



# Libya

## Sectoral Scenarios for Libya

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## Sectoral Scenarios for Libya

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### Stability scenario

Chart 13: Governance security in CP and Stability scenario, 2019–2043  
IFs index 0–1



Source: IFs 7.63 governance security index using internal war and government risk

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The Stability scenario represents reasonable but ambitious reductions in risk of regime instability and lower levels of

internal conflict. Stability is generally a prerequisite for other aspects of development and this would encourage inflows of foreign direct investment (FDI) and improve business confidence. Better governance through the accountability that follows substantive democracy is modelled separately.

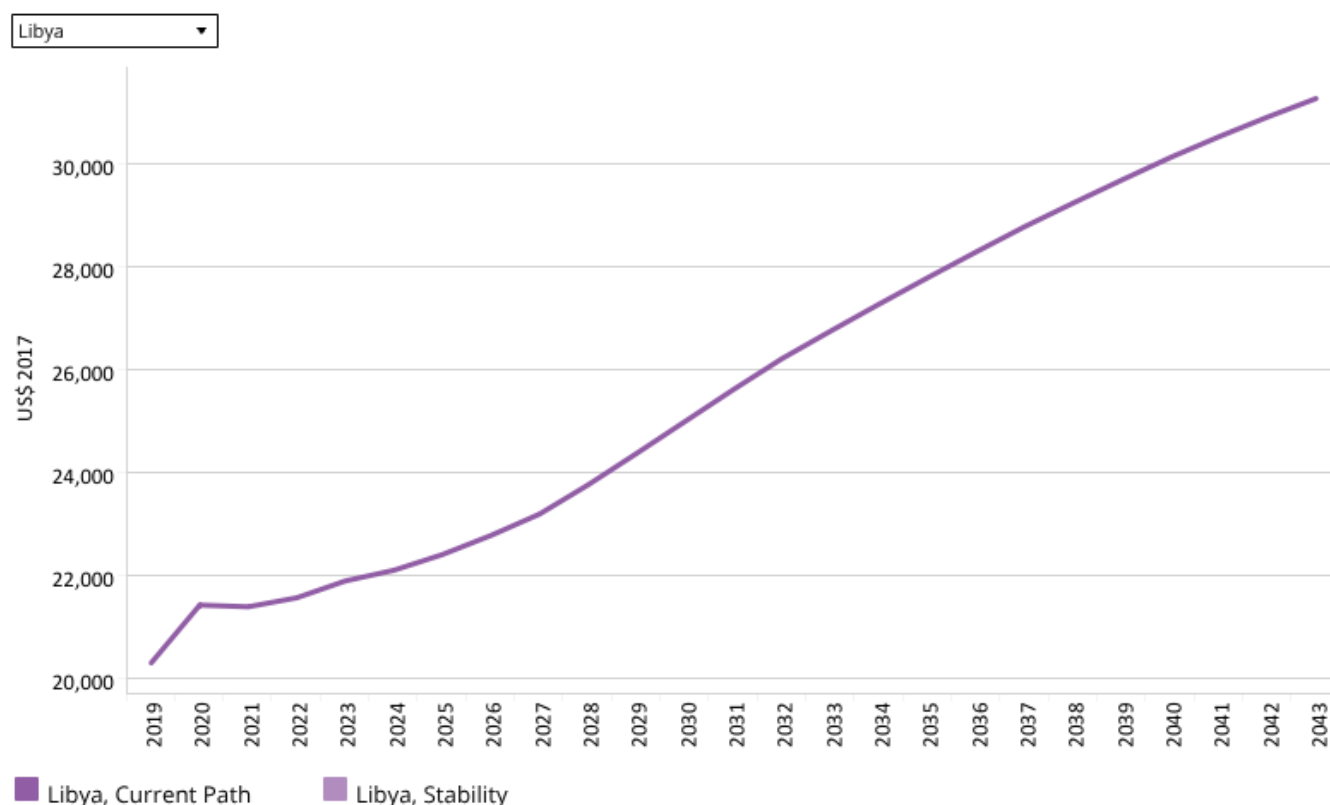
The intervention is explained [here](#) in the thematic part of the website.

Libya has been trapped in recurring cycles of violence since 2011 with the overthrow and death of Muammar Gaddafi. The associated developments are not reflected within IFs and Chart 13 is therefore not populated.

The transition from a stable authoritarian regime to stable democracy in Libya remains stalled, as vast areas are under the control of opposing armed groups. The events of 2011/12 were, in turn, the result of various structural factors, including a large youth bulge and lack of social, political and economic freedom. Almost half of Libya's adult population (15 years and older) was in the age bracket 15 to 29 years of age, constituting a large youth bulge, which is often associated with instability, particularly if it is well educated and without sufficient job opportunities. At 9 years of adult education, Libyans have the seventh highest mean years of education in Africa while levels of economic freedom (or opportunity) is among the lowest (50th out of 54 countries, using the Fraser Institute's index of economic freedom). The result is a country where opportunity is generally stymied, dominated by a large public sector that crowds out private competition while having some of the largest ICT sectors as a per cent of GDP in Africa. Access to the Internet therefore allowed for the rapid mobilisation of Libyans during the Arab Spring.

The demographic picture is now rapidly changing with Libya's youth bulge declining from 33% in 2019 to 26% in 2043. In Africa, only Algeria, Tunisia, Mauritius and Seychelles had a smaller youth bulge in 2019, but the other impediments to unlock opportunity such as an open and competitive economy, capable institutions and government capacity are unavailable during the current recurring bouts of armed violence and political instability.

Chart 14: GDP per capita in CP and Stability scenario, 2019–2043  
Purchasing power parity



Source: IFs 7.63 initialising from UN Population Division World Population Prospects and World Development Indicators data

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Since the start of conflict in 2011, estimates of GDP per capita for Libya have gyrated wildly from year to year and the data varies between agencies. The last data in IFs is for 2019, at which point Libya had the third highest GDP per capita in Africa at US\$20 296. According to the World Bank, GDP per capita plunged in 2020. The data on GDP per capita presented in this chart is only for the Current Path forecast and should be treated with caution.

In the Current Path forecast, GDP per capita in Libya will increase to US\$31 250 in 2043 — still ranked as the third highest in Africa, bested only by Equatorial Guinea and Seychelles. The projected GDP per capita in 2043 will be 76% greater than the average for upper middle-income African countries.

There is no Stability scenario for Libya and Chart 14 only presents the Current Path forecast.

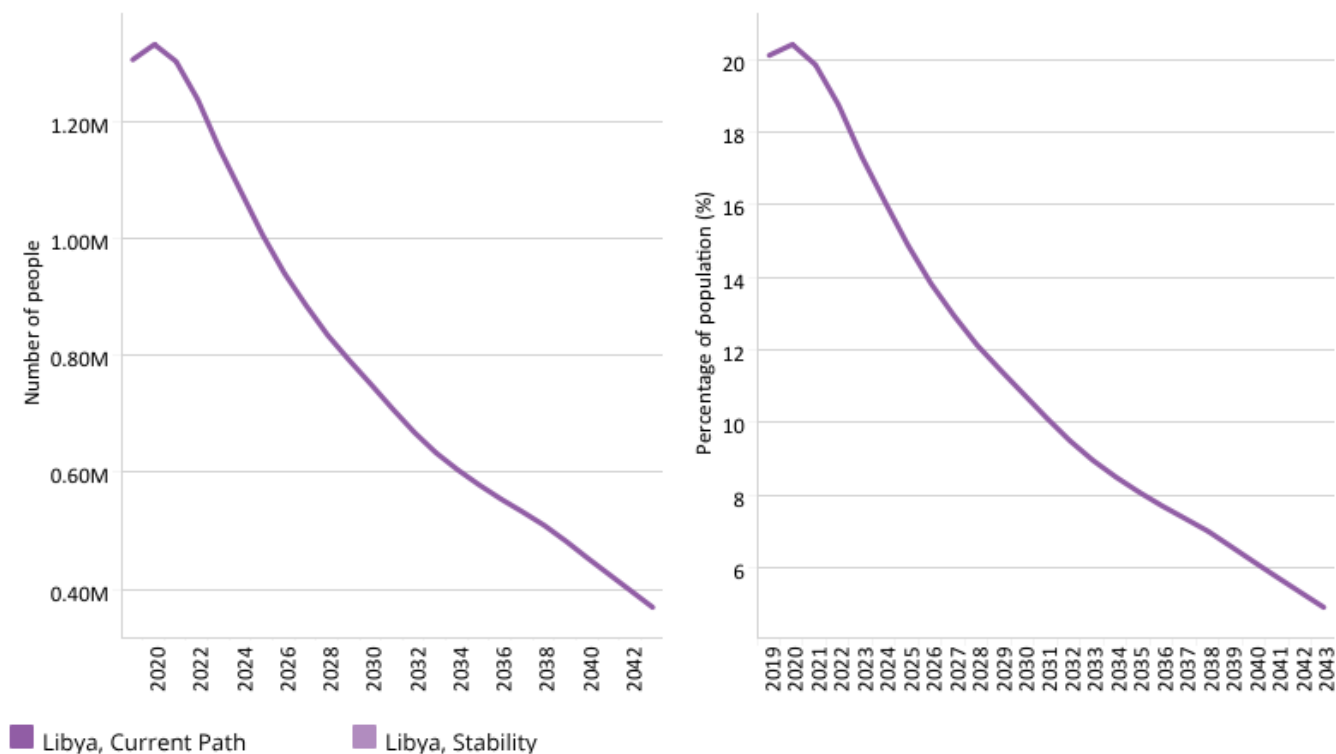


# Chart 15: Poverty in CP and Stability scenario, 2019–2043

Millions of people and % of total population



Libya \$5.50



Source: IFs 7.63 initialising from UN Population Division Population Prospects estimate, World Development Indicators population data and PovcalNet World Bank data

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Together with other countries in North Africa, Libya met the goal of eliminating extreme poverty (using US\$1.90) in 2018. However, using US\$5.50 for upper middle-income countries, 1.3 million Libyans (20.12%) lived in extreme poverty in 2019; this number will decline to 369 000 (4.9%) in 2043 in the Current Path forecast. This forecast likely underestimates the impact of recent levels of instability. Throughout the forecast period, the proportion of Libyans living in extreme poverty was lower than the average for upper middle-income countries in Africa with the poverty gap widening from 26.1 percentage points in 2019 to 34.8 percentage points in 2043.

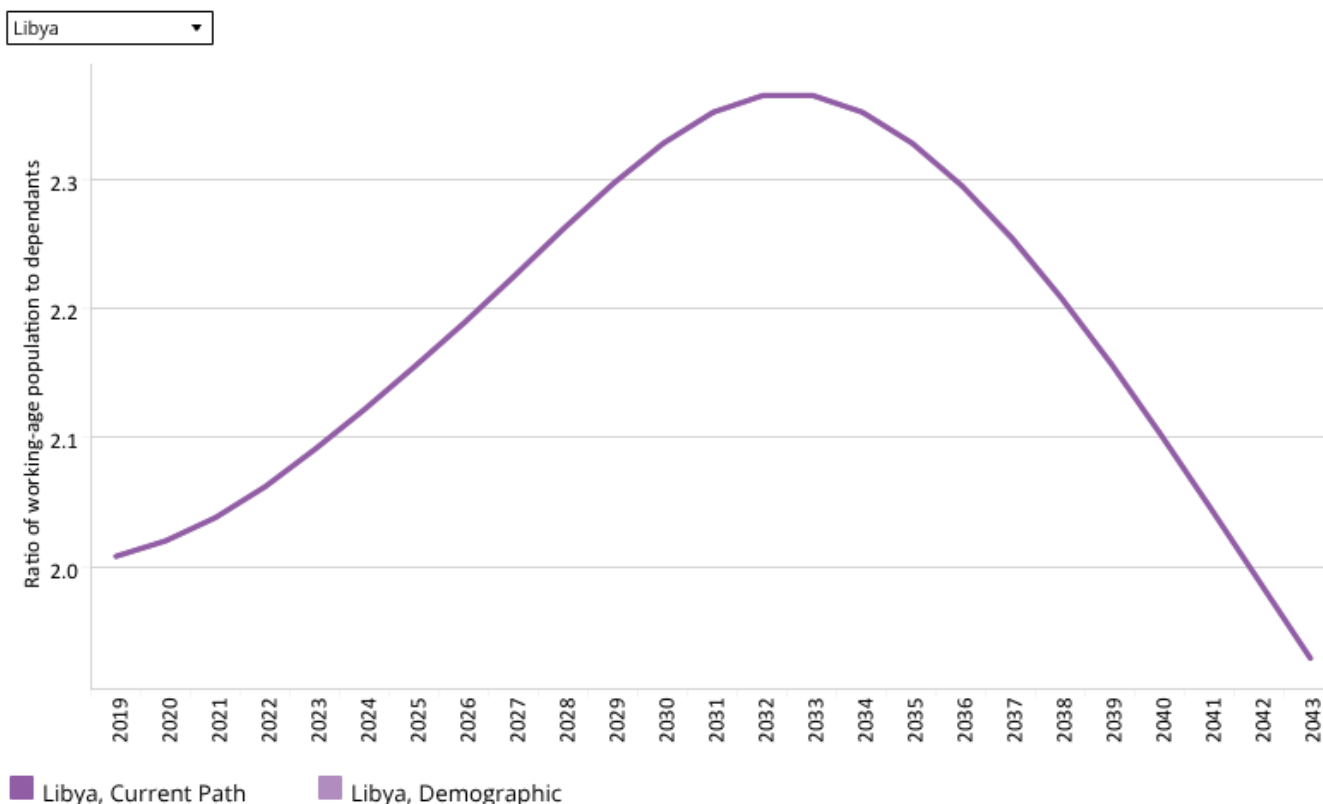
There is no Stability scenario for Libya and Chart 15 only presents the Current Path forecast.



## Demographic scenario

Chart 16: Demographic dividend in CP and Demog scenario, 2019–2043

Ratio of working-age population to dependants



Source: IFs 7.63 initialising from UN Population Division Population Prospects

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This section presents the impact of a Demographic scenario that aims to hasten and increase the demographic dividend through reasonable but ambitious reductions in the communicable-disease burden for children under five, the maternal mortality ratio and increased access to modern contraception.

The intervention is explained [here](#) in the thematic part of the website.

Demographers typically differentiate between a first, second and even a third demographic dividend. We focus here on the contribution of the size of the labour force (between 15 and 64 years of age) relative to dependants (children and the elderly) as part of the first dividend. A window of opportunity opens when the ratio of the working-age population to dependants is equal to or surpasses 1.7.

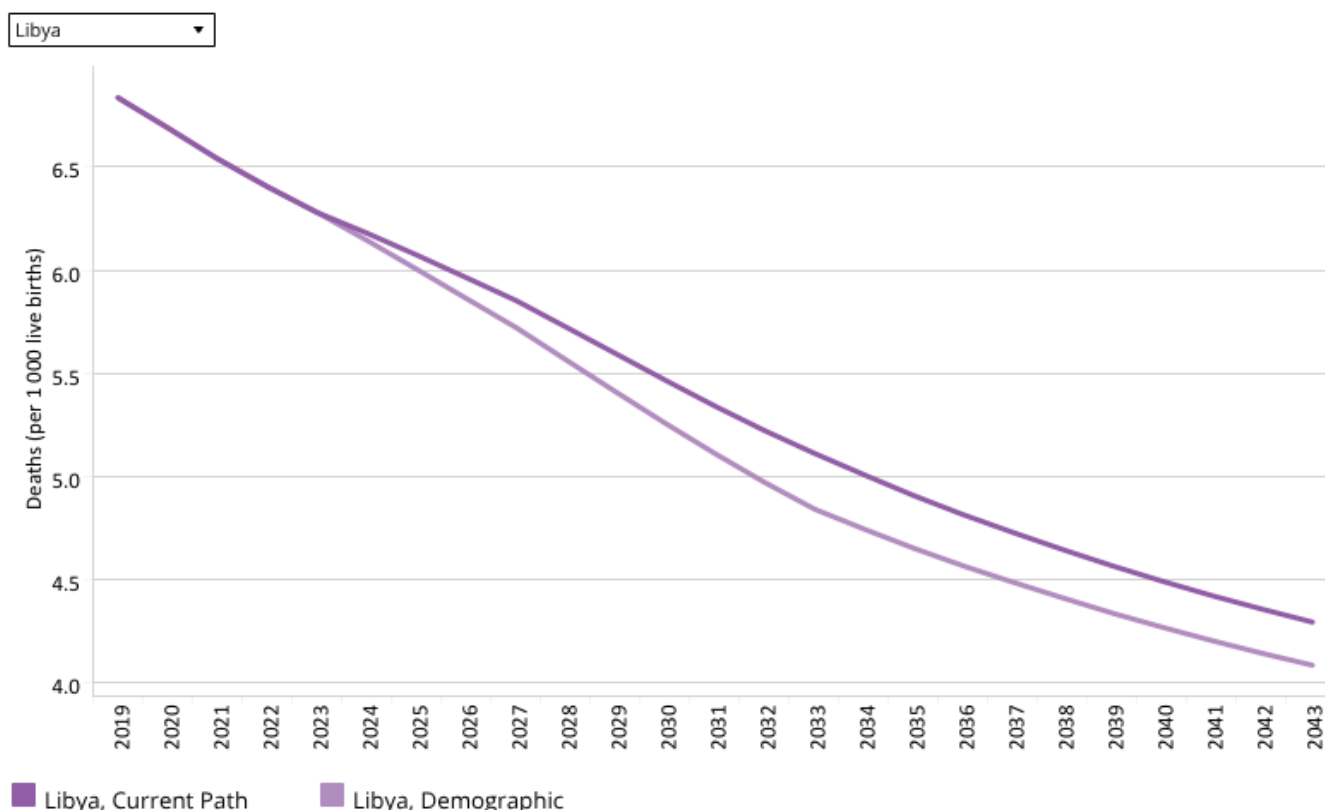
Libya entered a potential demographic dividend in 2001 and will remain in this window of opportunity beyond 2043, implying that, with the right policies and education, it has the potential for rapid economic growth. In 2019, the ratio of working-age persons to dependants was 2:1, below only Mauritius and Seychelles and above the average of 1.85:1 for upper middle-income African countries in the same year. The ratio means that 66.8% of Libya's population was then of working age (15 to 64 years). In the Current Path forecast, Libya will reach a peak demographic dividend in around 2033 when the ratio will get to 2.4:1, which is higher than the forecast for most other African states. Thereafter, the ratio of working-age persons to dependants will slowly decline to just below 1.9:1 by 2043, slightly below the average for its

income peers in Africa. It is, however, likely that the years of conflict will increase rates of total fertility that will impact upon its demographic profile.

As the country is already experiencing a demographic dividend, the Demographic scenario has a marginal impact on Libya.

**Chart 17: Infant mortality in CP and Demog scenario, 2019–2043**

Deaths per 1 000 live births



Source: IFs 7.63 initialising from Institute for Health Metrics and Evaluation Mortality Visualization Tool data

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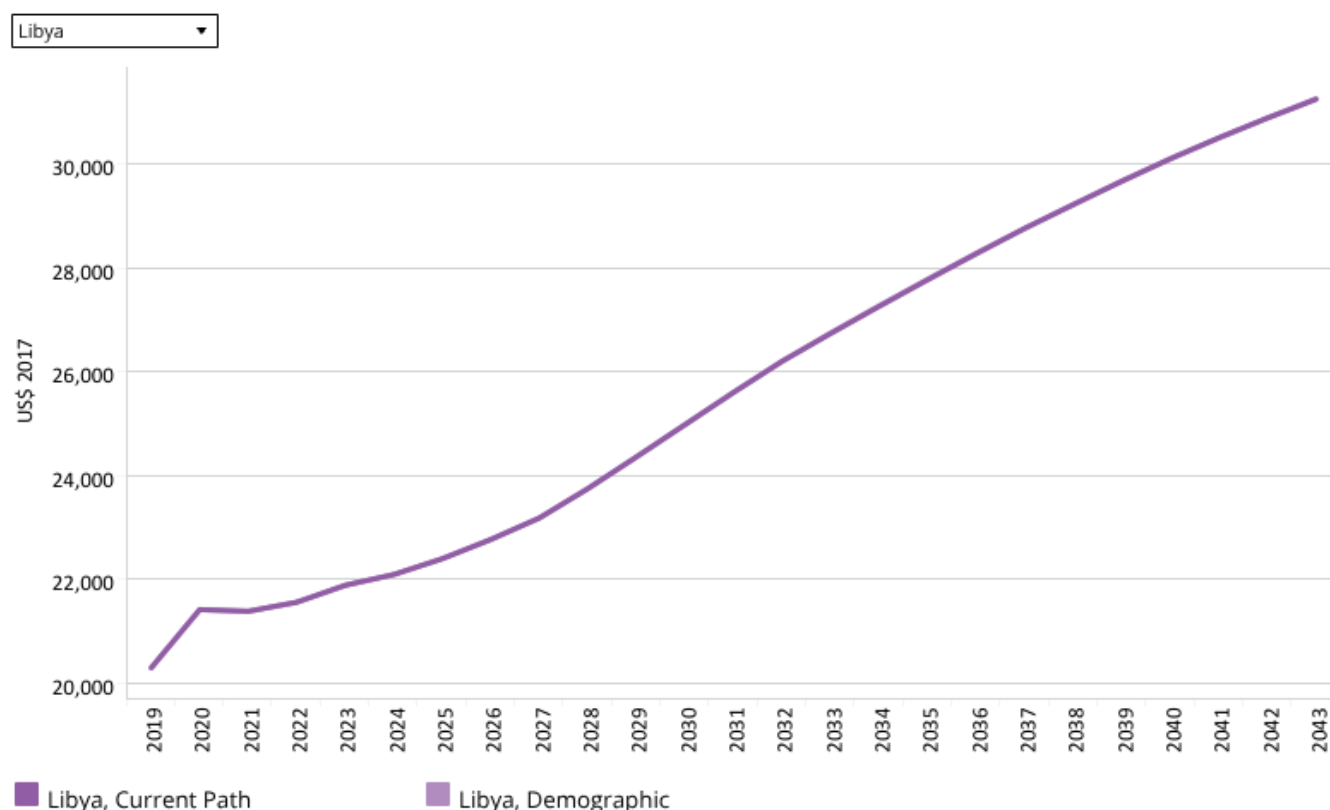
The infant mortality rate is the number of infant deaths per 1 000 live births and is an important marker of the overall quality of the health system in a country.

Investments in basic sanitation and healthcare since the discovery of oil means that Libya has among the lowest rates of infant mortality in Africa. In the year prior to the Arab Spring, in 2010, it was at 10.6 deaths per 1 000 live births, but then jumped to more than 16 in 2011. The IFs forecast is that infant mortality rates declined thereafter to 6.8 per 1 000 live births in 2019, but that number probably underestimates the impact of the ongoing conflict, with the forecast reaching 4.4 deaths in 2043.

