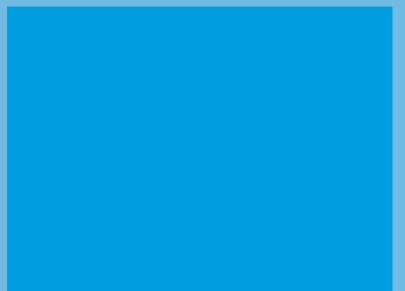
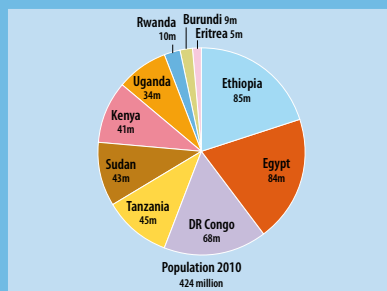
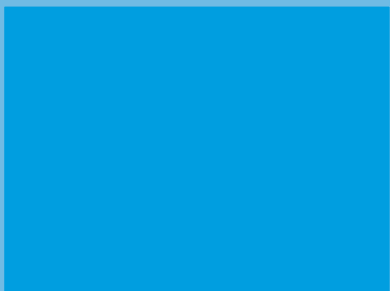
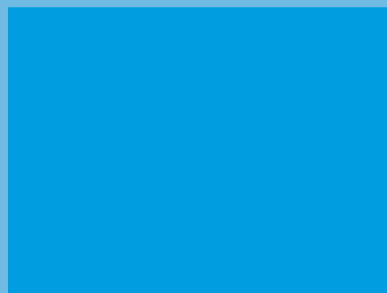


Opportunities and Challenges of the Growing Nile Population



KEY MESSAGES

- The Nile countries have a combined population of 437 million, 54 per cent of which (238 million) resides in the Nile Basin.
- Water availability appears to be the chief determinant of population distribution in the basin. In Egypt and Sudan, population is largely concentrated along the course of the River Nile, while in the upstream countries it follows the pattern of rainfall distribution.
- The population in the region is rising rapidly, presenting governments with both opportunities and challenges. The rising population increases availability of labour for economic production, and ensures a large market for food produce, manufactured goods, and services.
- But the rising population also increases degradation of natural resources, puts pressure on economic infrastructure (transport, education, health, water, and power and telecommunication facilities), increases food security concerns, and leads to rural–urban migration, with the attendant problems of rapid urbanization.
- The factors maintaining high population growth rates are numerous, including widespread poverty, illiteracy, cultural norms, low access to reproductive health services, lack of empowerment, and civil war.
- Concerted efforts by the riparian governments at addressing high population growth rates in the 1980s and 1990s produced sharp reductions in fertility rates. Fertility rates have continued to decline in the region but more slowly.
- About 72 per cent of the basin population resides in rural areas. The dominance of rural populations is predicted to persist to 2030 and beyond in most Nile countries.
- Considering that the factors that enabled a large population to make a positive contribution to economic development are not well established in most of the Nile countries, the challenges posed by the rising population far outweigh its benefits, and threaten to prevent these countries from becoming middle-income economies by 2025 or 2030.
- To achieve the ultimate goal of slowing the rate of population growth, the basin states need to increase funding for activities aimed at managing the population growth, and to intensify efforts at holistic rural development.

Women and children in Rwanda queue to collect tablets during the Mother and Child Health Week, held in April 2010. Improving the health of women and children is seen as an incentive to have smaller families.



POPULATION: A TWO-SIDED DEVELOPMENT ISSUE

The population of a nation or region – which represents the numerical strength of its human resources – is its most important resource. However, this presents a two-faced development issue. On the one hand, it is an asset, and a vital factor in wealth creation and economic development. On the other hand, it is a driver of environmental degradation and unsustainable development.

A large and rising population results in greater anthropogenic activity for sustenance and improved living standards. In a river basin, population growth ultimately leads to increasing demands and competition for scarce freshwater resources, and expanding degradation of watersheds. Good water resources management must therefore deal with the population–poverty–environment nexus, and consider the broader implications of population growth on the sustainable management and development of freshwater resources.

This chapter reviews the status of the basin population and discusses its importance with respect to the sustainable management and development of the Nile River Basin. It starts with an analysis of demographic factors, such as fertility rate, birth rate, death rate, and dependency ratios, and goes on to examine the population growth rate and reasons behind it. It considers the question of costs and benefits of the burgeoning population, and the necessary conditions for its positive contribution to national and regional development. It concludes with a discussion on what the Nile Basin countries need to do to turn the population from a challenge to a valuable asset for their development.



In densely populated Rwanda, as much land as possible is used for agriculture, often in an unsustainable manner, leading, among other things, to soil erosion and river siltation.



A LARGE BUT UNEVENLY DISTRIBUTED POPULATION

Spatial population distribution

The spatial distribution of population in the basin is influenced by a number of factors among which are climate, rainfall, soil fertility, mineral resources, peace and security in the area, and social and economic infrastructure (transport, education, health, telecommunications, and hospitality sector facilities). The influence of water availability (in the form of large water bodies or rainfall) appears to overshadow other factors.

In the downstream countries, human settlement is mainly concentrated along the course of the River Nile. Population density is very high in the Nile Delta and Nile Valley in Egypt, yet these areas represent only 5 per cent of the country's land area. The concentration of population along the Nile extends further southwards into The Sudan, with most people living along the Nile in the Khartoum area, and in the irrigated areas south of the city.

In the more upstream parts of the basin, the pattern of human settlement mainly follows that of rainfall. The highest population densities in the upstream countries are in the Ethiopian Highlands and the Nile Equatorial Lakes Plateau – both regions of high rainfall. Whereas large parts of DR Congo, Eritrea, Kenya, and Tanzania are sparsely populated, the parts of these countries in the Nile Basin are densely populated as they fall in the high rainfall belt.



Cairo, Egypt – the largest of the Nile cities, with nearly 11 million residents.



A suburb of Khartoum, The Sudan.

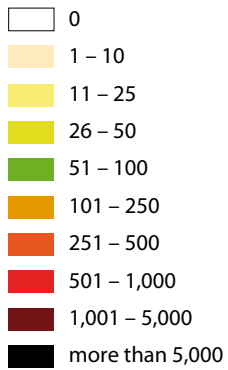


A pattern of small land holdings makes Burundi one of the more densely populated rural areas of the Nile Basin.

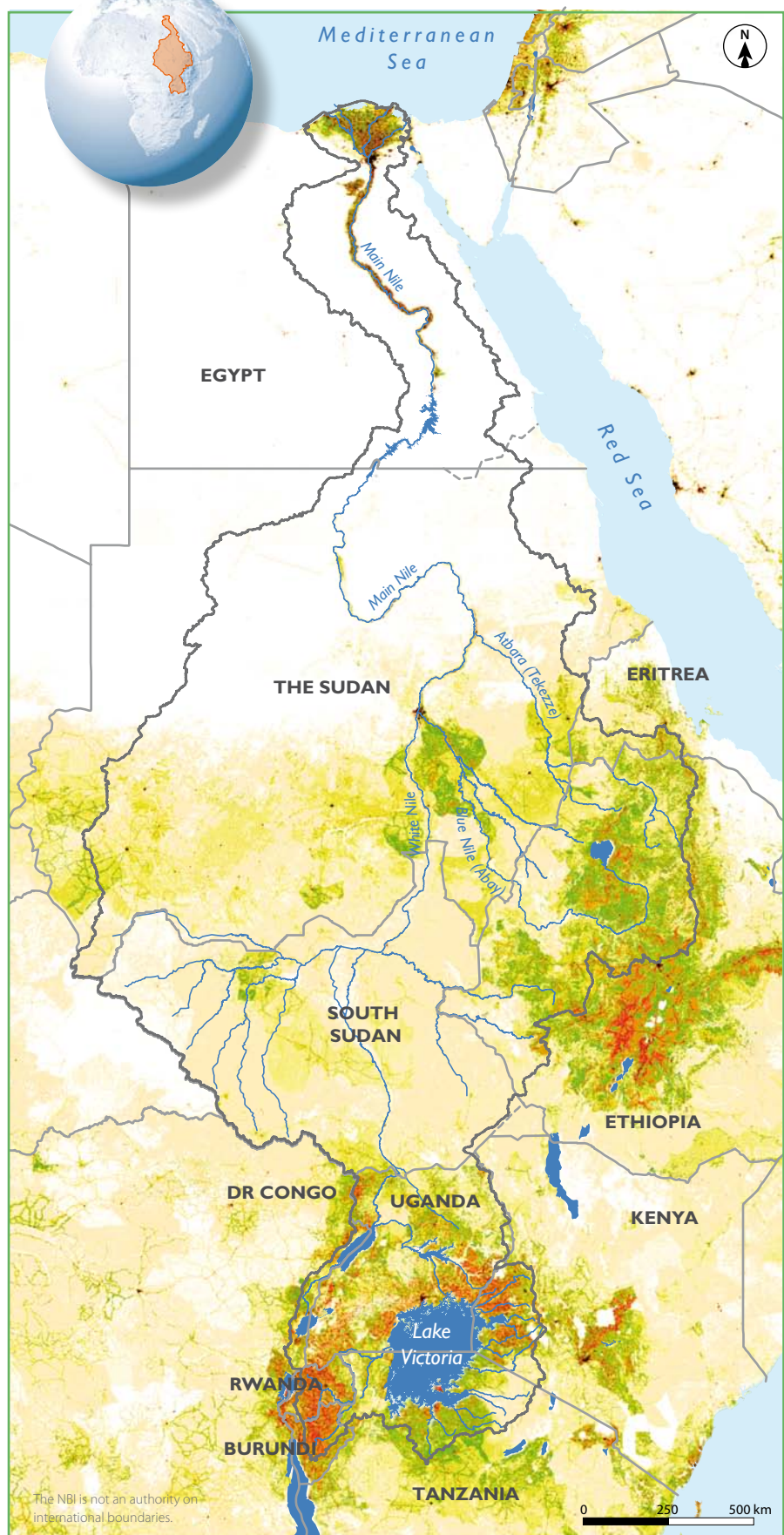
POPULATION DISTRIBUTION

People per square kilometre
2009

— Nile Basin border



(Map prepared by the NBI;
source of data: LANDSCAN 2009)



The NBI is not an authority on international boundaries.



