



CEN-SAD

CEN-SAD: Current Path

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CEN-SAD: Current Path forecast

Chart 1: Political map of CEN-SAD



This page provides an overview of the key characteristics of CEN-SAD 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 Community of Sahel-Saharan States (CEN-SAD) was established in 1998 in Libya and became a regional economic

community in 2000. It is an economic and integration organisation that seeks the economic union of the member countries and the promotion of international trade. CEN-SAD has 29 members, making it the largest regional economic community (REC) in Africa, comprising: Benin, Burkina Faso, Cape Verde, the Central African Republic (CAR), Chad, Comoros, Côte d'Ivoire, Djibouti, Egypt, Eritrea, The Gambia, Ghana, Guinea, Guinea-Bissau, Kenya, Liberia, Libya, Mali, Mauritania, Morocco, Niger, Nigeria, São Tomé and Príncipe, Senegal, Sierra Leone, Somalia, Sudan, Togo and Tunisia.

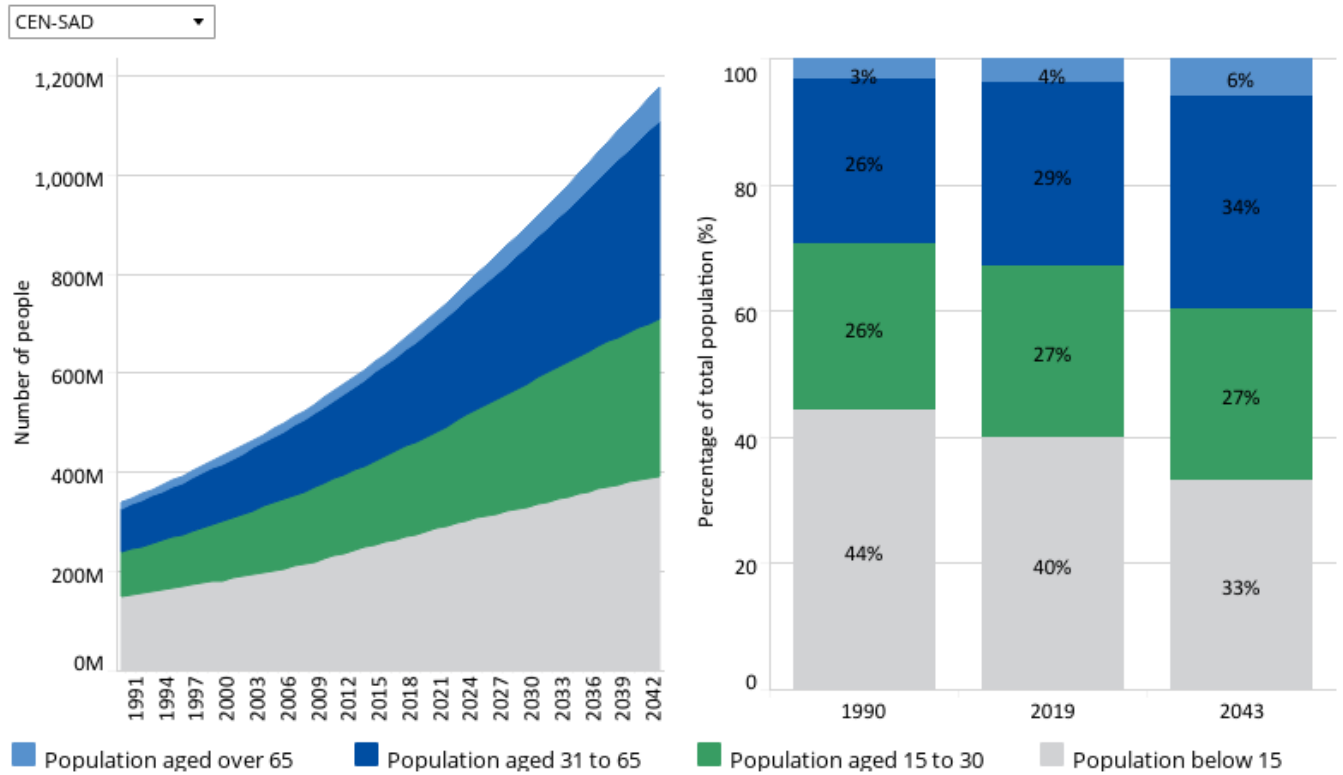
The members of the community are widely dispersed and no country is solely a member of CEN-SAD, thus negatively affecting the community's effectiveness and autonomy. The grouping has a wide variety of countries in terms of income classification. There are 14 low-income members, 14 lower middle-income members and one upper middle-income member. Integration between countries is also low when compared to other RECs.



Demographics: Current Path

Chart 2: Population structure in CP, 1990–2043

By cohort and % of population



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

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CEN-SAD’s total population is projected to almost double from 2019 to 2043 in the Current Path forecast, rising from 688 million to 1 175 million — an increase of 71%. The increase builds on the trend that the REC experienced between 1990 to 2019, when the population increased by 104% from 337 million to 688 million people.