At these low levels of mortality, the Demographic scenario has little impact and, in 2043, the difference between the Demographic scenario and the Current Path forecast is 0.2 fewer deaths per 1 000 live births. The projected infant mortality rate for Libya in both the Current Path forecast and in the Demographic scenario is significantly below the average for upper middle-income countries throughout the forecasting period.



Chart 18: GDP per capita in CP and Demog scenario, 2019–2043  
Purchasing power parity



Source: IFs 7.63 initialising from UN Population Division World Population Prospects and World Development Indicators data

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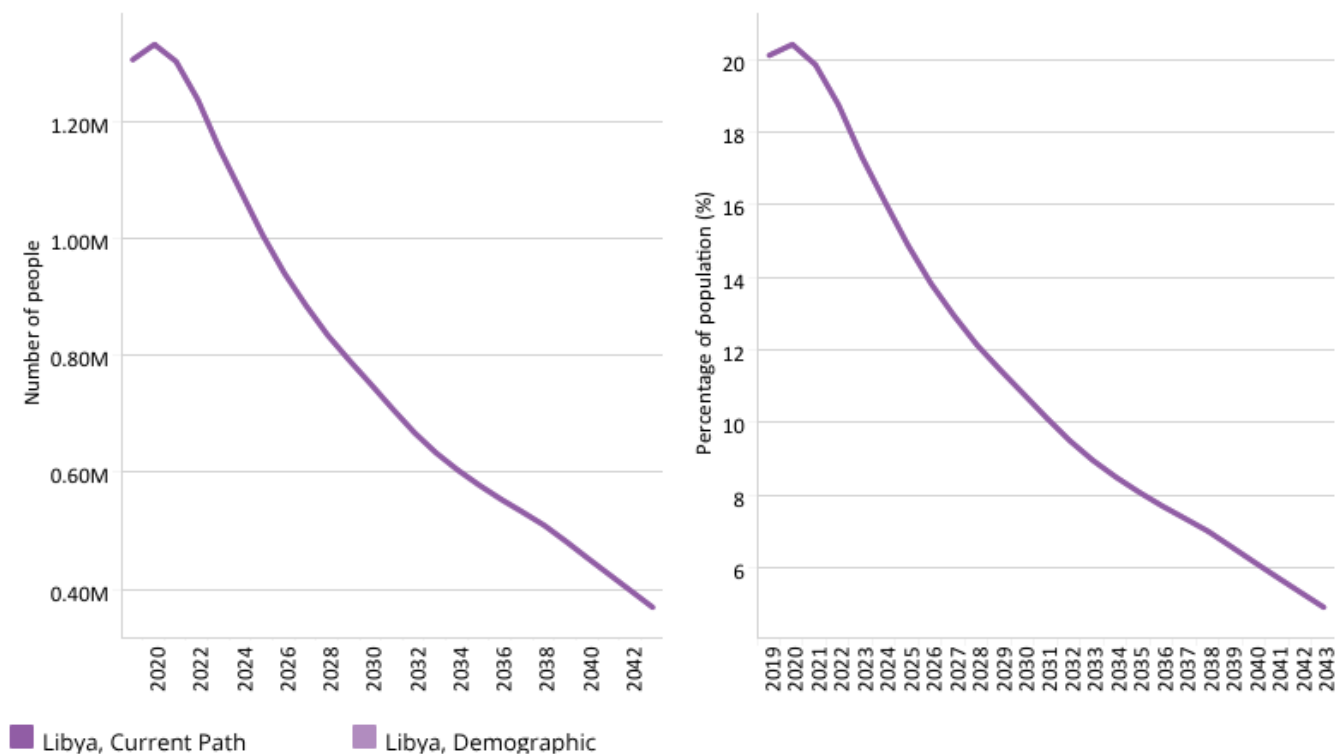
Since the start of conflict in 2011, estimates of GDP per capita for Libya have gyrated wildly from year to year and between data providers. The last data in IFs is for 2019, at which point Libya had the third highest GDP per capita in Africa at US\$20 296. According to the World Bank, GDP per capita plunged in 2020, and therefore the number presented in this chart needs to be treated with care. In the Demographic scenario, GDP per capita in Libya will increase to US\$31 261 in 2043, slightly above the Current Path forecast of US\$31 250. Libya's GDP per capita in the Demographic scenario will still be ranked as the third highest in Africa, bested only by Equatorial Guinea and Seychelles and 76% higher than the average for its income peers in Africa.

# Chart 19: Poverty in CP and Demog scenario, 2019–2043

Millions of people and % of total population



Libya \$5.50



Source: IFs 7.63 initialising from UN Population Division Population Prospects estimate, World Development Indicators population data and PovcalNet World Bank data

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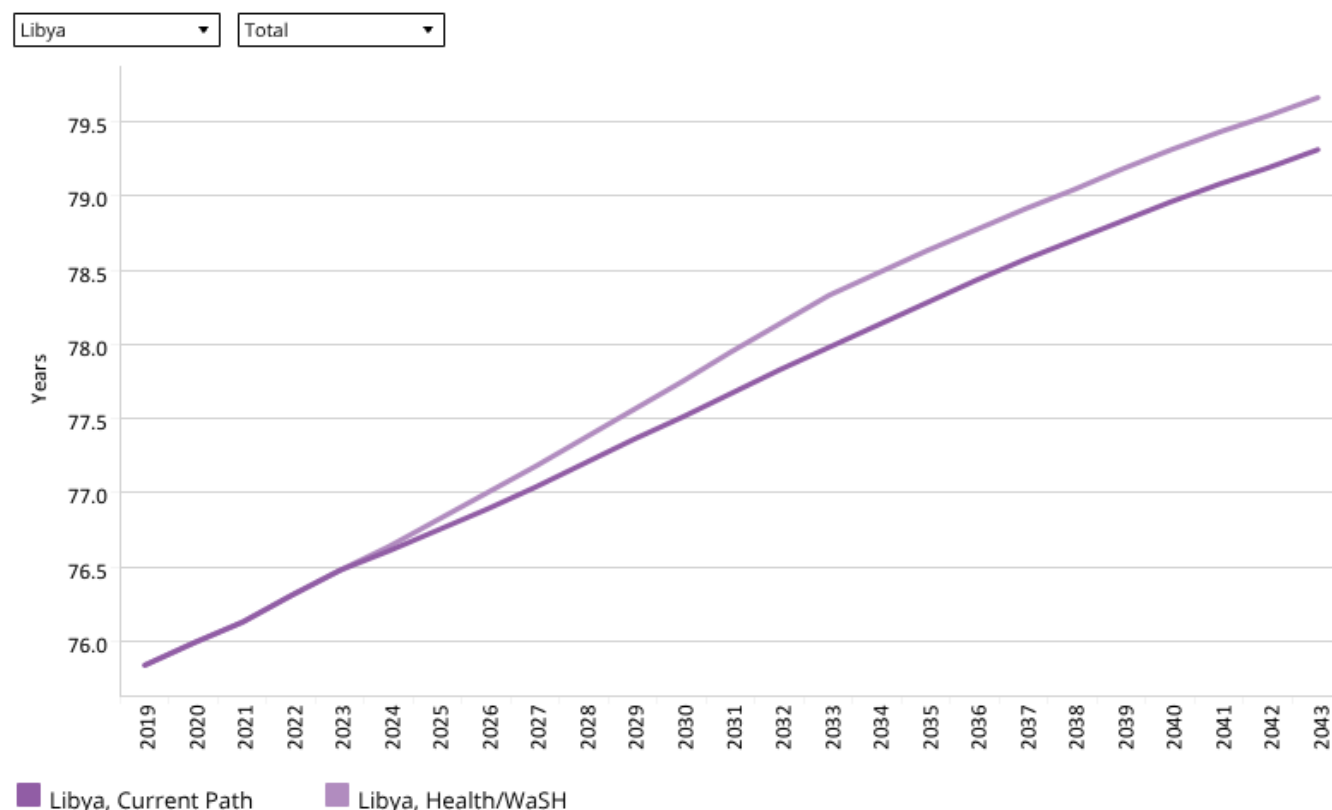
Together with other countries in North Africa, Libya met the goal of eliminating extreme poverty (using US\$1.90) in 2018. However, using US\$5.50 for upper middle-income countries, 1.3 million Libyans (20.12%) lived in extreme poverty in 2019; this number will decline to 369 000 (4.9%) in 2043 in the Current Path forecast. This forecast likely underestimates the impact of recent levels of instability.

Because Libya has a positive demographic profile with low levels of infant and maternal mortality, the Demographic scenario has no impact on extreme poverty.



## Health/WaSH scenario

Chart 20: Life expectancy in CP and Health/WaSH scenario, 2019–2043



Source: IFs 7.63 initialising from Institute for Health Metrics Evaluation GBD Foresight Tool data

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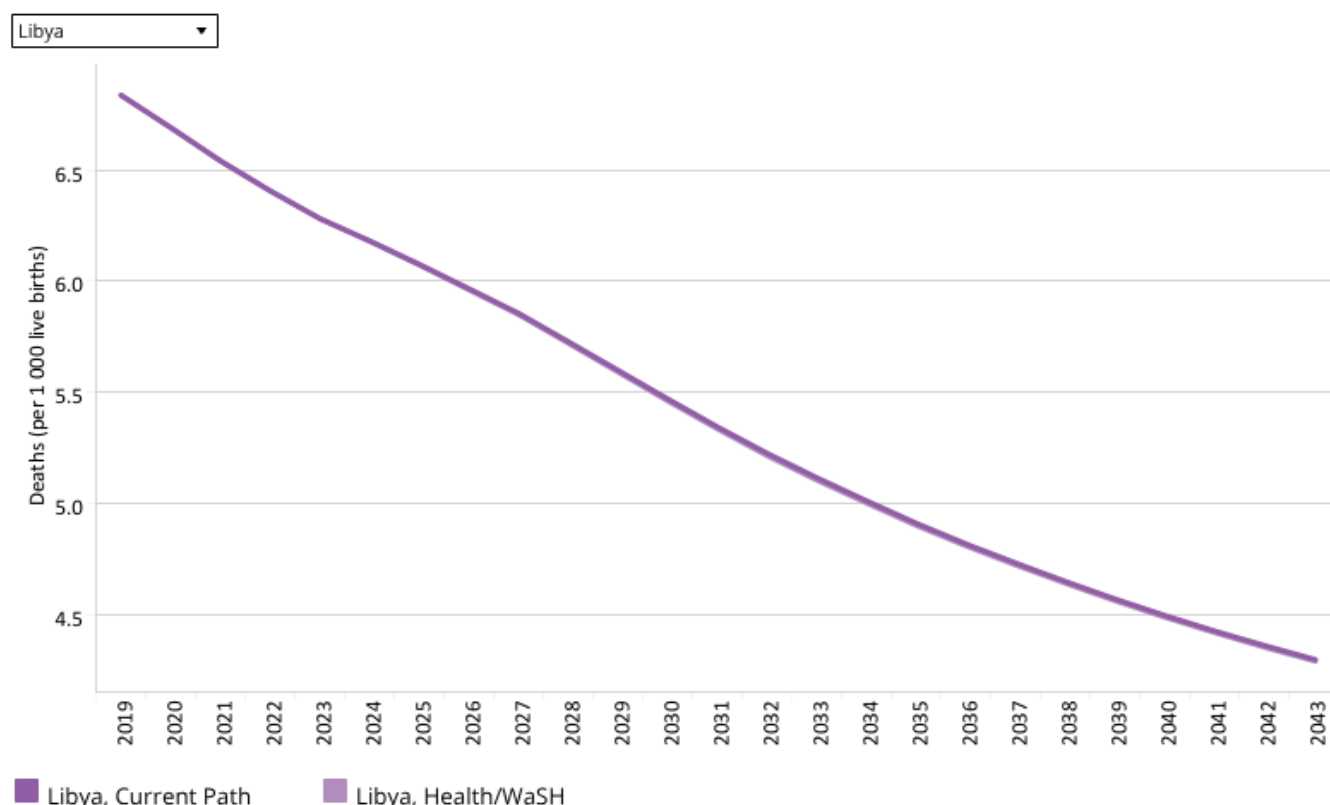
This section presents reasonable but ambitious improvements in the Health/WaSH scenario, which include reductions in the mortality rate associated with both communicable diseases (e.g. AIDS, diarrhoea, malaria and respiratory infections) and non-communicable diseases (NCDs) (e.g. diabetes), as well as improvements in access to safe water and better sanitation. The acronym WaSH stands for water, sanitation and hygiene.

The intervention is explained [here](#) in the thematic part of the website.

Libya has some of the highest rates of basic infrastructure provision in Africa. In 2019, access to improved water and sanitation infrastructure, for example, was at 100%, while connections to wastewater collection was at 82%.

Just before the Arab Spring, life expectancy in Libya was more than 76 years but declined thereafter, although the IFs forecast is that it has recently recovered back to that level, and life expectancy is forecast to increase from 75.8 years in 2019 to 79.3 years in 2043. That would mean that life expectancy in Libya would then be third highest in Africa, behind only Tunisia and Algeria. The Health/WaSH scenario therefore has only a limited impact on life expectancy, with an improvement of 0.35 years by 2043.

Chart 21: Infant mortality in CP and Health/WaSH scenario, 2019–2043  
Deaths per 1 000 live births



Source: IFs 7.63 initialising from Institute for Health Metrics and Evaluation Mortality Visualization Tool data

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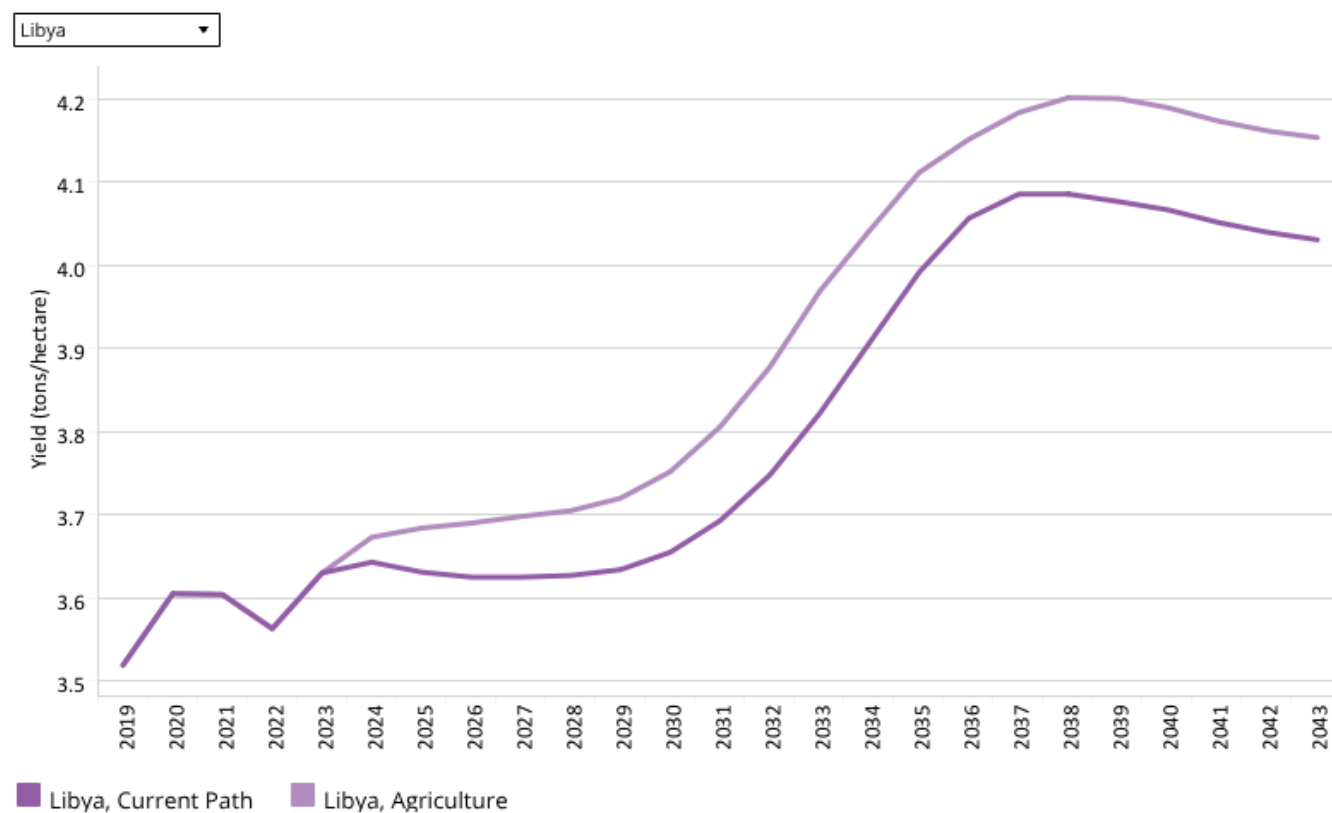
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Investments in WaSH infrastructure and healthcare since the discovery of oil means that Libya has among the lowest rates of infant mortality in Africa. In 2010, the rate was at 10.6 deaths per 1 000 live births, although, with the subsequent disruptions associated with the Arab Spring that rate jumped to more than 16 deaths in 2011. The IFs forecast is that infant mortality rates declined thereafter, to 6.8 deaths in 2019, but that rate probably underestimates the impact of the ongoing conflict, with the forecast improving to 4.4 deaths in 2043. The IFs forecast is that Libya had the lowest rate of infant deaths per 1 000 live births in Africa from 2018. At these low levels of mortality, the Health/WaSH scenario has no impact.



## Agriculture scenario

Chart 22: Yield/hectare in CP and Agric scenario, 2019–2043  
Pre-loss levels



Source: IFs 7.63 initialising from FAOSTAT on-line statistical service data

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The Agriculture scenario represents reasonable but ambitious increases in yields per hectare (reflecting better management and seed and fertiliser technology), increased land under irrigation and reduced loss and waste. Where appropriate, it includes an increase in calorie consumption, reflecting the prioritisation of food self-sufficiency above food exports as a desirable policy objective.

The intervention is explained [here](#) in the thematic part of the website.

The data on yield per hectare (in metric tons) is for crops but does not distinguish between different categories of crops.

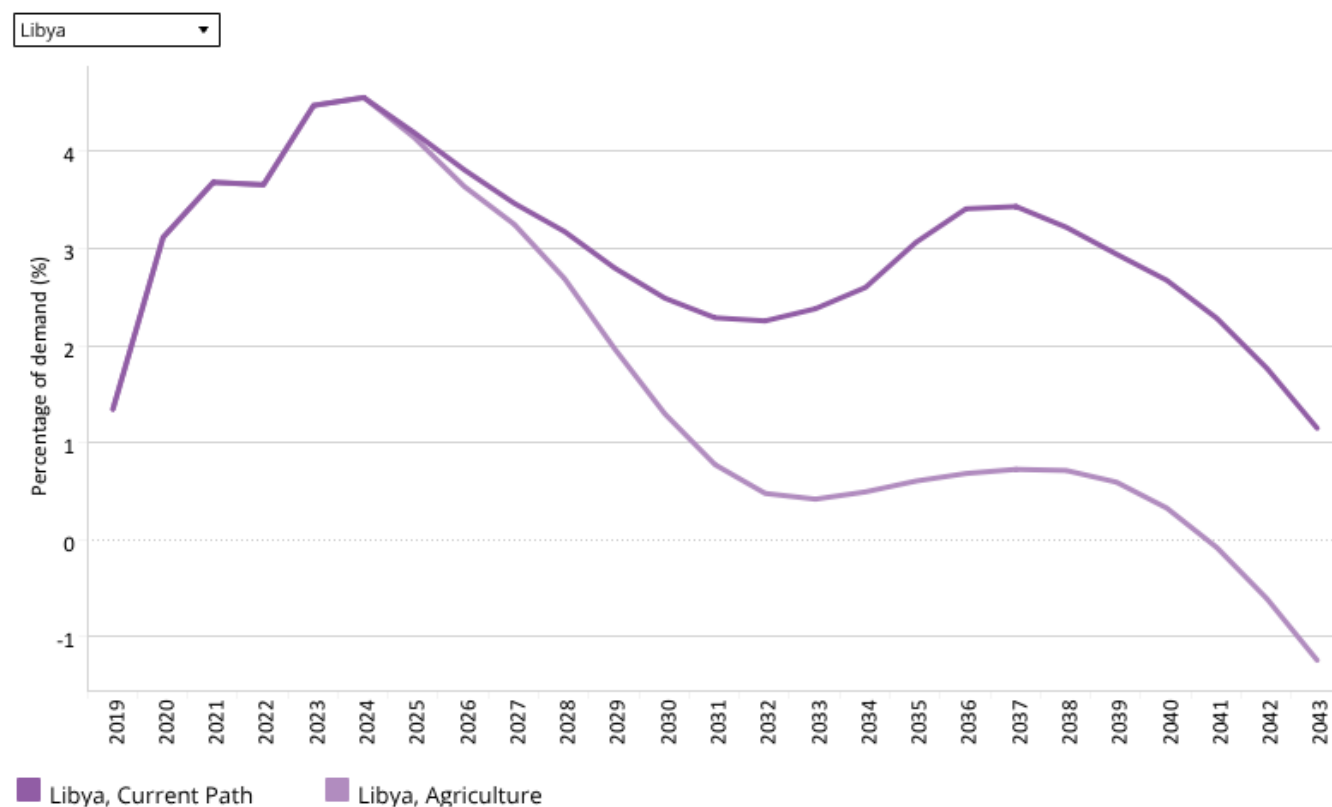
Only 1% (or 2 million hectares) of Libya's land area is suitable for crop cultivation and 7.5% for grazing. With around 263 000 hectares of land under irrigation, agriculture contributed around 3.5% to GDP (or US\$2.6 billion) in 2019 — although other [data sources](#) set it lower at around 1.3% of GDP. No historical data is available for agricultural production in Libya and the IFs pre-processor estimates 2019 production and demand at 8 million metric tons each, and that the country imported around 296 000 tons of agricultural products. By 2043, production and demand will increase to 10 million tons. According to the Global Agricultural Information Network, [Libya](#) imports around US\$3 billion foodstuffs annually.

According to the FAO, crop and livestock production are a significant source of food security for many Libyan households,

which tend to be small producers, with the result that a comparatively large proportion of Libyans (22%) are engaged in some form of agriculture production.

In 2019, crop yields per hectare in Libya was 3.5 tons, increasing to 4 tons by 2043 on the Current Path. In the Agriculture scenario, yields increase by 3% and will still be lower than the average of 4.7 tons for upper middle-income countries in Africa.