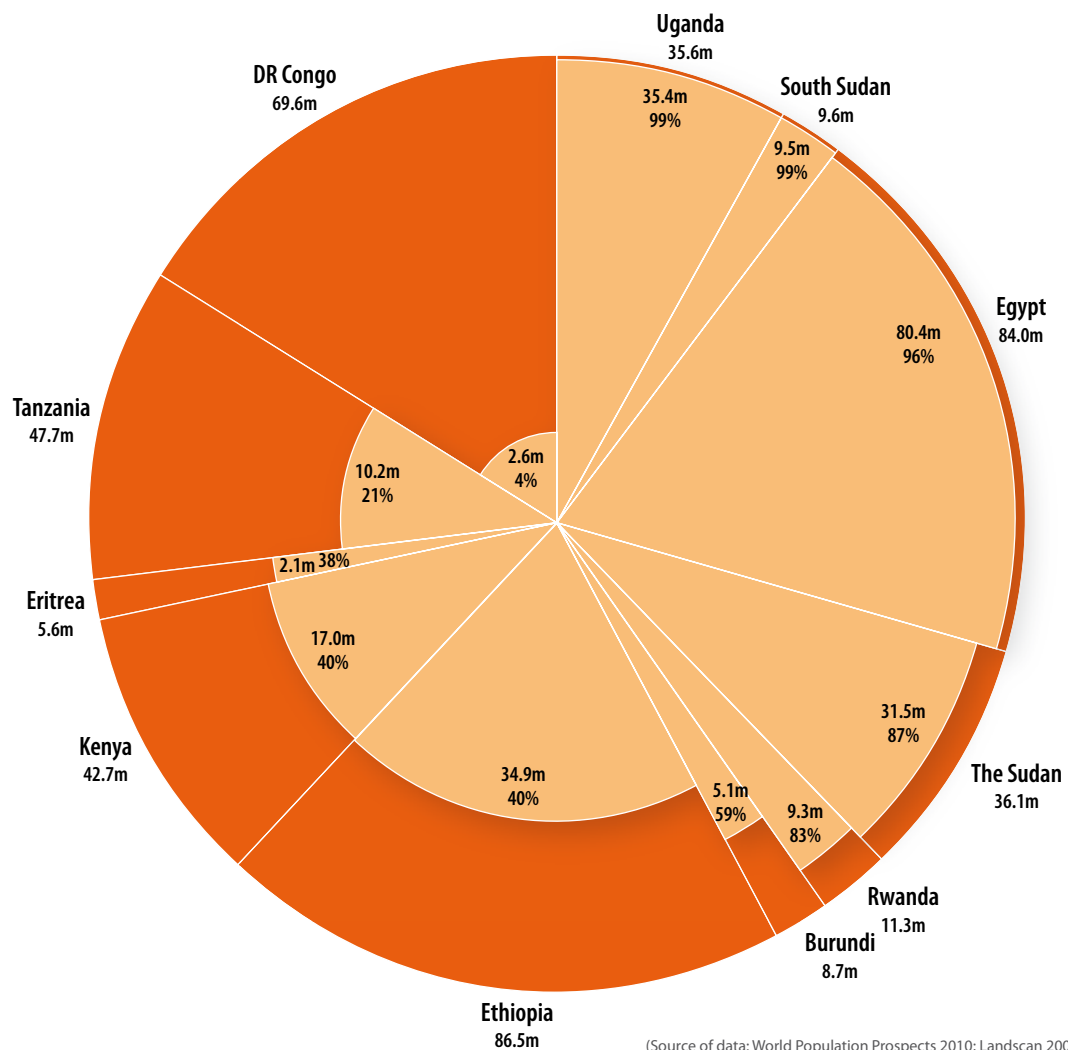
Population size

The combined population of the Nile riparian countries is 437 million, which is about 41 per cent of the population of Africa. Ethiopia has the highest population (86.5 million) closely followed by Egypt (83.9 million) and DR Congo (69.6 million), while Burundi (8.7 million) and Eritrea (5.6 million) have the smallest.

The combined population living within the basin area in the 11 riparian countries is 238 million (or 54% of the total population of the Nile countries). The proportion of the population of each country that lives within the basin ranges from 99 per cent for Uganda down to 4 per cent for DR Congo. In terms of actual numbers of people, Egypt has the largest population residing within the basin area (80.4 million) followed by Uganda (35.4 million) and Ethiopia (34.6 million), while DR Congo has the smallest population in the basin area (2.6 million).

POPULATION
Proportion of country population living in Nile Basin
2012

- total population
- population living in Nile Basin



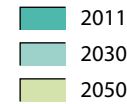
(Source of data: World Population Prospects 2010; Landscan 2009)

Rural-urban population distribution

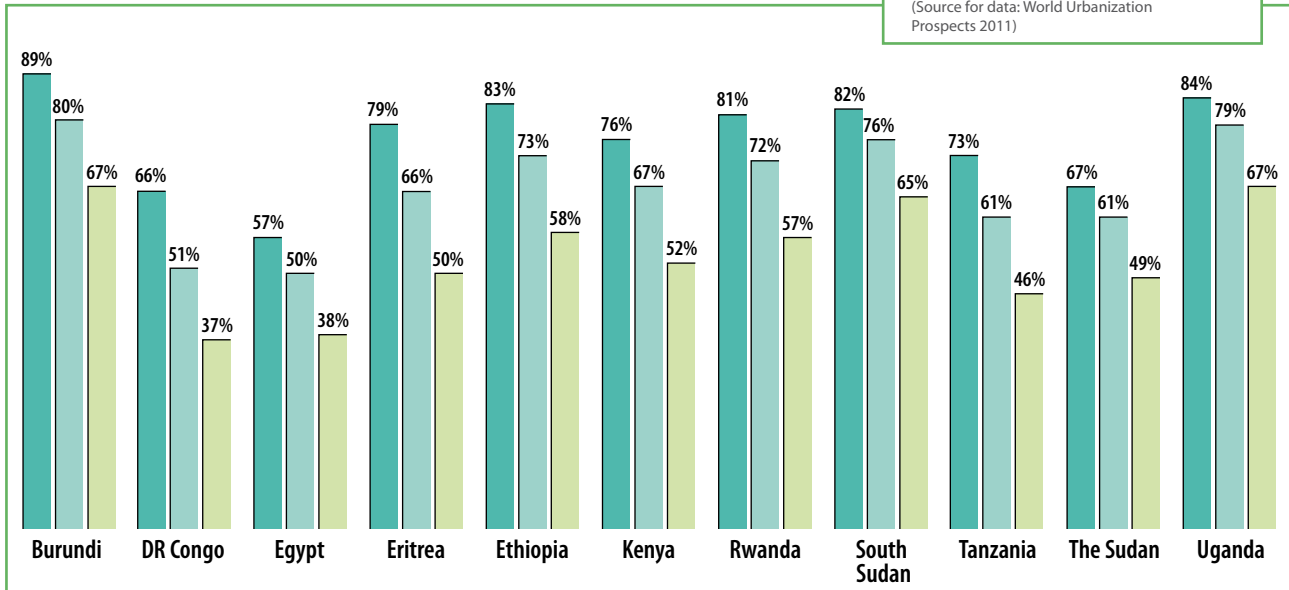
The biggest proportion of the population in the Nile countries resides in rural areas. Egypt has the lowest proportion of rural citizens while Burundi has the highest. Of the population living in the basin, an estimated 172 million people (or 72% of the basin population) reside in rural areas.

RURAL POPULATION

As percentage of total population
2011, 2030 & 2050 projected



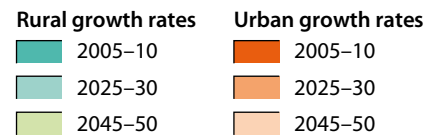
(Source for data: World Urbanization Prospects 2011)



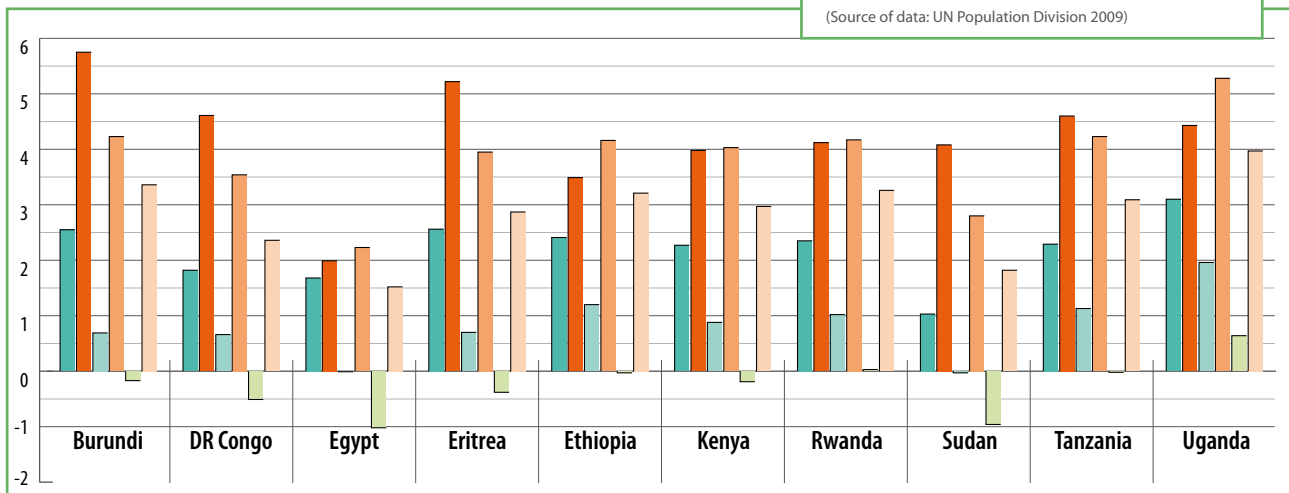
Despite relatively high annual growth rates (of between 4% and 5%) for urban populations in the basin, the dominance of rural populations is expected to persist until 2030 in nearly all Nile countries. The exceptions are The Sudan and Egypt, where rural populations in 2030 are projected to drop. Even by 2050, rural populations are still expected to be dominant in Burundi, Ethiopia, Kenya, Rwanda, and Uganda, and remain very substantial in the other riparian states. Only by the years 2045 to 2050 will rural growth rates become negative in most Nile countries, with the exceptions of Rwanda and Uganda.