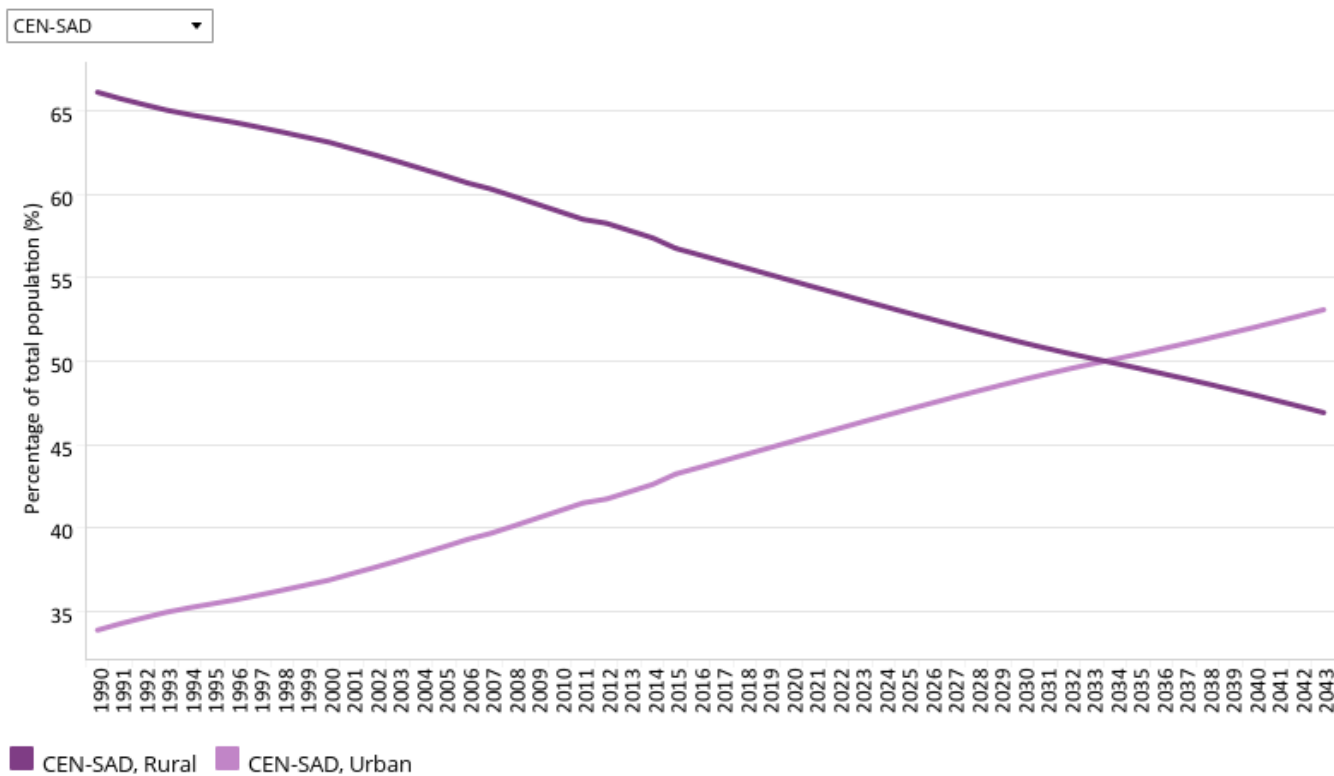
The total populations of CEN-SAD’s members vary greatly: Nigeria, the most populous country in Africa, had a total population of 204 million people in 2019, while the three island nations of the Comoros, Cape Verde and São Tomé and Príncipe all had populations below 1 million people. Niger and Chad are projected to see increases above 100% from 2019 to 2043, while significantly, Nigeria will see the fourth highest increase at 90%, reaching a total population of 388 million people in 2043.

The population structure of CEN-SAD will gradually shift towards a more mature composition, as the section of the population who are of working age will grow from 56.3% in 2019 to 60.9% in 2043. Additionally, those aged under 15 will constitute 33.2% of the total population in 2043 — 6.7 percentage points less than in 2019. The dependency ratio will thus decrease, opening the way for the demographic dividend, provided the working-age population is adequately skilled and is productively employed in the formal economy.

Individually, population structures also vary considerably. In 2019, nearly 50% of Niger’s population was aged below 15, while only 24% of Tunisia’s was of that age, and 9% was aged 65 or above. By 2043, Tunisia will be joined by Morocco, Libya

and Cape Verde as countries where those aged above 65 constitute more than 10% of the total population. Niger, Chad and Somalia will continue to have a youthful population, with more than 40% of their people aged below 15 in 2043.

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



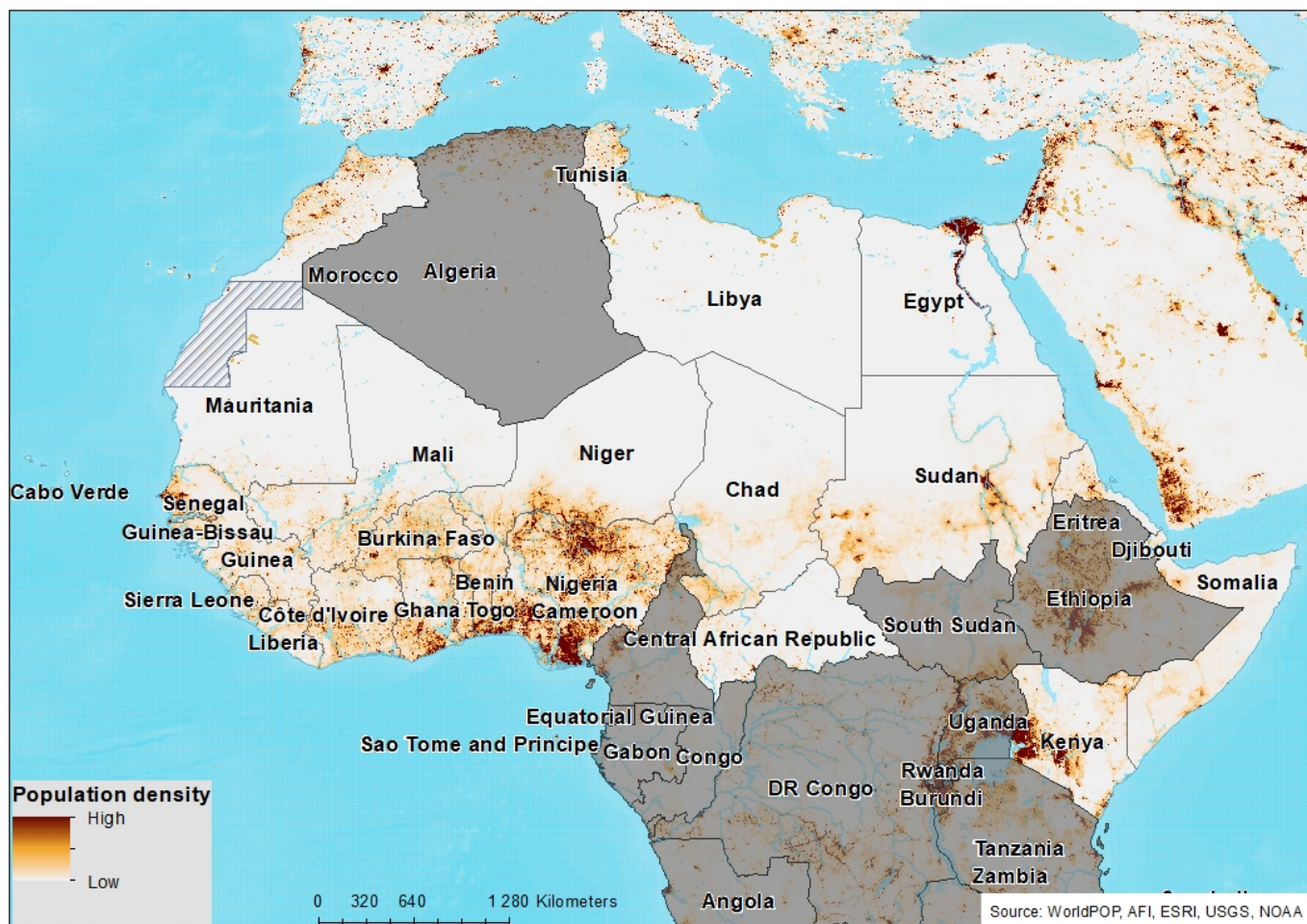
Source: IFs 7.63 initialising from UN World Urbanization Prospects estimate

