



# AMU

## AMU: Current Path

Kouassi Yeboua

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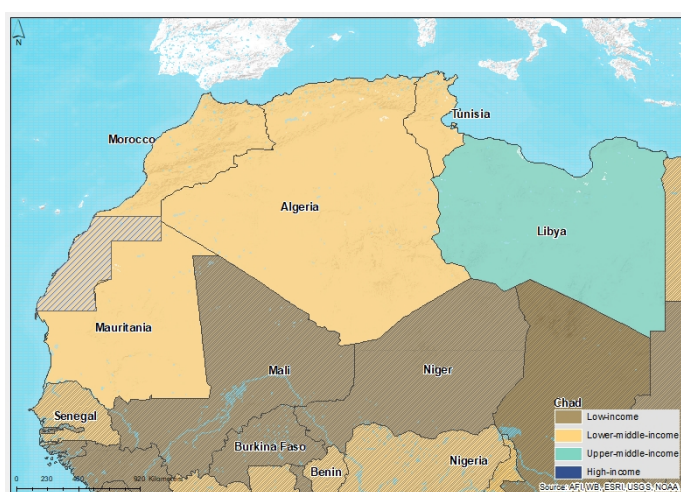
## AMU: Current Path

- AMU: Current Path forecast
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## AMU: Current Path forecast

Chart 1: Political map of AMU



This page provides an overview of the key characteristics of AMU 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.

The AMU is an economic and political organisation formed by the five Maghreb countries: Algeria, Libya, Morocco, Tunisia and Mauritania. These countries have strong historical, cultural and language affinities. The AMU was established on 17 February 1989 and is headquartered in Rabat, Morocco. The AMU represents 19% of Africa's area and 40% of the Arab world. It borders the Mediterranean Sea and the Atlantic Ocean and is rich in natural resources, including oil, gas, phosphates, iron ore, agricultural products, vast fishing banks and tourist attractions.

The Union has been unable to achieve tangible progress on its goals due to deep economic and political disagreements between Morocco and Algeria regarding, among others, the issue of Western Sahara. Competing domestic interests combined with political deadlocks among AMU members have resulted in a neglect of regional integration efforts within the Maghreb. No high-level meetings have taken place since 3 July 2008 and the Union is seen as largely dormant.

The World Bank classifies Libya as an upper middle-income country while Algeria, Morocco, Mauritania and Tunisia are considered lower middle-income countries.



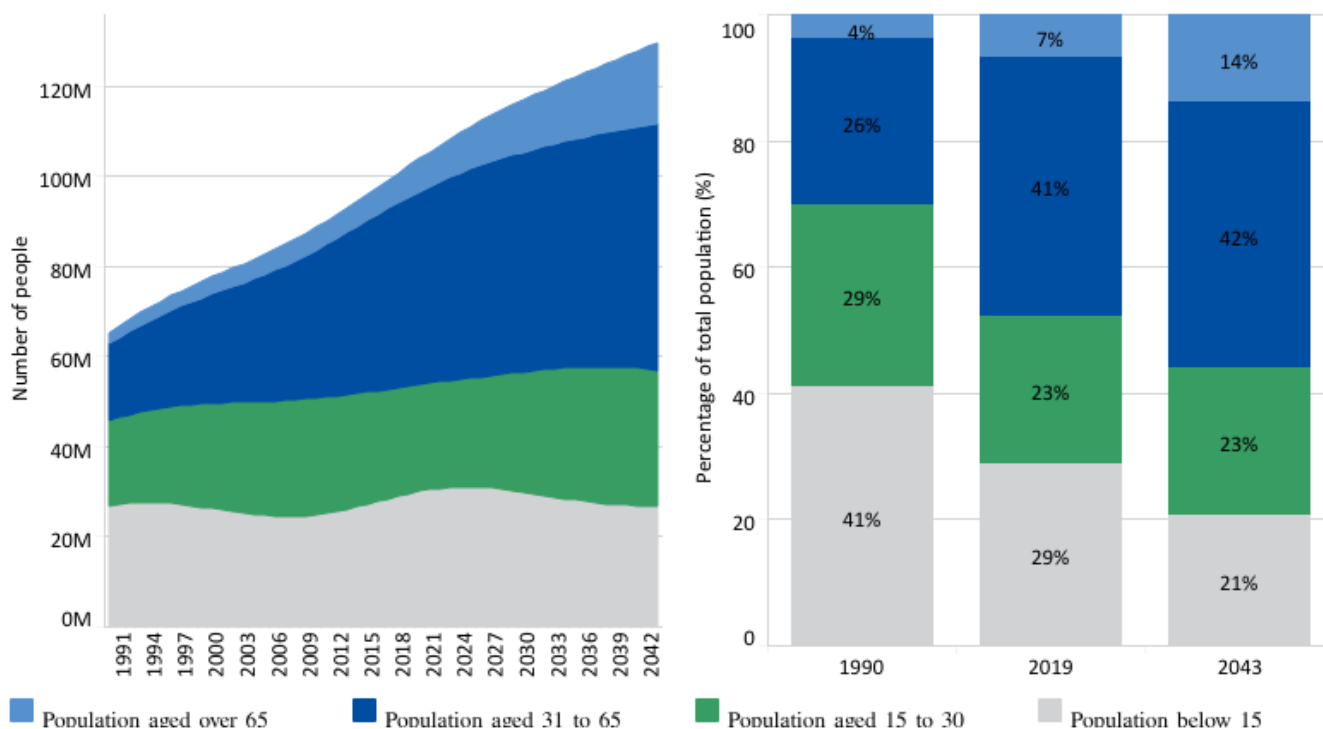
## Demographics: Current Path

Chart 2: Population structure in CP, 1990–2043

By cohort and % of population



AMU



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

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Collectively, the AMU countries had a population of 102.3 million in 2019, representing about 8% of Africa's population. In the Current Path forecast, the region's total population will increase to 129.5 million by 2043. At this point, the AMU will account for 6% of Africa's population. Of the population, 28.8% is below 15 years of age and it is forecast to decline gradually to 20.6% by 2043. The elderly population comprised about 7% in 2019 and it is projected to be 14% by 2043.