GROWTH RATES

Rural and urban
2005–10, 2025–30 & 2045–50 projected



(Source of data: UN Population Division 2009)





Population distribution by age group

Population pyramids for the Nile countries (which are a graphical representation of the population structure by sex and age) have a number of similarities and differences. The pyramids all have a broad base (indicating high birth rate), narrow apex (indicating high death rate and few elderly people), and a balanced sex ratio (almost equal numbers of males and females). The average family size in the region ranges from 4.5 persons (Tanzania) to 8.8 persons (South Sudan), with most countries having an average family size of between five and six people.

The pyramids for DR Congo, Ethiopia, Tanzania, and Uganda, and to a lesser extent Kenya and Rwanda, have a wide base, concave sides, and an elongated apex. This is because close to 25 per cent of their populations are in the 20–34 years age bracket, which is sexually active and highly fertile, giving these countries high birth rates and a large population in the 0–4 years age group. They also have the highest child and adult mortality rates and low life expectancy, producing the curved narrowing of the pyramid. The thin apex of the pyramid reflects the high die-off of elderly people in these countries.

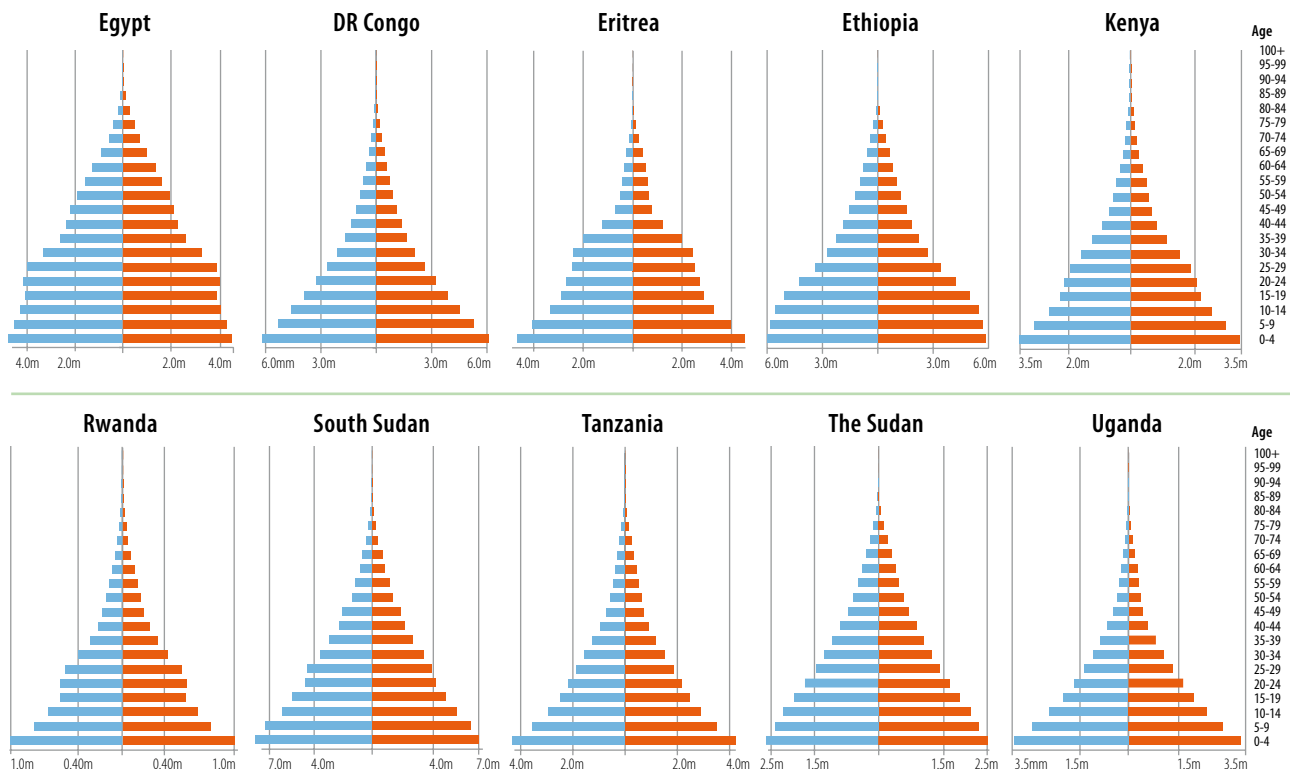
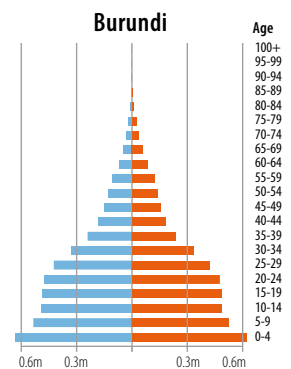
The pyramids of Burundi and Eritrea, and to a lesser extent Sudan, also show characteristics of high birth, fertility and death rates, but in addition show nearly equal proportions of the age groups in the 5–34 years bracket (5–29 years in the case of Burundi). This suggests past unfavourable conditions experienced by people older than 30 years, and could be pointing to the success of health improvement programmes, or to a history of civil war/insecurity.

POPULATION PYRAMIDS

Number of people in each age group
2012

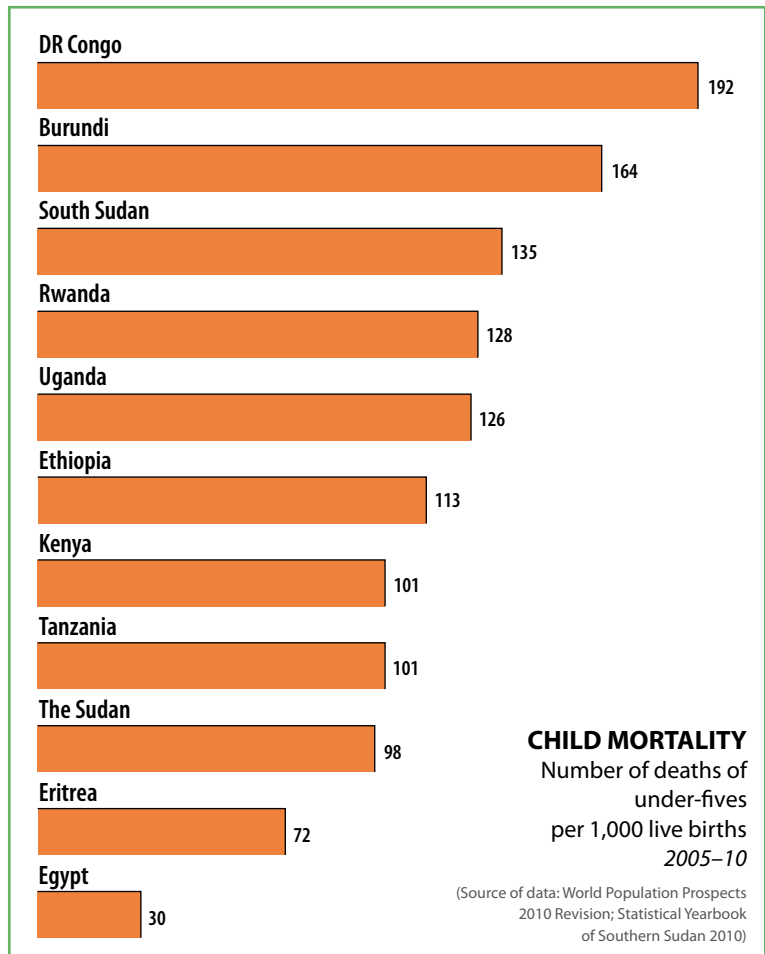
■ male
■ female

(Source of data: UN Population Division 2010)



The population pyramids of Egypt and Rwanda, and to a lesser extent Eritrea, have a youth bulge. For Egypt, the bulge is probably associated with better living standards and a relatively low birth and death rate, while for Rwanda and Eritrea it is probably associated with the end of the civil wars in the two countries, and with immigration by young people from neighbouring countries or the diaspora.

The combination of a population profile with a broad base (many children) and a narrow apex (few adults) creates a high dependency ratio: a small number of economically active people supporting a large number of dependent children. This is a problem common to all Nile countries – least so in Egypt (dependency ratio 49.7) and most of all in Uganda (dependency ratio 98.7), DR Congo (dependency ratio 90.6) and Tanzania (dependency ratio 85.7). The burdens posed by high child dependency are further compounded by dependency from elderly people, who are usually frail and nearly completely dependent.



Some of Rwanda's 2.8 million school-age children.