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CEN-SAD’s population has been steadily urbanising since 1990, when 66% of the population lived in rural areas. By 2019, 55% lived in rural areas and by 2043, urban areas are projected to house 53% of the CEN-SAD’s population.

There are sizable differences between member states: in 2019, 82% of Libya’s population lived in urban areas, whereas only 16% of Niger’s did. Rates of urbanisation differ markedly too: Mauritania’s urban population is expected to increase by 14.2 percentage points from 2019 to 2043, while CAR will become slightly more rural, the urban population shrinking by 2.1 percentage points. The country will thus buck Africa’s urbanisation trend, mainly due to the prolonged instability in the country forcing urban inhabitants to rural areas as they flee conflict. The country has struggled with repeated waves of internal displacement as a result, explaining the inversion of the urbanisation trend.

Chart 4: Population density map for 2019

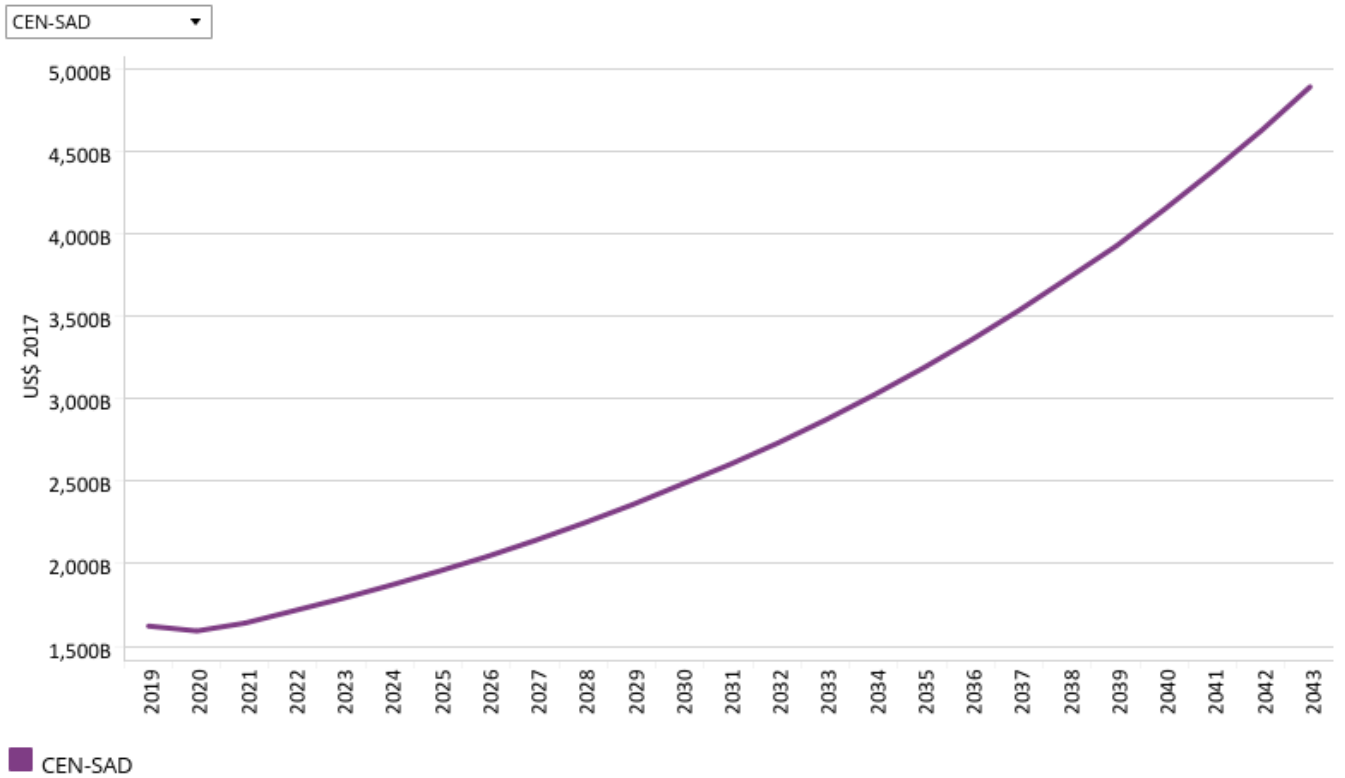


The population density of CEN-SAD is projected to rise from 0.48 people per hectare in 2019 to 0.82 people per hectare 2043, which would be slightly higher than Africa's average of 0.76 in the same year.

On an individual member level, the small nations of the Comoros, The Gambia and São Tomé and Príncipe naturally rank high, while countries with large land areas such as Sudan, Libya and Chad rank low. Two interesting cases are Nigeria and Egypt, who have relatively large land areas and high population densities. Nigeria ranked fourth among CEN-SAD members for population density in 2019 and is projected to rank third in 2043, highlighting the rapid population growth the country is expected to face and contend with moving forward.



