

Ethiopia

Ethiopia: Scenario Comparisons

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Last updated 17 December 2024 using IFs v8.26

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Chart 29: GDP per capita in the Current Path and scenarios, 2019-2043

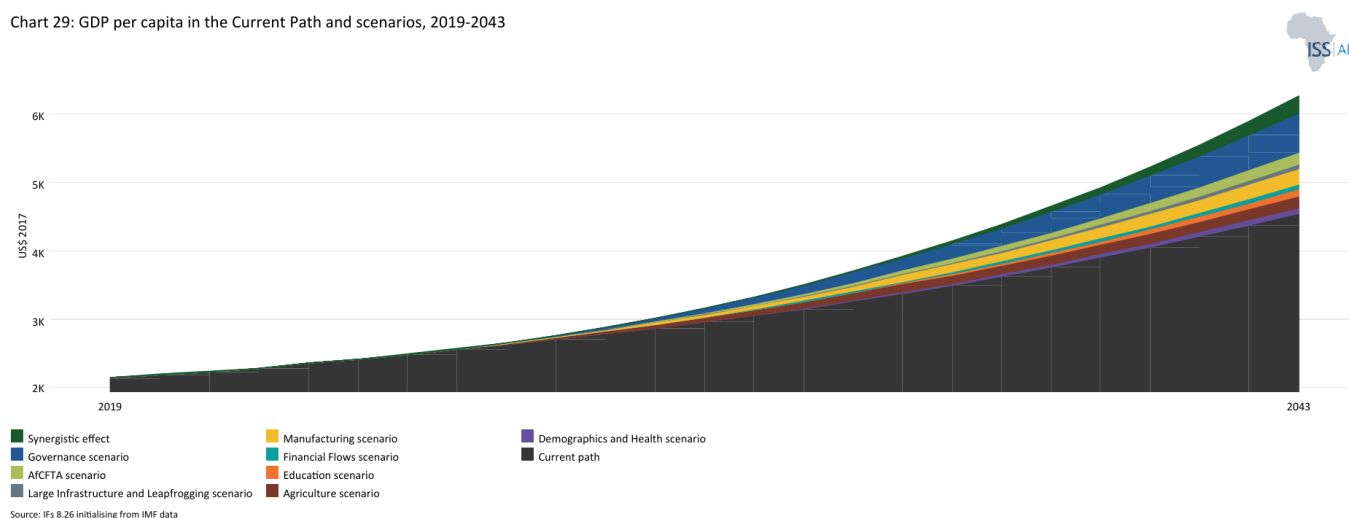


Chart 29 presents GDP per capita in the Current Path and each of the eight sectoral scenarios plus the synergistic effect. The data is from 2019 with a forecast to 2043 in purchasing power parity.

The Combined scenario combines all eight sectoral scenarios: Governance, Demographics and Health, Education, Large Infrastructure and Leapfrogging, Agriculture, Manufacturing, AfCFTA, and Financial Flows. This section compares the impacts of each sectoral scenario on GDP per capita. Ethiopia's GDP per capita increases in all eight scenarios.

The Governance scenario has the most significant positive impact on GDP per capita with an increase of US\$564 per person above the Current Path in 2043. The second, third and fourth most significant impact of the GDP per capita is achieved in the Manufacturing scenario, US\$222, above the Current Path, the AfCFTA and Agriculture scenarios with an increase of US\$174 (each) above the Current Path. The Large Infrastructure and Leapfrogging and the Financial Flows scenarios will have the least impact in terms of GDP per capita, with an increase of US\$72 and US\$71 (respectively) compared with the Current Path in 2043.

These sectors are not isolated; rather, they are closely interconnected. For instance, infrastructure and human capital development play a key role in driving industrialisation and economic diversification. Likewise, the construction of rural roads is essential for the commercialisation of agriculture and achieving food self-sufficiency. Agriculture can also serve as a foundation for manufacturing through agro-processing, while improvements in governance and security impact all sectors. As such, a comprehensive or coordinated policy approach across industries is the most effective way to achieve inclusive, sustained growth in Ethiopia. The Combined scenario, therefore, integrates all sectoral strategies, representing a unified development effort to overcome the critical barriers to long-term, inclusive growth and development in Ethiopia.