**Chart 23: Agriculture imports in CP and Agric scenario, 2019–2043**  
Net imports for meat, crops and fish, % of demand



Source: IFs 7.63 initialising from Food and Agriculture Organization Food Balance Sheets data

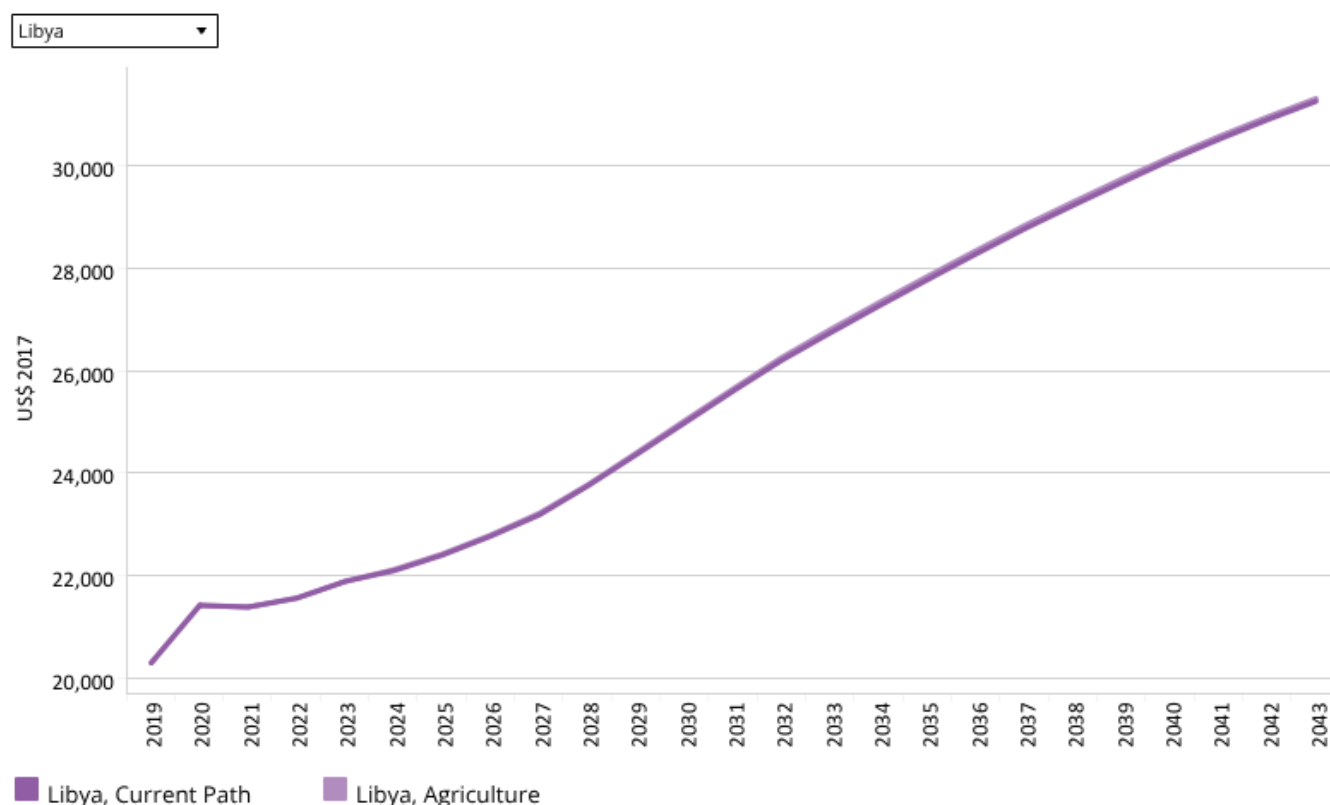
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In 2019, Libya produced 8 million metric tons of agricultural products (combining crops, meat and fish). This amount was insufficient to meet domestic consumption leading to net import of agricultural products of 1.35% of demand. On the Current Path, it is expected to increase to 10 million metric tons in 2043 (1.15% net agriculture imports as a per cent of agriculture demand). In the Agriculture scenario, production increases by almost 3% to 10.3 million tons in 2043 making Libya a net exporter equivalent to 1.24% of agriculture demand. By contrast, the average for upper middle-income Africa is for agriculture imports equivalent to 20.7% of demand.



Chart 24: GDP per capita in the CP and Agric scenario, 2019–2043  
Purchasing power parity



Source: IFs 7.63 initialising from UN Population Division World Population Prospects and World Development Indicators data

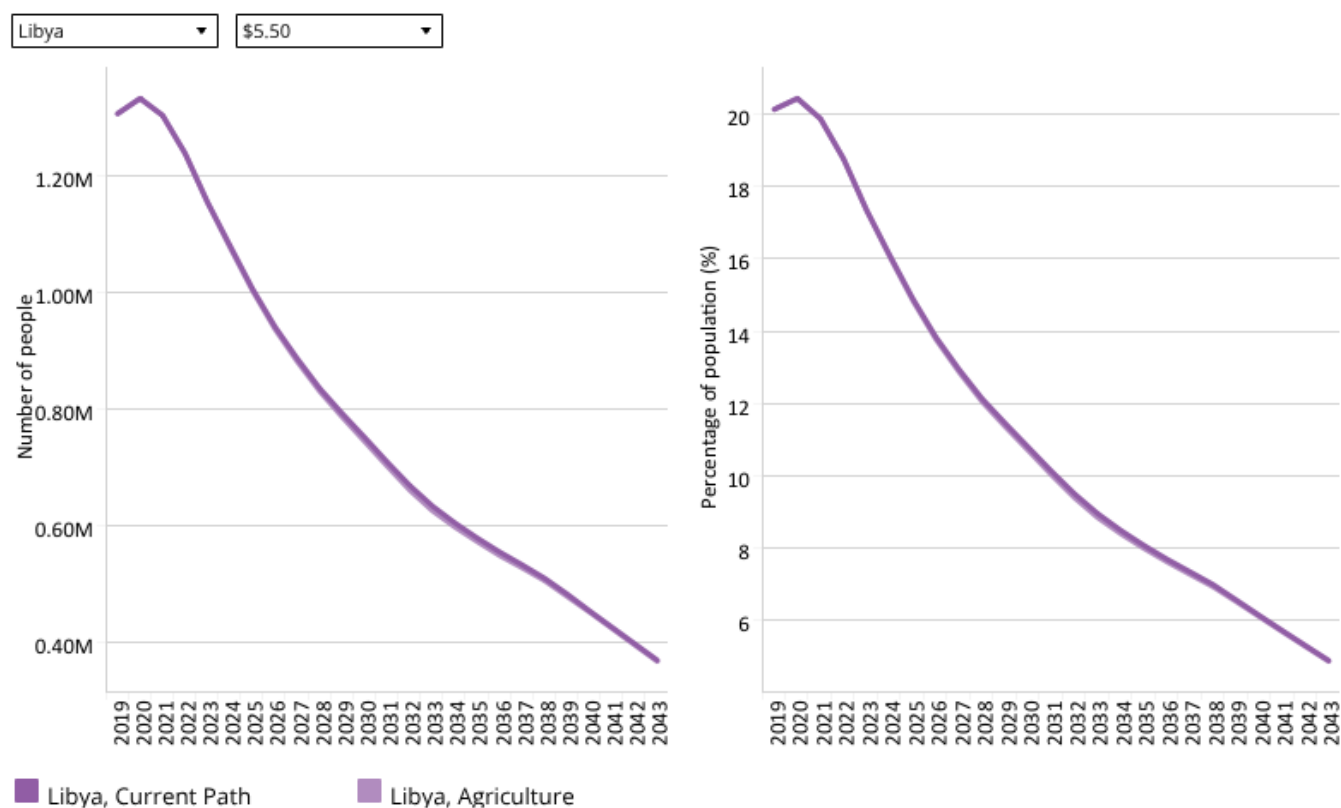
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Since the start of conflict in 2011, estimates of GDP per capita for Libya have gyrated wildly from year to year and between agencies. The last data in IFs is for 2019, at which point Libya had the third highest GDP per capita in Africa at US\$20 296. According to the World Bank, GDP per capita plunged in 2020, and therefore the numbers presented in this chart need to be treated with extreme caution. In the Current Path forecast, GDP per capita in Libya will increase to US\$31 250 in 2043 — still ranked as the third highest in Africa, bested only by Equatorial Guinea and Seychelles. In the Agriculture scenario, GDP per capita gets to US\$31 305 in 2043, an increase of US\$55 above the Current Path forecast for that year and over two-thirds higher than the average for upper middle-income countries in Africa.

# Chart 25: Poverty in CP and Agric scenario, 2019–2043

Millions of people and % of total population



Source: IFs 7.63 initialising from UN Population Division Population Prospects estimate, World Development Indicators population data and PovcalNet World Bank data

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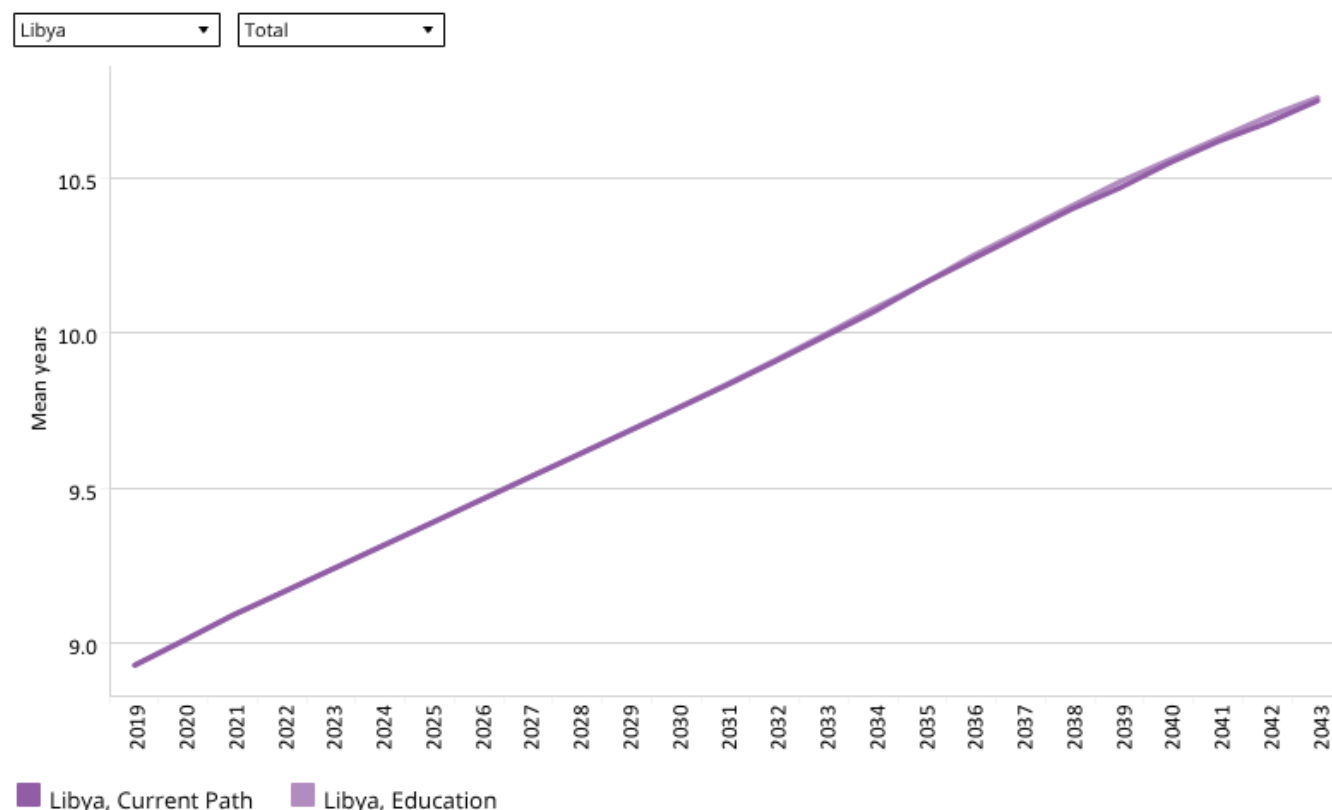
Together with other countries in North Africa, Libya met the goal of eliminating extreme poverty (using US\$1.90) in 2018. However, using US\$5.50 for upper middle-income countries, 1.3 million Libyans (20.12%) lived in extreme poverty in 2019; this number will decline to 369 000 (4.9%) in 2043 in the Current Path forecast, far lower than the projected average of 39.7% for upper middle-income countries in Africa in the same year. The Agriculture scenario has no significant impact on extreme poverty in Libya partly due to the unavailability of historical data on important indicators such as agricultural production. This forecast likely underestimates the impact of recent levels of instability.



## Education scenario

Chart 26: Mean years of education in CP and Educ scenario, 2019–2043

Mean years of adult (+15) education



Source: IFs 7.63 initialising from Barro-Lee data

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The Education scenario represents reasonable but ambitious improved intake, transition and graduation rates from primary to tertiary levels and better quality of education. It also models substantive progress towards gender parity at all levels, additional vocational training at secondary school level and increases in the share of science and engineering graduates.

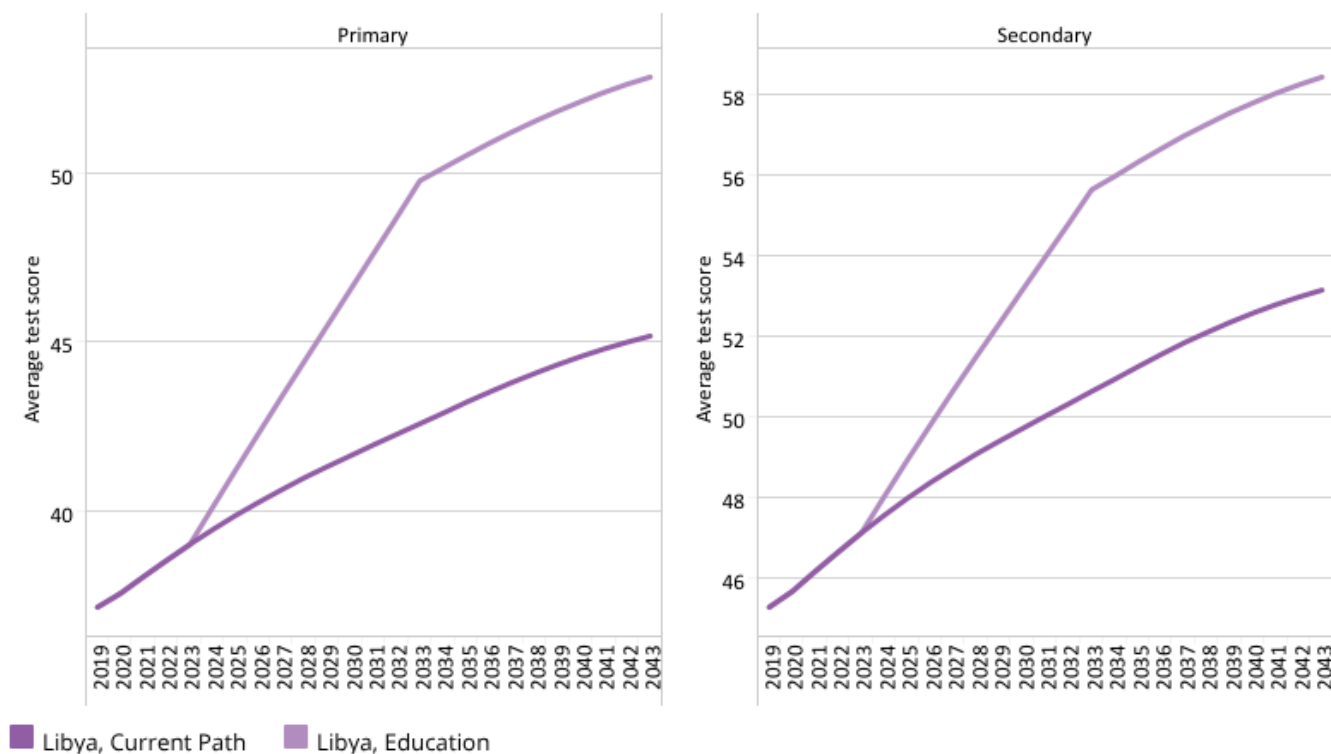
The intervention is explained [here](#) in the thematic part of the website.

In 2019, the mean years of education in Libya was 8.9 years. Although it is below the average of 9.8 years for its income peer group in Africa, it is the seventh best in Africa and significantly higher than the world average. In the Current Path forecast, mean years of adult education will increase to 10.8 years in 2043, the third highest in Africa. On average, females had more than 2 years more education than men in 2019. By 2043, the gap will have declined to 1.5 years. Because Libya already does very well in this regard, the Education scenario only has a marginal impact on mean years of adult education.

Chart 27: Education quality in CP and Educ scenario, 2019–2043  
Average test scores for primary and secondary learners



Libya



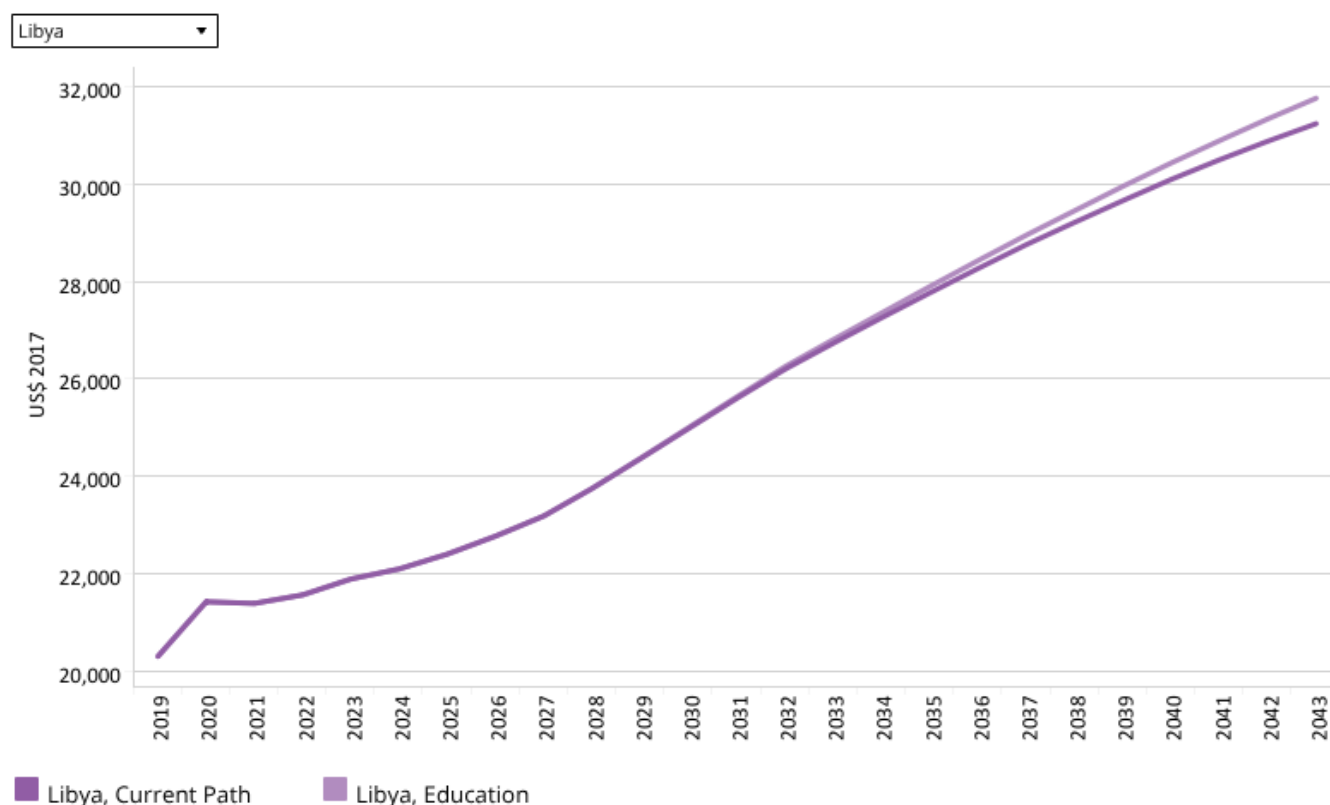
Source: IFs 7.63 initialising from World Bank EDSTATS

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Although Libya does very well in mean years of adult education (seventh best in Africa in 2019), the quality of education lags. In primary test scores, Libya ranked ninth in Africa in 2019 but fourth highest on secondary test scores. Average test score for primary learners improves from 37.2 in 2019 to 45.2 in 2043 on the Current Path, lower than the projected 52.8 in the Education scenario. Likewise, the Current Path forecast increases average test scores for secondary school learners from 45.3 in 2019 to 53.1 by 2043. The Education scenario results in raised average test scores, about 10% above the Current Path.

