

Lower middle-income Africa

Lower middle-income Africa: Current Path

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• Lower middle-income Africa: Current Path forecast

• Demographics: Current Path

• Economics: Current Path

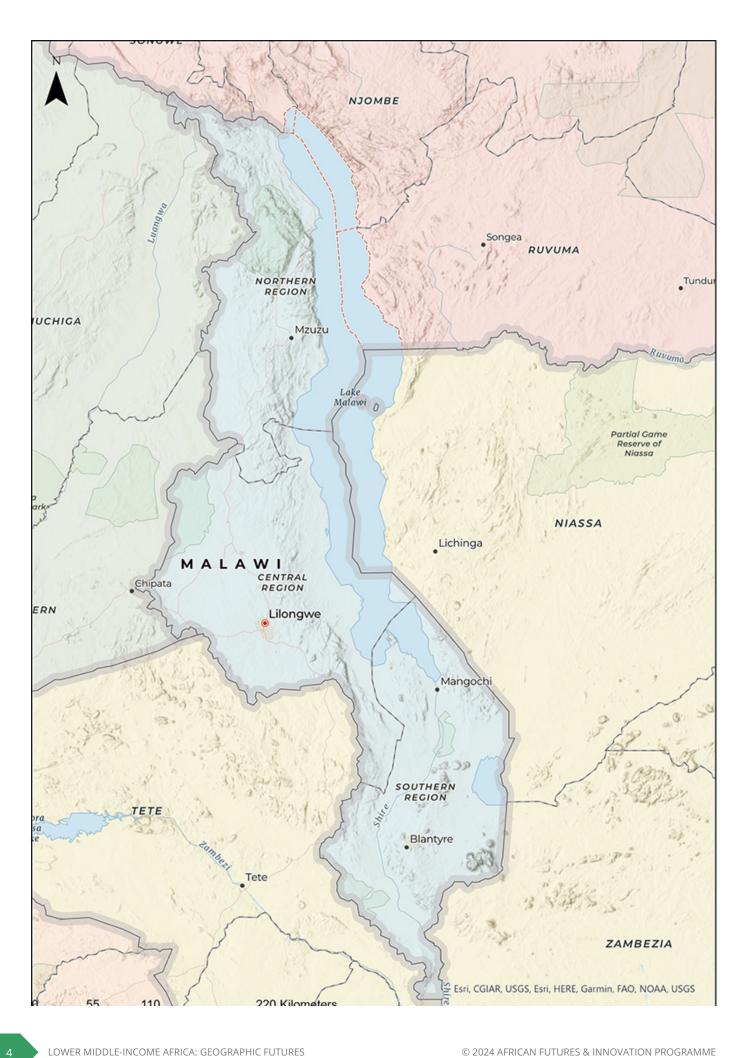
Poverty: Current Path

Carbon Emissions/Energy: Current Path



Lower middle-income Africa: Current Path forecast

Chart 1: Political map of LMI Africa





Source: African Futures

This page provides an overview of the key characteristics of LMI Africa along its likely (or Current Path) development trajectory. The Current Path forecast from the International Futures forecasting (IFs) platform is a dynamic scenario that imitates the continuation of current policies and environmental conditions. The Current Path is therefore in congruence with historical patterns and produces a series of dynamic forecasts endogenised in relationships across crucial global systems. We use 2019 as a standard reference year and the forecasts generally extend to 2043 to coincide with the end of the third ten-year implementation plan of the African Union's Agenda 2063 long-term development vision.

According to the World Bank 2021/22 country income group classification, LMI Africa has 23 member states: Algeria, Angola, Benin, Cameroon, Cape Verde, Comoros, the Republic of the Congo, Côte d'Ivoire, Djibouti, Egypt, Ghana, Kenya, Lesotho, Mauritania, Morocco, Nigeria, São Tomé and Príncipe, Senegal, Eswatini, Tanzania, Tunisia, Zambia and Zimbabwe. Membership is based on the World Bank classification of income ranging from US\$1 046 to US\$4 095 based on 2020 gross national income (GNI) per capita. The World Bank reviews the classification annually.

Membership cuts across all regions of Africa with five members from North Africa, six from West Africa, five from Central Africa, three East African countries, and four Southern African countries. Similarly, the LMI Africa grouping has members in all eight AU recognised regional economic communities, with large country to country differences. Some of the countries, such as Kenya, Comoros, Tunisia, Angola and Cameroon, are members of more than one AU-recognised REC in Africa.

