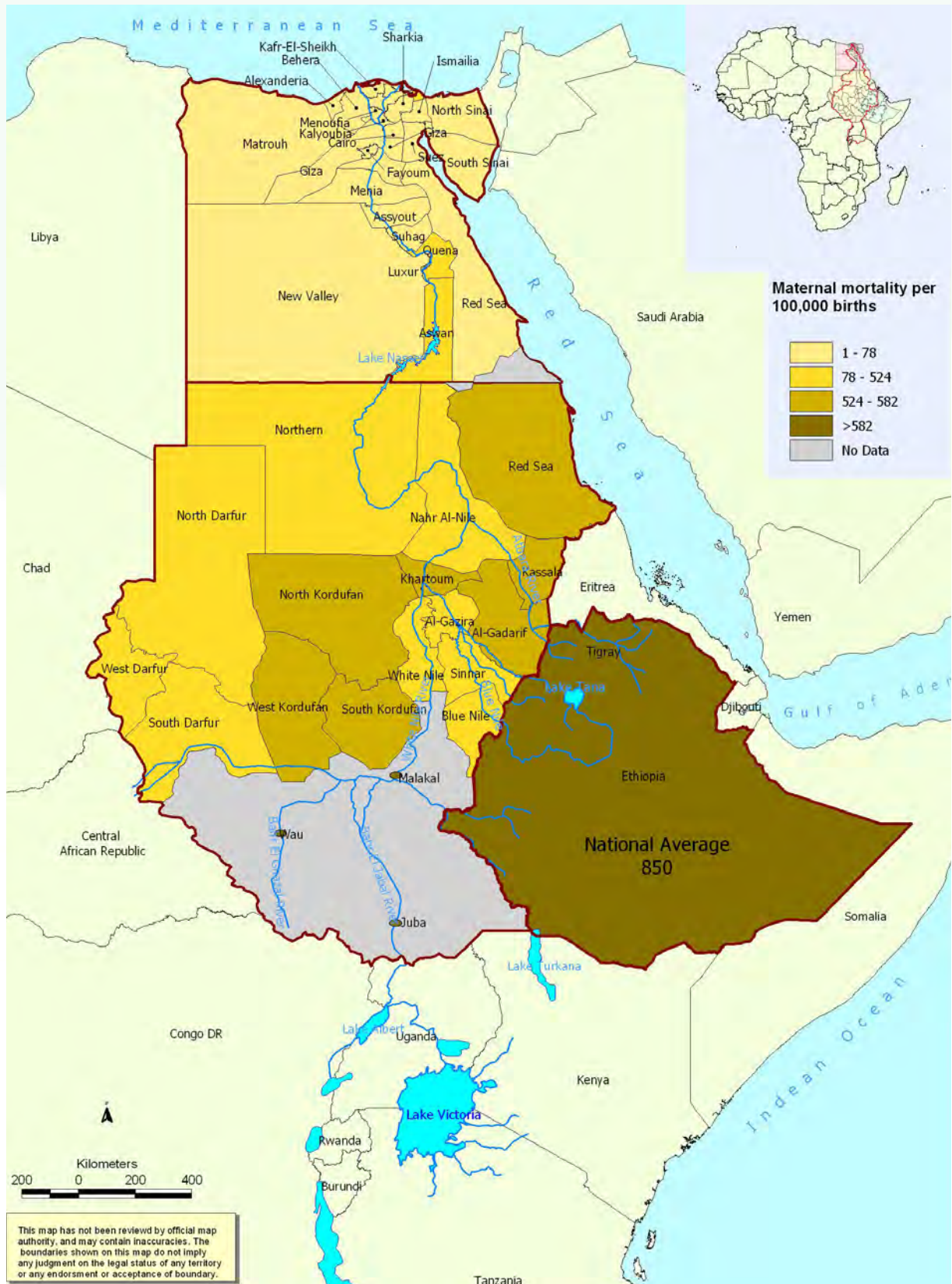
Maternal mortality situation in Ethiopia is aggravated by a combination of factors including limited access to health care services as well as cultural factors that pre-dispose women to pregnancy-related morbidity and mortality.