Algeria is the most populous country in the AMU, with 43 million people in 2019 and 57 million by 2043 while Mauritania has the lowest population (4.5 million in 2019 and 7.8 million by 2043).

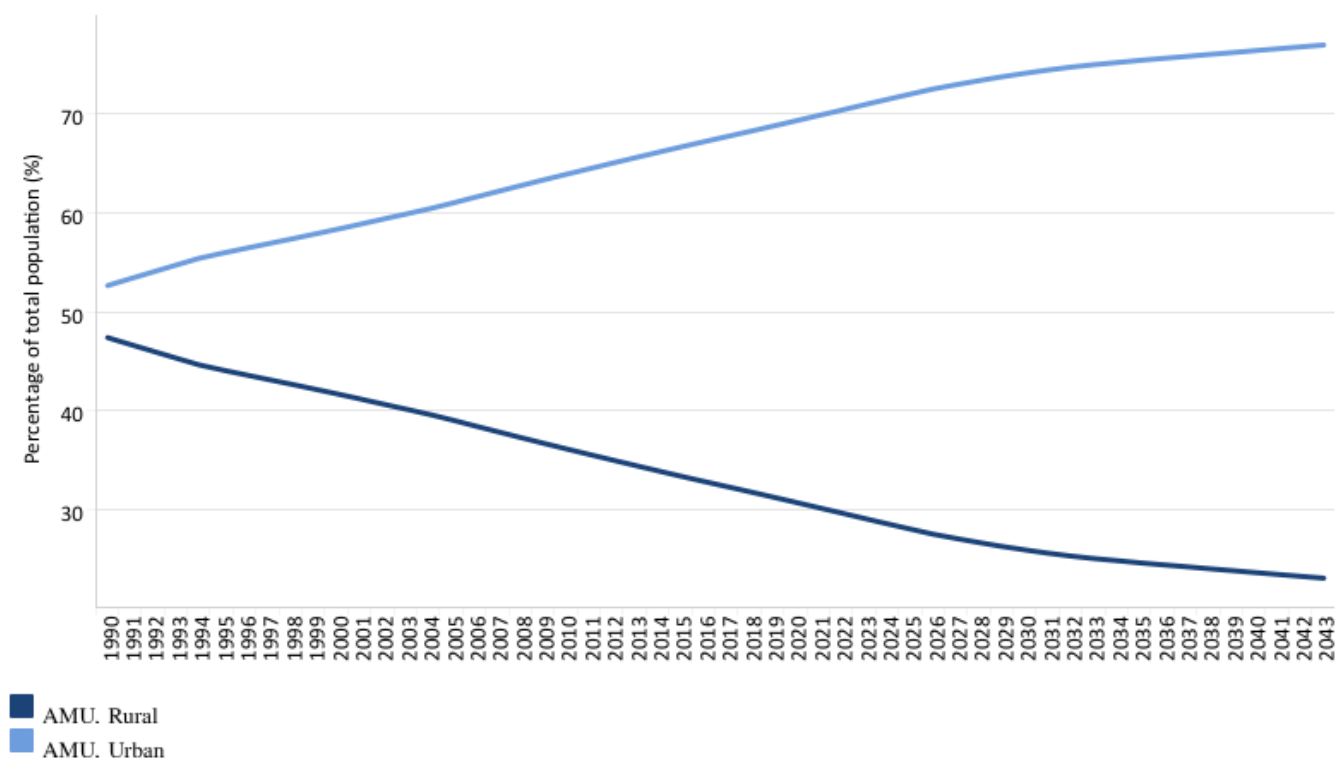
The AMU countries' population structure is typical of countries with relatively high life expectancy and low fertility rates.

The working-age cohort, 15- to 64 years of age, is the largest share of the population, and this can be a potential source of growth provided the labour force is well trained and there are employment opportunities. In 2019, the working-age population constituted about 64.4% of the population, and it is forecast to increase slightly to 65.5% by 2043.

Chart 3: Urban and rural population in CP, 1990–2043  
% of population



AMU



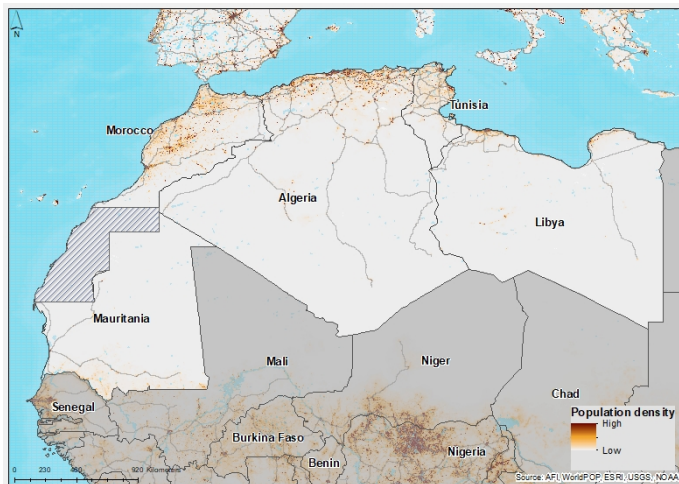
Source: IFs 7.63 initialising from UN World Urbanization Prospects estimate

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Urbanisation rates are high in the AMU countries. In 2019, 70.3 million, or 69%, of the AMU population lived in urban areas, up from 53% in 1990. The urban population is projected to be 100 million by 2043, equivalent to 77% of the regional population. Libya has the highest urbanisation rate (81.5%) among the AMU members, while Mauritania is the most rural country in the region, with 54.6% of its population living in urban areas in 2019. This high level of urbanisation comes with challenges associated with urban planning, job creation for the urban youth and environmental degradation. In 2019, about 31% of the AMU population lived in rural areas. In the Current Path forecast, it will decline to about 23% by 2043, equivalent to 30 million people.