The Combined scenario has a much greater impact on GDP per capita than the individual thematic scenarios. By 2043, Ethiopia's GDP per capita (PPP) will be US\$6 266 (or US\$1 714 larger than in the Current Path), indicating that an integrated push across all the development sectors could significantly improve Ethiopians' living standards.

Chart 30: Poverty in the Current Path and scenarios, 2019-2043

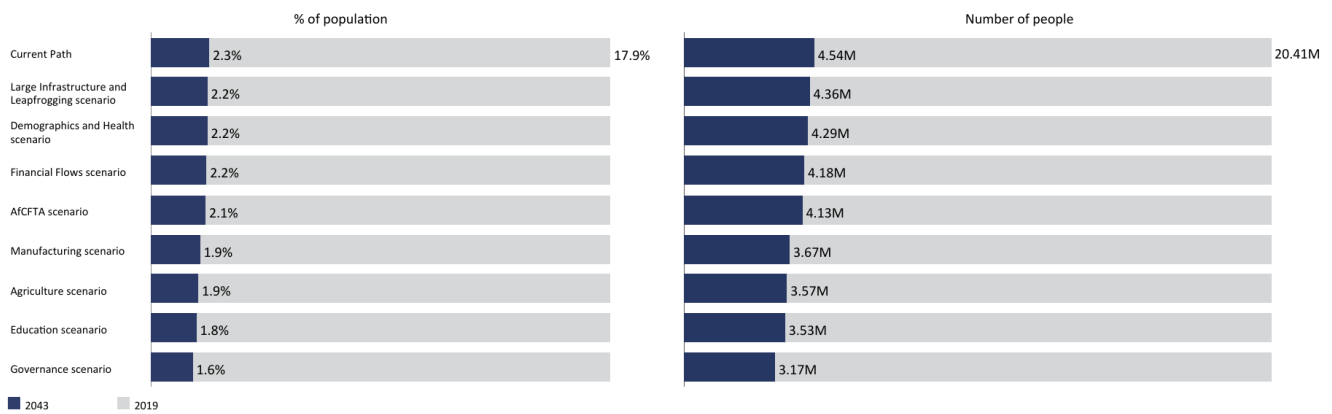


Chart 30 presents poverty in the Current Path and for each scenario, from 2019 to 2043. The data is for the number of people and as a % of the population. The user can select the number of extremely poor people or the percentage of the population.

All the scenario interventions contribute to poverty reduction in Ethiopia, however, the Governance scenario has the most significant impact on reducing extreme poverty by 2043. Under this scenario, the extreme poverty rate will fall to about 1.5% by 2043, compared to nearly 2.3% (equivalent to about 4.5 million Ethiopians) in the Current Path. This reduction will be equivalent to about 1.5 million fewer Ethiopians living in poverty (at US\$2.15) than the Current Path by 2043.

Good governance, exemplified by the control of corruption and the creation and implementation of effective regulatory policies, greatly enhances the ability of the poor to engage in and benefit from economic growth. Corruption, for example, harms the poor by diminishing the government's capacity to distribute public services efficiently and fairly.

The Education, Agriculture, and Manufacturing scenarios follow the Governance scenario in terms of poverty reduction. By 2043, the extreme poverty rate will be 1.78% under the Education scenario, equivalent to about 1.02 million fewer Ethiopians in extreme poverty. Education is frequently called the great equaliser, as it can provide access to jobs, resources and skills that enable individuals not just to survive but to thrive, but it takes up to a generation to have real effect.

In the Agriculture scenario, the extreme poverty rate will be 1.8%, compared to the Current Path of 2.3% for the same period. This will be equivalent to 967 million fewer Ethiopians under extreme poverty relative to the Current Path by 2043. Given that agriculture employs 63% of Ethiopia's workforce, increasing productivity in this sector could boost incomes for millions and significantly reduce poverty.

In the Manufacturing scenario, extreme poverty will be reduced to about 1.85% of the Ethiopian population by 2043. This will be equivalent to 869 000 fewer Ethiopians than the Current Path in 2043. As in many other African countries, a significant portion of impoverished individuals in Ethiopia are trapped in low-productivity sectors and informal sector activities. Developing the manufacturing sector can promote inclusive growth by facilitating the movement of low-income individuals into higher-productivity areas. This shift not only increases incomes but also initiates a positive cycle, where the expansion of productive employment, skill development and earnings mutually reinforce each other, driving economic growth and reducing poverty.