In Egypt, maternal death was caused primarily by preventable factors. Some governorates, such as Suez, Aswan, and Assiut showed marked improvements in maternal mortality ratio reaching to almost 70 percent, 50 percent, and 90 percent reductions, respectively.

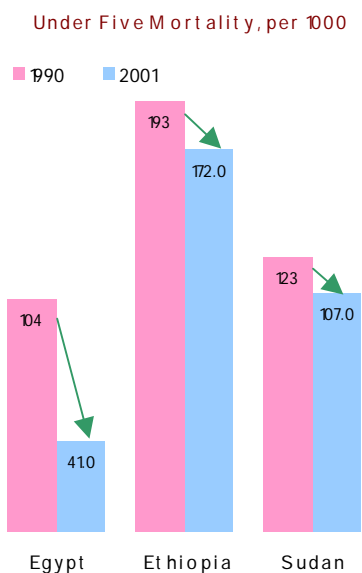
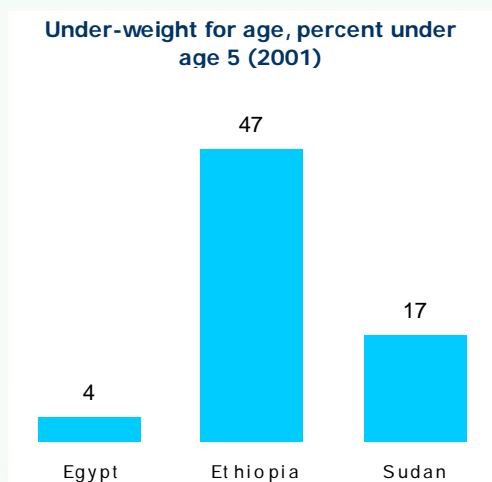
Maternal Mortality Ratio, per 100,000 live births (1985-2001)



Map 15: Maternal Mortality Rate



Map 16: Child Malnutrition



Proportion of Children Wasting

Malnutrition is a lack of healthy foods in the diet or an excessive intake of unhealthy foods, leading to physical harm. Malnutrition in children is caused by consuming too little food energy to meet the body's needs. Adding to the problem are diets that lack essential nutrients, illnesses that deplete those nutrients, and undernourished mothers who give birth to underweight children.