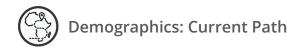
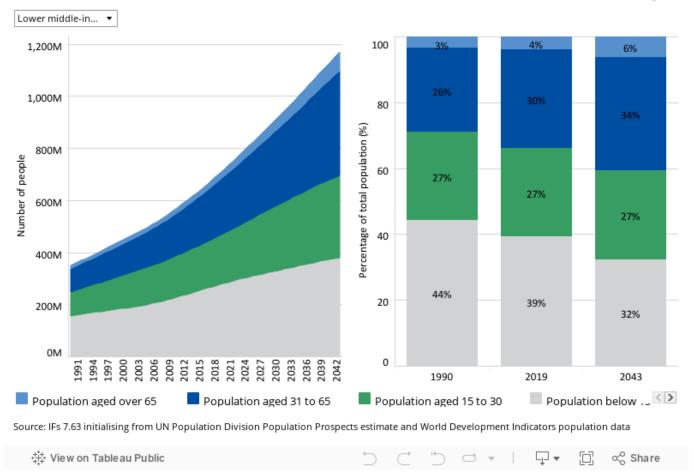


Chart 2: Population structure in CP, 1990–2043

By cohort and % of population





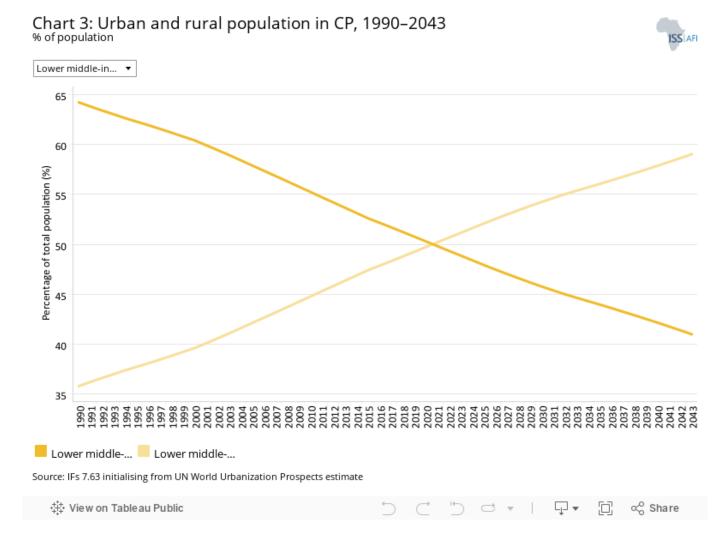
The total population of LMI Africa increased from 630.1 million people in 2015 to 697.8 million in 2019 and is expected to increase to 1 170 million by 2043. Whereas the average population growth rate was highest at 2.5% in 2019, it will modestly decline to 1.8% by 2043. In 2019, Nigeria had the largest population with 203.8 million people, followed by Egypt (100.5 million people) and Tanzania (58.1 million). The least populous countries are the island states of Comoros (857 000 people), Cape Verde (55 000 people), and São Tomé and Príncipe (218 000 people).

The average 2020 fertility rate in LMI Africa was 4.3 children per woman, which is set to decline to 3.1 in 2043. The countries with the highest fertility rates across the forecast horizon are Angola, Nigeria and Tanzania. By 2043, these countries would still have total fertility rates of 4.3, 3.9, and 3.3 children per fertile woman, respectively.

In 2019, the median age for the group ranged from 32.6 years in Tunisia to 16.6 years in Angola. LMI Africa, therefore, has an exceptionally young population with 44% of its adult population in the age group 15 to 29 years of age in 2019, typically considered as constituting a youth bulge. Even by 2043, 40% of the adult population will still be in this bulge, implying considerable momentum towards social turbulence without very rapid expansion of services and opportunities. With only 56.9% of its population in the general working-age bracket (15 to 64 years of age) in 2019, LMI Africa will only benefit from a demographic dividend during the second half of the century in 2053.

At 67.5 years, the 2019 average life expectancy for the LMI Africa group is slightly above the African average at 65.8 years.

The average life expectancy in LMI Africa will increase to 73.3 years in 2043 with the gap between males and females expected to increase from 3.7 to 4.4 years.