In the AfCFTA, Financial flows, Large Infrastructure and Leapfrogging, and Demographics and Health scenarios, 2.08% (413

000 fewer people), 2.1% (363 000), nearly 2.2% (247 000) and 2.2% (176 000) Ethiopians will be lifted out of extreme poverty relative to the Current Path by 2043, respectively.

In the Combined scenario, by 2030, about 6.8% of Ethiopians will be living in extreme poverty (at US\$2.15) compared to 8.2% in the Current Path. This represents about 2.2 million fewer Ethiopians living in extreme poverty compared to 12.5 million Ethiopians in the Current Path. Although the Combined scenario does not completely eliminate extreme poverty in Ethiopia by 2030, its implementation has a significant impact on reducing extreme poverty in the country. By 2043, extreme poverty in Ethiopia will be at 0.4% compared to 2.9% (4.5 million people) in the Current Path in that year.

Chart 31: GDP (MER) in the Current Path and Combined scenario, 2019-2043

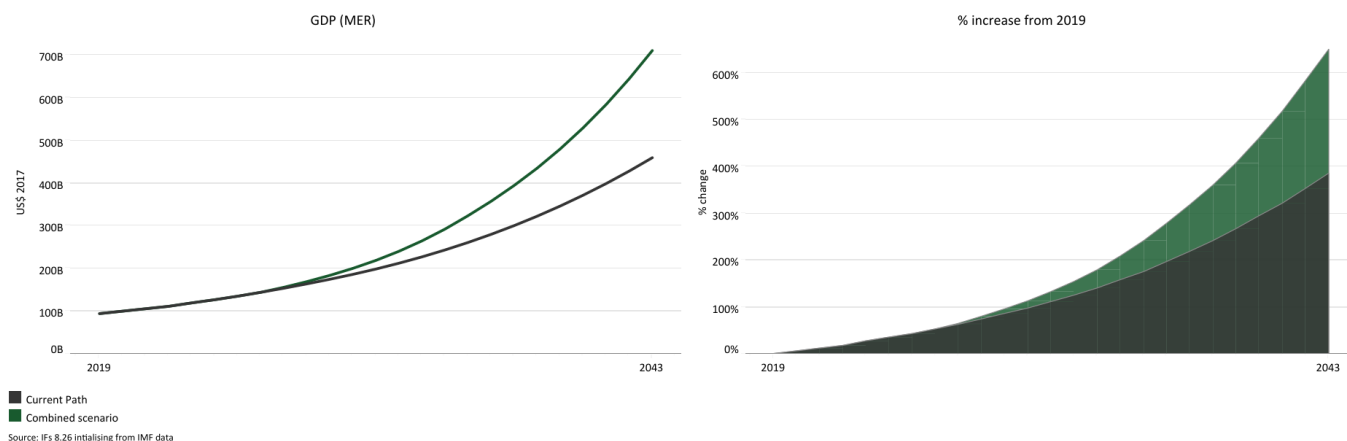


Chart 31 presents GDP in the Current Path and in the Combined scenario, from 2019 to 2043. The data is in US\$ 2017 and at market exchange rates.

In the Combined scenario, the average growth rate between 2026 and 2043 will be 9.6%, compared with 7% on the Current Path over the same period. The 2043 growth rate will be 10.2% in the Combined scenario, compared to a growth rate of 7.3% on the Current Path. The size of the Ethiopian economy measured in GDP (at MER) will be US\$250.7 billion larger than the Current Path in 2043.

Chart 32: Value added by sector in the Current Path and Combined scenario, 2019-2043