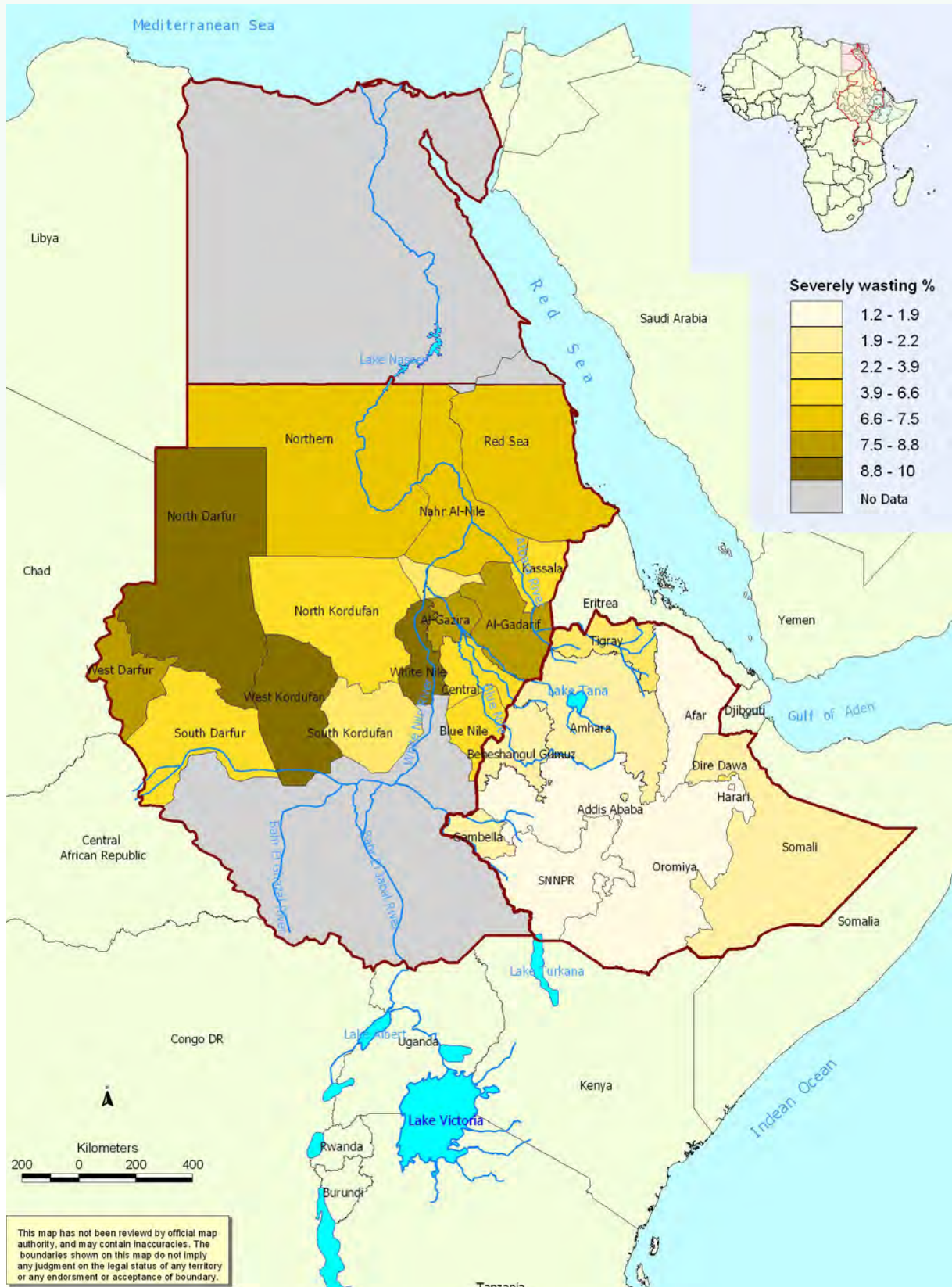
Using relative height and weight measures of children, we can generate both short and long-run indicators of their nutritional status. Their nutritional status, in turn, reflects the extent to which the welfare situation of these children has been affected and the degree of their vulnerability.

Wasting measure takes weight over age children between the ages of 3 and 60 months and relates to an international standard. This is a short-term indicator of malnutrition since the weight of a child easily fluctuates with immediate changes in nutrient intakes. It is condition of low weight-for-height.

Wasting is very high in Ethiopia and Sudan. The national prevalence of wasting percentage of wasting and severely wasting children in Ethiopia in 2000 was around 9.6 percent and 1.8 percent, respectively. The highest proportion of wasting children in Ethiopia were found in Afar, Tigray, Somali, Benishangul-Gumuz, and Amhara regions compared to Oromiya and Southern Nations and Nationalities and Peoples region.