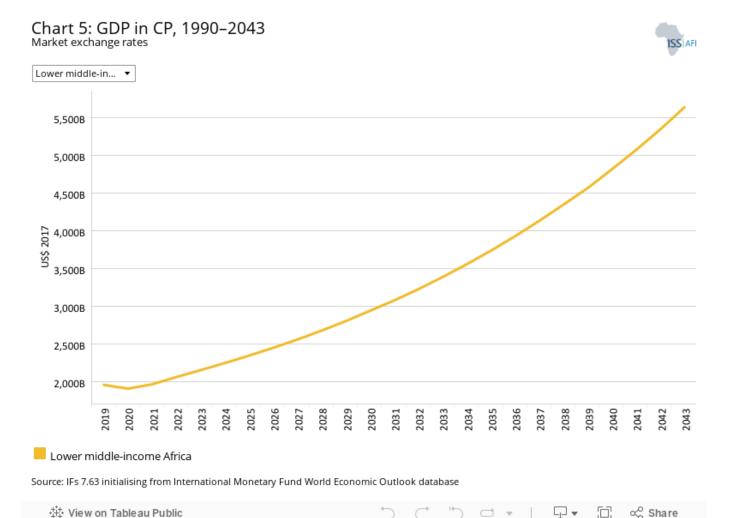
LMI Africa is still mainly rural (average of 50.8% in 2019) but rates differ enormously between member states. In 2019, four out of 23 group members (Eswatini, Kenya, Lesotho and Comoros) had more than 70% of the population living in rural areas, three out of 23 (São Tomé and Príncipe, Algeria and Djibouti) had less than 30% rural population, while only 13% in Burundi. On average, the group will become predominantly urban by 2022, and by 2043, 59% of the population will live in urban spaces.

Chart 4: Population density map for 2019

Source: Source goes here

Compared to the lower-income Africa and upper middle-income Africa groupings, LMI Africa has the highest population density, with large differences between countries. Comoros and São Tomé and Príncipe are the most densely populated countries within LMI Africa with 4.6 and 2.3 persons per hectare, respectively, followed by Nigeria with 2.2 persons per hectare. Of the 23 member states, 16 have low densities of less than one person per hectare. By 2043, Comoros will still be the most densely populated country at 7.4 persons per hectare, followed by Nigeria at 4.3.



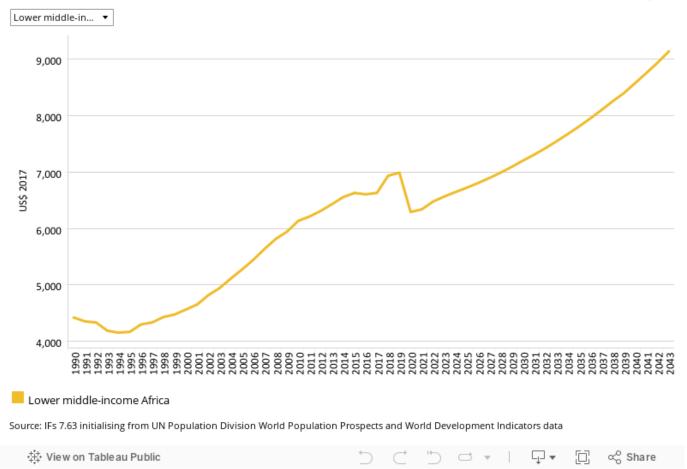


The combined GDP of LMI Africa has nearly tripled from US\$954.9 billion in 1990 to US\$1 959.8 billion in 2019. It is expected to expand to US\$5 637.5 billion by 2043. In 2019, LMI Africa's share of the continent's economy was 64.1%, which is set to slightly increase to 64.6% in 2043 as the average growth rate falls below the 5.6% rate for Africa. There are big differences in economic growth rates across the group. In 2019, 10 out of the 23 group members had average GDP growth rates of more than 5%, while four countries had less than 1% growth rate in that year. GDP growth rates range from 7.5% in Djibouti to 8.1% in Zimbabwe as it struggles with a currency crisis.

The LMI Africa group is dominated by Nigeria and Egypt, collectively constituting 46.4% the GDP of the group, followed by Algeria and Morocco at 13% and 7%, respectively. Looking to 2043, the share of Nigeria is set to increase to 34.9% (from 28.6% in 2019). Of the 23 countries in the group, 10 have very small economies constituting less than 1% of the total GDP.