Chart 5: GDP in CP, 1990–2043
Market exchange rates



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

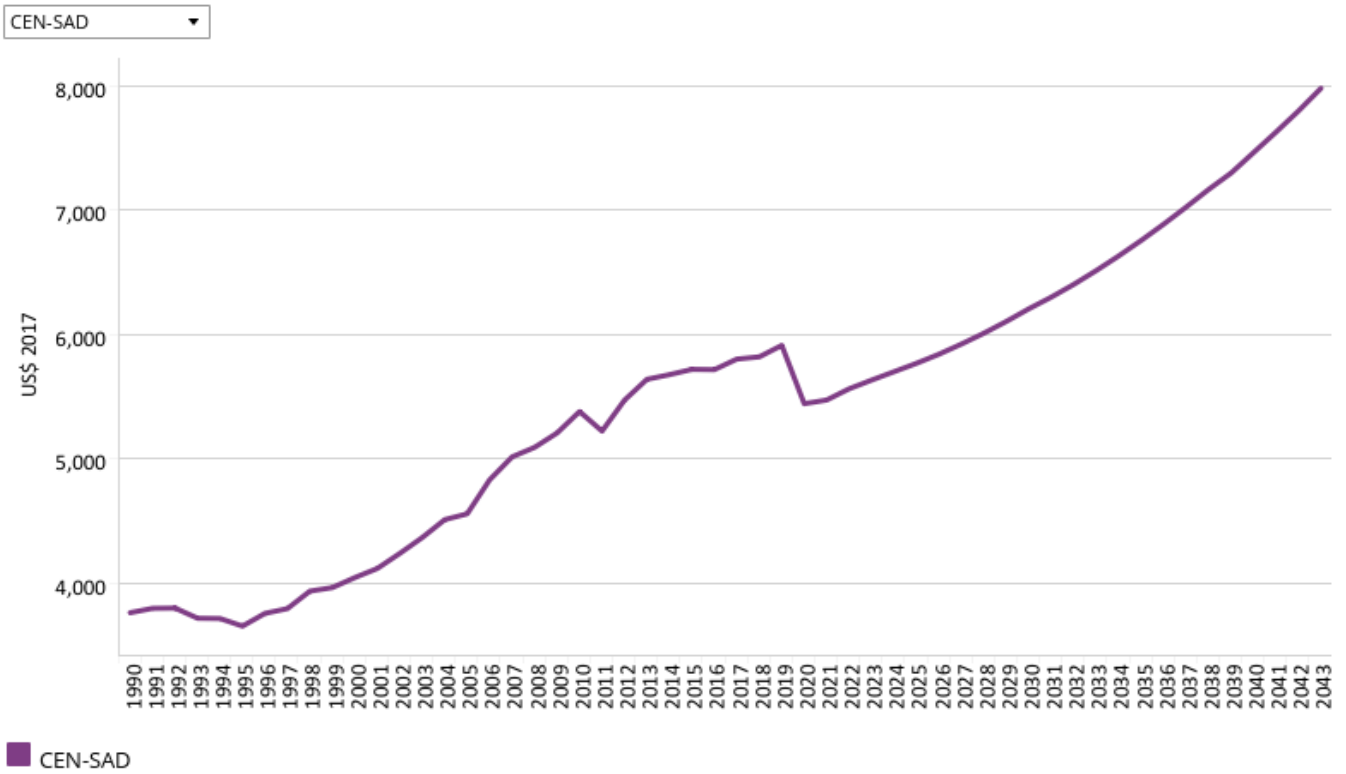
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The size of CEN-SAD’s combined economy equated to US\$1.6 trillion in 2019, and is expected to grow to about US\$4.9 trillion by 2043 — a large increase of 201.4%. The increase of US\$3 266.8 billion is mostly driven by Nigeria and Egypt; the former is expected to see an increase of US\$1.4 trillion, while the latter would see a rise of US\$635 billion. In percentage terms, the largest increase will come from The Gambia, whose economy nearly quintuples from US\$2.1 billion to US\$10 billion in 2043. Guinea-Bissau, Niger, Eritrea, Senegal and Guinea are all projected to see their economies grow fourfold from 2019 to 2043. The third and eight largest economies in 2019, Morocco and Tunisia, will only grow by 65% and 64% respectively, the smallest increases among CEN-SAD’s members.

The REC’s GDP distribution has been tilted heavily in favour of Nigeria since 1990, when the West African country accounted for 31.5% of CEN-SAD’s combined GDP, with its share increasing to 34.6% in 2019 and potentially rising to 40.3% in 2043. The second largest economy is expected to remain Egypt, with its share dipping from 21.5% in 2019 to 20.1% in 2043. Libya is expected to see the largest decrease between 1990 and 2043, dropping from 11.7% to 3.7%.

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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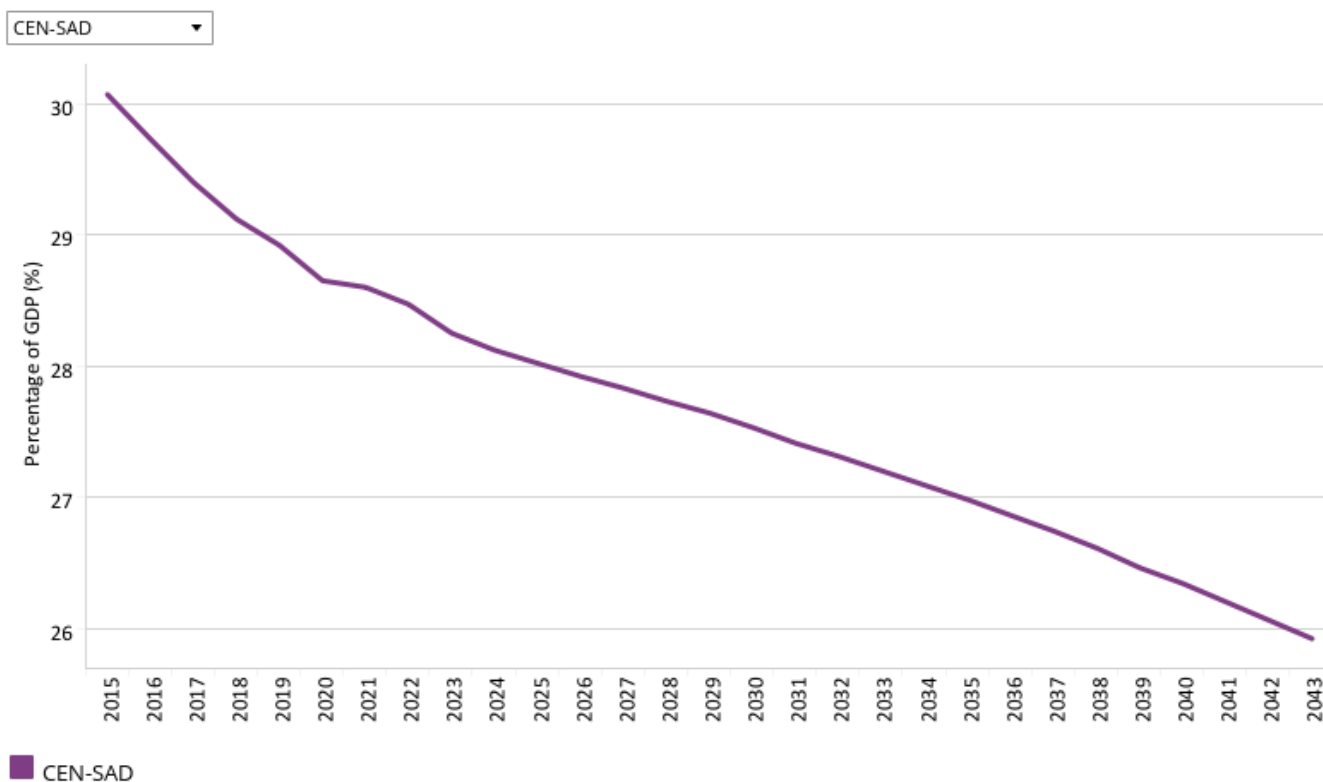