Map 16: Child Malnutrition



Map 17: Child Malnutrition

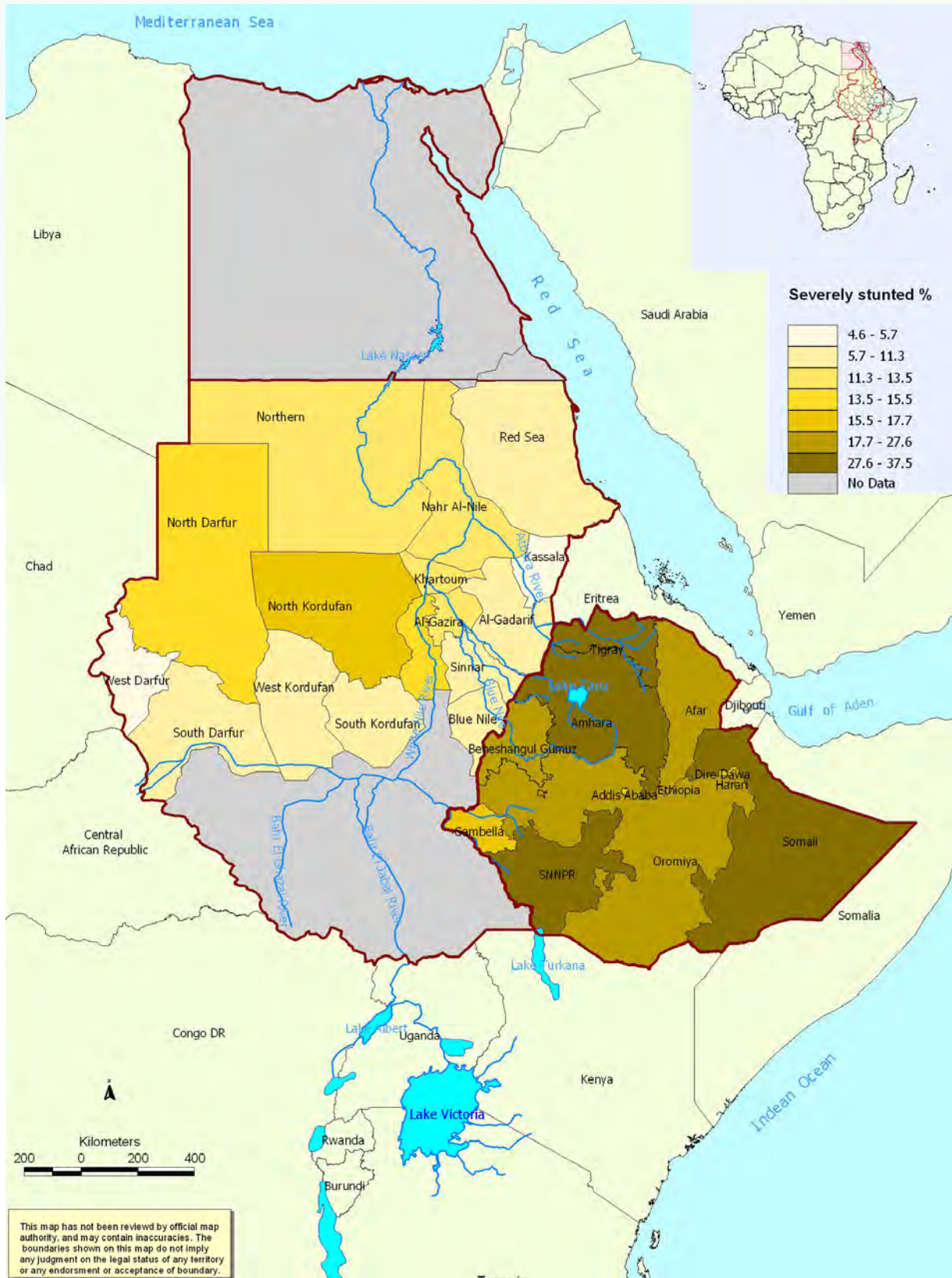
Proportion of children severely Stunted

Stunting in children is the restriction of the growth of the children so that they do not develop to their normal size. It is a condition of low height for age. Stunting is nutritional deficient state of long-term food deficiency often combined with persistent ill health. Stunting is when height of age's 'Z' score is less than -2 standard deviation. Severe stunting when height of age's 'Z' score is less than -3 standard deviation.

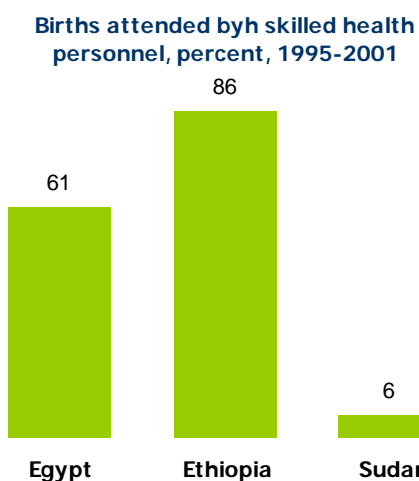
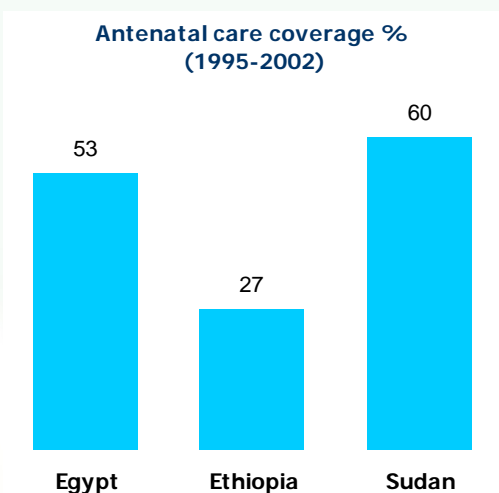
In Ethiopia, Amhara region has the largest proportion of severely stunted (38 percent) children followed by Southern Nations and Nationalities and Peoples region with 33 percent and Tigray with 32 percent severely stunted children.