Chart 4: Population density map for 2019



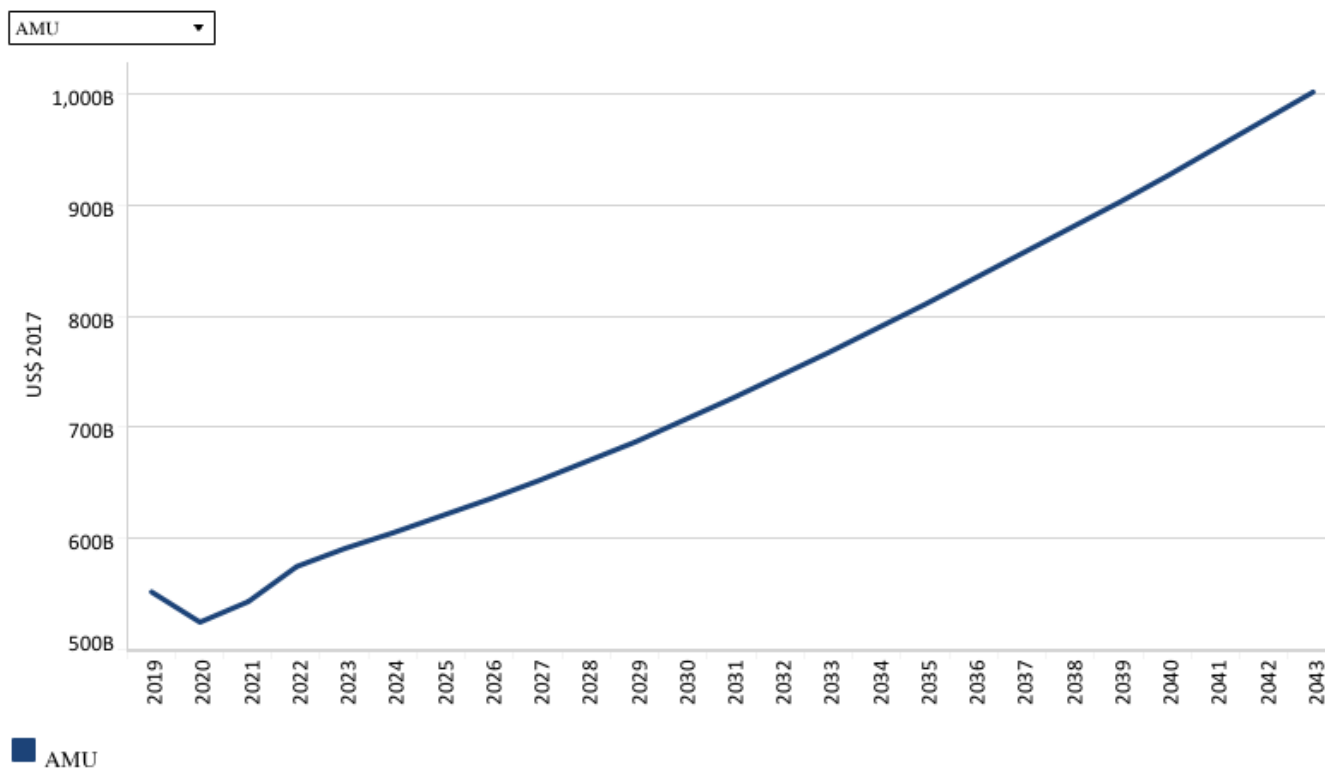
The AMU zone has very low population density with less than one person per hectare in 2019 in all countries, and it is forecast to remain below one person per hectare by 2043.



## Economics: Current Path

Chart 5: GDP in CP, 1990–2043

Market exchange rates



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

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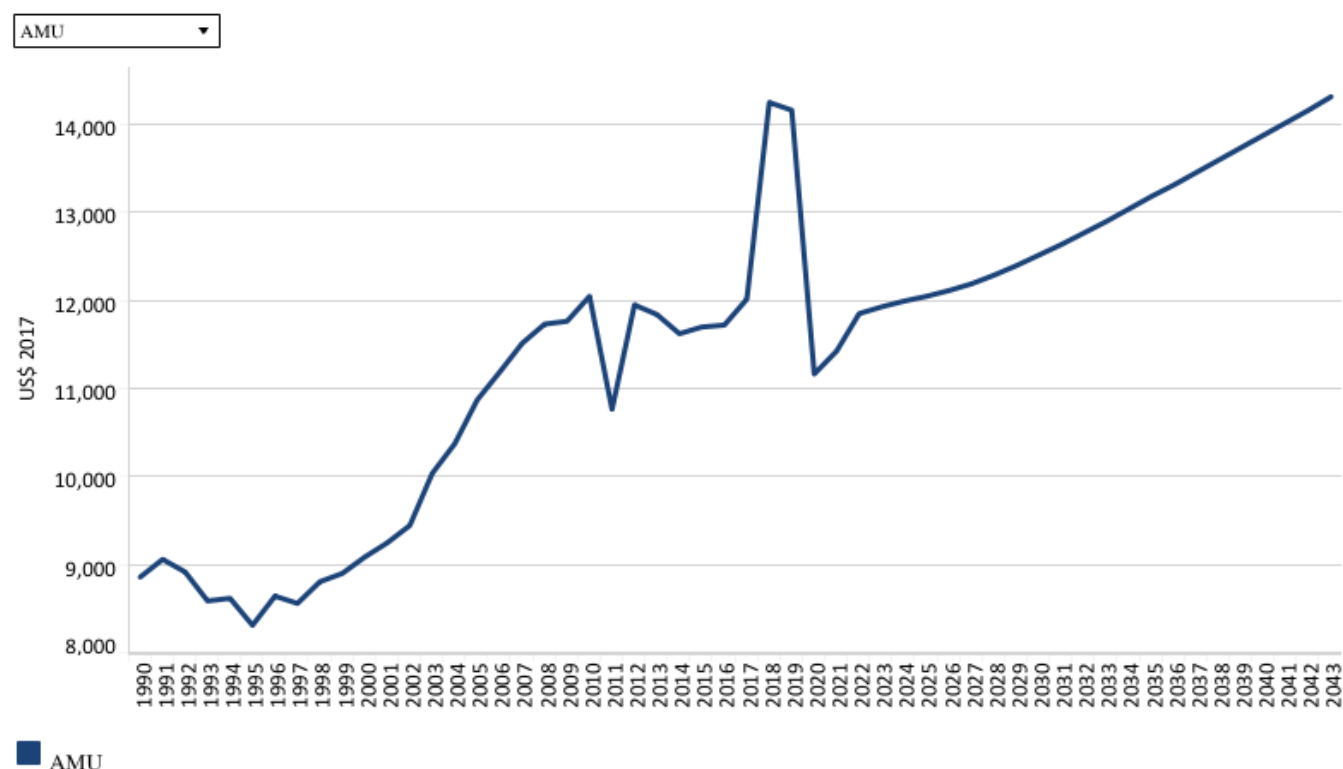
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Economically, the AMU countries are relatively small. Their combined GDP was US\$551.2 billion as of 2019, 114% up from US\$257.3 billion in 1990. This is equivalent to Nigeria's GDP and their total exports in 2019 were equivalent to Croatia's. All member countries have fairly large agricultural or raw materials sectors and are consequently quite vulnerable to exogenous shocks, such as the vagaries of weather and fluctuations in commodity world market prices.