SOCIO-ECONOMIC PROFILE

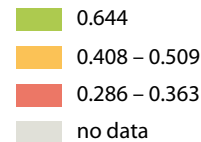
An underdeveloped region

The Nile Basin is a region of underdeveloped countries but with considerable variability in socio-economic conditions. According to the UNDP *Human Development Report 2011*, 10 of the 11 Nile countries fall in the 'low human development' category, with eight ranked in the bottom 25. Egypt falls in the 'medium human development' group, and is conspicuous among the Nile Basin countries for providing reasonable services and quality of life to its citizens. However, it has the advantage that most of its population live in the narrow tract of land along the Nile and in the Nile Delta areas, and its economy benefits from oil revenues. The headwater countries, in particular Tanzania, Kenya, Uganda, and Ethiopia, have been constrained in their efforts to provide similar quality of life for upstream riparian communities by the scattered settlement patterns and difficult terrain in the headwater areas.

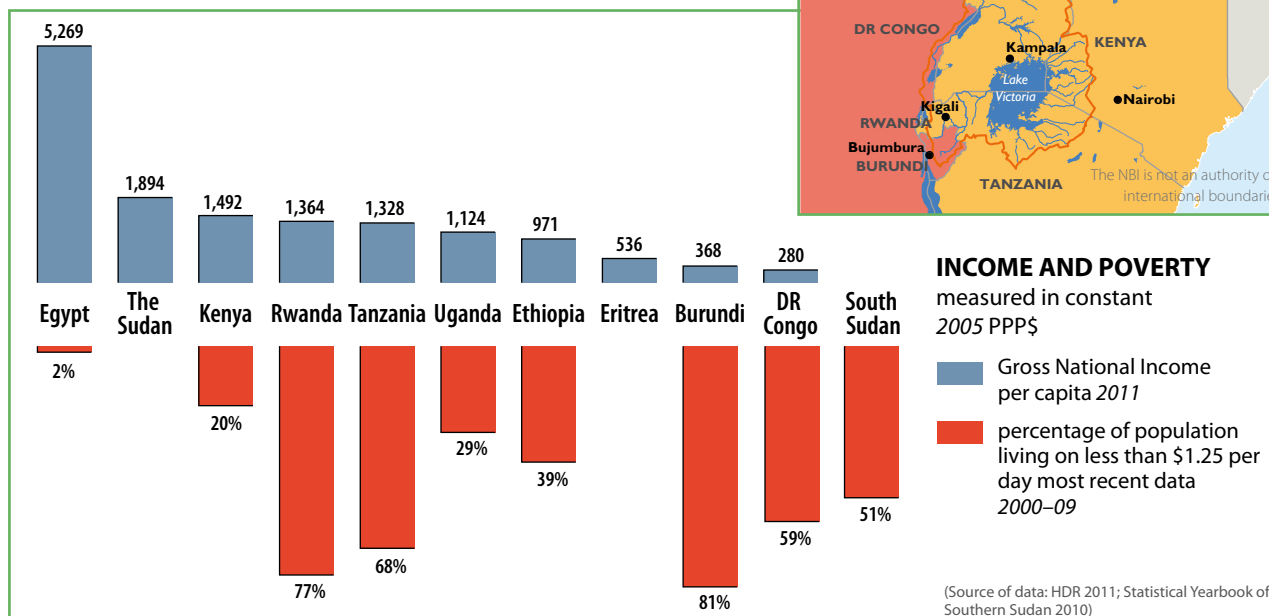
Other socio-economic indicators for the riparian countries corroborate the HDI statistic and paint a picture of a poorly developed basin. The Gross National Income (GNI) of most Nile riparian countries is low. With the exception of Egypt, whose GNI stands at PPP\$5,260, GNI is below the PPP\$1,966 average for Africa. The low per capita income is generally reflected in the relatively high rates of poverty in the basin. In five countries (Burundi, DR Congo, Rwanda, South Sudan, and Tanzania) more than 50 per cent of the population lives on less than PPP\$1.25 a day. Poverty levels are poorly correlated with GNI, however, indicating that socioeconomic inequalities make it difficult for countries to translate national prosperity into overall poverty reduction. Due to past policy neglect of agriculture, from which the majority derive their livelihood, the incidence of poverty and undernourishment is higher in rural areas than in urban areas.

HUMAN DEVELOPMENT INDEX

Score based on life expectancy, education, and income per capita 2011



(Source of data: UNDP, HDR 2011)



INCOME AND POVERTY

measured in constant 2005 PPP\$

- Gross National Income per capita 2011
- percentage of population living on less than \$1.25 per day most recent data 2000-09

(Source of data: HDR 2011; Statistical Yearbook of Southern Sudan 2010)

Employment by sector

Agriculture is the largest employer, providing work for over 75 per cent of the total labour force of the Nile countries. Egypt, which has a long history of agricultural development, is the only country that has successfully diversified away from over-dependence on agriculture: only 32 per cent of its economically active population engages in agriculture.

Data on unemployment is not readily available for the Nile countries but it is believed that unemployment levels are high in many of the Nile countries. A related indicator – the Labour Force Participation (LFP) rate – shows that a large proportion of the working-age population is active in the labour market. In most Nile countries, there is nearly equal (or little disparity in) participation of men and women, but in three countries women’s participation is markedly lower than that of men.

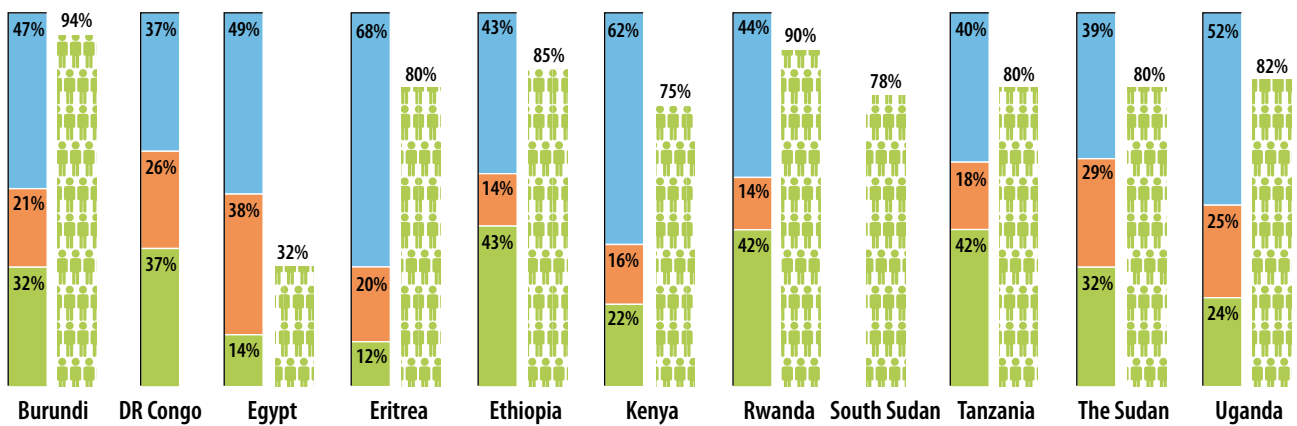
ECONOMIC PROFILE

2000–10 estimated

Contribution of sectors to total GDP

- services
- industry
- agriculture
- agricultural labour force as percentage of total

(Source of data: CIA Fact Book; Government of Southern Sudan (GOSS) 2010)

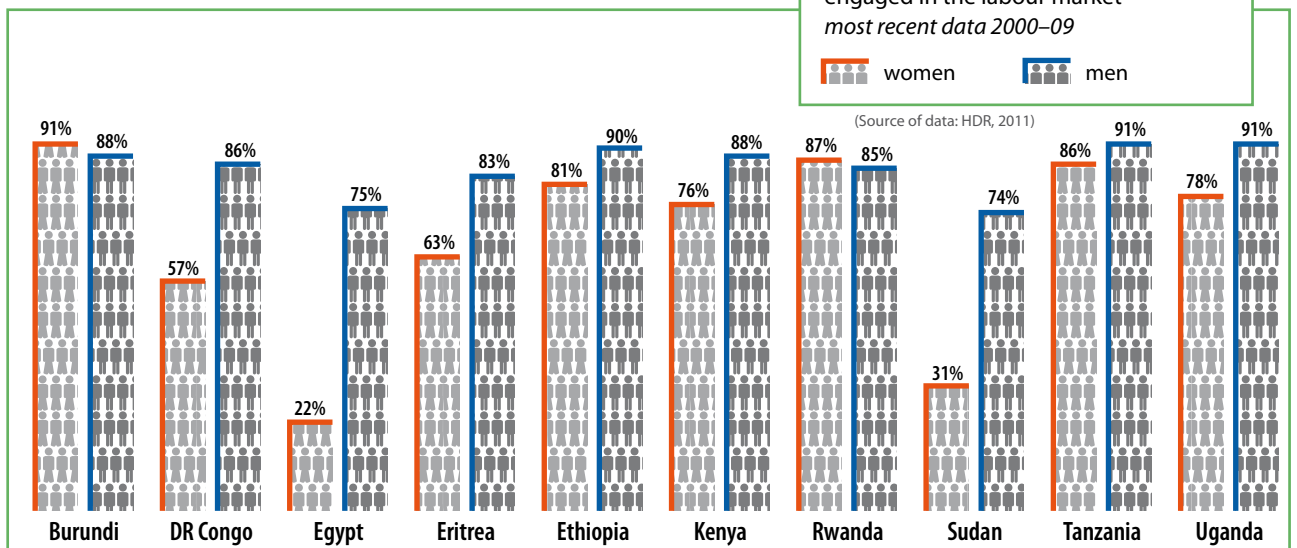


LABOUR FORCE PARTICIPATION

Percentage of working-age population engaged in the labour market
most recent data 2000–09

- women
- men

(Source of data: HDR, 2011)





The services sector is the lead contributor to GDP, followed by the agricultural sector. Only in Egypt is there a large contribution from industry, reflecting the low levels of industrialization in the region. The agricultural sector is treble important in the basin as a major contributor to GDP (in six Nile countries, agriculture contributes 30% to 45% of the total GDP), as the largest employer, and as a means for ensuring food security for the basin population.