Sever malnutrition was highest in South Sudan (34 percent), Eastern Region (24percent), Kordofan (21percent) and Darfur (20percent) compared with 9percent in Khartoum. Both moderate and severe stunting were higher in rural than urban areas in all the regions.

Map 17: Child Malnutrition



Map 18: Birth Attended by Skilled Personnel



Percent of births attended by health personnel

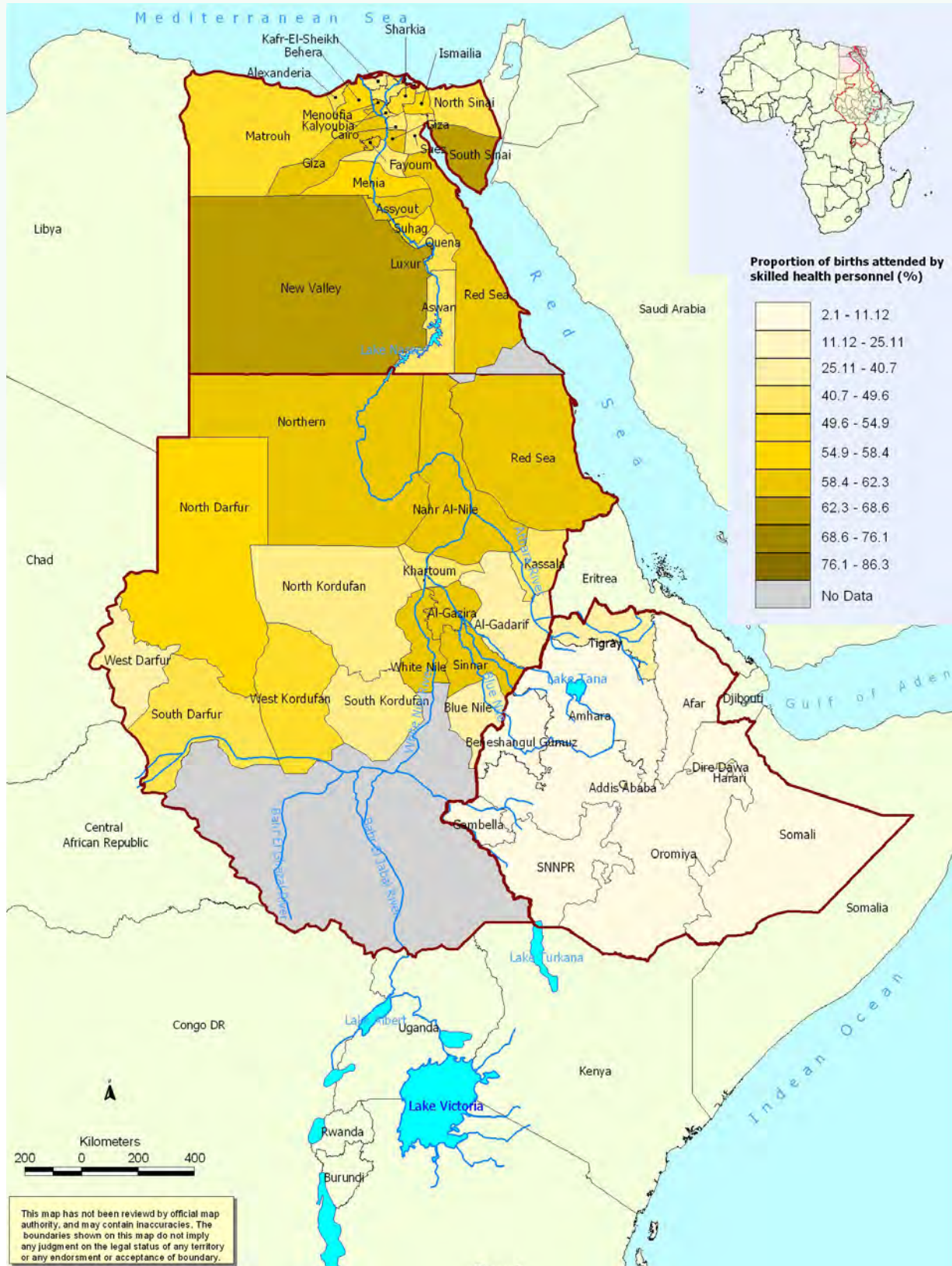
The provision of delivery assistance by trained attendants can greatly improve outcomes for mothers and children by the use of technically appropriate procedures, and accurate and speedy diagnosis and treatment of complications. Skilled assistance at delivery is defined as assistance provided by a doctor, nurse, or midwife.