Although many of the charts in the sectoral scenarios also include GDP per capita, this overview is an essential point of departure for interpreting the general economic outlook of CEN-SAD.

CEN-SAD’s GDP per capita grew steadily from 1990 to 2019, rising by 57% from US\$3 763 to US\$5 911. Recovery from the COVID-19 pandemic is projected to take some time, with the REC’s GDP per capita only reaching 2019 levels in 2027 again. By 2043, GDP per capita will be 35% higher than in 2019, reaching US\$7 978 and outpacing the projected average for Africa.

CEN-SAD has a large number of members, with a wide discrepancy in terms of development. Somalia and CAR both had GDP per capita below US\$900 in 2019, while Egypt and Tunisia’s were above US\$10 000 and Libya’s was above US\$20 000. By 2043, 23 out of the 29 members will still be below Africa’s average of US\$7 157. Libya will have the highest GDP per capita at US\$31 250, while Guinea-Bissau, Eritrea, Niger, Liberia and Togo would more than double their 2019 figures.

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]

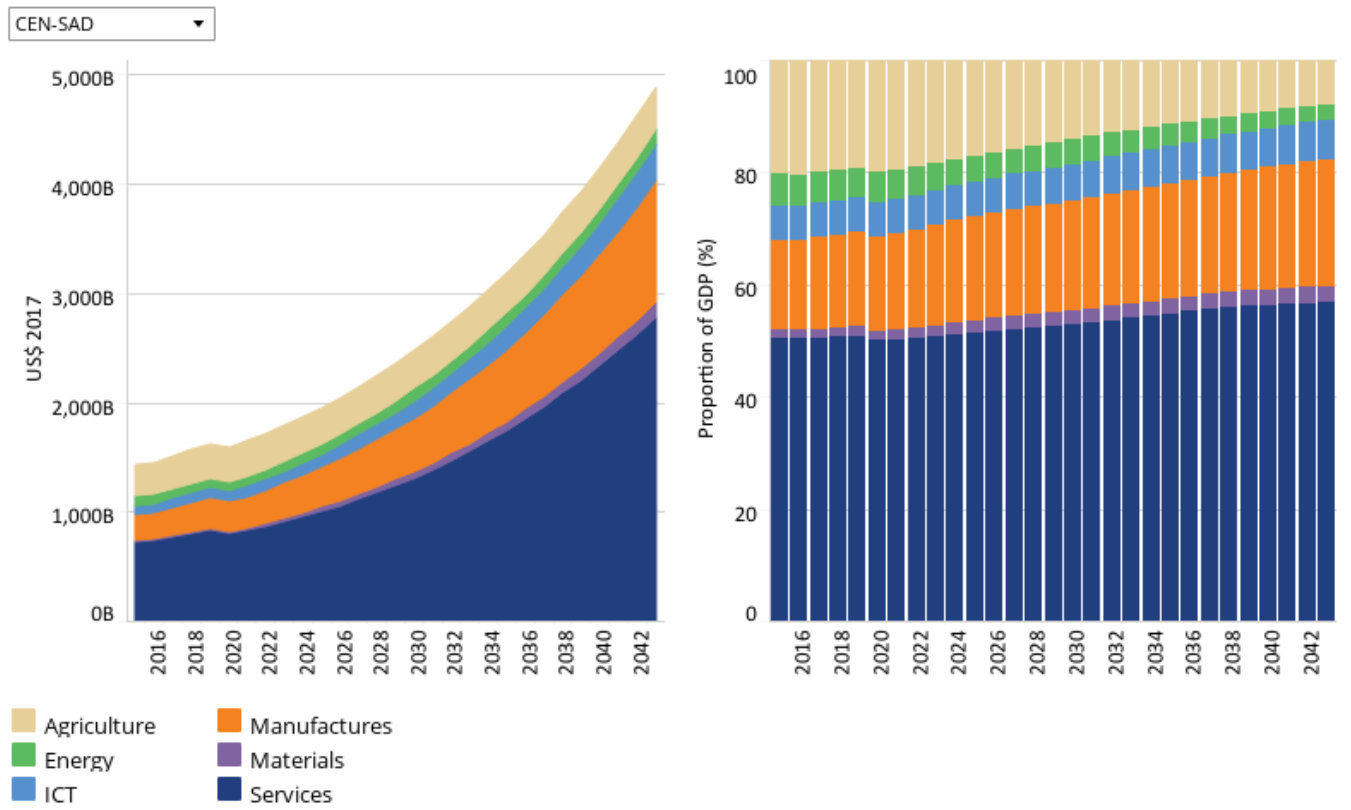
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The size of CEN-SAD’s informal sector was 29% of the subregion’s GDP, 2.6 percentage points above Africa’s average of 26.4% of GDP in 2019, but the REC is projected to gradually catch up, reaching 25.9% in 2043 and reducing the gap to only 1.2 percentage points.

All 29 members will see a decrease in the size of their informal sectors, which augurs well for governments’ revenue in the area due to the tax revenue increased formalisation brings. The largest decrease will be seen in Liberia, where the informal sector will be 8 percentage points smaller by 2043. Sudan will only see a 1 percentage point decrease, but the country’s level of informality was already the lowest among CEN-SAD’s members at 13.9% in 2019.