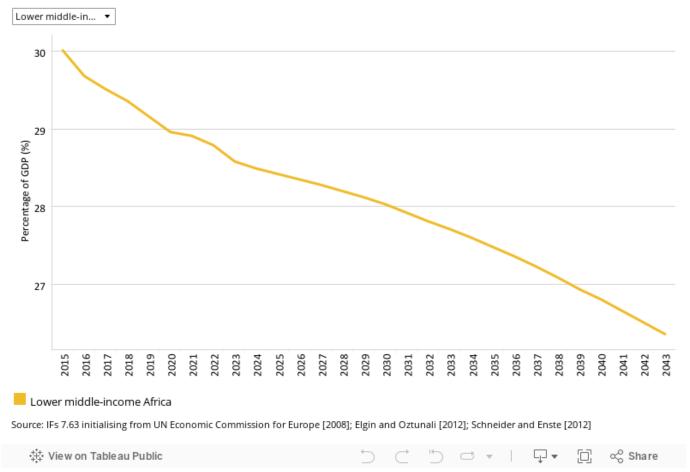
Although many of the charts in the sectoral scenarios also include GDP per capita, this overview is an essential point of departure for interpreting the general economic outlook of LMI Africa.

The average GDP per capita for LMI Africa was US\$6 898 in 2019, higher than the average GDP per capita in Africa of US\$5 289 in that year. The North African countries of Algeria, Egypt and Tunisia had the highest income levels of more than US\$10 000 in 2019, while Benin, Zimbabwe and Comoros had the lowest at less than US\$3 000. Though Nigeria had the largest economy (US\$560.7 billion) in Africa, its large population size (201 million people in 2019) and low level of industrialisation (lowest in the group at 9.4% in 2019) mean that it ranks eighth among the LMI Africa group of countries on GDP per capita, while Eswatini with a small economy (US\$6.4 billion) and population (1.14 million), and with a high manufacturing share of GDP (highest in the group at 35.3% in 2019) ranked fourth in 2019.

In the Current Path forecast, LMI Africa is set to increase its GDP per capita to US\$9 142 in 2043, higher than the African average of US\$7 157. Egypt will record the highest per capita GDP of US\$17 015, while the economic woes of Zimbabwe will see it record the lowest at US\$4 469 in 2043.

Chart 7: Informal sector value in CP, 2015–2043





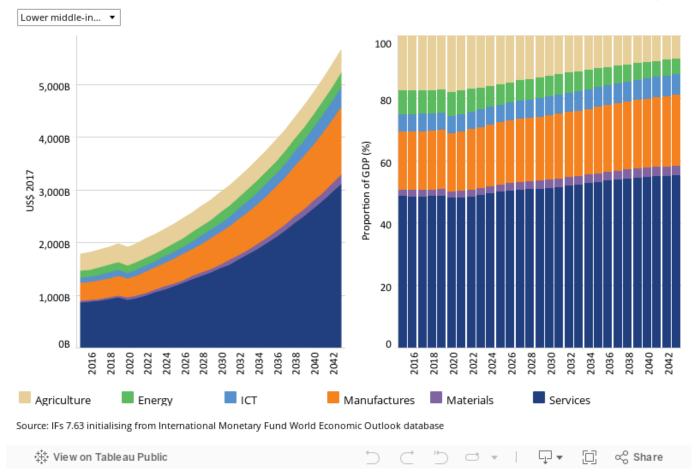
Estimates on the contribution of the informal sector to GDP in 2019 range from 52.8% in Zimbabwe to 18.4% in Algeria. By 2043, these numbers will have declined to 35.8% and 16.3%, respectively.

At 29.2% in 2019 (or US\$571.4 billion), the LMI Africa informal sector was about three percentage points of GDP larger than the average for Africa, reflecting the extent to which a very large portion of the population depends on this sector. By 2043, the GDP share of the informal sector is set to decline to 26.4%, equivalent to US\$1485.7 billion.

The informal sector share of GDP is largest in Zimbabwe (at 52.8%) and smallest in Algeria (at 18.4%). This does not necessarily reflect the informal labour share of the total labour force, which ranges from 77.6% in Benin to 27.2% in Algeria. Since its economy is also the largest within LMI Africa (and indeed within Africa), Nigeria had the largest informal sector size in absolute terms among the LMI Africa group members with a value of US\$220.2 billion in 2019 (39.3% of GDP), that will increase to US\$634 billion in 2043, but decline in its contribution to 33.2% of GDP.