Chart 28: GDP per capita in CP and Educ scenario, 2019–2043  
Purchasing power parity



Source: IFs 7.63 initialising from UN Population Division World Population Prospects and World Development Indicators data

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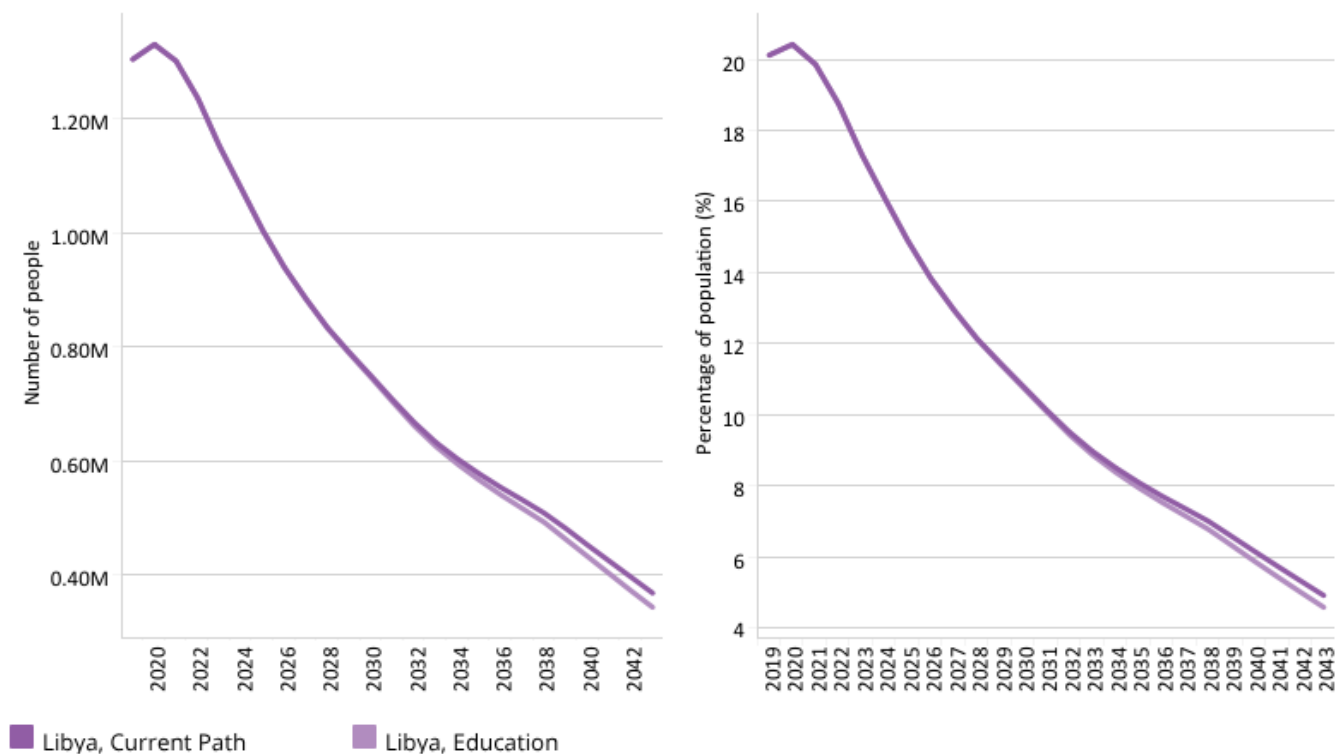
Since the start of conflict in 2011, estimates of GDP per capita for Libya have gyrated wildly from year to year and between different data providers. The last data in IFs is for 2019, at which point Libya had the third highest GDP per capita in Africa at US\$20 296. According to the World Bank, GDP per capita plunged in 2020, and therefore the numbers presented in this chart need to be treated with caution. In the Current Path forecast, GDP per capita in Libya will increase to US\$31 250 in 2043 — still ranked as the third highest in Africa, bested only by Equatorial Guinea and Seychelles. In the Education scenario, GDP per capita increases by US\$524 above the Current Path to US\$31 774 in 2043.

# Chart 29: Poverty in CP and Educ scenario, 2019–2043

Millions of people and % of total population



Libya \$5.50



Source: IFs 7.63 initialising from UN Population Division Population Prospects estimate, World Development Indicators population data and PovcalNet World Bank data

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Together with other countries in North Africa, Libya met the goal of eliminating extreme poverty (using US\$1.90) in 2018. However, using US\$5.50 for upper middle-income countries, 1.3 million Libyans (20.12%) lived in extreme poverty in 2019; this number will decline to 369 000 (4.9%) in 2043 in the Current Path forecast. This forecast likely underestimates the impact of recent levels of instability.

As Libya already does well in both the quantity and quality of education provided, the impact of the Education scenario on extreme poverty is a marginal decline to 4.57% (344 000 people) using US\$5.50.

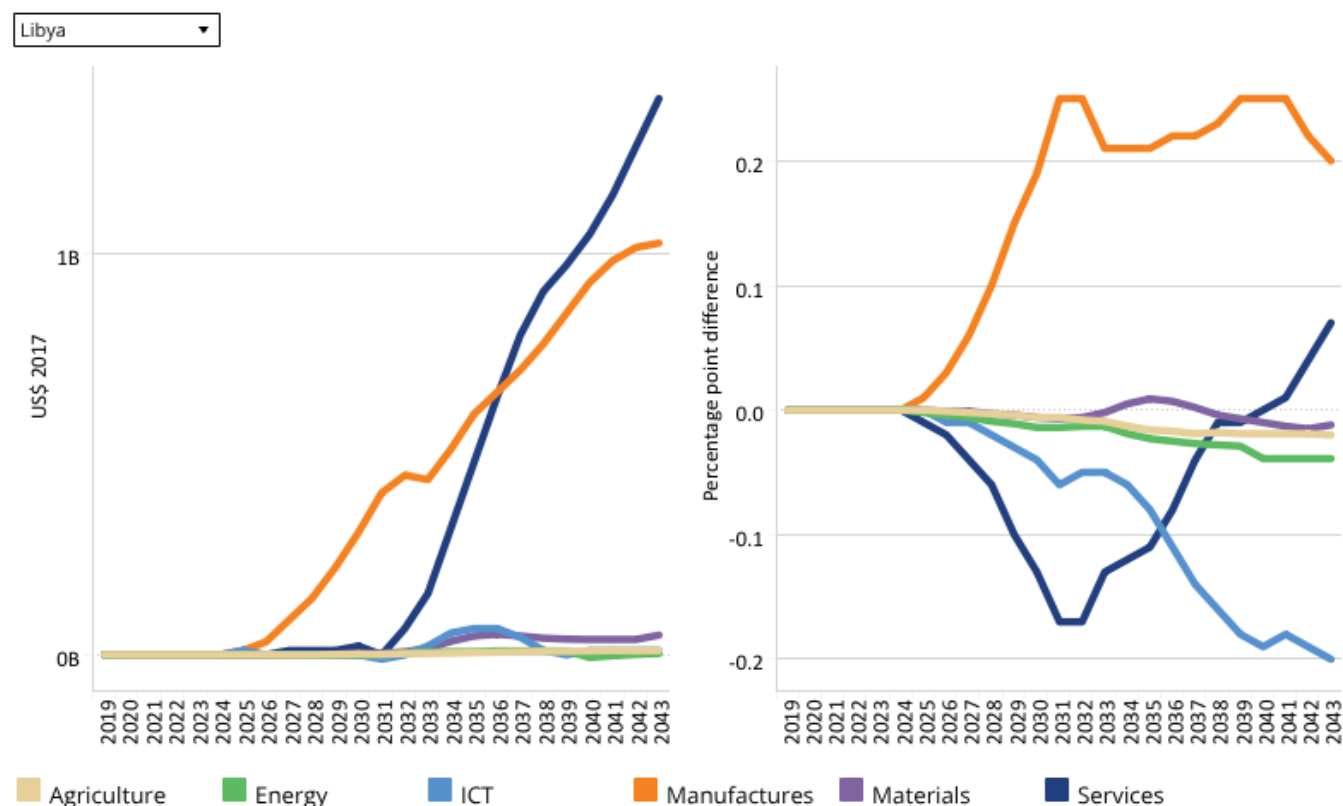




## Manufacturing scenario

Chart 30: Value added by sector in CP and Manufac/Transfers scenario, 2019–2043

Absolute and Percentage difference GDP



Source: IFs 7.63 initialising from International Monetary Fund World Economic Outlook database

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The Manufacturing/Transfers scenario represents reasonable but ambitious manufacturing growth through greater investment in the economy, investments in research and development, and promotion of the export of manufactured goods. It is accompanied by an increase in welfare transfers (social grants) to moderate the initial increases in inequality that are typically associated with a manufacturing transition. To this end, the scenario improves tax administration and increases government revenues.

The intervention is explained [here](#) in the thematic part of the website.

Chart 30 should be read with [Chart 8](#) that presents a stacked area graph on the contribution to GDP and size, in billion US\$, of the Current Path economy for each of the sectors.

Because of the ongoing conflict in Libya, the data and forecasts diverge from other sources and should be considered provisional.

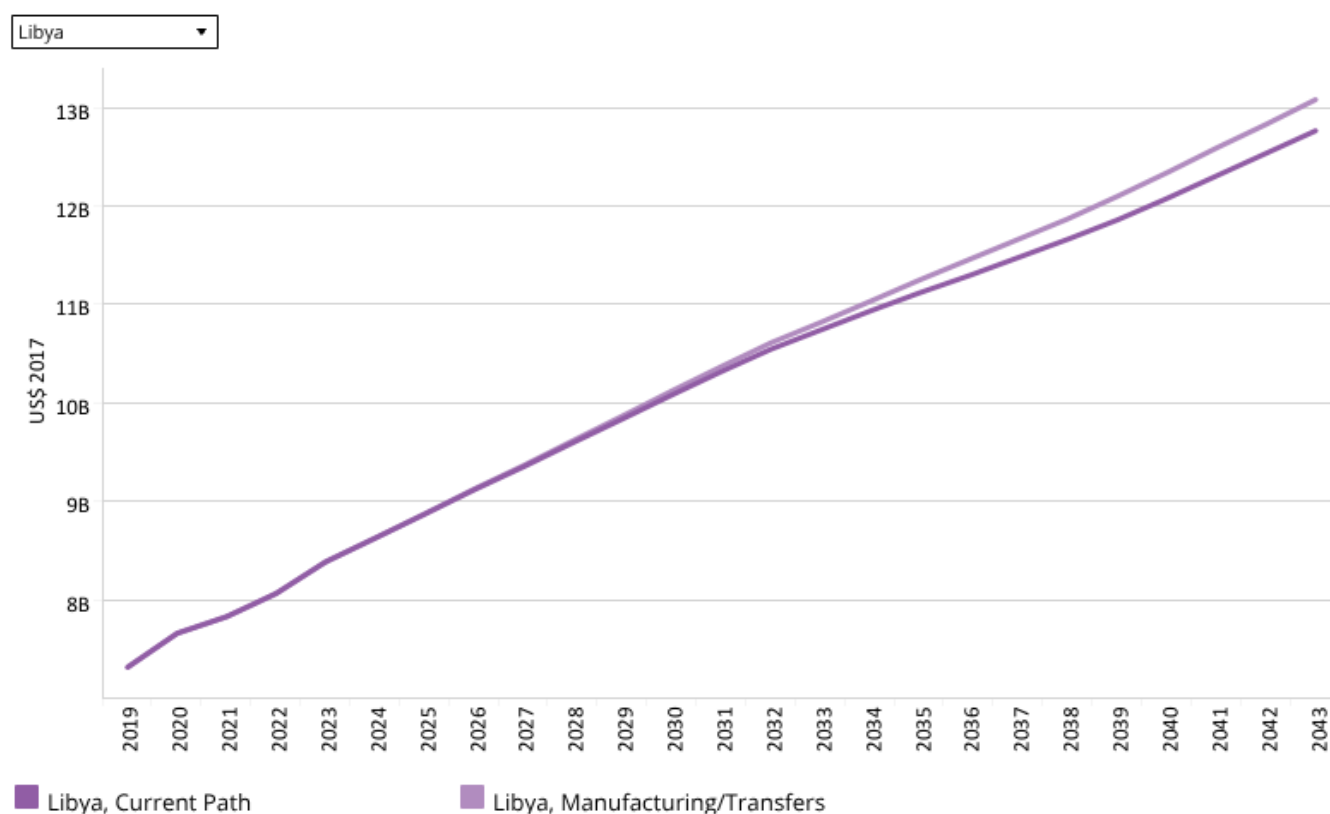
Similar to most other African countries, the Libyan economy is dominated by the service sector which, in 2019, accounted for 49% of GDP, followed by the manufacturing sector at 21%, ICT sector at 12.6%, energy sector at 11.8%, agriculture sector at 3.4% and materials sector at 2%. The Current Path forecast is for the service sector to maintain its large contribution (50%) in 2043, a modest increase in the contribution from the manufacturing sector (to 27.3%) and further

decline in the agriculture sector (to 1.9%). The largest shift, within IFs, is in the energy sector that declines to 3% of GDP in 2043 — likely because the IFs forecast for oil production initialises from 2015 data, a year during which production was particularly low.

Libya's manufacturing sector consists of a large oil and a much smaller non-oil component. According to [Nations Encyclopedia](#), the non-oil manufacturing industries are 'small, lightly capitalised, and devoted primarily to the processing of local agricultural products (tanning, canning fruits and vegetables, milling flour, and processing olive oil), and to textiles, building materials, and basic consumer items. Handicraft products include carpets and rugs, silver jewellery, textiles, glassware, and leather goods.'

The Manufacturing/Transfers scenario increases the contribution of manufactures by 0.2% above the Current Path in 2043 and services by 0.1%. The other sectors, agriculture, energy, materials and ICT, all decline in contribution to GDP, but all sectors are larger in 2043 in the Manufacturing/Transfers scenario compared to the Current Path forecast. The service sector, for example, is US\$1.38 billion larger and manufacturing US\$1.02 billion. Increases for other sectors are marginal.

**Chart 31: Gov welfare transfers in CP and Manufac/Transfers scenario, 2019–2043**  
Billions US\$ 2017



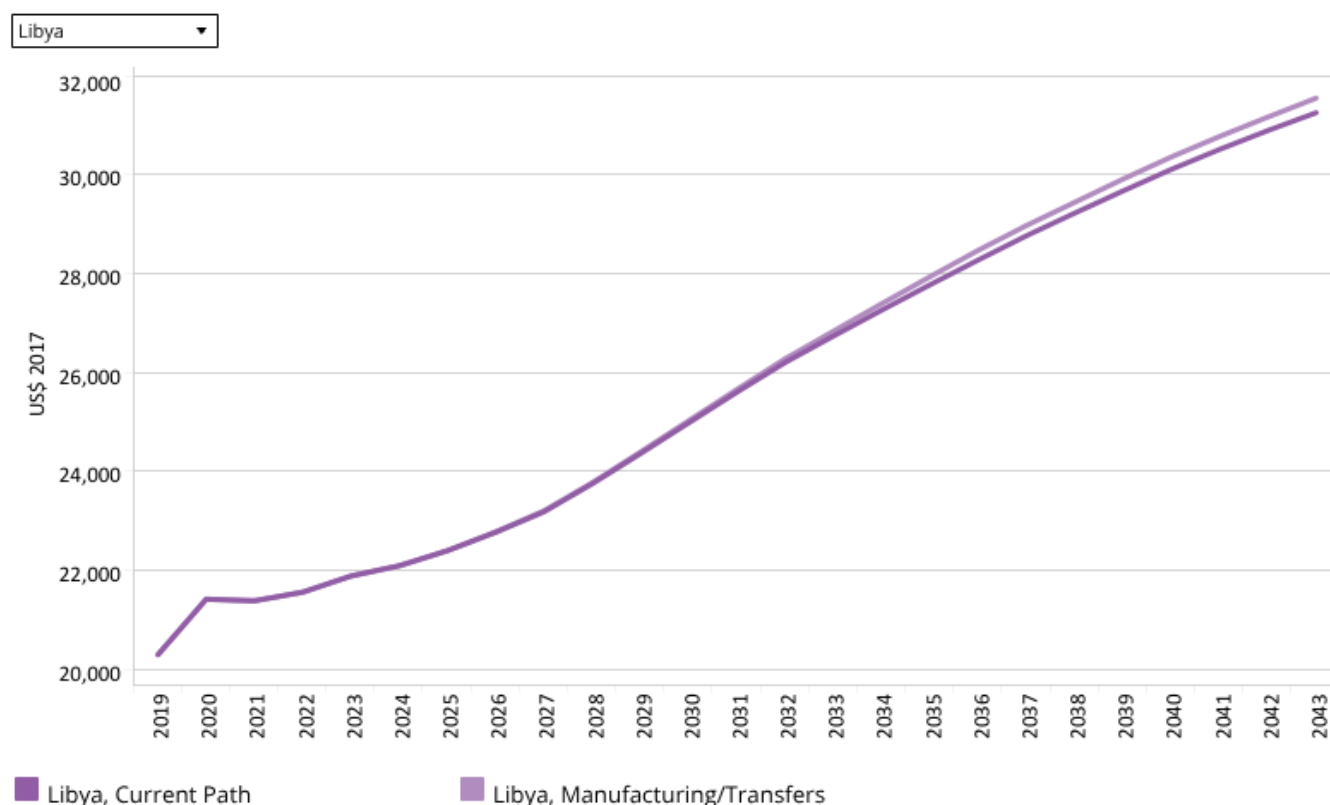
Source: IFs 7.63 initialising from World Development Indicators data

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Government welfare transfers in 2019 were US\$7.31 billion and increases to US\$12.76 billion in 2043 in the Current Path forecast. In the Manufacturing/Transfers scenario, it is US\$13.08 billion, an increase of slightly more than 2% above the Current Path forecast.

Chart 32: GDP per capita in CP and Manufac/Transfers scenario, 2019–2043  
Purchasing power parity



Source: IFs 7.63 initialising from UN Population Division World Population Prospects and World Development Indicators data

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Since the start of conflict in 2011, estimates of GDP per capita for Libya have gyrated wildly from year to year and between data providers. The last data in IFs is for 2019, at which point Libya had the third highest GDP per capita in Africa at US\$20 296. According to the World Bank, GDP per capita plunged in 2020, and therefore the number presented in this chart is provisional.

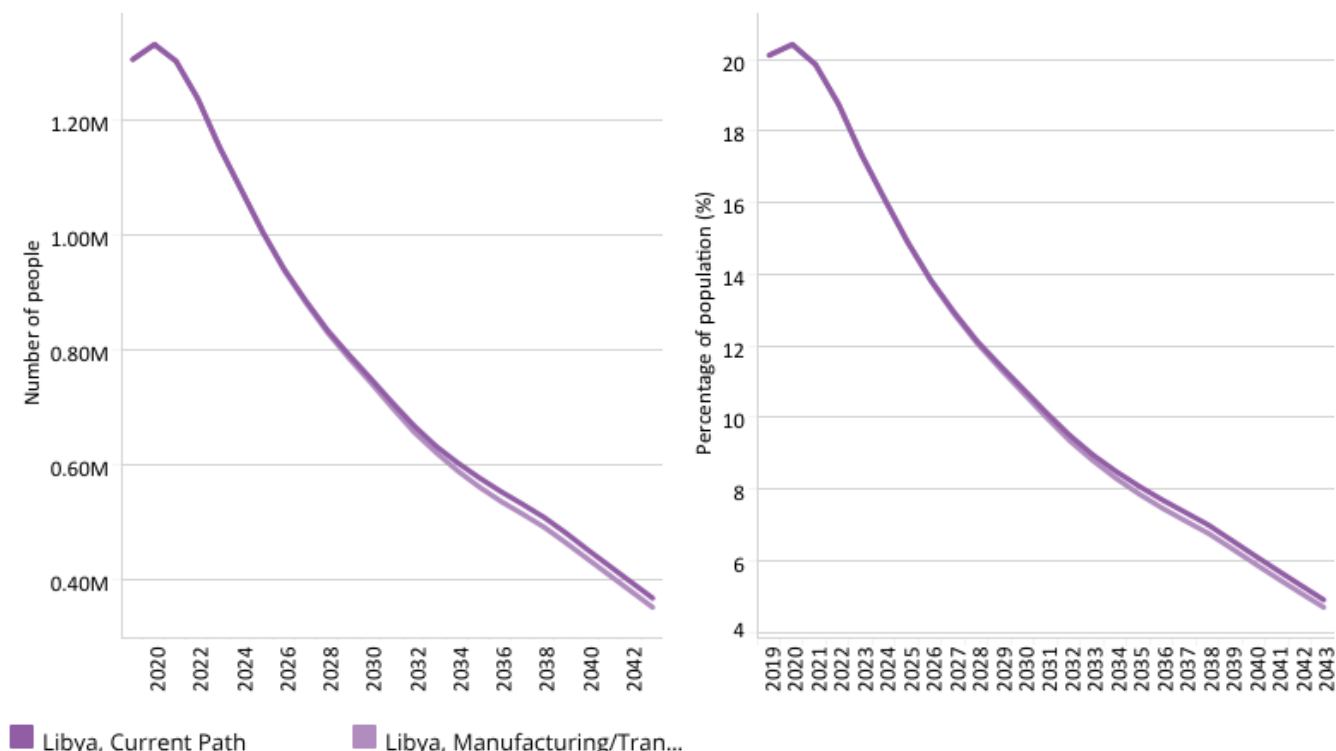
In the Current Path forecast, GDP per capita in Libya will increase to US\$31 250 in 2043 — still ranked as the third highest in Africa, bested only by Equatorial Guinea and Seychelles. In the Manufacturing/Transfers scenario, GDP per capita climbs to US\$31 545 by 2043, an increase of US\$295 and far above the average of US\$17 734 for upper middle-income countries in Africa.

# Chart 33: Poverty in CP and Manufac/Transfers scenario, 2019–2043

Millions of people and % of total population



Libya \$5.50



Source: IFs 7.63 initialising from UN Population Division Population Prospects estimate, World Development Indicators population data and PovcalNet World Bank data

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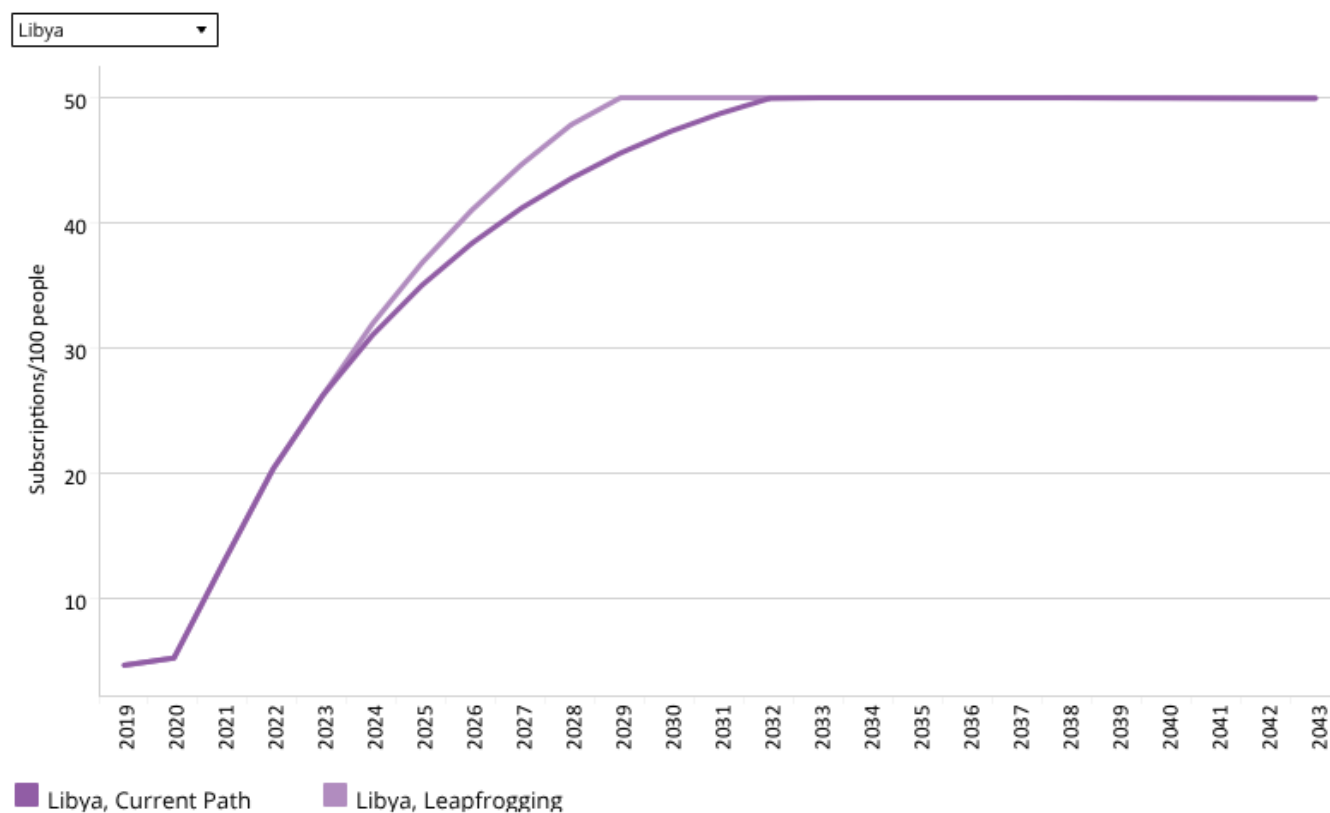
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Together with other countries in North Africa, Libya met the goal of eliminating extreme poverty (using US\$1.90) in 2018. However, using US\$5.50 for upper middle-income countries, 1.3 million Libyans (20.12%) lived in extreme poverty in 2019; this number will decline to 369 000 (4.9%) in 2043 in the Current Path forecast. This forecast likely underestimates the impact of recent levels of instability. In the Manufacturing/Transfers scenario, extreme poverty declines marginally to 353 000 (4.7%) which will be 35 percentage points lower than the average for its income peers on the continent.