The AMU economy has suffered two major recessions within the last decade: the GDP of the AMU contracted in 2011, due to the effect of the Arab Spring, and in 2020, due to the COVID-19 pandemic.

Algeria, which is a large producer of gas and oil, has the largest GDP in the zone, at US\$266.5 billion, while Mauritania has the lowest GDP, at US\$9.9 billion in 2019. In the Current Path forecast, the size of the regional economy is forecast to reach US\$992 billion by 2043, which is equivalent to an 80% increase between 2019 and 2043. By 2043, Algeria will have the largest economy within the AMU members with a GDP of US\$465.1 billion, while Mauritania will still have the smallest economy with a GDP of US\$27.1 billion. Growth is hampered by the long-standing rivalries and lack of economic cooperation.

Chart 6: GDP per capita in CP, 1990–2043  
Purchasing power parity



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

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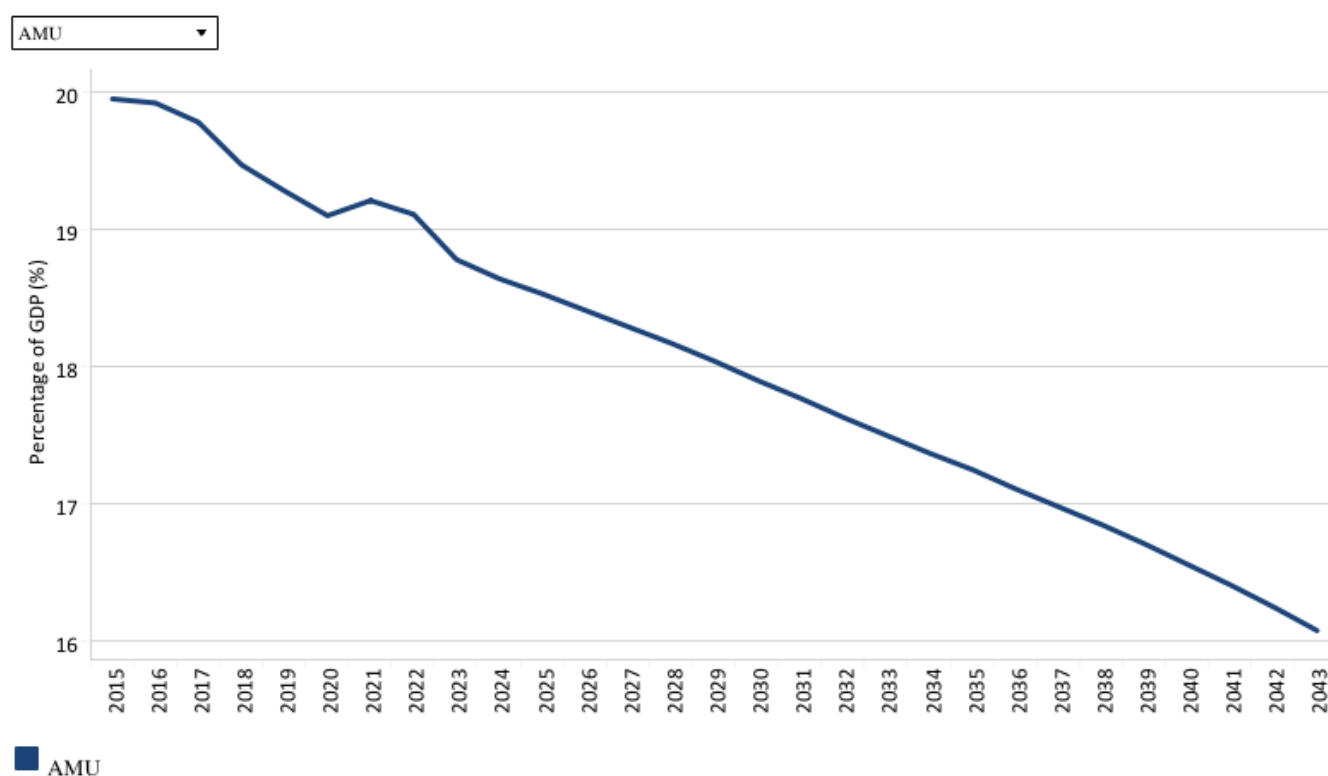
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Although many of the charts in the sectoral scenarios also include GDP per capita, this overview is an essential point of departure for interpreting the general economic outlook of [the AMU].