Chart 8: Value added by sector in CP, 2015–2043
Billions US\$ 2017 and % of GDP





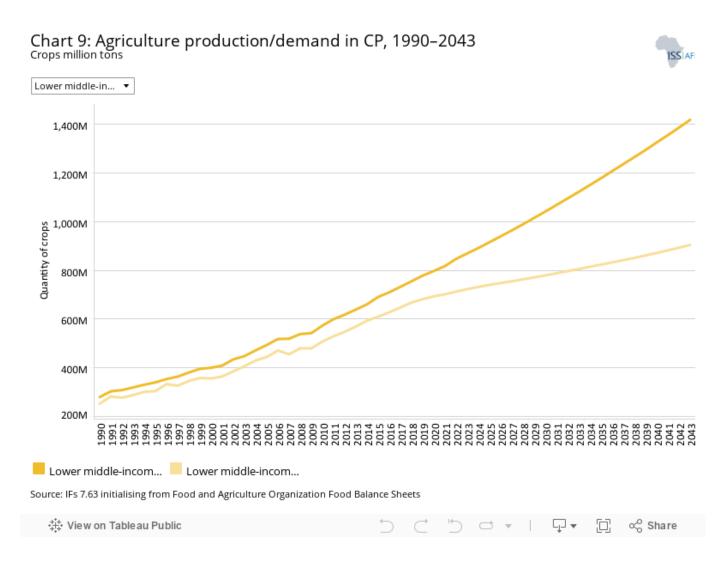
The IFs platform uses data from the Global Trade and Analysis Project (GTAP) to classify economic activity into six sectors: agriculture, energy, materials (including mining), manufacturing, service and information and communication technologies (ICT). Most other sources use a threefold distinction between only agriculture, industry and services with the result that data may differ.

Generally, the service sector dominates within LMI Africa, accounting on average 48%, ranging from 77.9% in Djibouti to 31.8% in Algeria. The service sector contributed more than 45% of GDP in 21 of the 23 LMI group members in 2019, and in other countries the value ranges between 40% and 51%. These are, however, generally low-end services, either as part of subsistence agriculture or low-end retail services located in informal urban areas. The contribution of the service sector is set to steadily increase from 48.6% in 2019 to 55.2% in 2043, while the contribution of agriculture declines from 17.3% to 7.4% during the same period despite its substantial potential. In 2019, agriculture contributed most to GDP in Kenya at 29.9% and least in Djibouti at 0.4%. These numbers will decline to 12.8% and 0.02%, respectively.

In the same vein, the share of manufacturing to GDP in LMI Africa will modestly increase from 18.9% in 2019 to 22.8% in 2043. In 2019, country to country variations were that the manufacturing share ranges from 35.3% in Eswatini to 9.4% in Nigeria. The contribution of the energy sector, at 7.3% in 2019, is boosted by oil production in the Republic of the Congo (23% of GDP in 2019), Angola (16%) and Algeria (16%) and is set to decline to an average for the group of 5% of GDP by 2043. The contribution of the ICT sector is at 5.6%, just next to the material sector; both sectors are set to increase marginally in 2043. Tunisia had the largest ICT sector in LMI Africa in 2019 at 7.7%, while Egypt will have the largest in 2043 at 8.7%. The ICT sector in Djibouti is smallest in the group at 0.9% and 2.4% in 2019 and 2043, respectively.

On average, the sizes of the service sector and, to a lesser extent, the manufacturing sector are set to increase significantly in absolute values over the forecast horizon. The sizes of other sectors do not substantially increase to the same extent. For example, while the LMI Africa's agriculture value in 2019 is 80% of its 2043 value, its services and manufacturing 2019 values are 30% and 28% of the 2043 values, respectively.

The service sector will grow most rapidly in Egypt, where it increases from US\$173 billion in 2019 to US\$531 billion in 2043, followed by Angola, where it will increase from US\$68.5 billion in 2019 to US\$252.5 billion in 2043, significantly larger in size than other group members. Because of the large size of its economy, Nigeria will experience the greatest increase in the value of its manufacturing sector between 2019 and 2043 amounting to US\$294 billion. São Tomé and Príncipe will just see US\$68 million addition to its service sector during the same period.