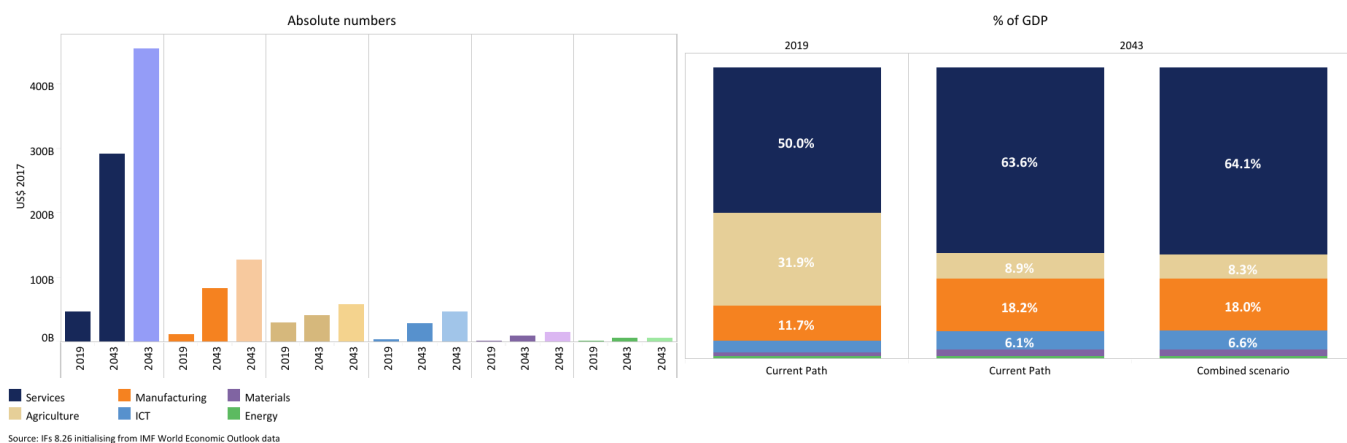


Chart 32 presents the value added by sector in the Current Path forecast and in the Combined scenario, from 2019 to

2043. The data is in US\$ 2017 and as a % of GDP.

Our modelling provides forecasts in six economic sectors namely agriculture, energy, materials (including mining), manufactures, services and ICTech.

In the Combined scenario, the absolute value added will increase relative to the Current Path by 2043 for all sectors (agriculture, energy, ICT, manufacturing, materials, and services). Valued-added gain as a percentage of GDP would increase the service and ICT sectors only.

The service sector will have the largest value-added gain of US\$163 billion relative to the Current Path by 2043. The sector share gain as a percentage of GDP would increase by 0.5% (relative to the Current Path) to account for 64.1% of Ethiopia's GDP by 2043.

The absolute value added in manufacturing will increase by US\$44.2 billion relative to the Current Path. However, its share as a percentage of GDP would decrease to nearly 18%, compared to about 18.2% on the Current Path by 2043.

In terms of absolute value added, the manufacturing sector will be followed by the ITC, agriculture, materials, and energy sectors, respectively. The value added of these sectors would increase by US\$18.5 billion, US\$18.1 billion, US\$5.2 billion, and US\$749 000 (respectively) relative to the Current Path by 2043.

The percentage share of the ITC sector would increase by nearly 0.6% of GDP (equivalent to US\$19.1 billion) to account for about 6.6% of GDP, while for agriculture, materials and energy, the percentage share would decrease by about 0.6%, 0.3%, and 0.25% (respectively) relative to the Current Path to account for about 8.4%, 2.2%, and 0.8% of Ethiopia's GDP, respectively.