The GDP per capita (PPP) of the AMU was US\$14 159 in 2019 compared to US\$8 854 in 1990, equivalent to a nearly 60% increase between 1990 and 2019. In 2011, the average income of the AMU zone declined to almost its level in 2004 due to the economic recession associated with the Arab Spring. The second significant decline in the GDP per capita within the last decade was caused by the COVID-19 pandemic in 2020. The wealthiest country based on GDP per capita at purchasing power parity is Libya, with a GDP per capita of US\$20 295 in 2019. The GDP per capita of Libya dropped by more than 60% in 2011 from its level of 2010 due to the Arab Spring. The country will likely not recover its pre-Arab Spring GDP per capita in the Current Path forecast horizon. Mauritania has the lowest GDP per capita in the zone, which was about US\$4 137 in 2019. In the Current Path forecast, the GDP per capita (PPP) of the AMU is forecast to be US\$14 312 by 2043.



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



Source: IFs 7.63 initialising from UN Economic Commission for Europe [2008]; Elgin and Oztunali [2012]; Schneider and Enste [2012]

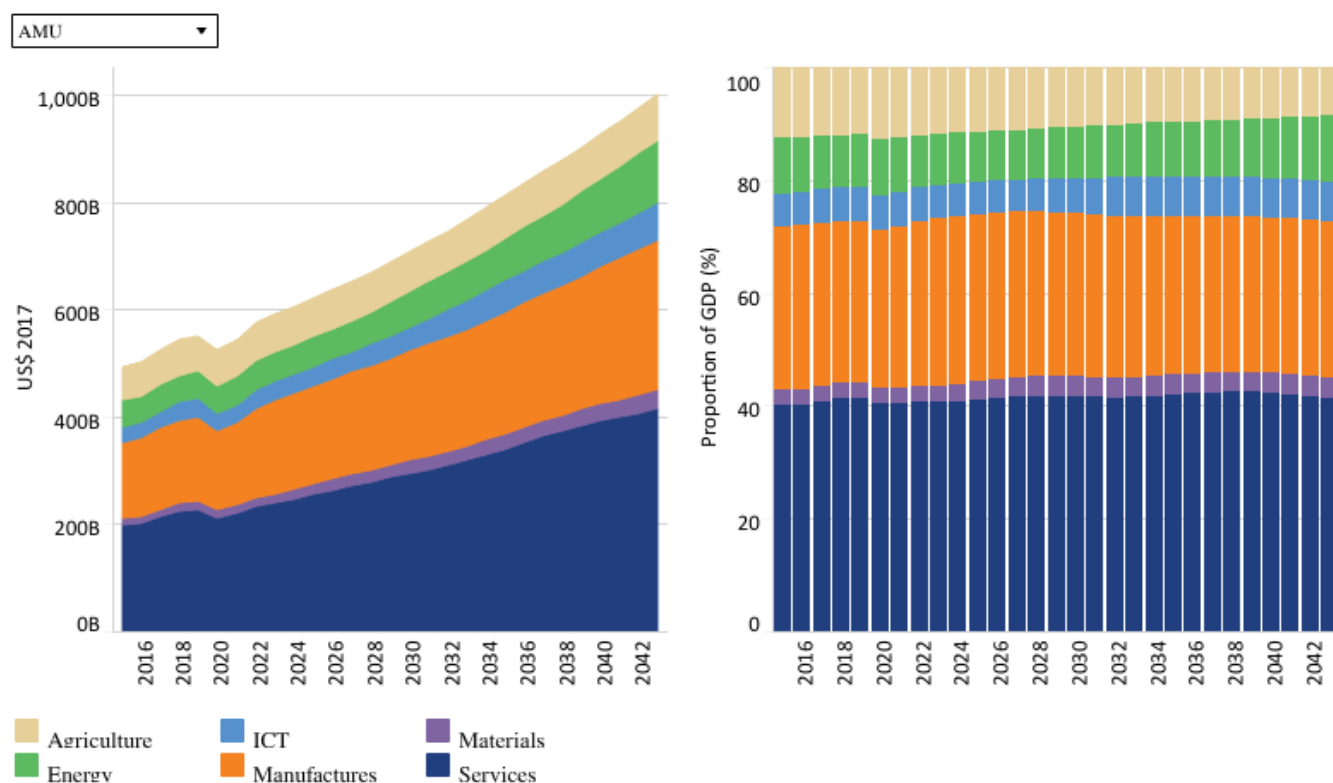
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The size of the informal economy represented about 19% of the total GDP of the AMU in 2019. In the Current Path forecast, the size of informality in the region is forecast to decline gradually to 16% by 2043. Mauritania has the highest level of informality in the AMU zone, while Libya has the lowest level. As of 2019, IFs estimates informality rates ranged from 23% of GDP in Mauritania, 22.9% of GDP in Tunisia, 21.7% in Morocco, 18.3% in Algeria, to 13.5% in Libya. In the Current Path forecast, Libya will still have the lowest level of informality by 2043 (9.2% of GDP). The size of the informal sector in Mauritania will decline gradually across the forecast horizon, but the country will have the highest level of informality by 2043 (20.6% of GDP).

Reforms to reduce informality, such as clearing the hurdles to registering a business, tackling corruption and improving access to finance are necessary as the informal economy is generally associated with low productivity and poverty.

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



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

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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), manufactures, services and information and communications technology (ICT). Most other sources use a threefold distinction between only agriculture, industry and services with the result that data may differ.

Like most African countries, the service sector is the dominant sector of the AMU economy. In absolute terms, the value added or output of all the sectors increases across the forecast horizon. Specifically, the value added of the service sector increases by more than 80% between 2019 and 2043. The manufacturing output increases by 76.5%, 30.4% for agriculture, 127.6% for energy, 124.4% for materials and 112% for ICT (from a very low base) between 2019 and 2043. By 2043, the service sector will have the highest output (US\$) while the lowest output will come from materials. In percentage of GDP, the service sector accounted for about 41% of GDP in 2019, followed by the manufacturing industry, which accounted for 28.5% of GDP. Agriculture, which is the third major sector, accounted for 12% of GDP in 2019.