The data on agricultural production and demand in the IFs forecasting platform initialises from data provided on food balances by the Food and Agriculture Organization (FAO). IFs contains data on numerous types of agriculture but aggregates its forecast into crops, meat and fish, presented in million metric tons. Chart 9 shows agricultural production and demand as a total of all three categories.

In 2019, total agricultural demand exceeded production by 105 million metric tons — a gap that is expected to increase to 560 million metric tons by 2043. The LMI Africa region is, therefore, becoming increasingly food insecure, not only because of poor domestic production but also because of changes in dietary preferences.

Nigeria was the greatest producer of crop, meat and fish in LMI Africa of 213 million metric tons in 2019, followed by Egypt

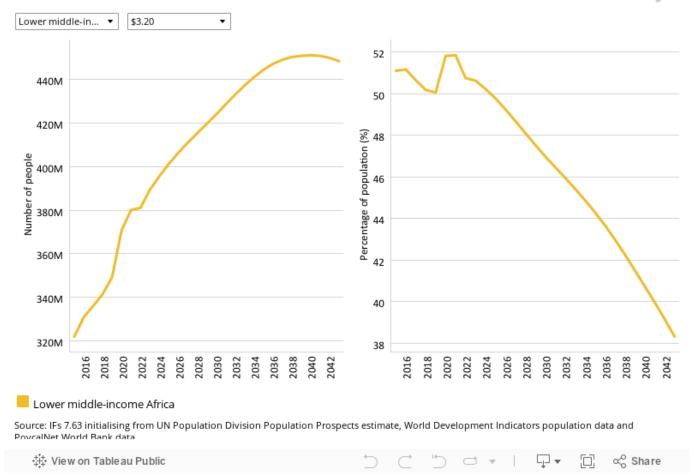
and Tanzania at 114 million and 51 million, respectively. São Tomé and Príncipe and Djibouti were the smallest agricultural producers in the LMI Africa group. By 2043, Nigeria is poised to increase its agricultural production by 33% to 282.4 million metric tons; Djibouti, the smallest producer, will decrease production to 124 000 metric tons from 87 000 metric tons.

Crop production comprises more than 90% of total agricultural production in LMI Africa in 2019, and by 2033 this will decline to below 90% such that in 2043 crop production will amount to 88% of total agricultural production.









There are numerous methodologies for and approaches to defining poverty. We measure income poverty and use GDP per capita as a proxy. In 2015, the World Bank adopted the measure of US\$1.90 per person per day (in 2011 international prices), also used to measure progress towards the achievement of Sustainable Development Goal (SDG) 1 of eradicating extreme poverty. To account for extreme poverty in richer countries occurring at slightly higher levels of income than in poor countries, the World Bank introduced three additional poverty lines in 2017:

- US\$3.20 for lower middle-income countries
- US\$5.50 for upper middle-income countries
- US\$22.70 for high-income countries.

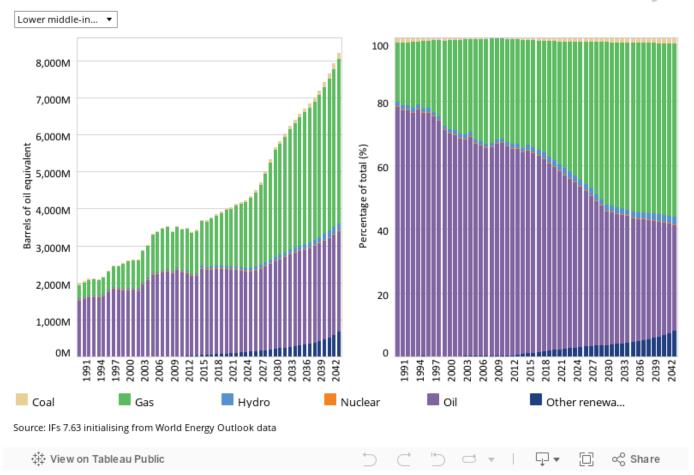
Because of its high rates of population growth and relatively slow economic growth, the number of extremely poor people (using US\$3.20) in LMI Africa will increase from 322 million in 2019 to 448.4 million in 2043. Nearly 80% of the increase in the number of poor people is due to Nigeria, where the number increases by 100 million between 2019 and 2043. In Egypt, the number of poor people will decline from 21.8 million in 2019 to 17 million in 2043, while the poverty rate will decline from 24% in 2019 to 12% in 2043. Benin, Zambia, Nigeria, Tanzania and São Tomé and Príncipe have the highest poverty rates of >70%, while Algeria, Tunisia and Morocco have the lowest poverty rates in LMI Africa of <7% in 2019. While in 2019

seven countries had a poverty rate of >65%, by 2043 all LMI Africa countries will experience poverty rates of below 65% with Zambia topping the list at 64.9%. The decline in poverty in LMI Africa will be supported by strong economic growth with ten out of 23 group members having >5% economic growth rate in 2019.