## Leapfrogging scenario

Chart 34: Fixed broadband access in CP and Leapfrogging scenario, 2019–2043  
Subscriptions per 100 people



Source: IFS 7.63 initialising from International Telecommunication Union data

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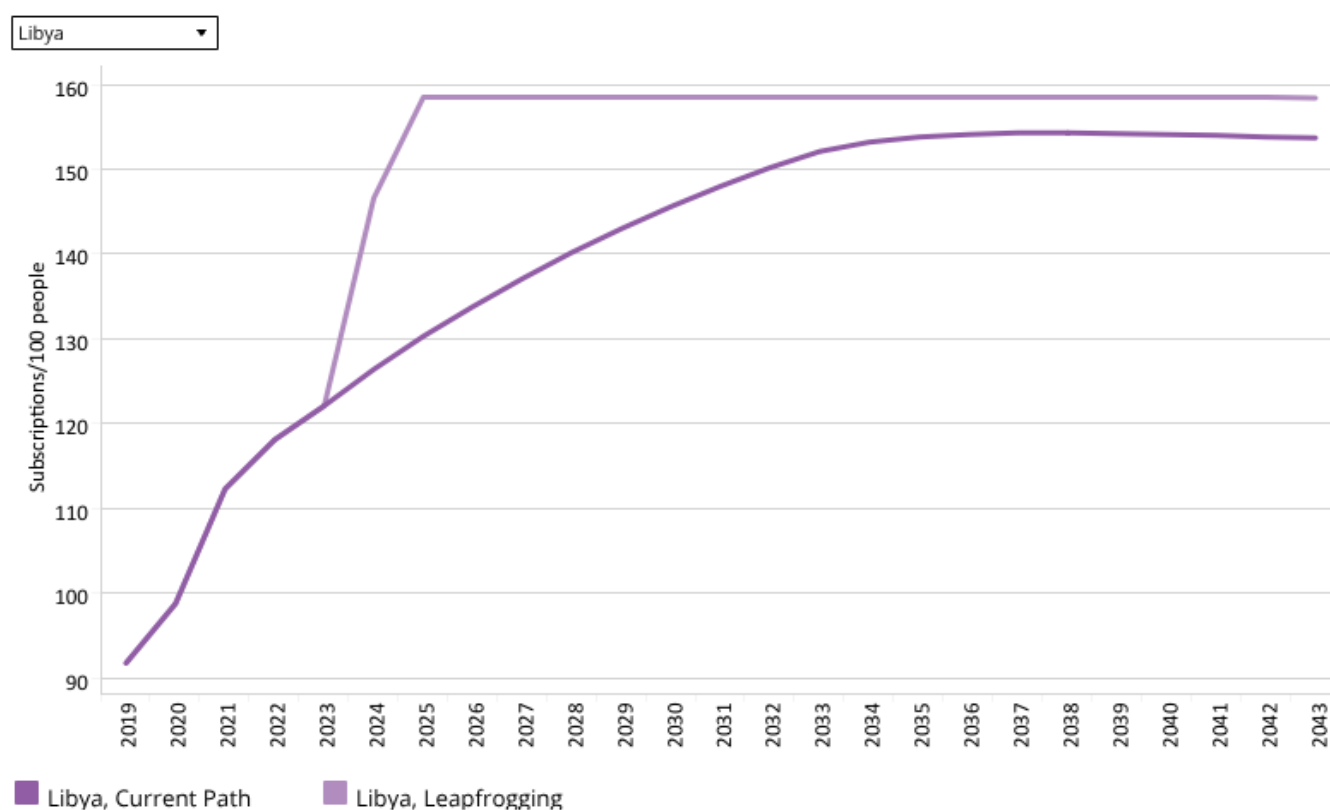
The Leapfrogging scenario represents a reasonable but ambitious adoption of and investment in renewable energy technologies, resulting in better access to electricity in urban and rural areas. The scenario includes accelerated access to mobile and fixed broadband and the adoption of modern technology that improves government efficiency and allows for the more rapid formalisation of the informal sector.

The intervention is explained [here](#) in the thematic part of the website.

Fixed broadband includes cable modem Internet connections, DSL Internet connections of at least 256 KB/s, fibre and other fixed broadband technology connections (such as satellite broadband Internet, ethernet local area networks, fixed-wireless access, wireless local area networks, WiMAX, etc.).

In 2019, fixed broadband subscriptions in Libya were at 4.7 per 100 persons, the tenth highest in Africa and slightly above the average of 4.4 per 100 persons for upper middle-income countries in Africa. However, much of the infrastructure has been damaged in the ongoing civil war. In the Current Path forecast, it is set to reach saturation levels of 50 per 100 persons in 2032 (at which point it will be ranked first in Africa) and three years earlier in the Leapfrogging scenario and remain so thereafter.

Chart 35: Mobile broadband access in CP and Leapfrogging scenario, 2019–2043  
Subscriptions per 100 people



Source: IFS 7.63 initialising from International Telecommunication Union data

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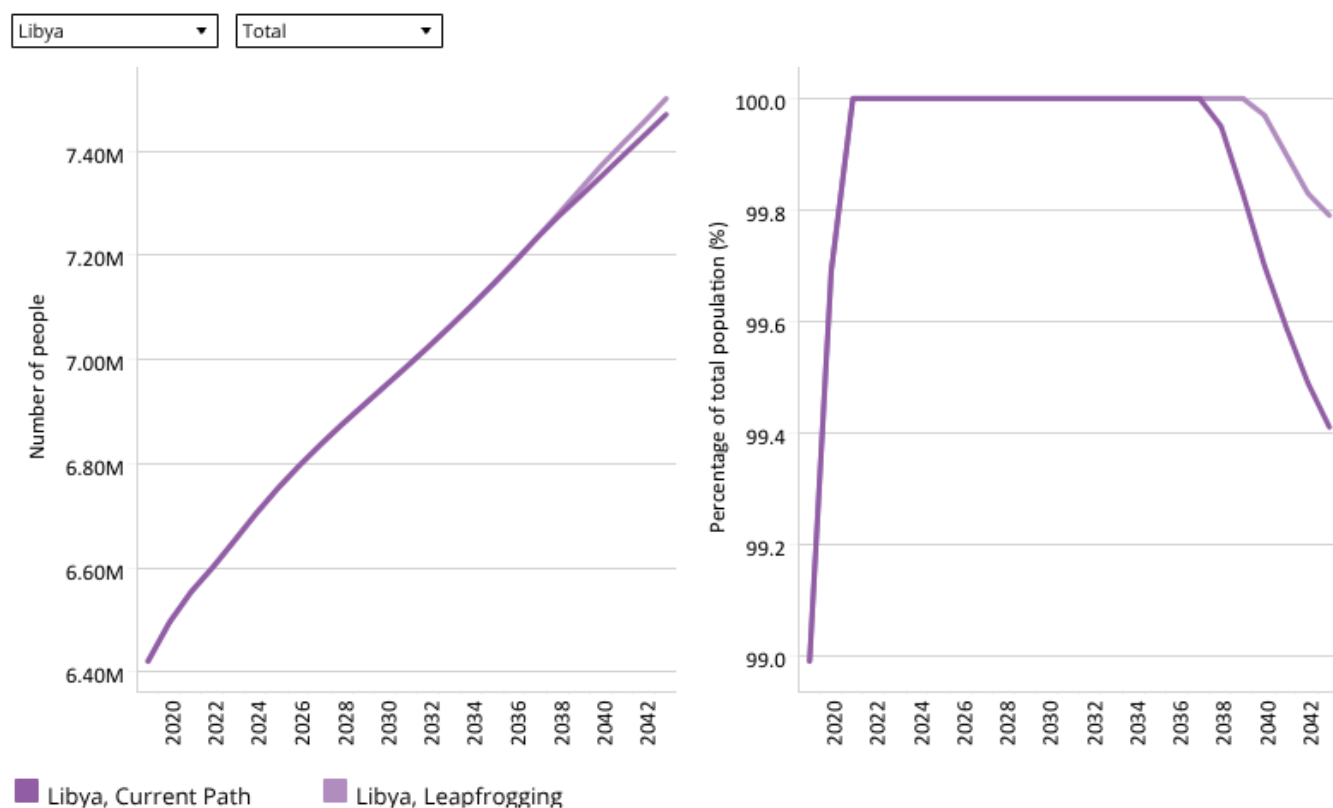
Mobile broadband refers to wireless Internet access delivered through cellular towers to computers and other digital devices.

The disruption of Libya's mobile network after 2011 is not reflected in Chart 35, which presents mobile broadband subscriptions per 100 persons on the Current Path and in the Leapfrogging scenario. According to the research company [BuddleComm](#), 'much of the telecom infrastructure was destroyed or stolen following the 2011 disturbances, including about a quarter of the country's mobile tower sites reconstruction efforts were stymied by political and military disturbances which affected much of the country.' In 2019, mobile broadband subscriptions in Libya were at 92 per 100 persons, getting to saturation rates of 150 in 2032. In the Leapfrogging scenario, Libya gets to 150 subscriptions seven years earlier, in 2025. By 2043, the Leapfrogging scenario will raise mobile subscriptions to 158 per 100 persons, which is above the Current Path projections of 154 per 100 persons.



# Chart 36: Electricity access in CP and Leapfrogging scenario, 2019–2043

Millions of people and % of population



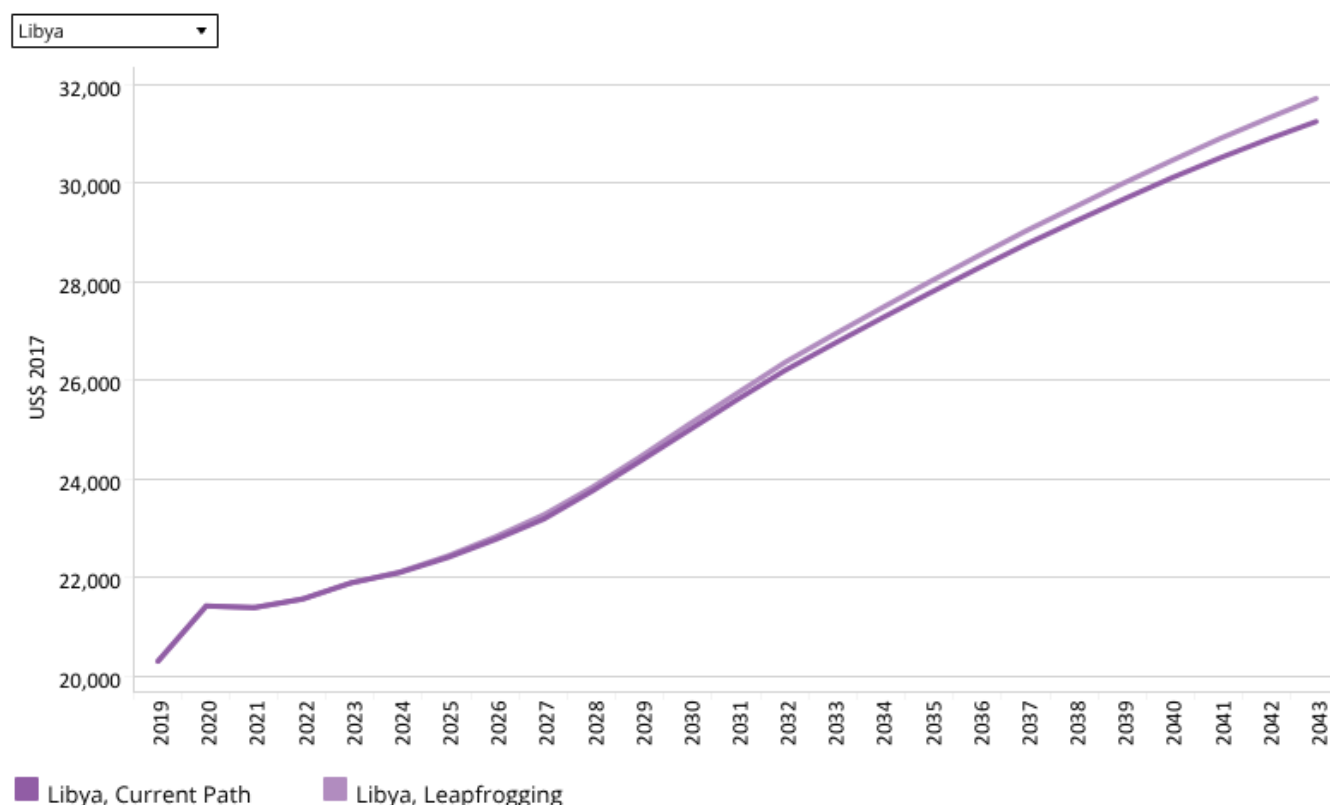
Source: IFs 7.63 initialising from World Development Indicators data

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Libya has provided electricity access to all of its population, urban and rural, for several decades and the Leapfrogging scenario therefore has no impact on access rates.

Chart 37: GDP per capita in CP and Leapfrogging scenario, 2019–2043  
Purchasing power parity



Source: IFs 7.63 initialising from UN Population Division World Population Prospects and World Development Indicators data

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Since the start of conflict in 2011, estimates of GDP per capita for Libya have gyrated wildly from year to year and between agencies. The last data in IFs is for 2019, at which point Libya had the third highest GDP per capita in Africa at US\$20 296. According to the World Bank, GDP per capita plunged in 2020, and therefore the number presented in this chart must be considered to be provisional.

Because its ICT sector is already large by comparative standards, the Leapfrogging scenario has a limited impact on further growth in Libya, increasing the size of the sector by only 0.2 percentage points of GDP in 2043.

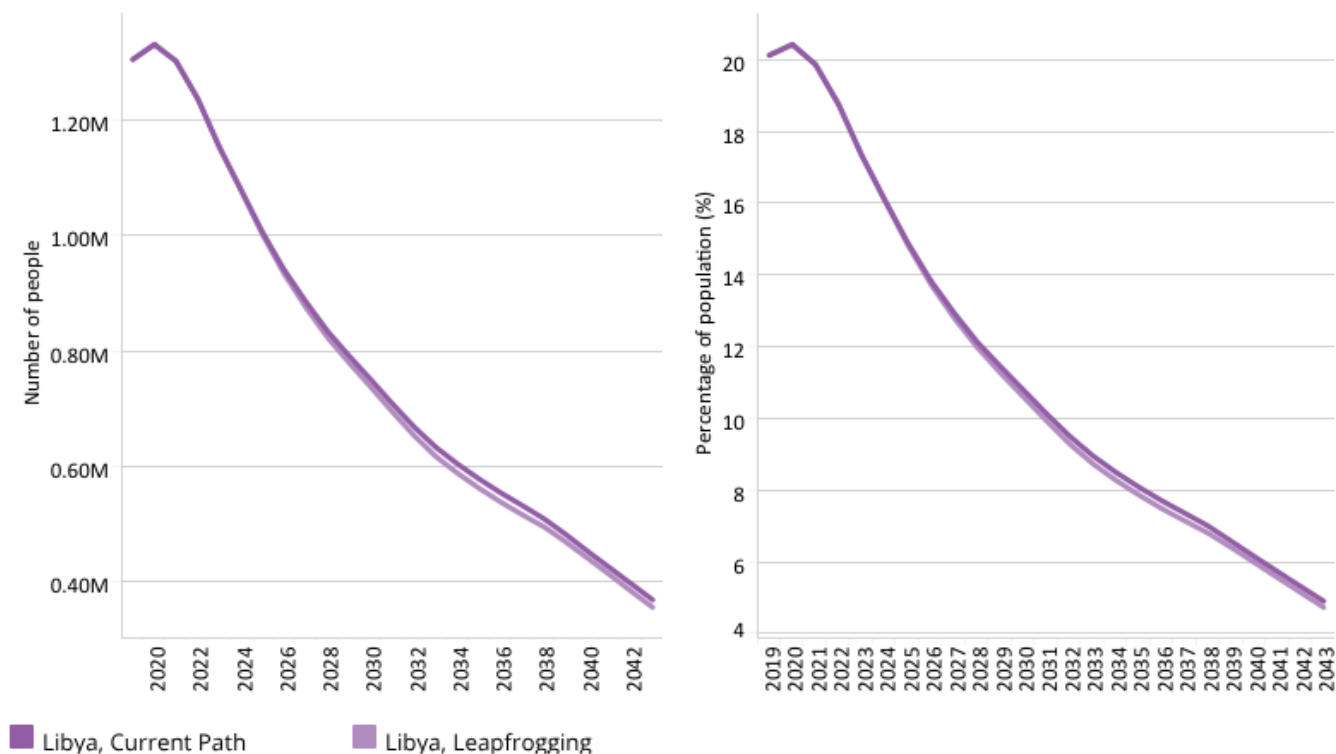
In the Current Path forecast, GDP per capita in Libya will increase to US\$31 250 in 2043 — still ranked as the third highest in Africa, bested only by Equatorial Guinea and Seychelles. In the Leapfrogging scenario, GDP per capita will increase to US\$31 719 in 2043, 1.5% higher than the Current Path forecast and far above the average of US\$17 734 for upper middle-income African countries.

# Chart 38: Poverty in CP and Leapfrogging scenario, 2019–2043

Millions of people and % of total population



Libya \$5.50



Source: IFs 7.63 initialising from UN Population Division Population Prospects estimate, World Development Indicators population data and PovcalNet World Bank data

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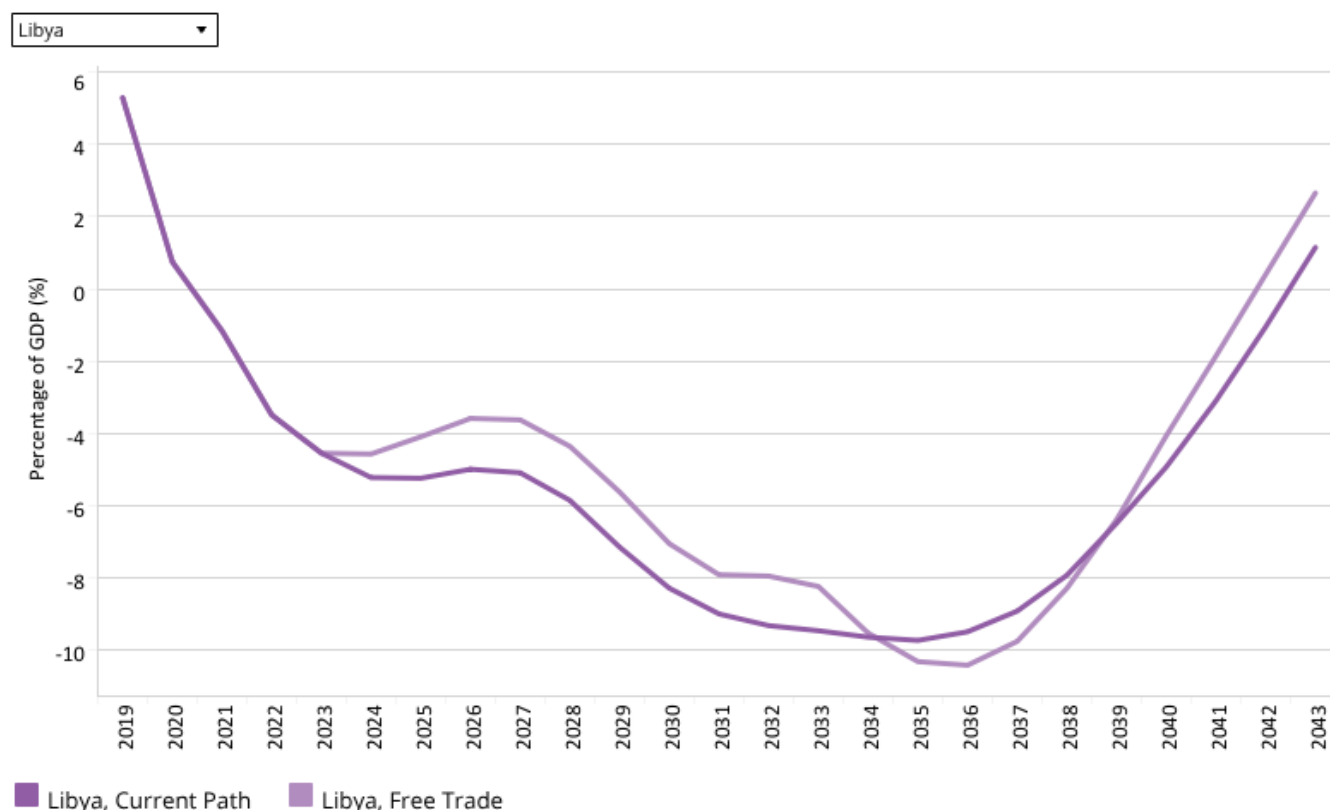
Together with other countries in North Africa, Libya met the goal of eliminating extreme poverty (using US\$1.90) in 2018. However, using US\$5.50 for upper middle-income countries, 1.3 million Libyans (20.12%) lived in extreme poverty in 2019; this number will decline to 369 000 (4.9%) in 2043 in the Current Path forecast. This forecast likely underestimates the impact of recent levels of instability.

In the Leapfrogging scenario, the number of people living below US\$5.50 declines marginally to 356 000 (4.73% of the population) in 2043 — far below the average of 39.7% for upper middle-income countries in Africa.