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), manufacturing, services 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.

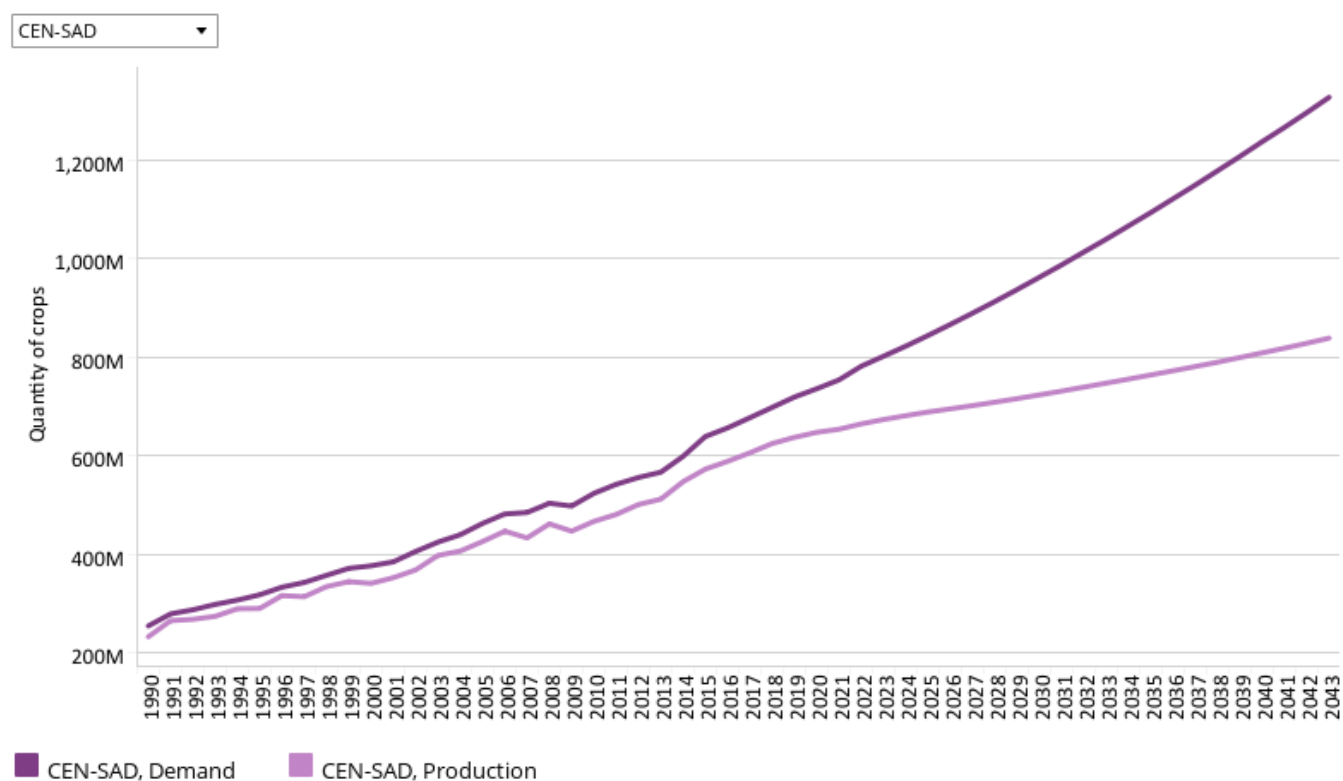
The service sector is very important to the CEN-SAD economy, constituting 50.9% of GDP in 2019, and is forecast to account for 56.8% of GDP in 2043. The agriculture sector has the second largest contribution to CEN-SAD's GDP with its share in GDP of 19.3% in 2019. The share of agriculture is, however, projected to steadily decline to 7.9% by 2043 while that of the manufacturing sector will grow from 16.7% in 2019 to 22.7% by 2043, indicating the structural transformation of the economy.

The decrease in agriculture's contribution is universal among members, but the largest decrease will be in Guinea-Bissau, where the agriculture sector shrinks by 27 percentage points by 2043 compared to its level in 2019. Manufacturing also grows, with only Mauritania seeing a small decrease in the size of its manufacturing sector. Chad, Mali and Eritrea's manufacturing sectors are expected to add more than 12 percentage points extra value by 2043.

Ultimately, however, the service sector is projected to overshadow all other sectors. The smallest share of the sector in GDP by 2043 is in Chad, where it still adds 41% of total value added. Djibouti's service sector will hold the largest share at 75.7% in 2043, with São Tomé and Príncipe and Cape Verde's shares also above 70%, respectively. The dominance of the service sector could be detrimental to long-term growth if the productivity in the sector is low and quality of employment is lacking.

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

Crops million tons



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.

CEN-SAD's agriculture demand is projected to continue to rise across the forecast horizon, rising from 719.2 million tons in 2019 to 1.33 trillion tons in 2043 — an increase of 84.6%. Agriculture production will not however rise to meet this increase in demand and a scenario of increased food import dependence is projected for the REC. Production will increase by 31.6% from 637.3 million tons in 2019 to 838.9 million tons by 2043. These trends show that agricultural production in the CEN-SAD area is not keeping pace with the expected 71% increase in the population from 2019 to 2043.

CEN-SAD's members are all expected to see a significant increase in the size of their agriculture production shortfalls, except for Morocco, whose production will increase by 8 percentage points more than its demand from 2019 to 2043. Chad, Somalia and Niger on the other hand will see the largest increases in demand over this period, with increases above 150% driven by rapid population growth.

Nigeria is projected to have the largest gap between production and demand by 2043: its shortfall will exceed 200 million metric tons in 2043, nearly triple the size of the next largest deficit, which would be Egypt's at 81.7 million tons. Libya is expected to have the smallest gap by 2043 of 60 000 tons.