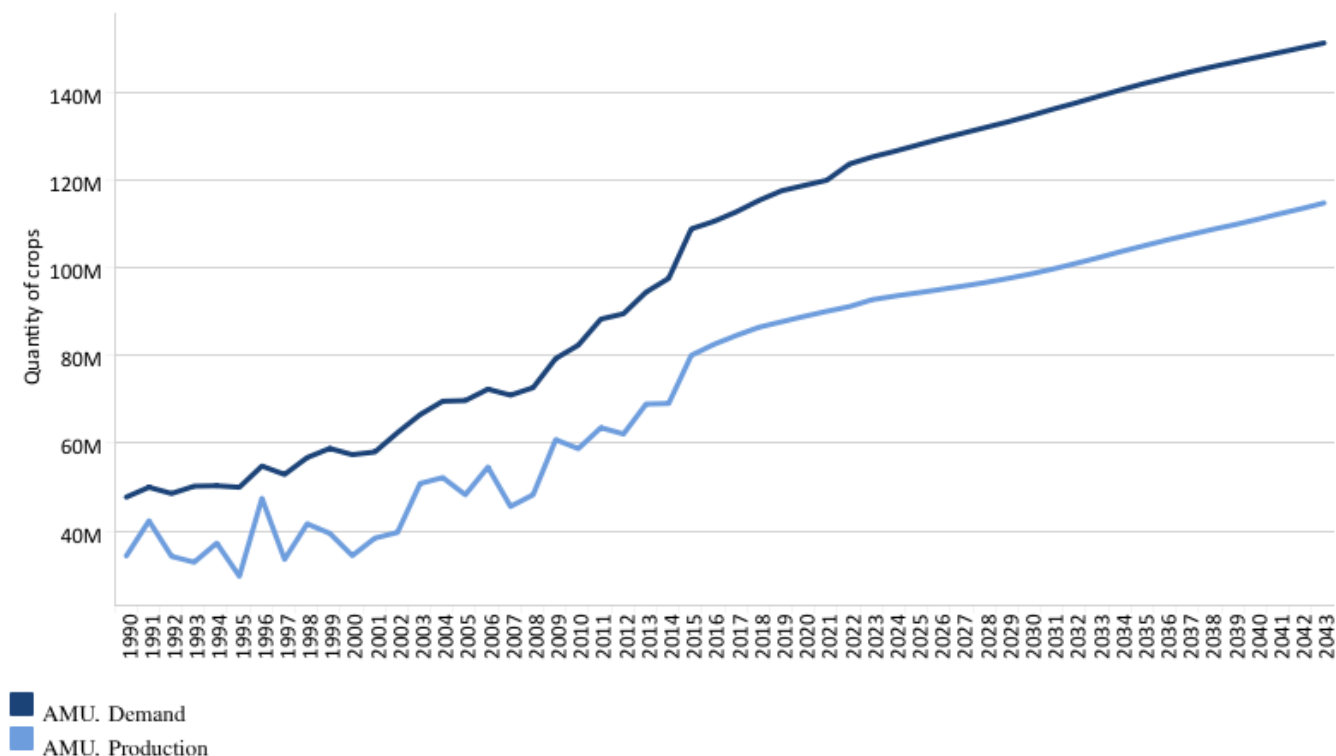
The Current Path forecast is that the energy sector will overtake the agriculture sector by 2036 to become the third-largest sector after service and manufacturing. By 2043, the share of the service sector in GDP will slightly increase to 41.3%, while that of manufacturing will slightly decline to 27.7% of GDP compared to 28.5% in 2019. This implies that premature deindustrialisation will continue in the AMU area; the manufacturing share of GDP declines while the countries are still underdeveloped. Overall, the structural transformation process, which consists of moving resources from low productivity sectors to more productive sectors such as manufacturing and services, is slow in the AMU area

Chart 9: Agriculture production/demand in CP, 1990–2043

Crops million tons



AMU



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

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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.

The total agriculture demand in the AMU is forecast to increase from 47.7 million metric tons in 1990 to 151 million metric tons by 2043, while agriculture production will increase from 34.3 million metric tons to 114.6 million metric tons. This is equivalent to a deficit of 36.4 million metric tons in 2043.

Morocco has the highest agriculture production in the AMU zone, estimated at 30 million metric tons in 2019, while Mauritania has the lowest agriculture production (0.4 million metric tons). In per capita production, Libya has the highest agriculture production per capita estimated at about 1.1 million metric tons in 2019, while Mauritania has the lowest agriculture production per capita (0.09 million metric tons) in 2019.

Food insecurity is very high in Mauritania compared to its peers in the AMU due to difficult farming conditions, insufficient rain and recurrent locust infestations.

In the Current Path forecast, Mauritania will still record the highest food deficit of the AMU members by 2043.