There is considerable variation in access to clean water and improved sanitation in the basin, with performance for clean water being much higher than that for improved sanitation, and performance in urban areas (for both clean water and improved sanitation) being higher than in rural areas. Egypt is the only country in the region to have attained high coverage levels for access to clean water and improved sanitation. With respect to clean water, there are three countries where less than one-third of the rural population has access to clean water: Eritrea, Ethiopia, and South Sudan, and twice that many with respect to access to improved sanitation.

Partly because of the relatively low clean water and improved sanitation coverage in some of the basin countries, the infant and under-five mortality levels are higher than the average for Africa. Life

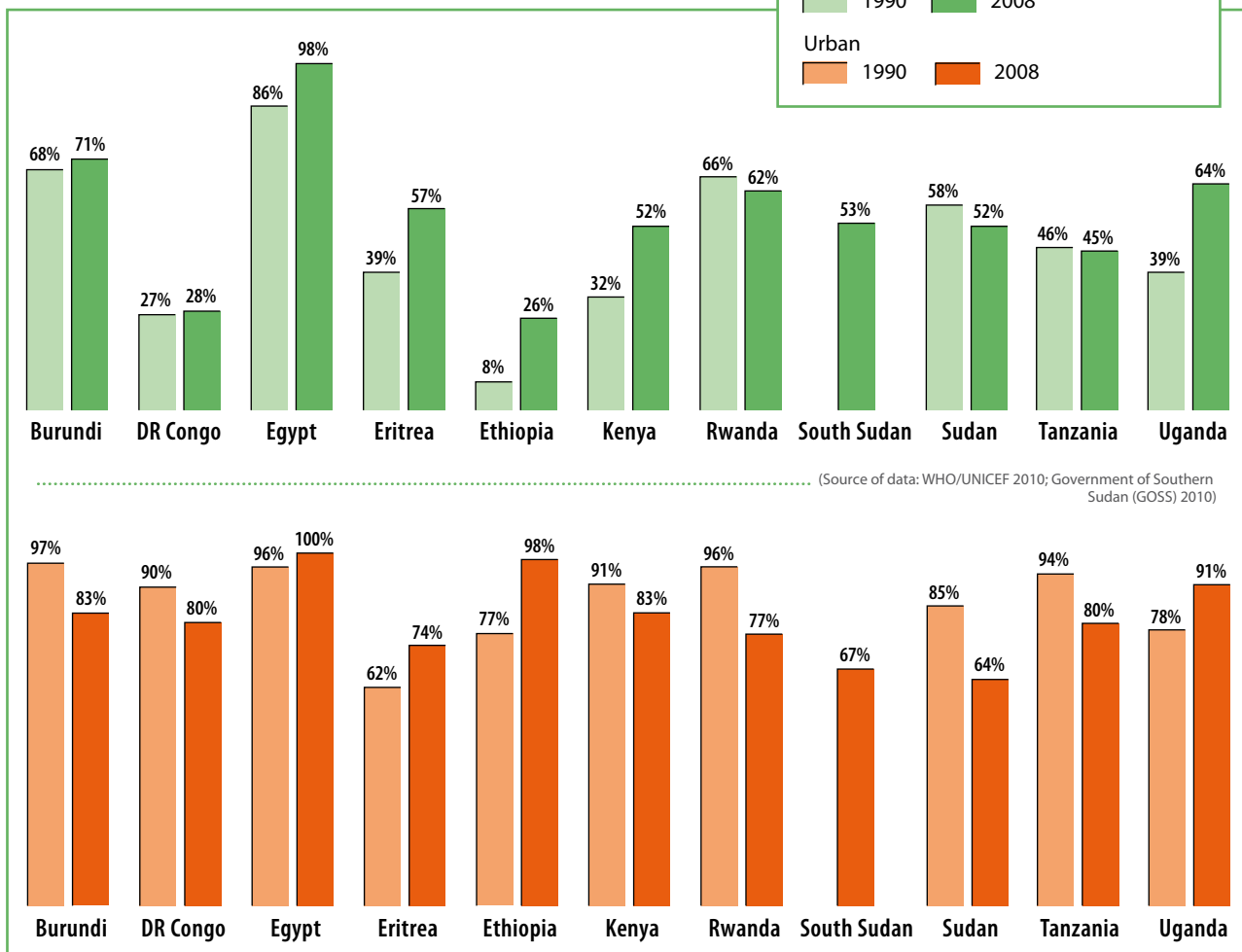


Boy carrying water back from a hand pump in Hoima district, Uganda.

DRINKING WATER

Percentage of population using improved drinking water sources 1990 & 2008

Rural
 1990 (light green) 2008 (dark green)
 Urban
 1990 (light orange) 2008 (dark orange)



expectancy in Egypt is above 70 years (for both women and men), but it stands at 45 to 55 years in most of the other Nile countries.

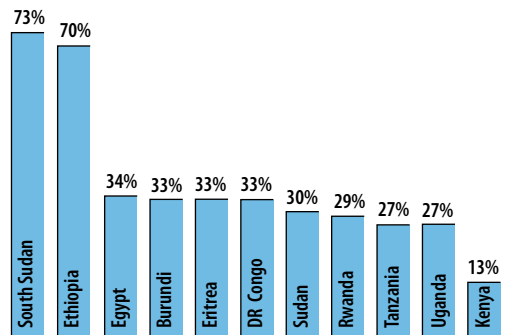
Adult illiteracy rates for the Nile countries lie in the range of 25 to 35 per cent, with Kenya, Ethiopia, and South Sudan being the only exceptions. While gross enrolment in primary schools is high, the proportion of the adult population that has attained secondary education is low in most of the Nile countries. HIV/AIDS levels for the Nile countries range from 2 to 4.5 per cent, with the exception of Egypt, where incidence is below 0.1 per cent for both sexes.



Open sewers and poor housing in a slum area of Addis Ababa, Ethiopia.

ADULT ILLITERACY

Percentage of people ages 15 and older who cannot read, write, and understand short statements
most recent data 2005–10

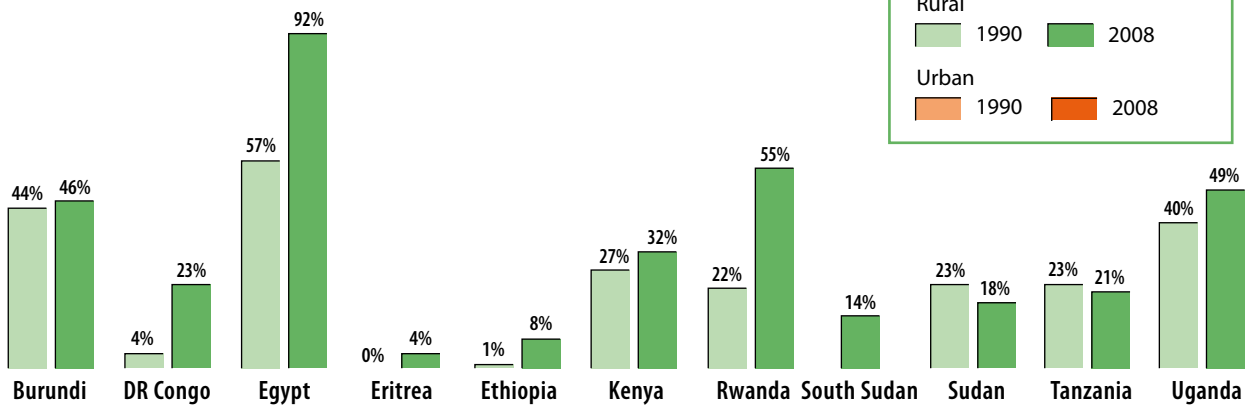


(Source of data: Figure for Ethiopia is for a different period; Government of Southern Sudan (GOSS) 2010.

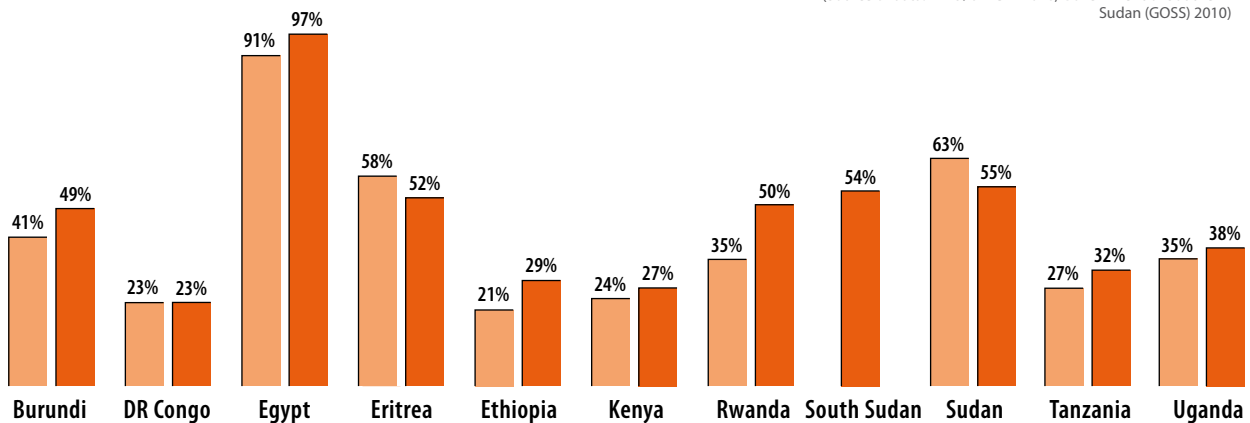
SANITATION

Percentage of population using improved sanitation
1990 & 2008

Rural
 1990 (light green) 2008 (dark green)
 Urban
 1990 (light orange) 2008 (dark orange)



(Source of data: WHO/UNICEF 2010; Government of Southern Sudan (GOSS) 2010)