Egypt has the highest proportion of births attended by skilled personnel. The range is from 49 percent in Kafr-El Sheikh to as high as 86 percent in South Sina.

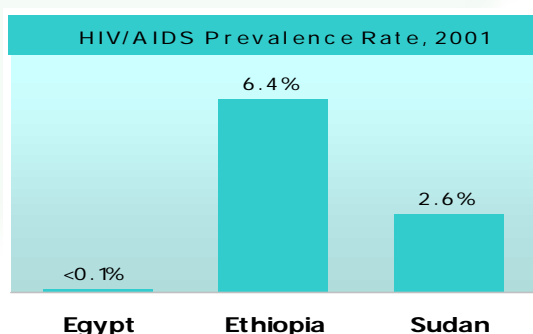
In Sudan, skilled personnel delivered about 87 percent of births. This percentage is highest in Khartoum at 93 percent and lowest in Western Darfur at 70 percent.

In Ethiopia, barely 9.7 percent of pregnant women deliver with the help of skilled health workers. The majority of women do not even seek ante-natal care when pregnant.

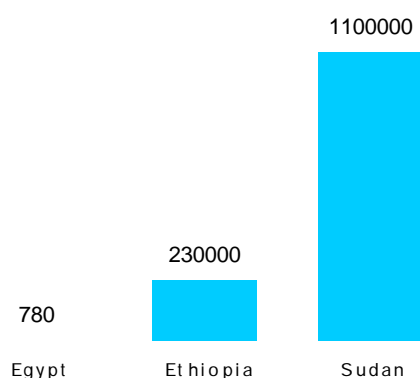
Map 18: Birth Attended by Skilled Personnel



Map 19: HIV/AIDS



Women Living with HIV/AIDS (% 15-49 age (2001))



Estimated Prevalence of HIV (proportion of the 15-49 year old population)