## Free Trade scenario

Chart 39: Trade balance in CP and Free Trade scenario, 2019–2043  
% of GDP



Source: IFs 7.63 initialising from World Development Indicators data

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The Free Trade scenario represents the impact of the full implementation of the African Continental Free Trade Area (AfCFTA) by 2034 through increases in exports, improved productivity and increased trade and economic freedom.

The intervention is explained [here](#) in the thematic part of the website.

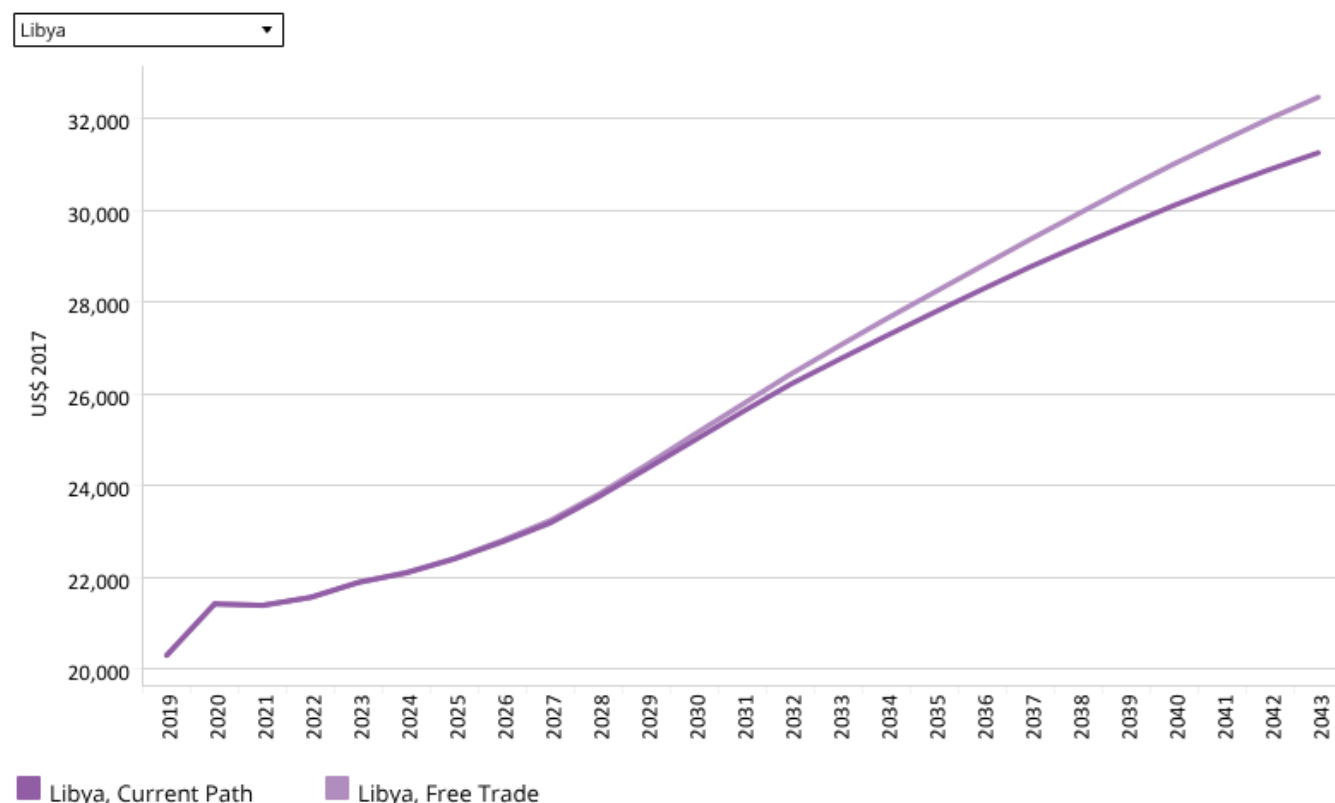
The trade balance is the difference between the value of a country's exports and its imports. A country that imports more goods and services than it exports in terms of value has a trade deficit, while a country that exports more goods and services than it imports has a trade surplus.

**The Maghreb** is the least economically integrated bloc in the world with a share of intra-regional trade of only around 5% of total trade.

Because of its oil largesse, Libya has been able to run a consistent trade surplus for many years. In 2019, it was at 5.29% of GDP, and will decline to 9.72% of GDP in 2035 before recovering to 1.15% of GDP in 2043. Libya is not integrated into global value chains, reflected in its status as an observer, and not a member, of the World Trade Organization (WTO). Its accession negotiations started in 2004 but have stalled. Libya also does not have an Association Agreement with the EU, in spite of its proximity to Europe. The EU and Libya started negotiations for a Framework Agreement on trade in 2008, but they were [suspended in 2011](#) due to the events around the Arab Spring.

In the Free Trade scenario, Libya's trade deficit bottoms out at 10.42% of GDP in 2036 and recovers to a surplus of 2.66% in 2043.

**Chart 40: GDP per capita in CP and Free Trade scenario, 2019–2043**  
Purchasing power parity



Source: IFs 7.63 initialising from UN Population Division World Population Prospects and World Development Indicators data

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Since the start of conflict in 2011, estimates of GDP per capita for Libya have gyrated wildly from year to year and between agencies. The last data in IFs is for 2019, at which point Libya had the third highest GDP per capita in Africa at US\$20 296. According to the World Bank, GDP per capita plunged in 2020, and therefore the number presented in this chart needs to be treated with extreme caution.

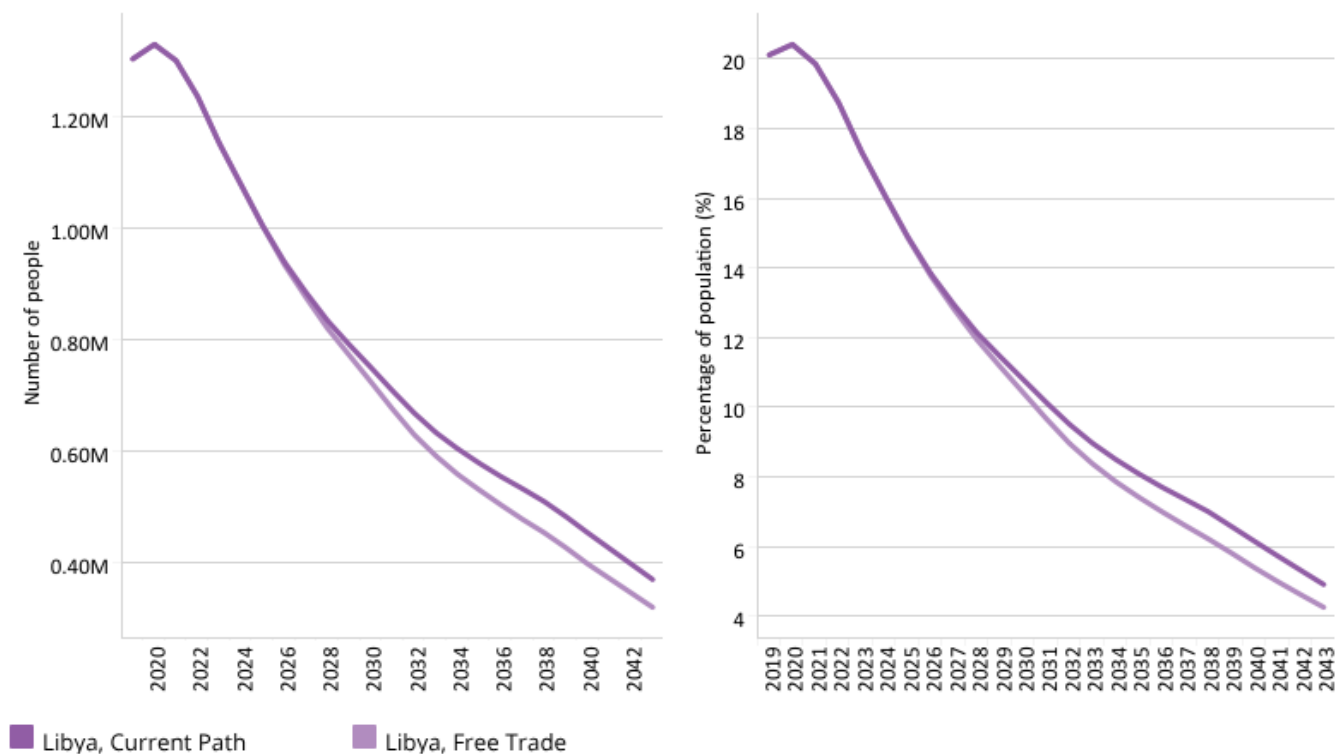
In the Current Path forecast, GDP per capita in Libya will increase to US\$31 250 in 2043 — still ranked as the third highest in Africa, bested only by Equatorial Guinea and Seychelles. In the Free Trade scenario, GDP per capita reaches US\$32 460 in 2043, 4% above the Current Path forecast for that year and 83% higher than the average for upper middle-income countries in Africa.

# Chart 41: Poverty in CP and Free Trade scenario, 2019–2043

Millions of people and % of total population



Libya \$5.50



Source: IFs 7.63 initialising from UN Population Division Population Prospects estimate, World Development Indicators population data and PovcalNet World Bank data

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Together with other countries in North Africa, Libya met the goal of eliminating extreme poverty (using US\$1.90) in 2018. However, using US\$5.50 for upper middle-income countries, 1.3 million Libyans (20.12%) lived in extreme poverty in 2019; this number will decline to 369 000 (4.9%) in 2043 in the Current Path forecast. This forecast likely underestimates the impact of recent levels of instability.

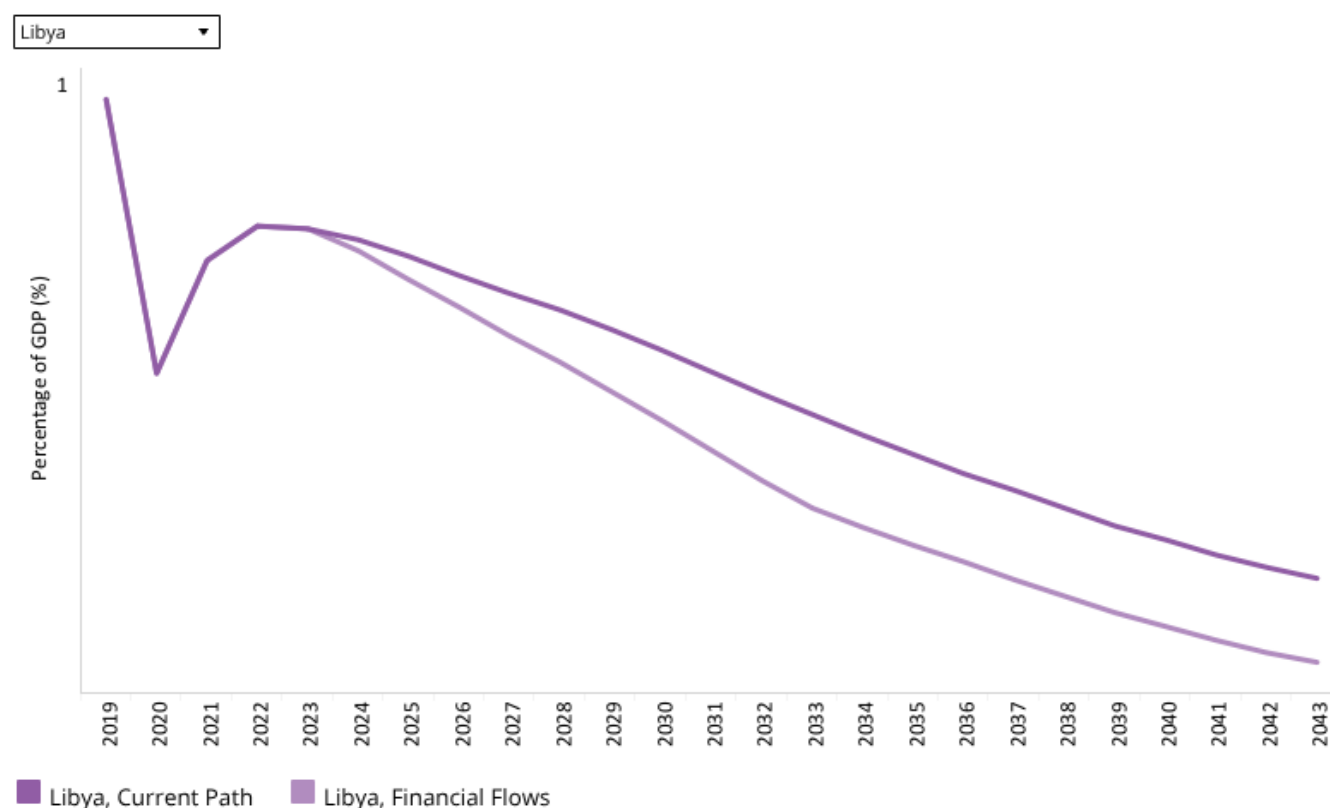
The Free Trade scenario reduces extreme poverty in Libya to 4.3% of the population, equivalent to 50 000 fewer people, in 2043, compared to the Current Path. The extreme poverty rate in the Free Trade scenario will also be 35.4 percentage points below the average for upper middle-income countries in Africa.





## Financial Flows scenario

Chart 42: Foreign aid in CP and Financial Flows scenario, 2019–2043  
% of GDP



Source: IFs 7.63 initialising from Development Assistance Committee of the OECD data, and World Bank and OECD GNI estimates.

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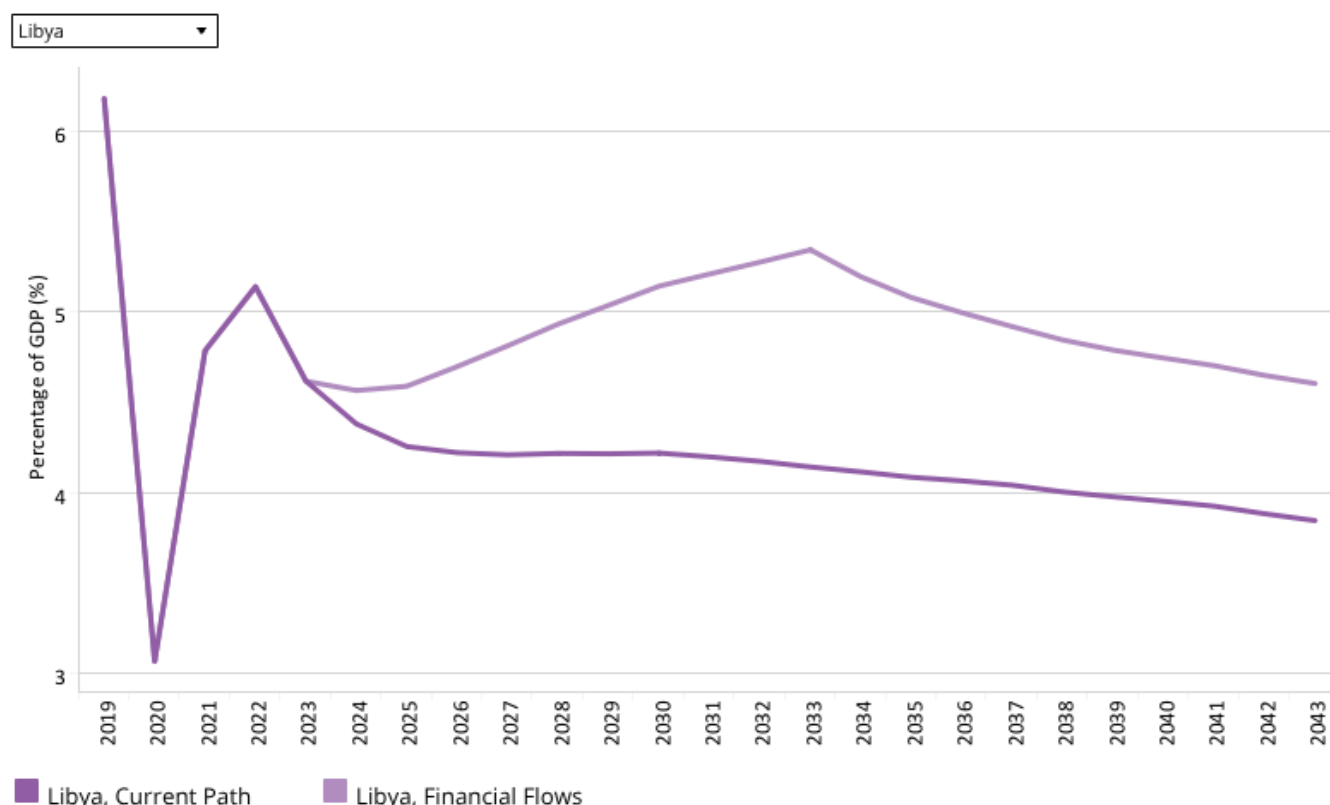
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The Financial Flows scenario represents a reasonable but ambitious increase in worker remittances and aid flows to poor countries, and an increase in the stock of foreign direct investment (FDI) and additional portfolio investment inflows to middle-income countries. We also reduced outward financial flows to emulate a reduction in illicit financial outflows.

The intervention is explained [here](#) in the thematic part of the website.

Libya's status as an oil-rich, upper middle-income country, its anti-Western stance and support of radical and terrorist groupings under the 42-year leadership of Muamar Ghaddafi meant that it received little aid from Western donors. In 2019, foreign aid represented 0.82% of GDP (US\$603 million) and the IFs Current Path forecast is that it will decline to 0.47% of GDP (US\$844 million) in 2043. In the Financial Flows scenario, aid declines to 0.412% of GDP (US\$748 million) and is replaced by larger inflows of FDI (see Chart 43). The IFs forecast is that aid to Libya declines more slowly than for other upper middle-income countries in Africa

Chart 43: Inflow of FDI in CP and Financial Flows scenario, 2019–2043  
% of GDP



Source: IFs 7.63 initialising from International Monetary Fund World Economic Outlook database

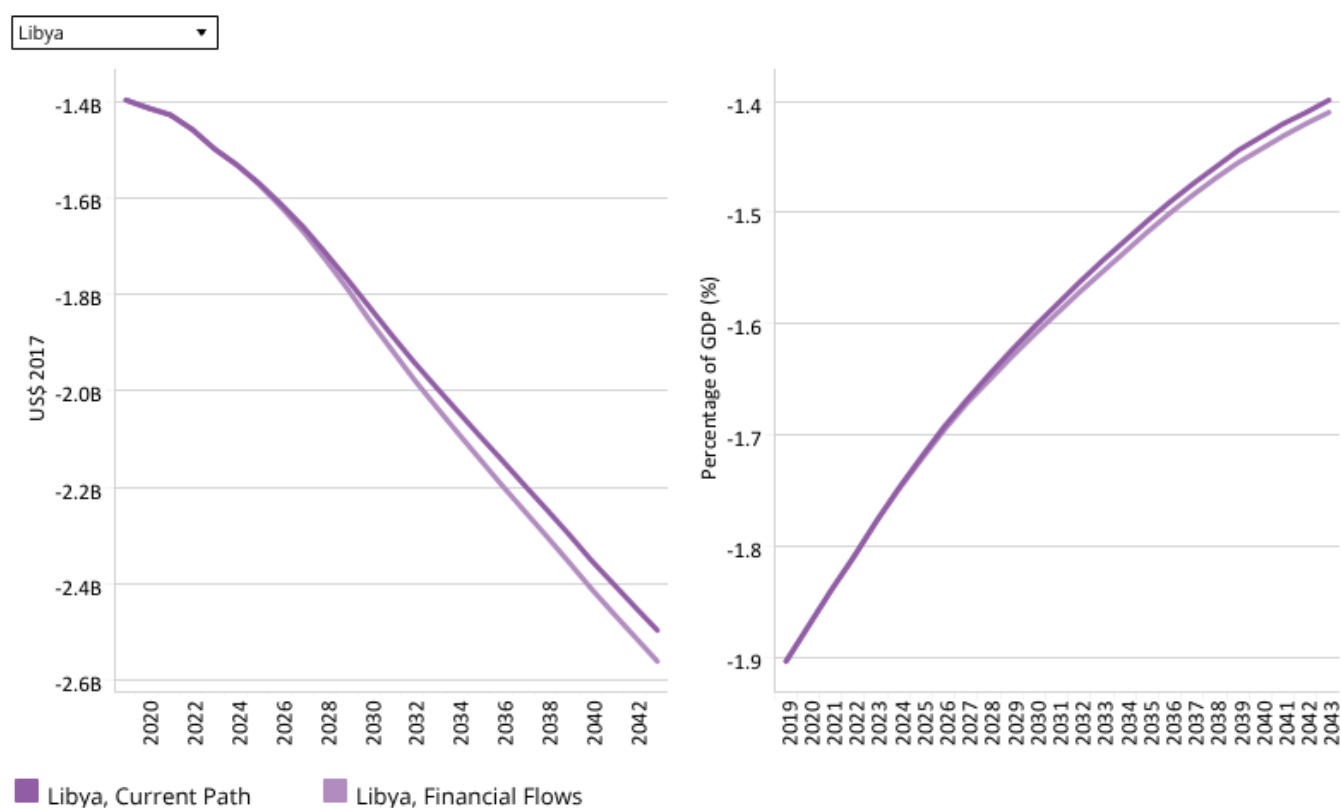
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According to the [African Economic Outlook](#), 'The main impediments to the expansion of the private sector and the flow of FDI are the lack of transparency in the regulations, the level of bureaucracy required to be endured to start up a business and the country's weak legal system.' The result is that FDI inflows to Libya were almost exclusively oriented towards its hydrocarbon sector.

In 2019, FDI inflows to Libya amounted to 6.18% of GDP (US\$4.54 billion), which is above the average of 2.3% of GDP for upper middle-income African countries. It plummeted in 2020, and recovered to 4.78% (US\$3.72 billion) in 2021. In the Current Path forecast, FDI to Libya will amount to 3.84% in 2043 (US\$6.86 billion). In the Financial Flows scenario, FDI increases by almost 22% to 4.6% of GDP (US\$8.36 billion), still higher than the projected average of 3.2% for upper middle-income countries in Africa.