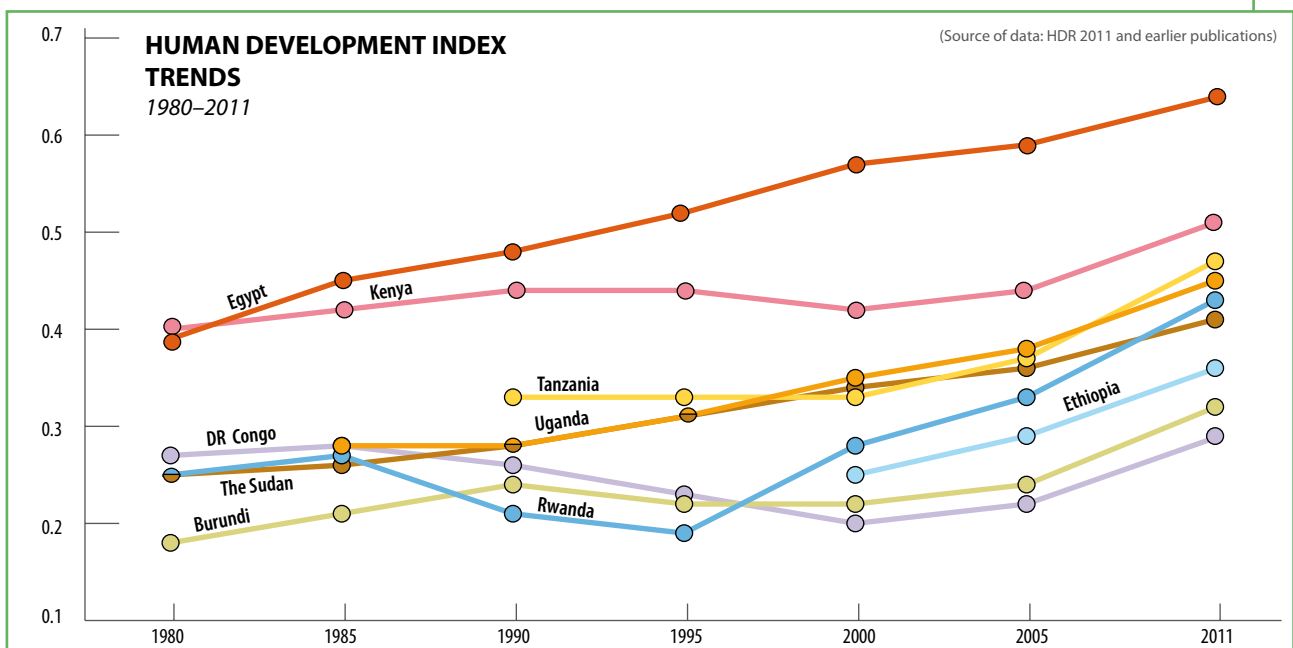




An optimistic economic outlook

For the majority of Nile riparian countries the period 1980 to 2000 was characterized by economic downturn, stagnation, and declining per capita incomes. However, the last decade has seen a return to positive economic growth, bringing a sense of optimism to the region. The change has resulted from important economic reforms undertaken by the countries, mainly focusing on improving macroeconomic management, liberalizing markets and trade, and widening the space for private-sector activity. Where these reforms have been sustained and underpinned by improvements in governance, civil peace, and control of corruption, they have not only attracted foreign investments (especially from countries such as China, India, Brazil, and Turkey) and led to expansion of the manufacturing sector, but have also enhanced incomes, reduced poverty, and enabled the countries to expand social and human development programmes. Egypt has seen the greatest improvements, and has experienced steady growth in GDP and GNI for the past two decades.

Since 2000, the number of armed conflicts in the region has been decreasing, although ethnic- and border-related skirmishes flare up from time to time. While corruption remains a serious challenge, there has been progress in macroeconomic management, with the improved business environment making it possible to foster more enduring public-private sector partnerships. There have also been significant advances in democracy, strengthening of the civil society, freedom of the press, and adherence to principles of human rights and equality. These changes are necessary to guarantee that increasing national prosperity and per capita income can translate into benefits for all sections of society.

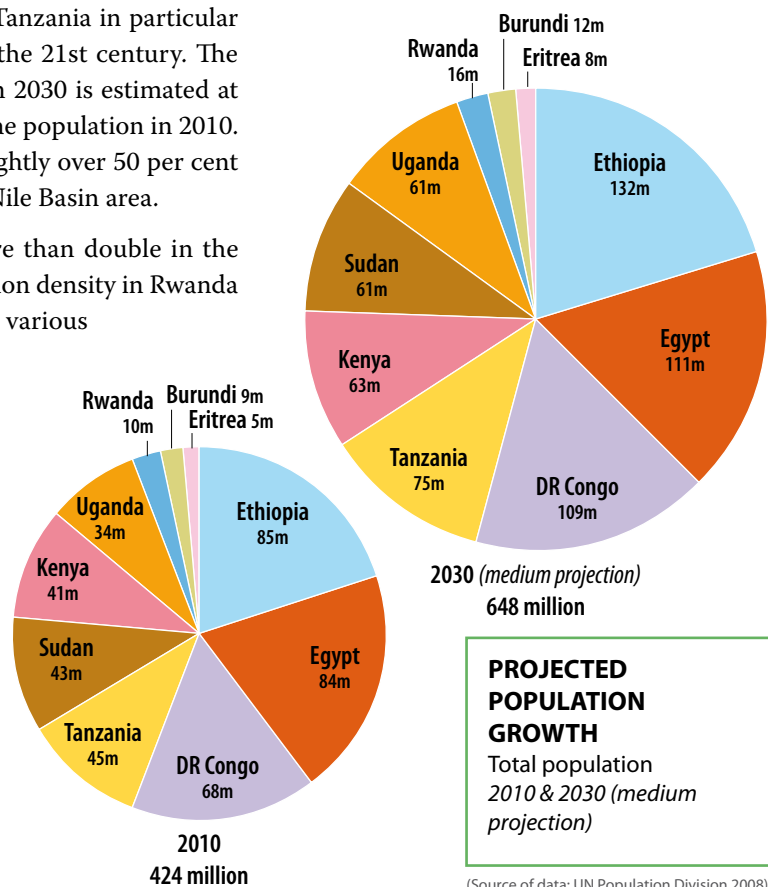


THE BASIN POPULATION IS SET TO RISE RAPIDLY

Projections of population growth

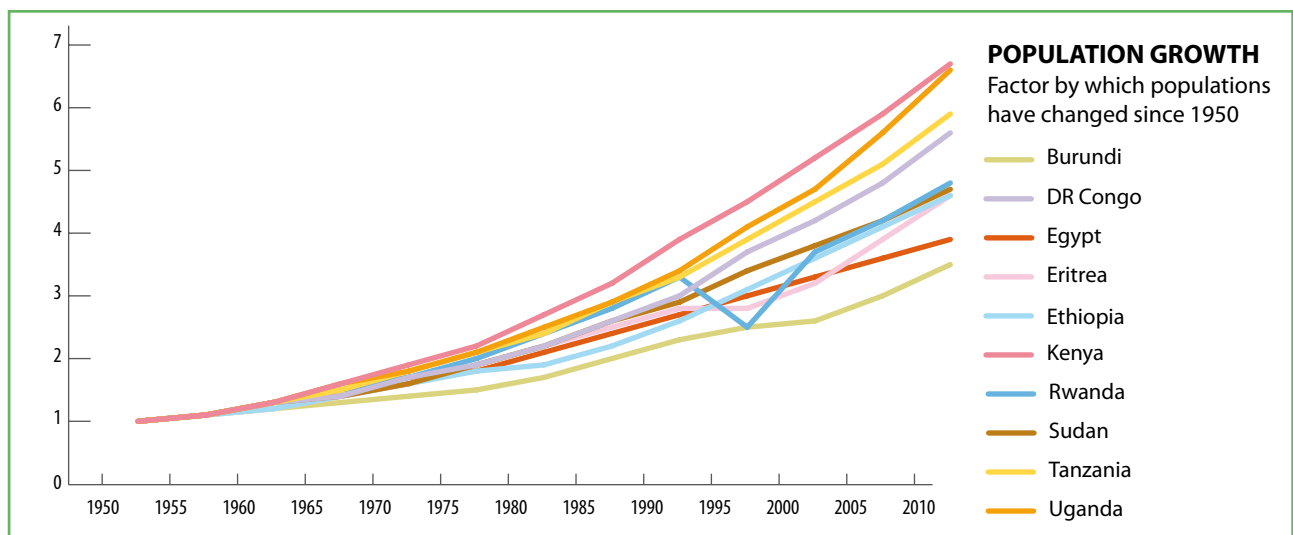
Since 1950, the populations of the Nile countries have been increasing, although at varying rates. The average annual rate of population change for the period 2005 to 2010 is in excess of 2 per cent for the Nile countries, with the highest growth rates (3.2%) found in Uganda and Eritrea. The growth rate of Egypt is low (1.8%) and levelling off, but in the upstream countries – Uganda and Tanzania in particular – it is projected to remain high for much of the 21st century. The combined population of the basin countries in 2030 is estimated at 648 million – an increase of 53 per cent over the population in 2010. It is estimated that, as is currently the case, slightly over 50 per cent of the population in 2030 will be living in the Nile Basin area.

Populations in seven Nile countries will more than double in the coming 40 years, and lead to very high population density in Rwanda and Burundi, around Lake Victoria, along the various Nile reaches, and in the Ethiopian Highlands.



PROJECTED POPULATION GROWTH
 Total population 2010 & 2030 (medium projection)

(Source of data: UN Population Division 2008)





Underlying causes of high population growth

The high population growth rate in the basin countries is the outcome of complex interactions amongst multiple economic, social, and cultural factors. They are further discussed opposite.

More challenges than opportunities

The rising population of the Nile Basin presents opportunities for economic development. It increases availability of labour for economic production, and ensures a ready market for food produce, manufactured goods, and services. This should present significant opportunities for economic growth provided that proper conditions for development are in place.