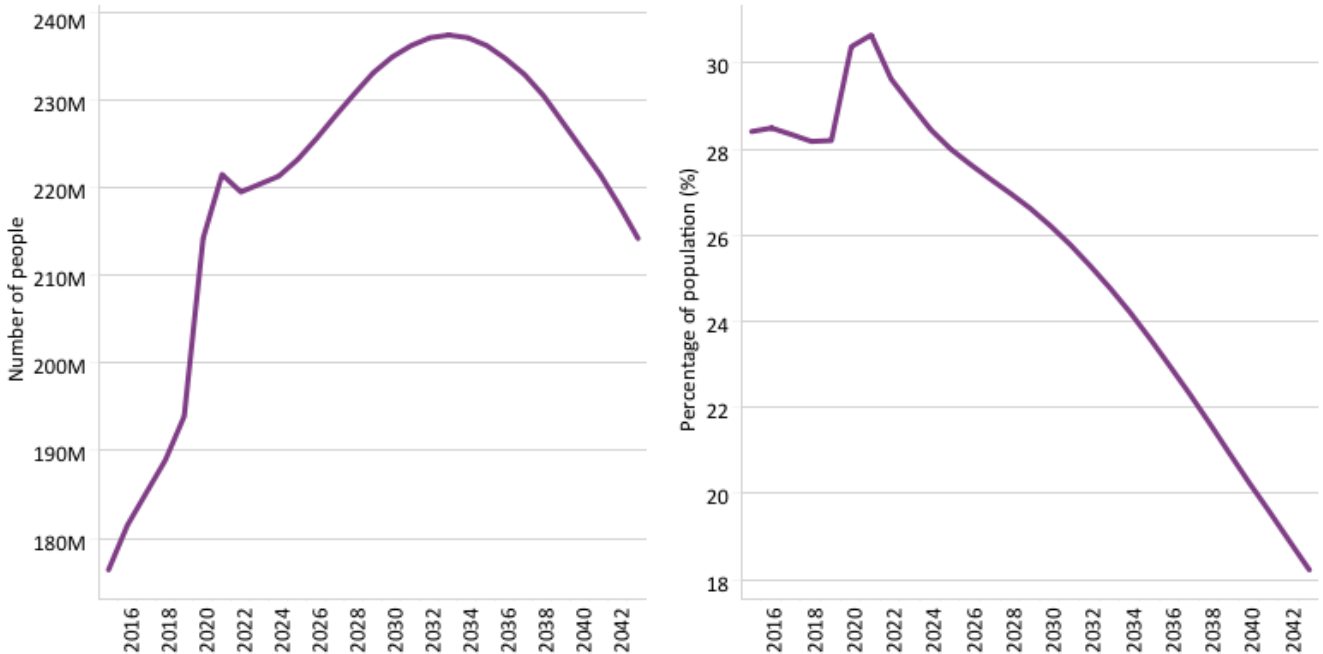


Poverty: Current Path

Chart 10: Poverty in CP, 2015–2043
Millions of people and % of total population



CEN-SAD \$1.90



CEN-SAD

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 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.

Using the US\$1.90 per person a day poverty threshold, the CEN-SAD region had a poverty rate of 28.2% in 2019, 6.6 percentage points below Africa's average of 34.8%. By 2043, CEN-SAD's poverty rate will have dropped to 18.2%, 2.7 percentage points below Africa's average. The percentage reduction is significant but in absolute terms an extra 20.3 million people is expected to be extremely poor by 2043 due to rapid population growth.

Poverty is a major problem in a number of CEN-SAD's members. Three countries at the US\$3.20 per person a day poverty

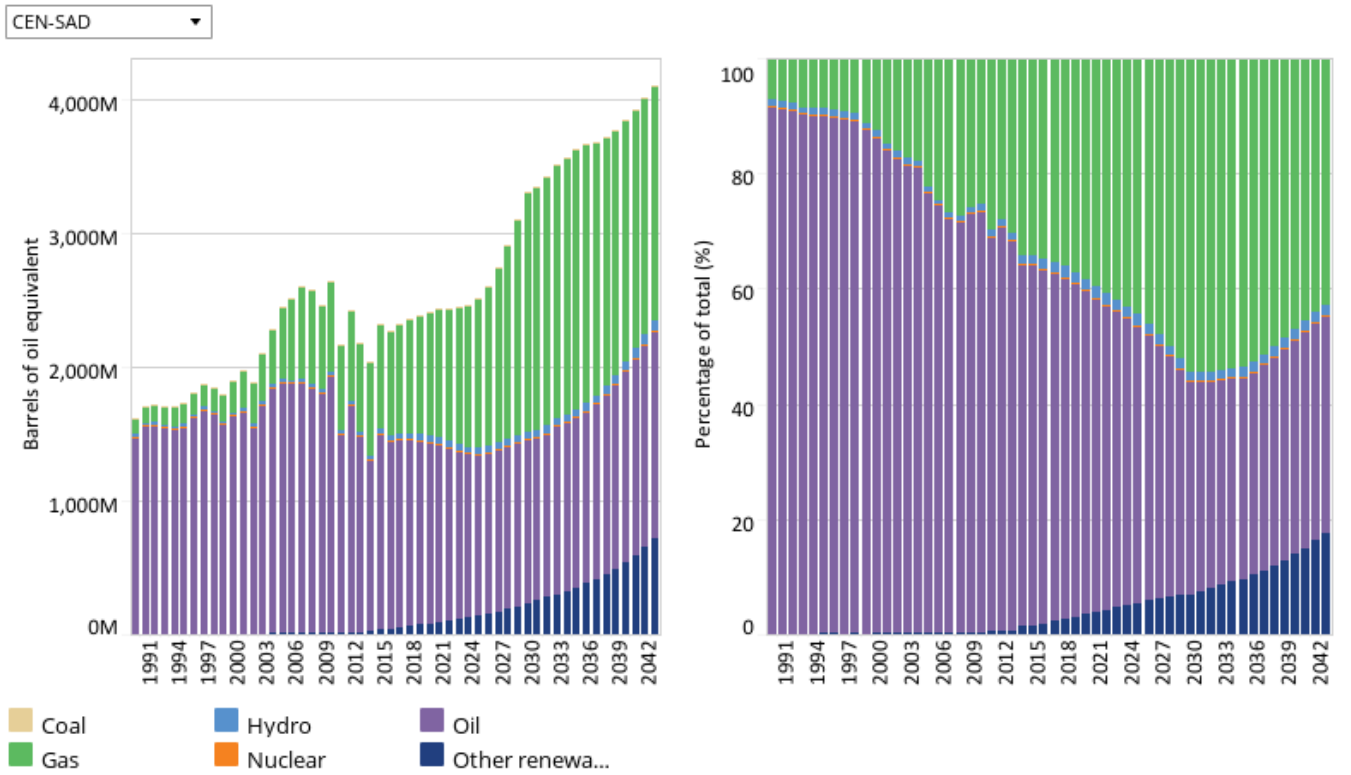
threshold, Nigeria, São Tomé and Príncipe and Benin, had poverty rates above 70%, which worsened even further in 2020 due to the COVID-19 pandemic. The only country which will likely eradicate extreme poverty at the appropriate poverty level designated by its World Bank income group by 2043 is The Gambia, achieving a rate below 3% in 2040. In the Current Path forecast, Senegal will see the largest reduction in its US\$3.20 poverty rate compared to 2019 levels, with a decline of 33 percentage points by 2043.