Chart 33: Informal sector in the Current Path and Combined scenario, 2019-2043

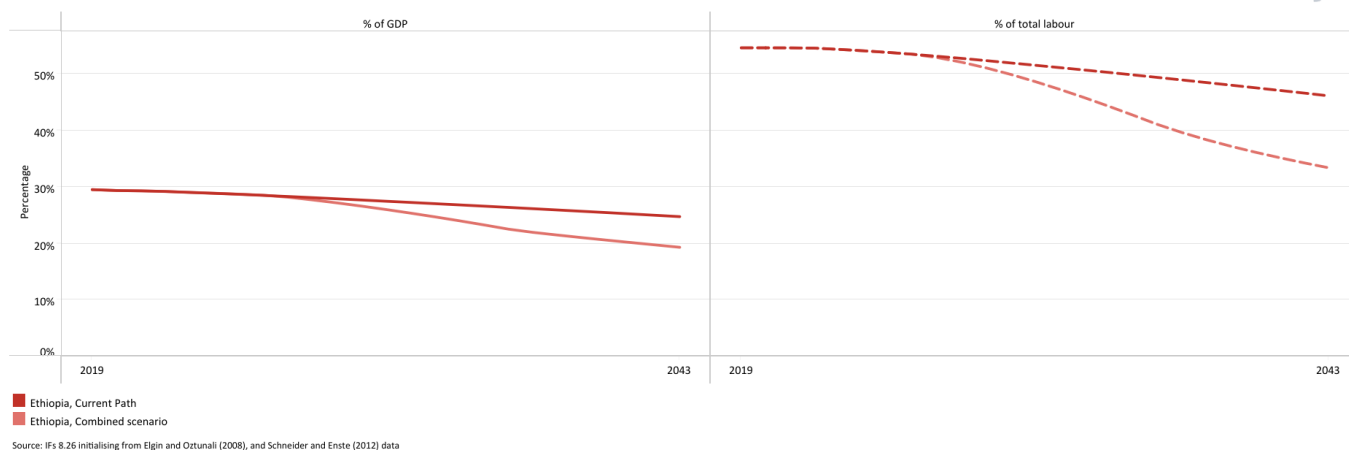


Chart 33 presents the size of the informal sector as percentage of the total economy in the Current Path and in the Combined scenario, from 2019 to 2043.

The informal economy is the predominant source of employment and livelihood opportunities in Ethiopia. However, workers in this sector face significant decent work challenges, such as limited access to public social protection. Ethiopia's informal economy is well-structured, with two-thirds of workers belonging to associations, cooperatives, or indigenous organisations like *Iddirs* (insurance) or *Eqqubs* (savings). Many informal workers join social groups to access social services, and trade unions may offer organisational support.

Many informal workers' organisations are **primarily local**, which limits their capacity to engage in national policymaking, decision-making or social dialogue. Despite this, they play a vital role in civil society by strengthening communities, providing economic and financial services, and expanding social protection.

With limited formal sector opportunities, most of Ethiopia's workforce is employed in the informal sector, 54.4% in 2023, and forecasted to decrease to about 46.2% by 2043 on the Current Path. In the Combined scenario, the share of informal labour in the total workforce will decrease to about 33.4% - a 12.8% percentage points below the Current Path by 2043, as the economy formalises. The size of Ethiopia's informal economy will be 19.3% of GDP in the Combined scenario - 5.4 percentage points below the Current Path forecast in 2043.

Chart 34: Life expectancy in the Current Path and Combined scenario, 2019-2043

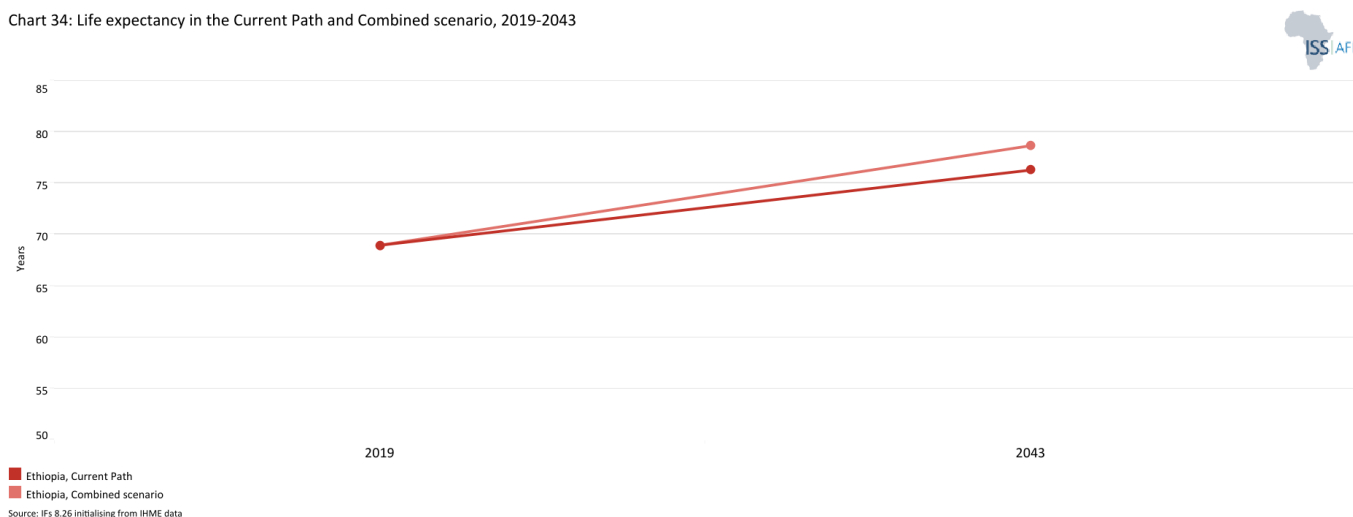


Chart 34 compares life expectancy in the Current Path with the Combined scenario, from 2019 to 2043.