Chart 44: Remittances in CP and Financial Flows scenario, 2019–2043  
Billions US\$ 2017 and % of GDP



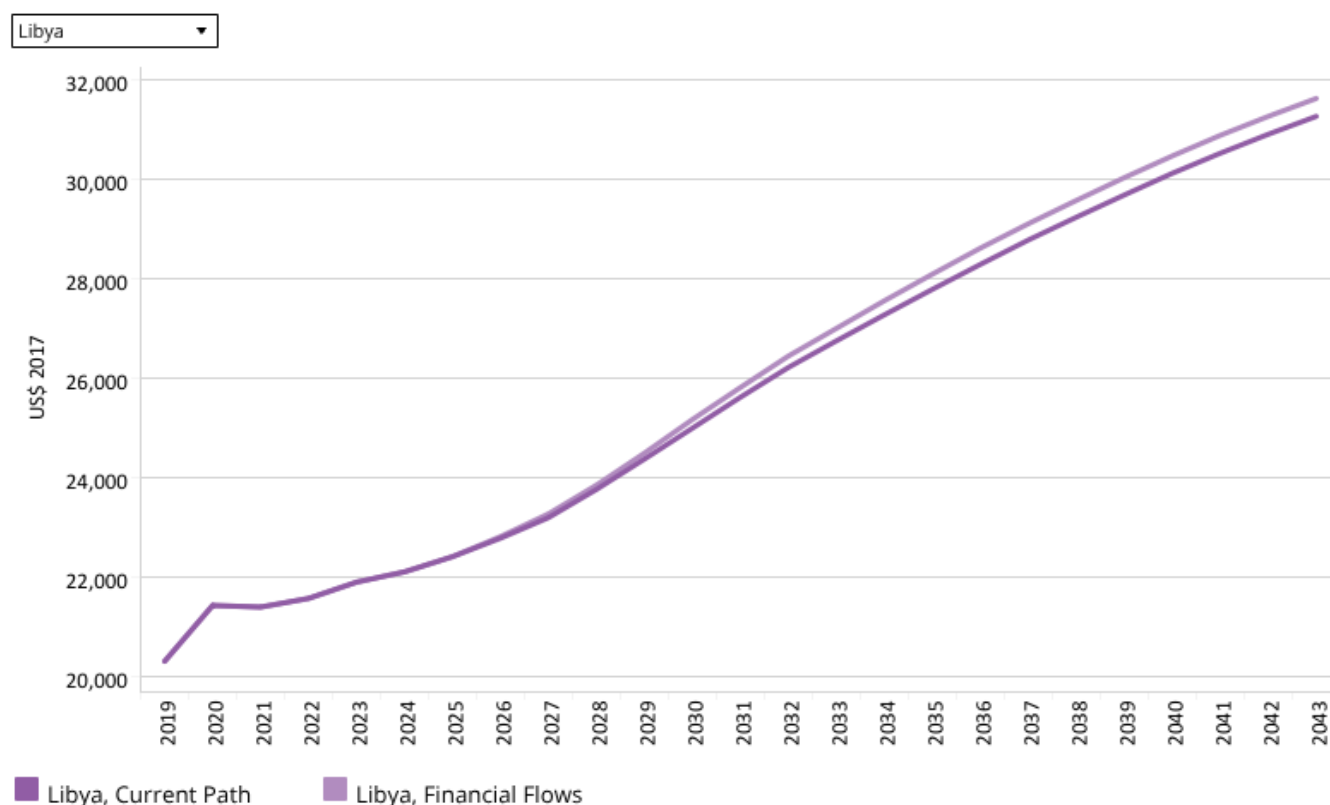
Source: IFs 7.63 initialising from World Development Indicators data

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Data for remittances in Libya is poor, but generally the country experiences a net outflow of remittances given its high levels of GDP per capita and large number of migrants within its borders. Within IFs remittance outflows came to 1.9% of GDP in 2019 (US\$1.4 billion) and will be 1.4% of GDP (US\$2.5 billion) in the 2043 Current Path forecast, with a small increase to 1.41% of GDP (US\$2.56 billion) in the Financial Flows scenario.

Chart 45: GDP per capita in CP and Financial Flows scenario, 2019–2043  
Purchasing power parity



Source: IFs 7.63 initialising from UN Population Division World Population Prospects and World Development Indicators data

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Since the start of conflict in 2011, estimates of GDP per capita for Libya have gyrated wildly from year to year and between agencies. The last data in IFs is for 2019, at which point Libya still had the third highest GDP per capita in Africa at US\$20 296. According to the World Bank, GDP per capita plunged in 2020, and therefore the number presented in this chart must be considered to be provisional.

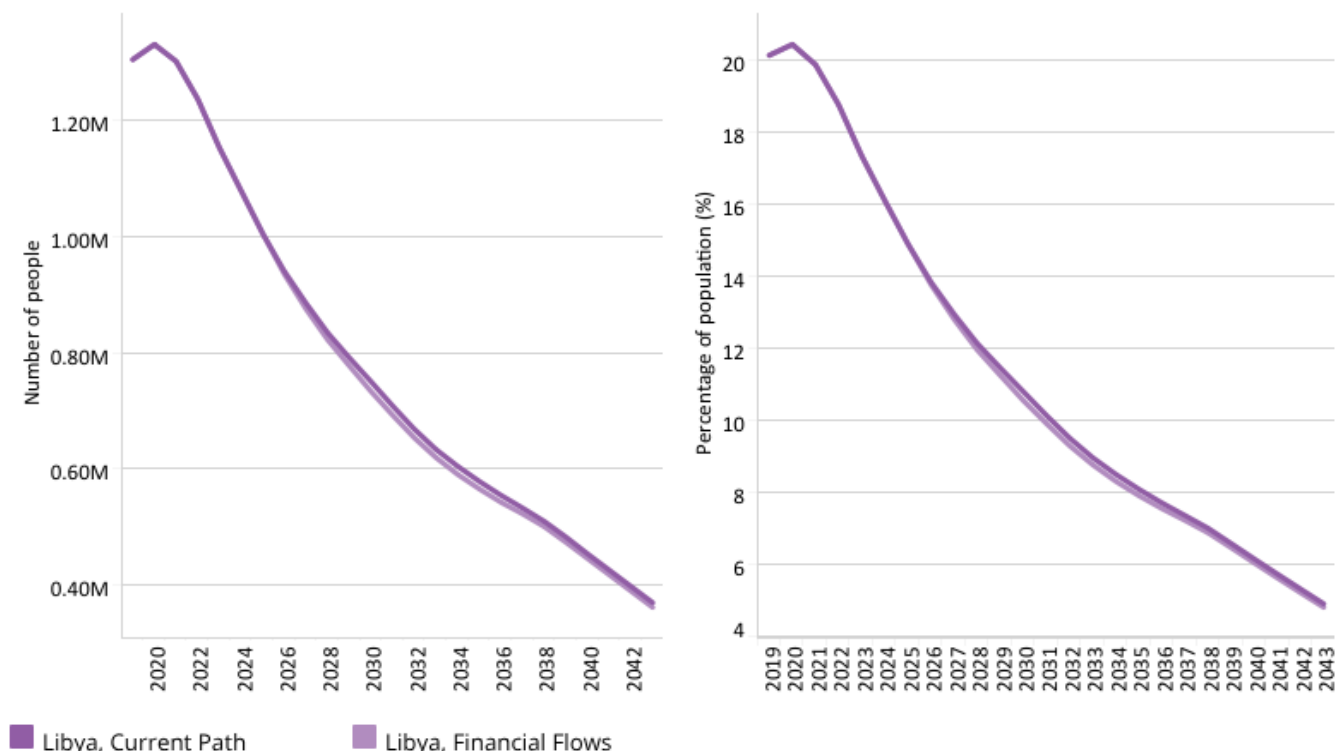
In the Current Path forecast, GDP per capita in Libya will increase to US\$31 250 in 2043 — still ranked as the third highest in Africa, bested only by Equatorial Guinea and Seychelles. In the Financial Flows scenario, GDP per capita will increase to US\$31 610, 1.2% above the Current Path forecast and 78% more than the average for upper middle-income countries in Africa.

# Chart 46: Poverty in CP and Financial Flows scenario, 2019–2043

Millions of people and % of total population



Libya \$5.50



Source: IFs 7.63 initialising from UN Population Division Population Prospects estimate, World Development Indicators population data and PovcalNet World Bank data

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Trade openness will reduce poverty in the long term after initially increasing it due to the redistributive effects of trade. Most African countries export primary commodities and low-tech manufacturing products, and therefore a continental free trade agreement (AfCFTA) that reduces tariffs and non-tariff barriers across Africa will increase competition among countries in primary commodities and low-tech manufacturing exports. Countries with inefficient, high-cost manufacturing sectors might be displaced as the AfCFTA is implemented, thereby pushing up poverty rates. In the long term, as the economy adjusts and produces and exports its comparatively advantaged (lower relative cost) goods and services, poverty rates will decline.

Together with other countries in North Africa, Libya met the goal of eliminating extreme poverty (using US\$1.90) in 2018. However, using US\$5.50 for upper middle-income countries, 1.3 million Libyans (20.12%) lived in extreme poverty in 2019; this number will decline to 369 000 (4.9%) in 2043 in the Current Path forecast. This forecast likely underestimates the impact of recent levels of instability.

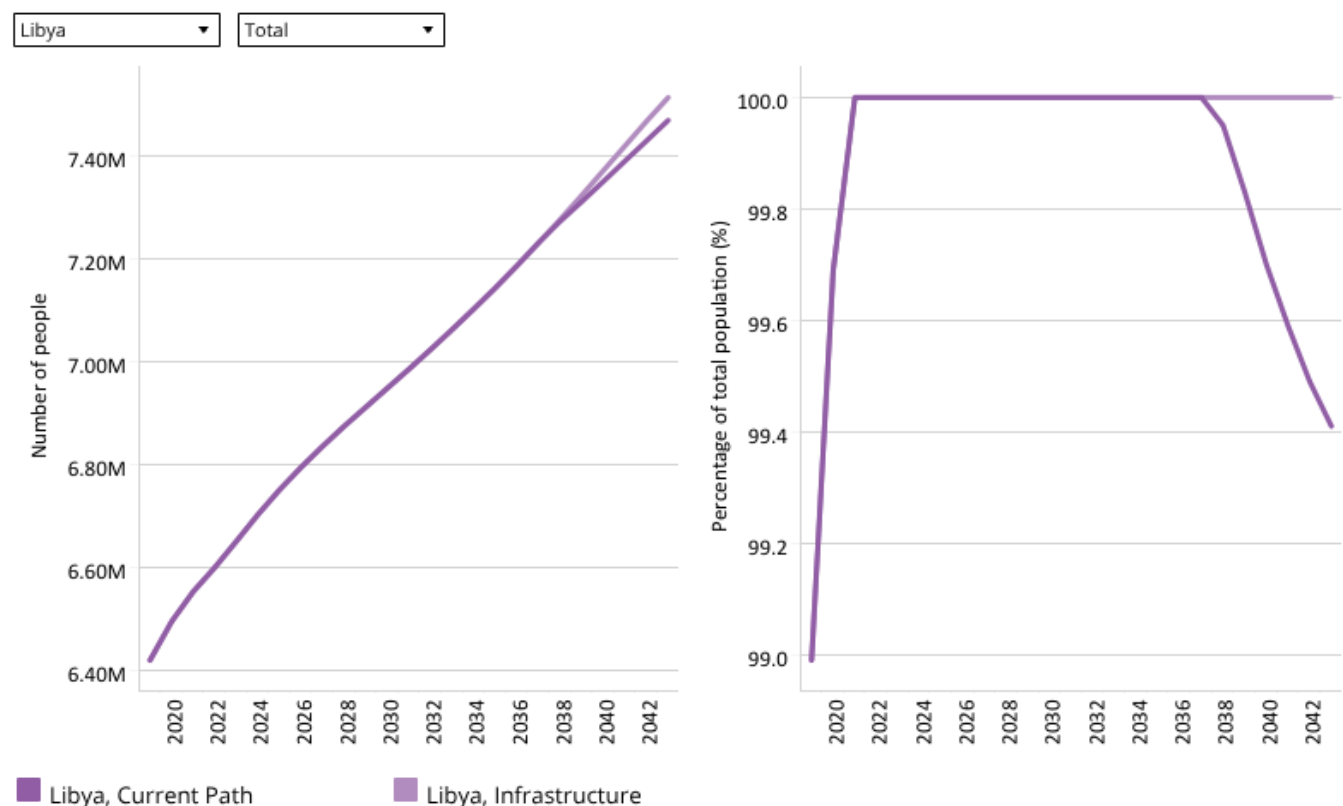
In the Financial Flows scenario, extreme poverty rate in Libya will be reduced to 4.8% of the population, translating into 10 000 fewer poor people than the Current Path — more than eight times lower than the average for upper middle-income countries in Africa.



## Infrastructure scenario

Chart 47: Electricity access in CP and Infrastructure scenario, 2019–2043

Millions of people and % of population



Source: IFs 7.63 initialising from World Development Indicators data

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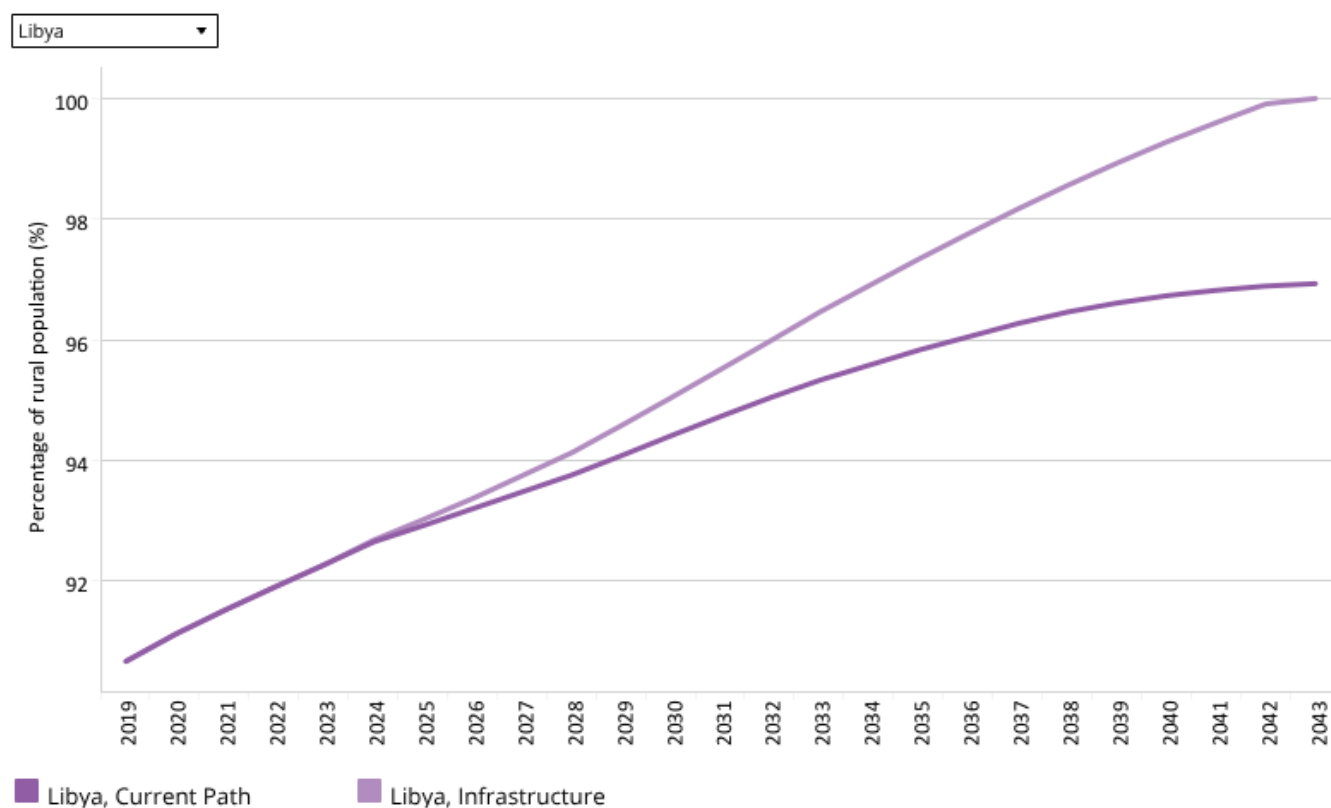
The Infrastructure scenario represents a reasonable but ambitious increase in infrastructure spending across Africa, focusing on basic infrastructure (roads, water, sanitation, electricity access and ICT) in low-income countries and increasing emphasis on advanced infrastructure (such as ports, airports, railway and electricity generation) in higher-income countries.

Note that health and sanitation infrastructure is included as part of the Health/WaSH scenario and that ICT infrastructure and more rapid uptake of renewables are part of the Leapfrogging scenario. The interventions there push directly on outcomes, whereas those modelled in this scenario increase infrastructure spending, indirectly boosting other forms of infrastructure, including that supporting health, sanitation and ICT.

The intervention is explained [here](#) in the thematic part of the website..

Libya has provided electricity access to all of its population, urban and rural, for several decades, and the Infrastructure scenario has no impact on electricity access.

**Chart 48: Rural road access in CP and Infrastructure scenario, 2019–2043**  
 % of rural population within 2 km of an all-weather road



Source: IFS 7.63 initialising from World Bank Rural Access Index data

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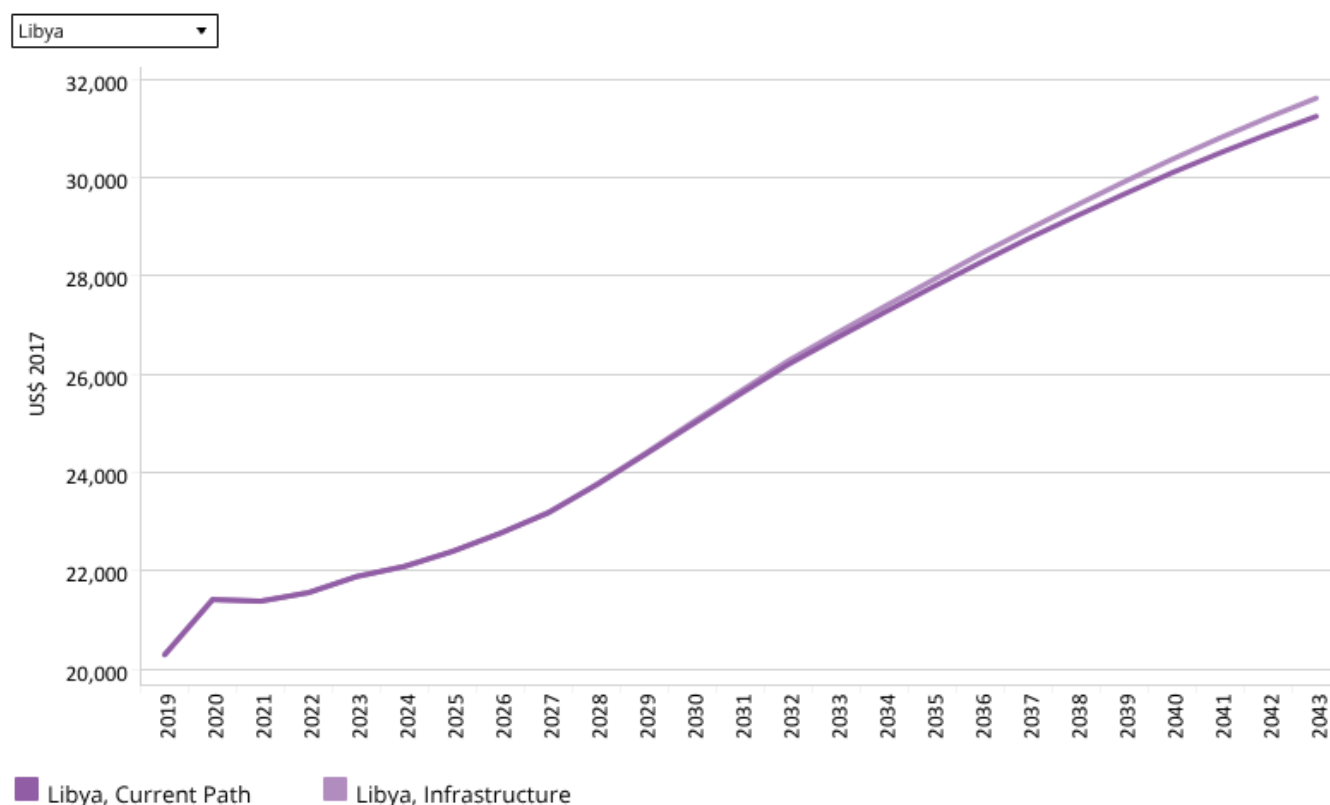
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Indicator 9.1.1 in the Sustainable Development Goals refers to the proportion of the rural population who live within 2 km of an all-season road and is captured in the Rural Access Index.

Because of its generally arid climate, Libya has Africa's second highest portion of its population in urban areas at 82% (representing 5.3 million people) and is close to saturation level. By 2043, more than 84% of Libya's population will be urban (4.9 million people). Hence, in 2019, 90.7% of Libya's rural population lived within 2 km of an all-season road and access rates were the third highest in Africa and 7.2 percentage points above the average for upper middle-income countries in Africa.

In the Current Path forecast, the portion of the rural population within 2 km from an all-weather road increases to 96.9% in 2043 and to 100% in the Infrastructure scenario.

Chart 49: GDP per capita in CP and Infrastructure scenario, 2019–2043  
Purchasing power parity



Source: IFs 7.63 initialising from UN Population Division World Population Prospects and World Development Indicators data

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Since the start of conflict in 2011, estimates of GDP per capita for Libya have gyrated wildly from year to year and between data providers. The last data in IFs is for 2019, at which point Libya had the third highest GDP per capita in Africa at US\$20 296. According to the World Bank, GDP per capita plunged in 2020, and therefore the number presented in this chart must be treated with extreme caution.

In the Current Path forecast, GDP per capita in Libya will increase to US\$31 250 in 2043 — still ranked as the third highest in Africa, bested only by Equatorial Guinea and Seychelles. The Infrastructure scenario will raise GDP per capita to US\$31 621 which will be US\$371 more than the Current Path and 78% more than the average for upper middle-income African countries.