A large number of people does not automatically translate into an economic advantage for a country. A combination of other factors is needed to produce economic growth. These are related to the characteristics of a population (such as its age-group structure), people's educational attainment, entrepreneurial attributes, organizational capabilities, and foresightedness, and the country's level of economic development. These factors are either absent or not favourably developed in the region, so that in the majority of cases, the challenges presented to the riparian governments by a rising population outweigh its benefits.

One of the conditions for productive utilization of the large population is the numeric dominance of the economically active age bracket (15–64 years). Such a situation, referred to as the 'demographic dividend', results from progressive decline in fertility rate and youth dependency ratio. In all Nile countries, the 15–64 years age group is the largest (ranging from 49% in Eritrea to 64% in Tanzania). However, the 0–14 years age group is also quite large (ranging from 38% to 49% in the upstream countries). In Egypt, this age group makes up 31 per cent of the total population. Thus, the window of opportunity of the 'demographic dividend' only exists for Egypt.

It should be borne in mind that a country can only exploit the 'demographic dividend' if its economy has the capacity to absorb the extra workforce, and the workforce itself possesses the relevant skills and attitude to be effective players in the economy. This is not the case for most Nile riparian countries. In six Nile countries, more than 35 per cent of the population lives on less than PPP\$1.25 a day, which precludes this segment from any significant role in consumption of essential commodities other than food (which they mainly grow for themselves).

Given that the factors needed for productive engagement of the population are not all in place, the rising population presents the countries with enormous development challenges and, for upstream countries, makes it increasingly difficult to attain their vision of becoming middle-income countries by 2025 or 2030. A large proportion (75% to 94%) of the workforce of the upstream Nile countries is employed in agriculture, mainly at subsistence level. An



Growing populations can provide significant opportunities for investment. Workers pick chrysanthemum cuttings for export at a flower farm in Kampala, Uganda. Flower farming is an expanding industry across the region.

Men operating thread-spinning machinery in a factory producing fishing nets, Kisumu, Kenya.



FACTORS RESPONSIBLE FOR HIGH POPULATION GROWTH

ECONOMIC AND POLITICAL

Poverty: Poverty may increase fertility either by lowering people's ability to afford contraceptives and reproductive health services, or by limiting leisure options, making sexual activities the most readily available form of recreation. Poverty may also dispose communities to regard children as a source of 'social security' and income, either from dowry or as hired casual farm or house labour. Poor people are generally not afraid of the possible decline in standard of living due to extra children.

Unemployment: Lack of gainful occupation and cultural traditions that encourage women to stay at home contribute to high population growth in various ways, including availability of free time for sexual activities, and presenting couples with no 'valid excuse' for not begetting extra children on account of time limitations for child care. Unemployment also sustains poverty, leading to population growth through poverty-related forces described above.

Civil war: Many parts of the Nile Basin have experience of political instability, civil war, and insecurity. War and the mass killings associated with it are viewed by communities as threatening their very survival. They consciously and subconsciously respond by ensuring high fertility to perpetuate their lineage. Civil war also contributes indirectly to population growth by deepening poverty and preventing access to health and other social services.

Increased survival and reduced mortality rates: The recent improvements in public health and general standards of living across the basin have led to increases in birth rates and a reduction in deaths of mothers, children, and adults.

SOCIAL AND CULTURAL

Illiteracy: Uneducated girls tend to marry and start child bearing at a much earlier age than educated girls. Furthermore, uneducated girls usually have little knowledge of family planning and of their biology as compared to educated girls. They thus are not in a good position to take firm control of their reproductive lives.

Low access to reproductive health services: There are high levels of unmet demand for contraceptives within the Nile basin countries due to factors such as affordability, convenience to the users, concerns about side effects, and doubts about effectiveness. This curtails both child spacing and prevention of unwanted pregnancies.

Women's empowerment: Research has shown that women who work and contribute to family income are more confident and able to choose when to get pregnant. The high level of gender inequality and economic disadvantage prevalent in the Nile Basin robs women of their confidence and decision-making authority on various reproduction health matters.

GENDER INEQUALITY INDEX

Score based on range of health, educational, and political indicators relating to women 2011

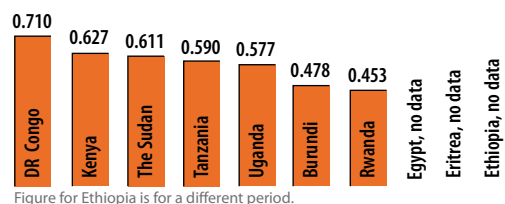


Figure for Ethiopia is for a different period.

Religion: Whereas most, if not all, religions do not support premarital sexual, some religions such as Islam tend to be more strict on such matters, with the result that fewer Muslim women get pregnant before marriage. The strong influence of religion may partly explain the low fertility rate in Egypt. Some religions such as the Catholic Church do not sanction birth control methods except for natural ones. The opposition to contraception of these religions is a big factor in birth control among married couples.

Culture and traditions: Many rural families still view large numbers (of family, clan, or tribe members) as a source of power, wealth, and security. In many rural areas, farming and livestock-keeping are still quite traditional and characterized by intensive human labour and frequent livestock rustling. More manpower is required for increased production, raiding of livestock, and defence of the community. Other cultural practices that lead to increased population are early marriage and polygamy.

Most African societies treat the topic of sexuality and family life as taboo. This tends to limit access to information that could contribute to improvement of family planning. Over the years there has been progressive erosion of traditional values and morals leading, among other things, to high teenage pregnancies. Lifestyles have changed, with little attention now paid to virginity and abstinence.

The above factors, present to varying extents, are largely responsible for the rapid population rise in the region.



ever-increasing demand for cultivable land in the countries is leading to encroachment on forests, wetlands, and conservation areas, which endangers the Nile ecosystems. Population pressure also results in fragmentation of agricultural holdings, settlement on marginal lands, and rising landlessness. Competition and conflicts over access to natural resources such as water, land, and pasture are likely to intensify with population growth. At the basin level, the rapid rise in population is associated with mounting demand for scarce freshwater resources, and increasing degradation of headwater catchments that are critical for sustaining the flow of the Nile tributaries. (See Chapter 3 for a more detailed discussion of the impacts of population on the environment.)

The riparian governments have not been successful in expanding the national economic infrastructure to match the growth in population and are therefore finding difficulties in meeting their Millennium Development Goal (MDG) targets. There is growing inadequacy/congestion in the transport, education, health, housing, and hospitality sectors as well as in utilities/services such as water and sanitation, electricity/energy, and telecommunications.

The low quality of life and difficulty of finding viable livelihoods in the rural areas is causing large numbers of people to migrate from rural areas to cities in search of work, better education, and improved social services. But life for many urban poor is not any better, due to low job opportunities and inadequate housing. The urban poor mainly live in informal settlements, and frequently settle on marginal land subject to erosion or seasonal flooding. The rapid rural–urban migration also leads to problems in the cities such as congestion, pollution, and crime.

Congested early morning traffic blocks a main thoroughfare in central Khartoum, The Sudan.



EMERGING MEGACITIES

Within the Nile Basin countries, there are six cities with a population of 3 million inhabitants or more.

Only Cairo is classified as a megacity – with a population in excess of 10 million people – but other large cities such as Kinshasa, Khartoum, and Alexandria exhibit the typical characteristics of megacities. These include large peri-urban populations at their fringes, with dominant illegal settlements and inadequate housing, sanitation, and other essential services.

Other features of megacities include traffic congestion, water and air pollution, smog, unemployment, lack of open spaces, and very high population densities.

The speed of growth of the megacities, driven by rapid rural–urban and urban–urban migration, is faster than the rate of expansion in economic infrastructure. This problem stretches city resources and threatens to overwhelm city administrators.

THE 10 LARGEST CITIES IN THE NILE REGION

	Population (2009)
Cairo*	10.9 million
Kinshasa	8.4 million
Khartoum*	5.0 million
Alexandria*	4.4 million
Nairobi	3.4 million
Dar-Es-Salaam	3.2 million
Addis Ababa*	2.9 million
Lubumbashi	1.5 million
Kampala*	1.5 million
Kigali*	0.9 million

*City is located within the Nile Basin

(Source: The World Fact Book 2012)

Practically all of the major cities in the Nile region have informal settlements on their fringes. Some, such as Manshiet Nasser in Cairo, Kibera in Nairobi, and Matonge in Kinshasa, are among the largest informal settlements in Africa.



Rusting corrugated iron roofs on one of the slums of Nairobi, Kenya.

FEEDING THE URBAN POPULATION

As the urban population grows and per capita income rises, so too will demand for food.

Urbanization creates a ready and growing market for perishable produce such as fruits, vegetables, and dairy, but also for staples.

It provides an opportunity to rejuvenate rural areas that have efficient transport links to the city, especially if policies encourage local produce instead of food imports.

Rural rejuvenation requires a shift from unorganized and informal agricultural practices to more modern production methods. Orienting towards urban markets could provide an avenue for gainful employment and revenue generation for rural households.

This would be particularly effective if local farmers received a larger share of the overall profits by reducing the difference between retail and farm-gate prices



A Ugandan stallholder selling local produce to urban dwellers.



RISING TO THE CHALLENGE

Tackling population growth

The riparian governments recognize the intimate links between population dynamics, poverty, and environment, and have made significant strides in addressing the population problem within the broader framework of poverty reduction strategies. The 1980s and 1990s was a period of renewed activity during which the riparian governments, with support from the United Nations Fund for Population Activities (UNFPA), intensified efforts to tackle the spiralling population. In the above period, countries formulated or updated national population policies; and increased efforts to integrate population in development planning and set up national institutions to coordinate population activities. The countries also implemented programmes to improve primary health care (including family planning); expand education and awareness on reproductive health; and improve nutrition and food security, among others.