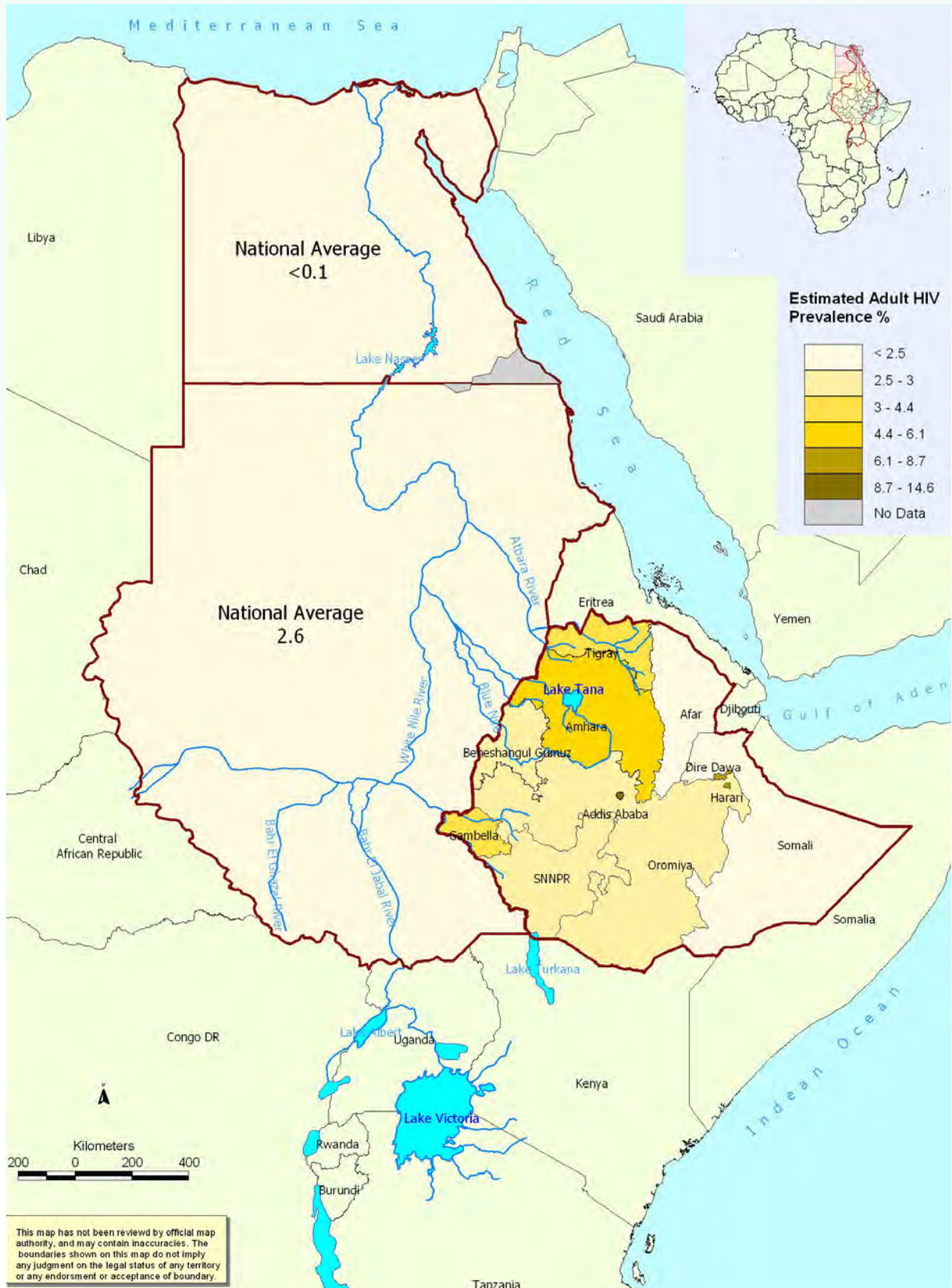
HIV prevalence rate gives an estimate of the percentage of adults (aged 15-49) living with HIV/AIDS and is calculated by dividing the estimated number of adults living with HIV/AIDS at yearend by the total adult population at year end.

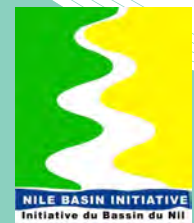
HIV prevalence varies markedly across the ENB countries. The spread of HIV/AIDS in Ethiopia is alarming. In Ethiopia in 2003 was 4.4 percent; 12.6 percent in urban areas and 2.6 percent among the rural population. At the end of 2001 an estimated 2.1 million people were living with HIV/AIDS. The highest HIV prevalence rates are concentrated among the youth. The high-risk ages for women and men are between 15 and 24 years, and between 25 and 34 years, in their respective orders. Reported AIDS cases show that 91 percent of infections occur among adults between 15 and 49 years. Eighty to ninety percent of all HIV infections are caused by heterosexual transmission. The two most important risk factors are heterosexual contact, and having sexually transmitted infections.

Women constitute a majority of HIV-infected adults and teenage girls are infected at a higher rate than boys.

Egypt is a low prevalence country for HIV/AIDS, below 0.1 percent.

Map 19: HIV/AIDS







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