Chart 11: Energy production by type in CP, 1990–2043 Barrels of oil equivalent and % of energy production





The IFs platform forecasts six types of energy, namely oil, gas, coal, hydro, nuclear and other renewables. To allow comparisons between different types of energy, the data is converted into billion barrels of oil equivalent (BBOE). The energy contained in a barrel of oil is approximately 5.8 million British thermal units (MBTUs) or 1 700 kilowatt-hours (kWh) of energy.

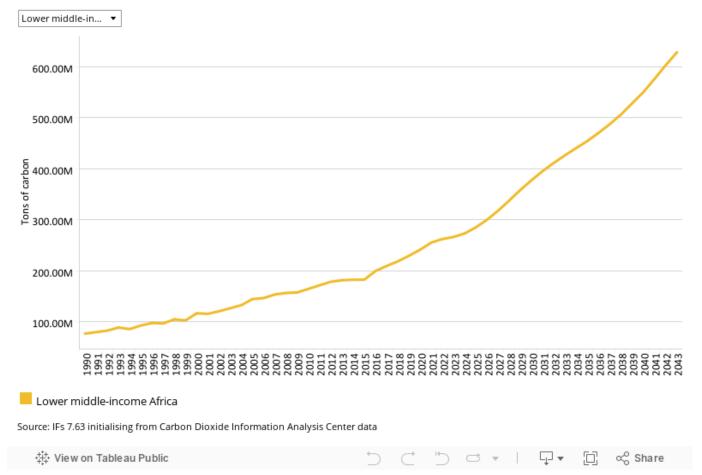
Nigeria and Angola produce significantly more energy among the LMI Africa member states, mostly oil, and they are the biggest gas producers producing more than 400 million barrels in 2019.

Hydro energy production is strongest in Zambia and Ghana, though coal, hydro and nuclear energy production comprise less than 1% of total energy production in LMI Africa. In 2019, oil and gas comprised 63% and 36% of total energy production, respectively. Kenya leads in the production of other renewable sources of energy such as solar and wind energy.

In the Current Path forecast for 2043, more gas (54%) than oil (33%) will be produced, as the production of other sources of energy increases to 12%. Gas production in Algeria will increase almost fivefold between 2019 and 2043, while in Nigeria it will increase by 2.5-fold during the same period.







Carbon is released in many ways, but the three most important contributors to greenhouse gases are carbon dioxide (CO2), carbon monoxide (CO) and methane (CH4). Since each has a different molecular weight, IFs uses carbon. Many other sites and calculations use CO2 equivalent.

As a group, LMI Africa countries emitted 229 million tons of carbon in 2019 — an amount that will increase by nearly threefold to 629 million tons by 2043. In the process, LMI Africa will increase its portion of Africa's carbon emissions from 54% of the African total to 67%. Due to their large economies and oil production, Egypt, Algeria and Nigeria are the largest emitters, contributing 66% of total emissions in 2019.

In the Current Path forecast, the top three emitters will still contribute two-thirds of all carbon emissions in 2043, with Egypt experiencing the largest growth in emission of 220% between 2019 and 2043.

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Mustapha Jobarteh (2024) Lower middle-income Africa. Published online at futures.issafrica.org. Retrieved from https://futures.issafrica.org/geographic/income-groups/lower-middle-income-africa/ [Online Resource] Updated 13 December 2023.



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Mustapha Jobarteh joined the ISS in January 2022 as a Senior Researcher in the African Futures and Innovation programme in Pretoria. Before joining ISS, Mustapha was a senior lecturer and Head of the Department of Economics and Finance at the University of the Gambia and a research fellow with the Center for Policy, Research and Strategic Studies. His interests include macroeconomics, international trade and econometric modelling. Mustapha has a PhD in economics from Istanbul Medeniyet
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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.

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