The efforts bore fruit and produced remarkable reductions in the Total Fertility Rate (TFR = average number of children per woman), particularly in Egypt, Kenya, and Rwanda. The DR Congo is the only riparian country that witnessed an increase in fertility in the above period. The dramatic rate of decline in fertility of the 1980s and 1990s was not sustained for long, however. A slowdown occurred after 1990, although the downward trend in fertility has continued to the present day. The three countries (Egypt, Kenya, and Rwanda) that registered the highest reductions in fertility rate also currently have the highest Contraceptive Prevalence Rate (CPD) among the riparian countries (60%, 46%, and 36% respectively).

The Nile countries need to continue with proactive measures to maintain, or indeed increase, the momentum in bringing down fertility, and check the population growth. As in the past, this will call for a multi-pronged approach that addresses population growth in the broader context of sustainable development.

POPULATION POLICY IN RWANDA

Rwanda's National Population Policy (2003) envisages using an integrated approach to address population growth. It aims to:

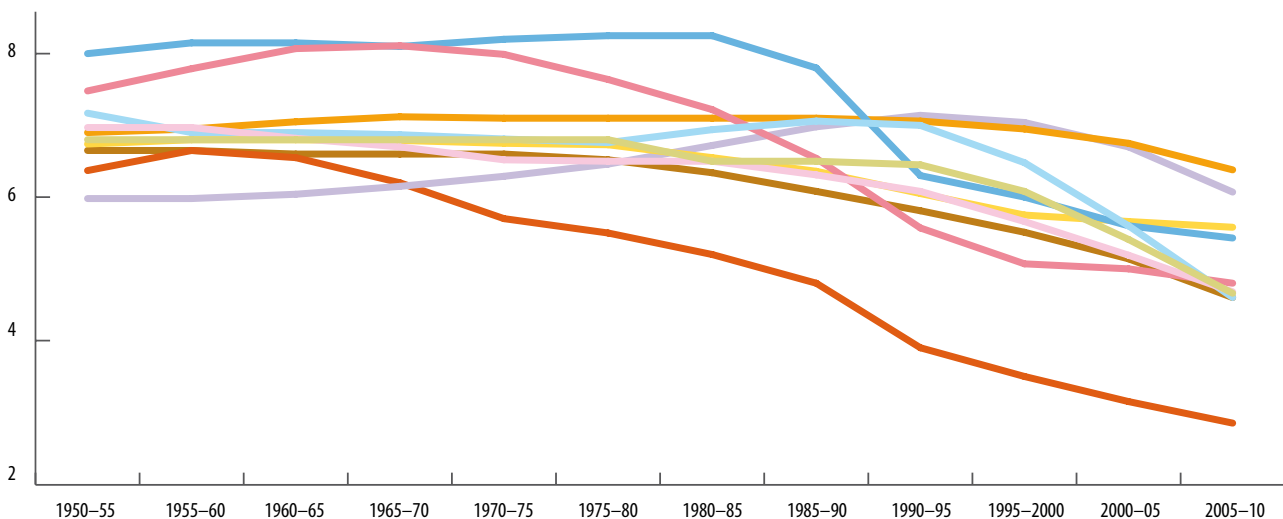
- improve the health and survival of children and women as an incentive for people to have smaller families
- provide education and employment
- build an institutional structure that integrates gender, environment, governance, health care, and nutrition.

FERTILITY RATES

Number of children each woman would bear during her life according to prevailing age-specific fertility rates

- | | |
|------------|------------|
| — Burundi | — Kenya |
| — DR Congo | — Rwanda |
| — Egypt | — Sudan |
| — Eritrea | — Tanzania |
| — Ethiopia | — Uganda |

(Source of data: HDR 2011)

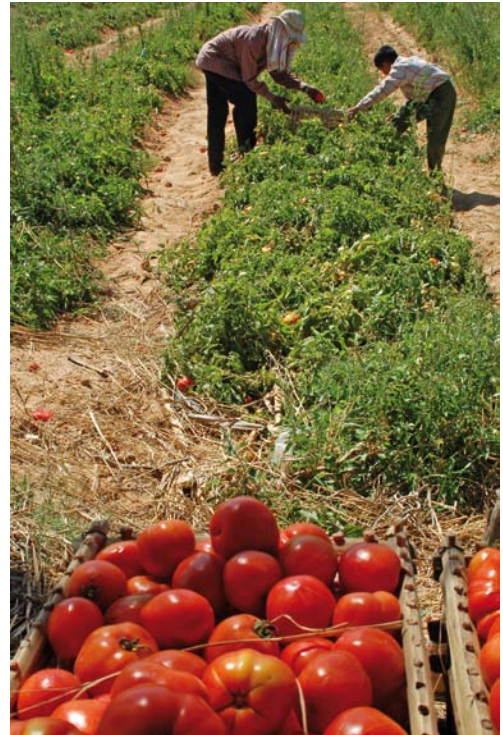


Examples of elements of such an integrated, multi-pronged programme include the following:

- Integrating population issues in national planning and budgeting processes, particularly in areas of infrastructure expansion and sustainable natural resources management.
- Promoting the holistic, integrated development of rural areas to, among other things, diversify rural livelihoods. A critical component of rural development is the promotion of rural industries for creation of employment, enhancing markets for farm produce, adding value to agricultural products, reducing post-harvest losses, and increasing economic viability of rural agriculture.
- Pursuing economic empowerment of women by introducing policies and programmes to promote gender equity in employment, leadership, access, and ownership and control of productive resources such as land and credit.
- Consolidating affirmative action to enhance girl-child education.
- Increasing investments in actions targeted at reducing infant and child mortality (e.g. immunization, providing vitamin supplements, and increasing safe water and sanitation coverage).
- Increasing investment in family life education and reproductive health care, including measures to integrate men in family planning.

Eradicating poverty

Considering that poverty is one of the main factors driving the rapid growth in population, its reduction becomes a matter of priority for the riparian countries. At national level, poverty is being addressed through poverty reduction strategies, although implementation remains patchy, suffers from capacity and coordination constraints, and is often disrupted by emergencies (e.g. the recent food crisis and global financial meltdown).



Farmers in West Noubaria, Egypt, harvesting tomatoes to supply Heinz.



Farmers harvest sunflowers in Lira District, northern Uganda, where they cultivate, produce, and sell oil from vegetables.



CONCLUSIONS AND RECOMMENDATIONS

The Nile Basin has a large population that is growing at a much faster pace than the ability of governments to improve socio-economic conditions. Given the economic and natural resource limitations in the basin, it is clear that, for now, the challenges posed by the rising population outweigh its likely benefits. It is imperative, therefore, that countries increase funding to population programmes to try to slow down the pace of population growth. Countries also need to increase funding to programmes promoting integrated rural development and dealing with the rapid rate of urbanization.

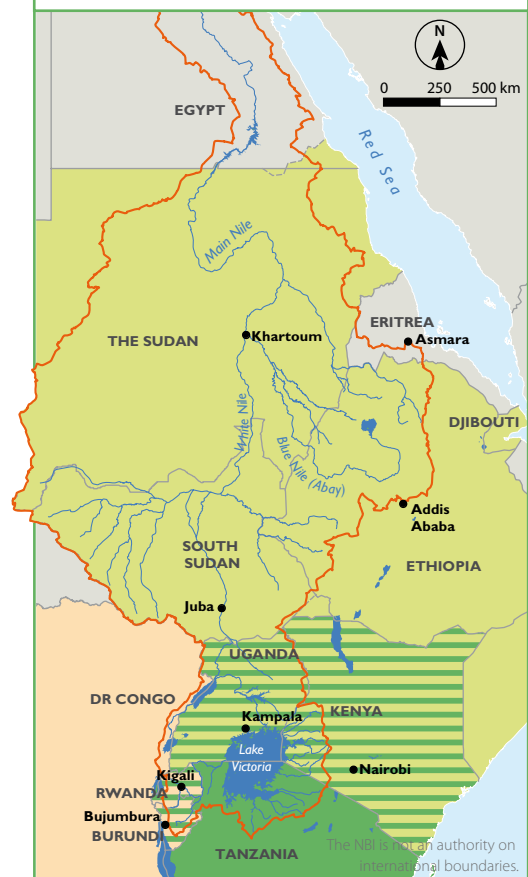
A large proportion of the population in the Nile riparian countries resides in the rural areas and intimately depends on agriculture – and hence on the natural resources base – for their livelihood and food security. Policies and investments aimed at promoting rural development, with a focus on improving rural agriculture productivity coupled with sustainable and efficient natural resources management, are of critical importance for turning the rising population from a burden to an advantage. This is further discussed in Chapter 5.

A doubling of the population in 40 years – in seven out of 10 riparians – may well be beyond the ability of some countries to deal with individually. This signals the importance of strengthening regional integration as a way of promoting general economic development. A promising area for inter-basin cooperation is agricultural trade, which can support regional food security while simultaneously fostering much-needed rural development. Other possible areas for cooperation include trade in energy, inter-connection of the power grid, infrastructure development, education and research, and creating large unified markets for goods and services.

INTERGOVERNMENTAL ORGANIZATIONS LOCATED IN BASIN

Member countries of:

-  Communauté Economique des Pays des Grands Lacs (CEPGL)
-  East African Community (EAC)
-  Intergovernmental Authority on Development (IGAD)



REGIONAL INTEGRATION

The East African Community (EAC) is an example of regional integration that aims to stimulate economic development through progressively removing internal trade barriers and thus expanding the common regional market.

Other benefits of regional cooperation through the EAC are demonstrated by:

- Common transboundary programmes and projects, such as regional infrastructure (power pool, roads, and railways), water resources management and

development (through the Lake Victoria Basin Commission), and environmental management (Lake Victoria Environmental Management Program).

- Generally good relations and shared interests among neighbouring states, thereby averting disputes that could potentially lead to disintegration and disruption of markets, trade, labour flows, and infrastructure, diverting resources from economic development.

Countries combine EAC membership with affiliation to other regional organizations such as IGAD or CEPGL.