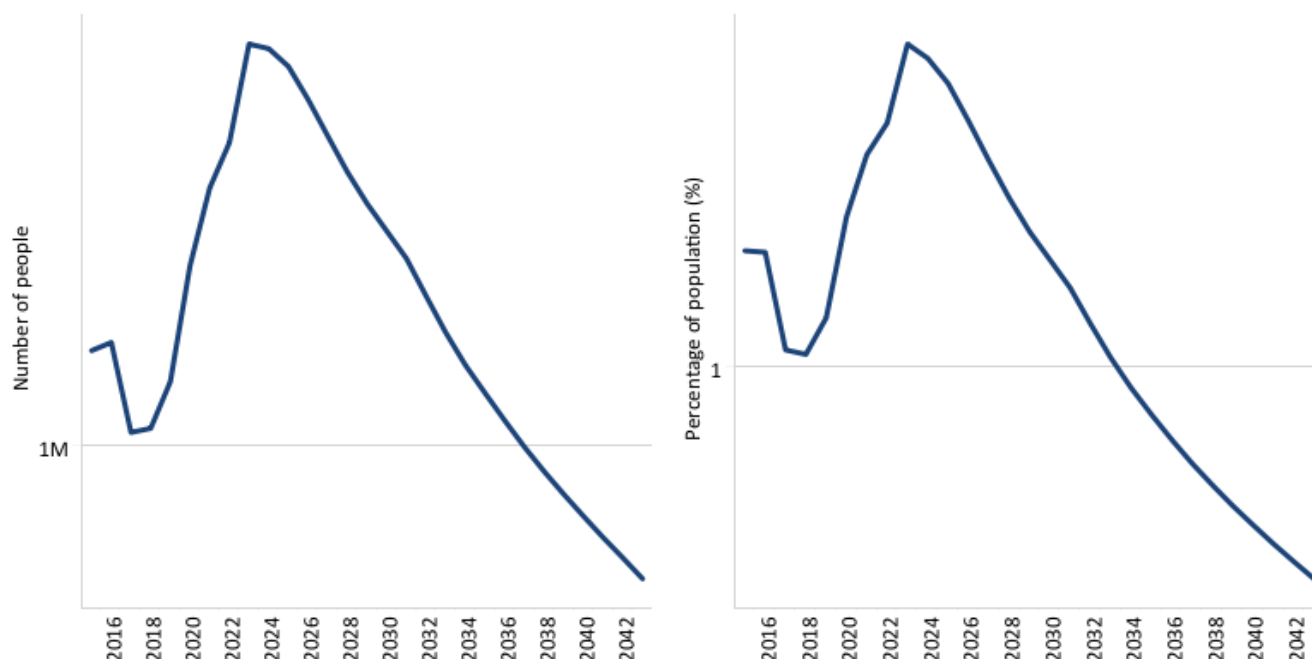
## Poverty: Current Path

Chart 10: Poverty in CP, 2015–2043

Millions of people and % of total population



AMU \$1.90



AMU

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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There are numerous methodologies 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 a day (in 2011 international prices), also used to measure progress towards the achievement of Sustainable Development Goal 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.

At the regional level, the AMU has achieved SDG Goal 1 of the eradication of extreme poverty, although not in Mauritania. Technically, less than 3% of the population of all countries in the world should be surviving below US\$1.90 per day (extreme poverty) by 2030. At the regional level, this headline goal has long before been achieved.

Using the poverty threshold of US\$1.90 per day, about 1.1 million people lived in extreme poverty in 2019. This translates to an average poverty rate of 1.1% in the region, already below 3%.

Due to the economic fallout associated with the COVID-19 pandemic, the number of poor people will increase and peak in 2023 before starting to decline. The poverty rate will peak at 1.65% in 2023. In the Current Path forecast, fewer than one million people will be surviving under US\$1.90 per day by 2043. This translates to a poverty rate of 0.57%.

With a poverty rate of 11.4% in 2019, Mauritania is the only country of the AMU that has not yet achieved SGD Goal 1 of eradicating extreme poverty. Extreme poverty in Mauritania is forecast to increase to 20.3% in 2023 before it starts to decline. In the Current Path forecast, Mauritania will get to about 15.7% by 2030 and 7.1% by 2043. The achievement of regional targets regarding poverty hinges, therefore, on Mauritania.

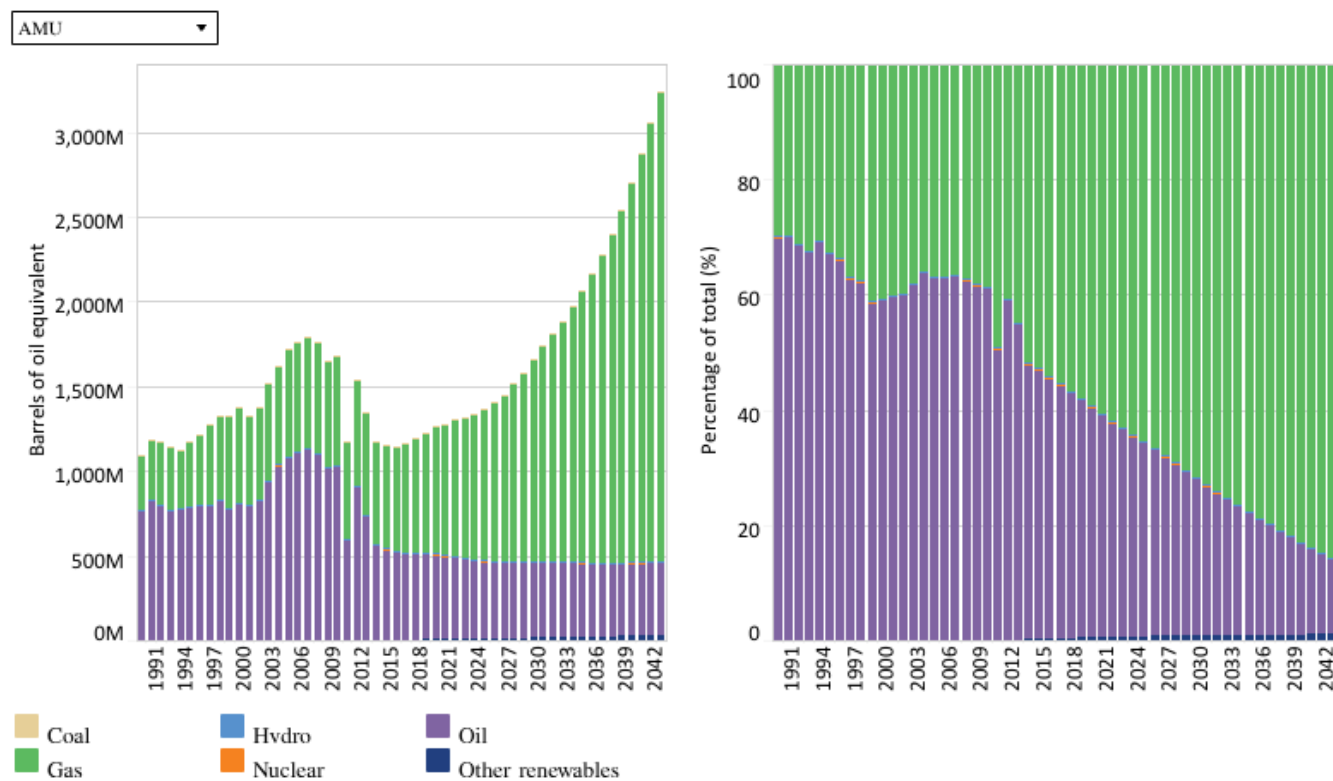




## Carbon Emissions/Energy: Current Path

Chart 11: Energy production by type in CP, 1990–2043

Barrels of oil equivalent and % of energy production



Source: IFs 7.63 initialising from World Energy Outlook data

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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.