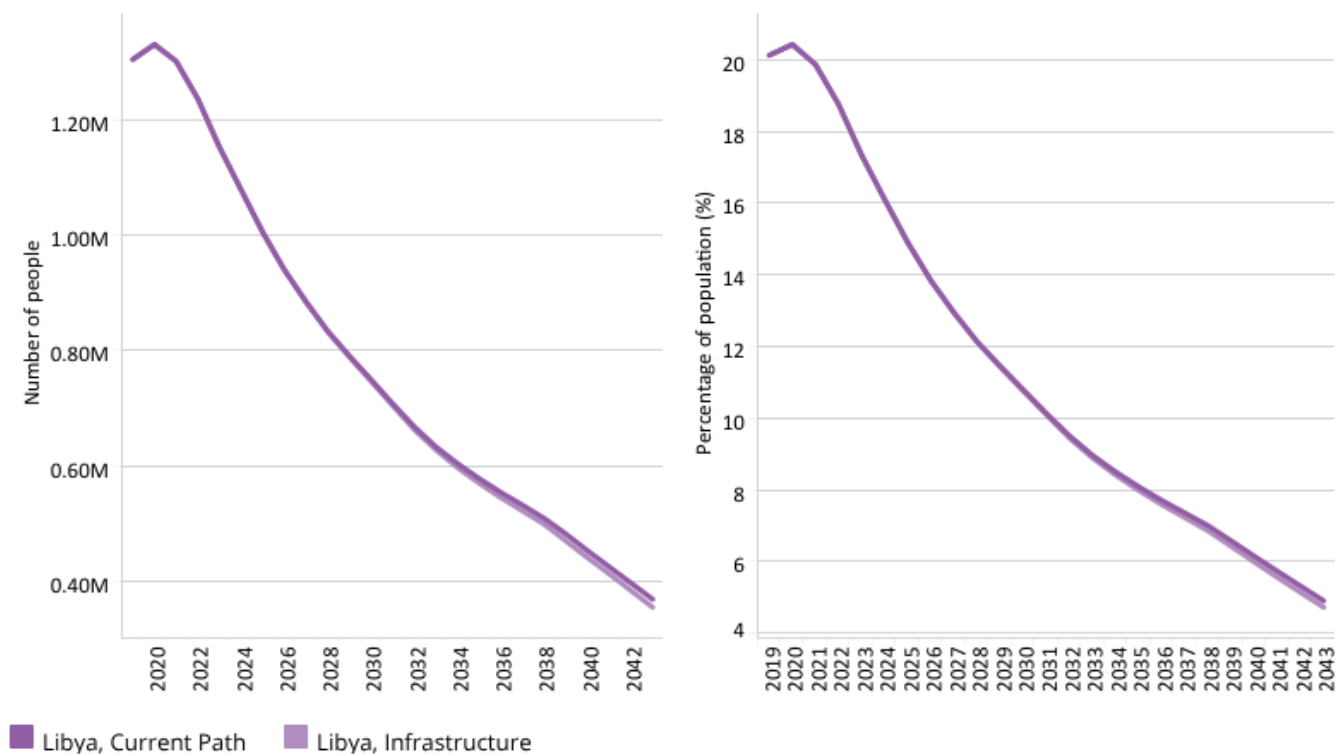


# Chart 50: Poverty in CP and Infrastructure scenario, 2019–2043

Millions of people and % of total population



Libya \$5.50



Source: IFs 7.63 initialising from UN Population Division Population Prospects estimate, World Development Indicators population data and PovcalNet World Bank data

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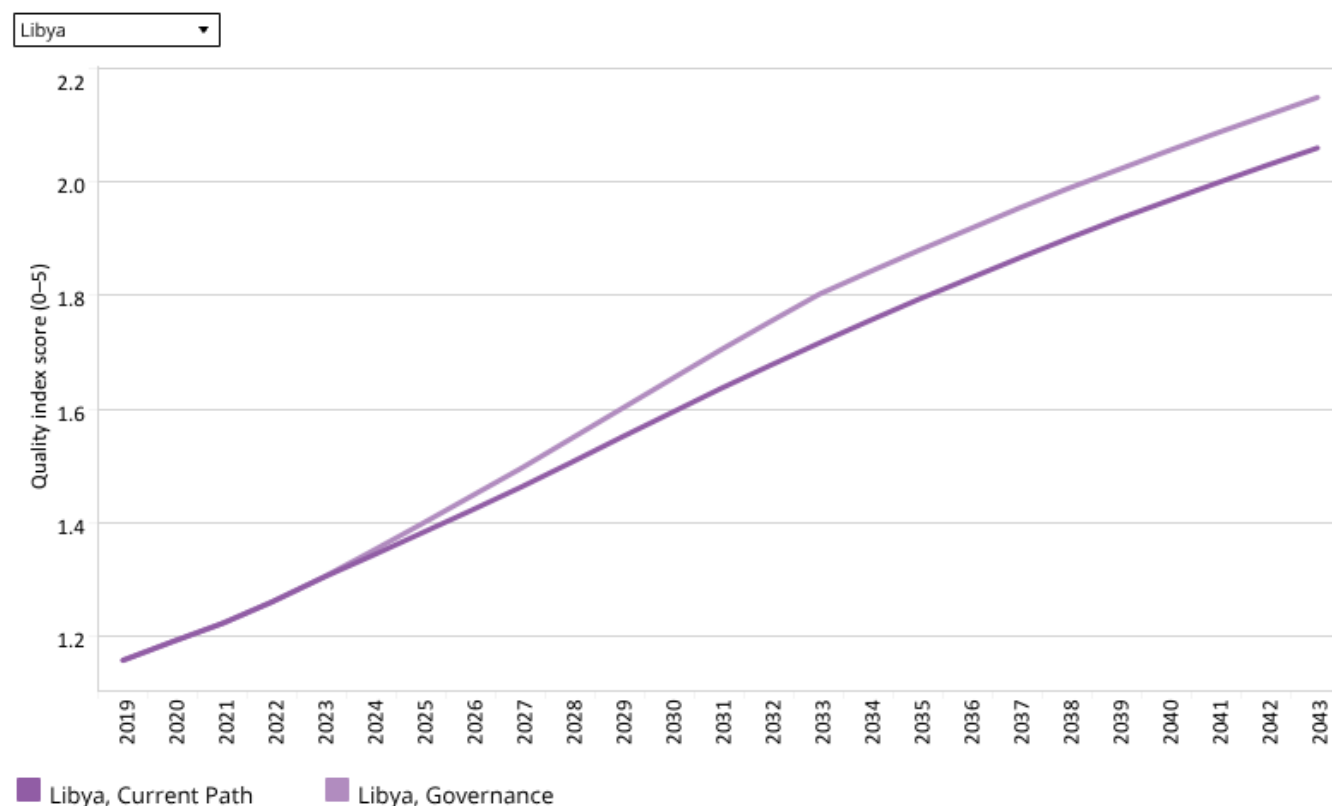
Together with other countries in North Africa, Libya met the goal of eliminating extreme poverty (using US\$1.90) in 2018. However, using US\$5.50 for upper middle-income countries, 1.3 million Libyans (20.12%) lived in extreme poverty in 2019; this number will decline to 369 000 (4.9%) in 2043 in the Current Path forecast. This forecast likely underestimates the impact of recent levels of instability.

In the Infrastructure scenario, extreme poverty rate in Libya will be reduced to 4.7% of the population, comparable to 10 000 fewer poor people than the Current Path and over eight times lower than the average for upper middle-income countries in Africa.



## Governance scenario

Chart 51: Gov effectiveness in CP and Governance scenario, 2019–2043  
World Bank quality index score for government effectiveness



Source: IFs 7.63 initialising from Kaufmann, Kraay and Mastruzzi (2010) data

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The Governance scenario represents a reasonable but ambitious improvement in accountability and reduces corruption, and hence improves the quality of service delivery by government.

The intervention is explained [here](#) in the thematic part of the website.

As defined by the World Bank, government effectiveness ‘captures perceptions of the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government’s commitment to such policies’.

Chart 51 presents the impact of the interventions in the Governance scenario on government effectiveness.

Libya has been without a national government since 2011 when Muammar Gaddafi was overthrown and killed shortly as the Arab Spring washed over much of North Africa. The country has been unstable since.

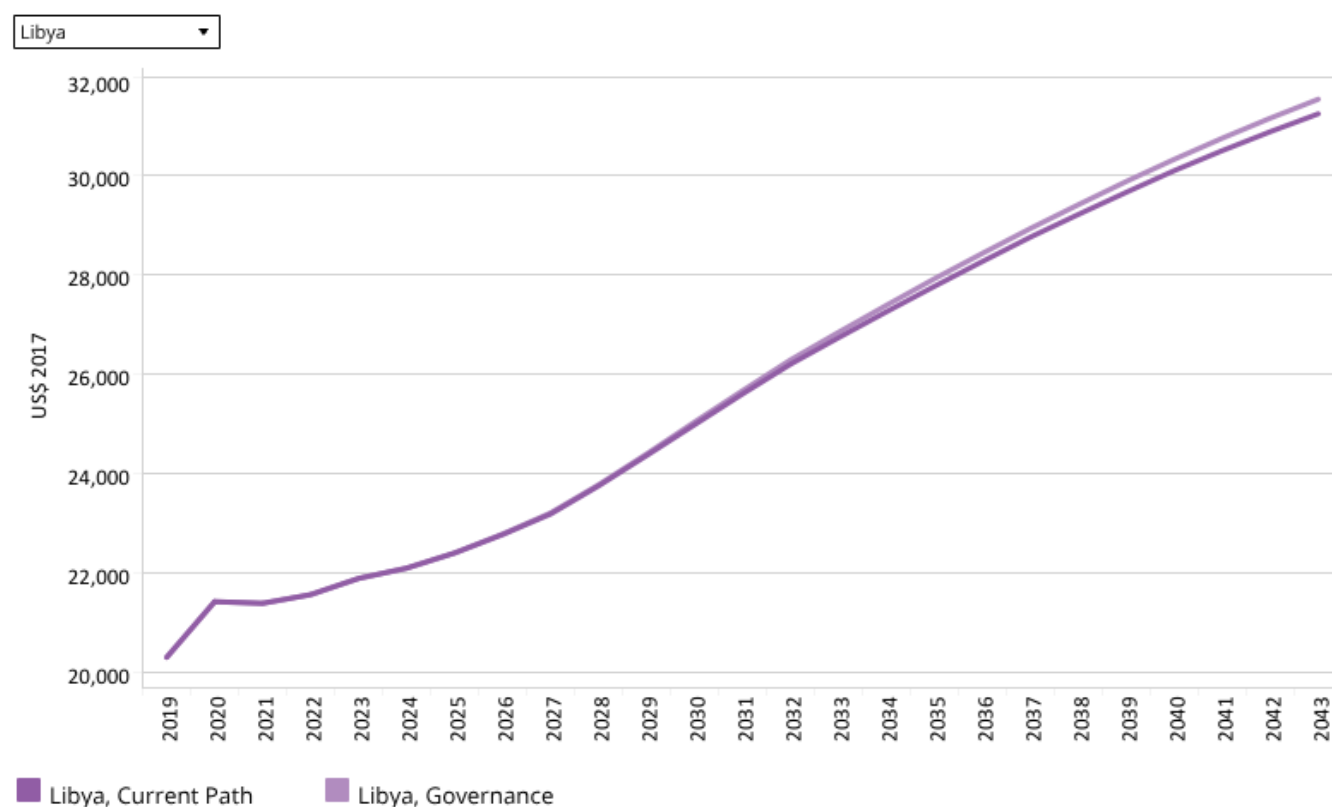
Parliamentary elections in 2012 and an agreement to form a national unity government in 2015 have not been able to halt growing insecurity and Libya’s descent into a civil war destabilised large parts of the Sahel through the spread of arms and fighters. By 2014, two rival authorities claimed to govern Libya, each backed by a number of African and non-African countries. An October 2020 ceasefire agreement was followed by the establishment of a Government of National Unity

several months later but national elections, originally scheduled for December 2021, have been repeatedly postponed. Instead, various factions control parts of the country and have been engaged in extensive armed conflict that has involved thousands of mercenaries from outside the country as well as the provision of weaponry.

The transition from an authoritarian regime to stable democracy has stalled and Libya is trapped in instability — technically with a hybrid (or anocratic) regime type but more practically with vast areas under the control of opposing armed groups.

Recent years have therefore seen a steady decline in government effectiveness in Libya with the rate declining from 1.7 in 2004 to 0.6 in 2016, also the last year of the data within IFs. The Current Path forecast is that Libya will regain its 2004 score of 1.7 in 2032 and, by 2043, will rank 34th in government effectiveness in Africa. The Governance scenario will improve government effectiveness by more than 4% above the Current Path forecast of 2.06 in 2043. Throughout the forecast period, Libya's score on the government effectiveness index remains below the average for the upper middle-income countries in Africa.

**Chart 52: GDP per capita in CP and Governance scenario, 2019–2043**  
Purchasing power parity



Source: IFs 7.63 initialising from UN Population Division World Population Prospects and World Development Indicators data

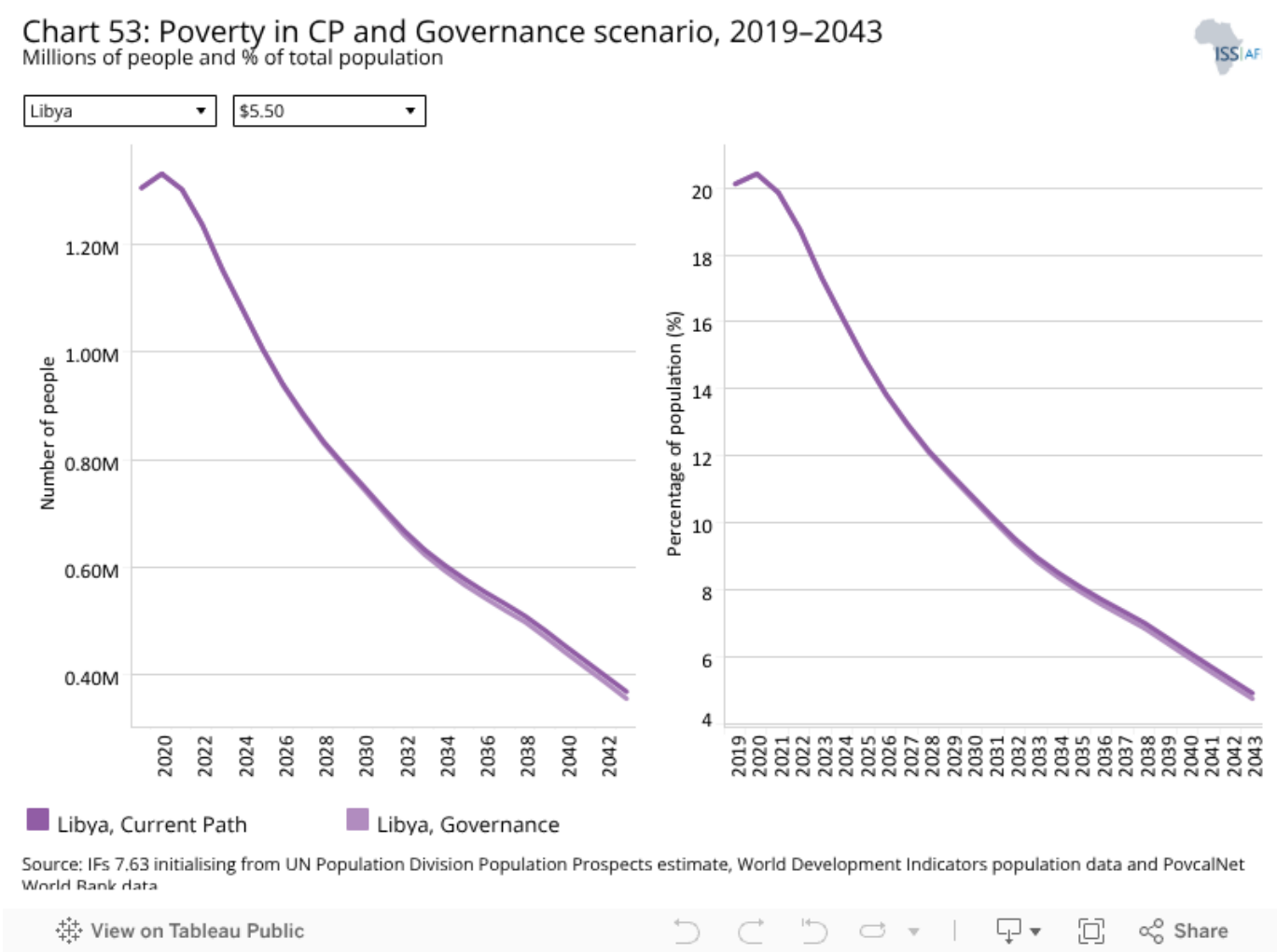
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Since the start of conflict in 2011, estimates of GDP per capita for Libya have gyrated wildly from year to year and between agencies. The last data in IFs is for 2019, at which point Libya had the third highest GDP per capita in Africa at US\$20 296. According to the World Bank, GDP per capita plunged in 2020, and therefore the number presented in this chart needs to be treated with caution.

In the Current Path forecast, GDP per capita in Libya will increase to US\$31 250 in 2043 — still ranked as the third highest

in Africa, bested only by Equatorial Guinea and Seychelles. In the Governance scenario, GDP per capita increases above the Current Path projections to US\$31 545 in 2043, though it is likely an underestimation of the effect of improved governance on incomes.



Together with other countries in North Africa, Libya met the goal of eliminating extreme poverty (using US\$1.90) in 2018. However, using US\$5.50 for upper middle-income countries, 1.3 million Libyans (20.12%) lived in extreme poverty in 2019; this number will decline to 369 000 (4.9%) in 2043 in the Current Path forecast. This forecast likely underestimates the impact of recent levels of instability.

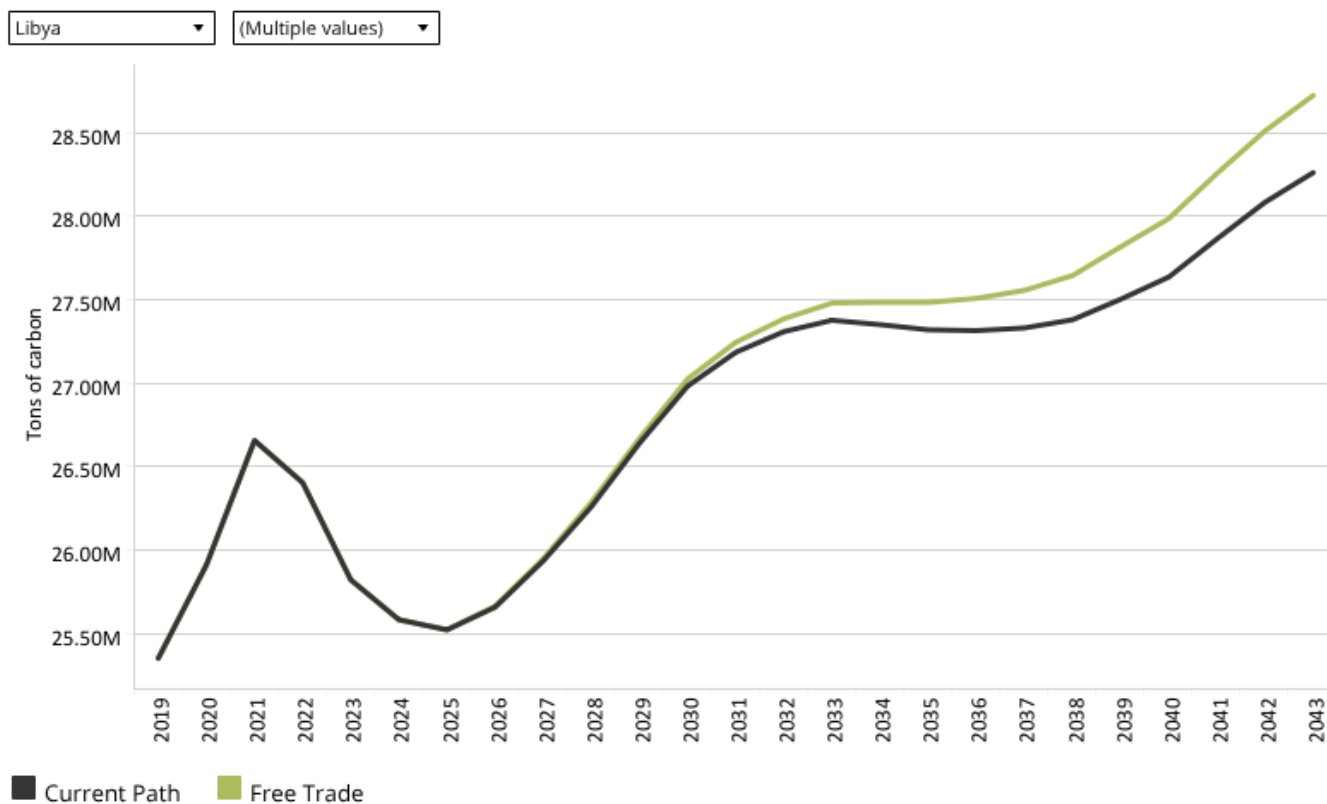
In the Governance scenario, 4.7% of Libya’s population will live below the US\$5.50 extreme poverty line, equivalent to 356 000 people, in 2043. This will be below the average extreme poverty rate of 39.7% for upper middle-income countries in Africa.



## Impact of scenarios on carbon emissions

Chart 54: Carbon emissions in CP and scenarios, 2019–2043

Million tons of carbon (note, not CO<sub>2</sub> equivalent)



Source: IFs 7.63 initialising from Carbon Dioxide Information Analysis Center data

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This section presents projections for carbon emissions in the Current Path for Libya and the 11 scenarios. Note that IFs uses carbon equivalents rather than CO<sub>2</sub> equivalents.

Due to its large oil and gas activities, the estimate within IFs is that Libya was the fifth largest carbon emitter in Africa in 2019, releasing 25 million tons of carbon, and is forecast to increase to 28.3 million tons in 2043 in the Current Path forecast. At that point, Libya will be the eighth largest carbon emitter on the continent. Ignoring the Stability scenario for the purposes of this analysis, of the remaining ten scenarios, the Free Trade scenario releases the most carbon in 2043. It is also the scenario that results in the largest GDP. The Health/WaSH will be the least carbon intensive scenario by 2043.

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Dr Jakkie Cilliers is the ISS's founder and former executive director. He currently serves as chair of the ISS Board of Trustees, head of the African Futures and Innovation (AFI) programme at the Pretoria office of the Institute, and is an extraordinary professor at the University of Pretoria. His 2017 best-seller *Fate of the Nation* addresses South Africa's futures from political, economic and social perspectives. His three most recent books, *Africa First! Igniting a Growth Revolution* (March 2020), *The Future of Africa: Challenges and Opportunities* (April 2021), and *Africa Tomorrow: Pathways to Prosperity* (June 2022) take a rigorous look at the continent as a whole.

## About African Futures & Innovation

Scenarios and forecasting can help Africa identify and respond to opportunities and threats. The work of the African Futures & Innovation (AFI) program at the Institute for Security Studies aims to understand and address a widening gap between indices of wellbeing in Africa and elsewhere in the world. The AFI helps stakeholders understand likely future developments. Research findings and their policy implications are widely disseminated, often in collaboration with in-country partners. Forecasting tools inspire debate and provide insights into possible trajectories that inform planning, prioritisation and effective resource allocation. Africa's future depends on today's choices and actions by governments and their non-governmental and international partners. The AFI provides empirical data that informs short- and medium-term decisions with long-term implications. The AFI enhances Africa's capacity to prepare for and respond to future challenges. The program is headed by Dr Jakkie Cilliers.