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.

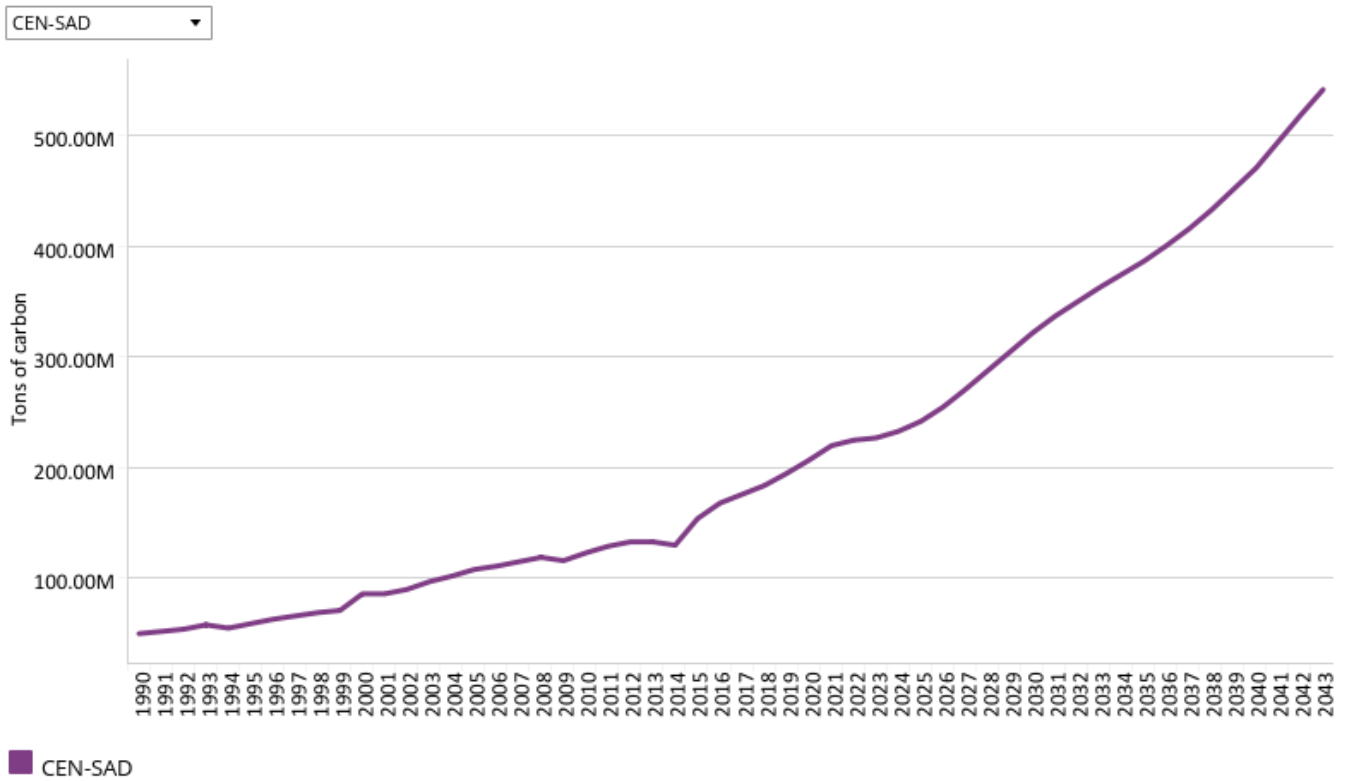
The majority of CEN-SAD’s energy production comes from oil: in 2019, oil accounted for 58% of total energy produced, while gas was second at 37%. The energy mix is projected to gradually move towards gas and other renewables, excluding hydro. In 2043, gas would account for 43% of total energy produced, followed by oil at 38% and other renewables at 18%, a 15 percentage point increase from 3% in 2019.

The scale of energy production varies greatly between CEN-SAD’s members, with multiple countries producing little to no energy of their own due to the lack of natural resources or small land area, such as the island states of São Tomé and Príncipe and Comoros. Nigeria is the dominant force in terms of energy production, accounting for over 50% of total energy production in 2019. Nigeria’s share is projected to grow slightly from 53.4% in 2019 to 55.2% in 2043, with oil’s contribution dropping from 66.5% to 45.5%.

Kenya is projected to lead the way in terms of producing energy through renewable resources: in 2019, it produced the most renewable energy, 53 million BOE, and by 2043 production would have nearly quadrupled to 209 million BOE,

constituting 98.1% of the country's total energy production.

Chart 12: Carbon emissions in CP, 1990–2043
 Million tons of carbon (note, not CO₂ 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 (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.

CEN-SAD's carbon emissions increased by 290% between 1990 and 2019, and is projected to increase by 178% between 2019 and 2043, reaching 542 million tons of carbon emissions by 2043 in the Current Path forecast. The continued increase is a consequence of the projected growth of the economies of CEN-SAD's members.

On an individual level, Egypt was the largest emitter in 2019, but will be overtaken by Nigeria before 2043, due to the latter's projected economic growth over the forecast horizon. In 2019, Egypt emitted 67.7 million tons of carbon compared to Nigeria's 39.3 million tons, but by 2043, Nigeria is expected to emit 198.1 million tons compared to Egypt's 150 million tons.

The divergence in economic size between CEN-SAD's members, discussed in Chart 5, informs the sizable discrepancy in carbon emissions: Nigeria and Egypt combined accounted for 55.9% of emissions in 2019, rising to 64.2% in 2043. No other individual country is projected to emit more than 6% of the REC's total carbon emissions by 2043.

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