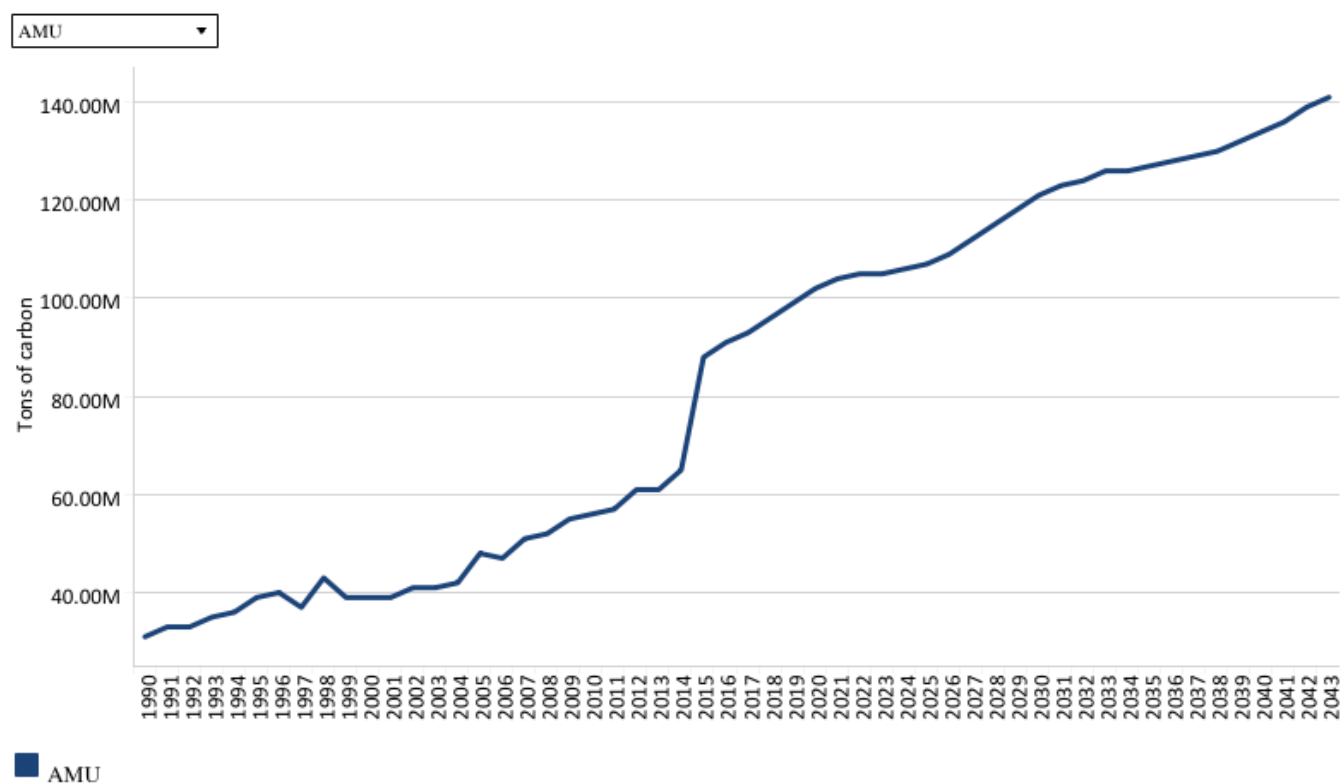
Oil and gas are the dominant sources of energy in the AMU area. Until 2013, oil was the leading energy source in the region and accounted for 54.9% of energy production. Currently, the volume of gas produced has overtaken that of oil. In 2019, gas production was 711 million barrels of oil equivalent while oil production stood at 507 million barrels.

In the Current Path forecast, gas production will significantly increase to reach 2.8 billion barrels of oil equivalent by 2043, while oil production will decline to 420 million barrels in the same year. By 2043, gas will account for 85.7% of total energy production, while oil will account for 13.1%. While Algeria and Libya are significant oil and gas exporters, other members import most of their energy needs. For instance, Morocco imports 95% of its energy needs.

The energy production from renewable sources is still at the embryonic stage in the region. The energy from other renewable sources is forecast to reach 34 million barrels of oil equivalent or barely 1% of total energy production by 2043. The region has vast potential for renewable energy and governments in the AMU should capitalise on it to accelerate their energy transition.

# Chart 12: Carbon emissions in CP, 1990–2043

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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Carbon is released in many ways, but the three most important contributors to greenhouse gases are carbon dioxide (CO<sub>2</sub>), carbon monoxide (CO) and methane (CH<sub>4</sub>). Since each has a different molecular weight, IFs uses carbon. Many other sites and calculations use CO<sub>2</sub> equivalent.

Carbon emissions in the AMU zone increased from 31 million tons of carbon in 1990 to 96 million tons of carbon in 2019, more than 200% increase within two decades although from a very low base. In the Current Path forecast, carbon emissions in the area will increase to 141 million tons by 2043. Emitting an estimated 45 million tons of carbon, Algeria is by far the largest contributor to carbon emissions in the AMU, followed by Libya. In the Current Path forecast, Algeria and Libya will be the largest contributors to carbon emissions in the region by 2043, collectively responsible for around 70% of the AMU's emissions.

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## About the authors

Dr Kouassi Yeboua previously worked as a Senior Researcher at AFI, where he led significant ISS studies on the long-term development prospects of the Democratic Republic of Congo, the Horn of Africa, Nigeria, Malawi, and Mozambique. His research focuses on development economics, macroeconomics, gender, and economic modeling. He holds a PhD in Economics.

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