Life expectancy in Ethiopia has significantly improved since the 2000s, with females' life expectancy being higher than males' over the time horizon. As of 2023, life expectancy was estimated at 70.6 years (combined average), 72.5 for females, and 68.7 for males. These numbers are significantly higher than the average for Africa's lower-middle-income countries

In the Current Path, life expectancy in Ethiopia will increase to 76.3 years—78.5 years for females and 74.5 years for males by 2043. In the Combined scenario, life expectancy would increase to 78.3 years—80.1 years for females and 76.6 for males in 2043, further extending the extent to which Ethiopians will experience longer life expectancy compared to other African countries at similar levels of development.

Chart 35: Domestic Gini in the Current Path and Combined scenario, 2019-2043

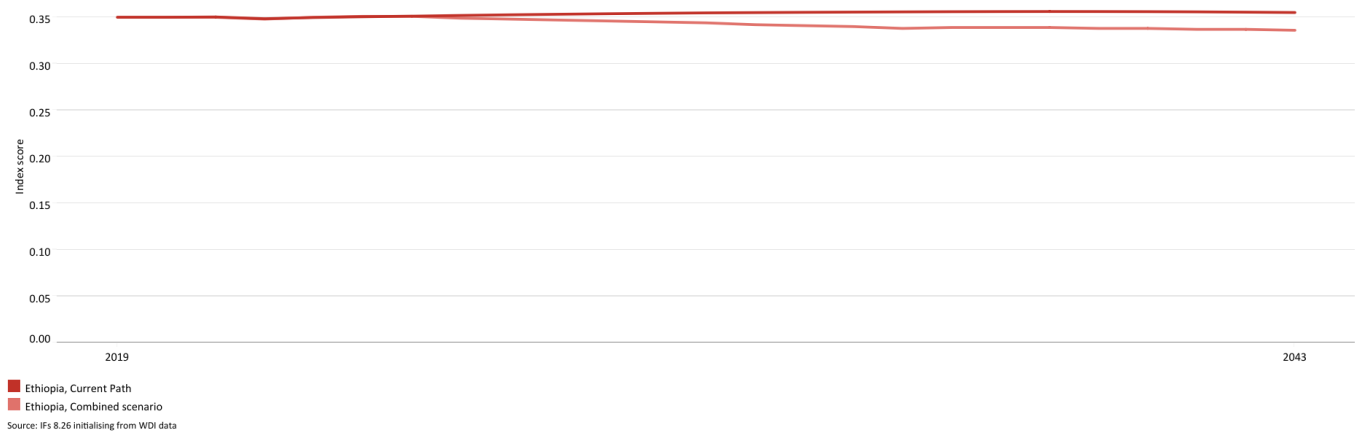


Chart 35 compares the Gini coefficient in the Current Path with the Combined scenario, from 2019 to 2043.

The Gini index measures a country's level of income inequality by assessing the distribution of income or wealth among its population. The coefficient of the Gini index ranges from 0 (or 0%) to 1 (or 100%), with 0 representing perfect equality and 1 representing perfect inequality

With a Gini coefficient of 0.35 in 2023, Ethiopia has lower inequality than most other African countries, ranking 9th out of 54. Unlike other rapidly growing developing countries, Ethiopia has not significantly experienced an increase in inequality as measured by the Gini coefficient index.

In most developing countries, the most vulnerable people experience fewer benefits from economic growth than those in medium-higher income deciles. This highlights the potential policy trade-offs between growth and inequality. The government of Ethiopia's development plans have been strongly focused on inclusive growth and increased spending aimed at benefiting the poor.

On the Current Path, income inequality in Ethiopia will slightly increase with a Gini coefficient of 0.355 by 2043. The Combined scenario would, however, generate more inclusive growth and improve income distribution in the country. In the combined scenario, the Gini index will decline to 0.339 by 2043.

Chart 36: Carbon emissions in the Current Path and Combined scenario, 2019-2043
Million tons of carbon (note, not CO2 equivalent)

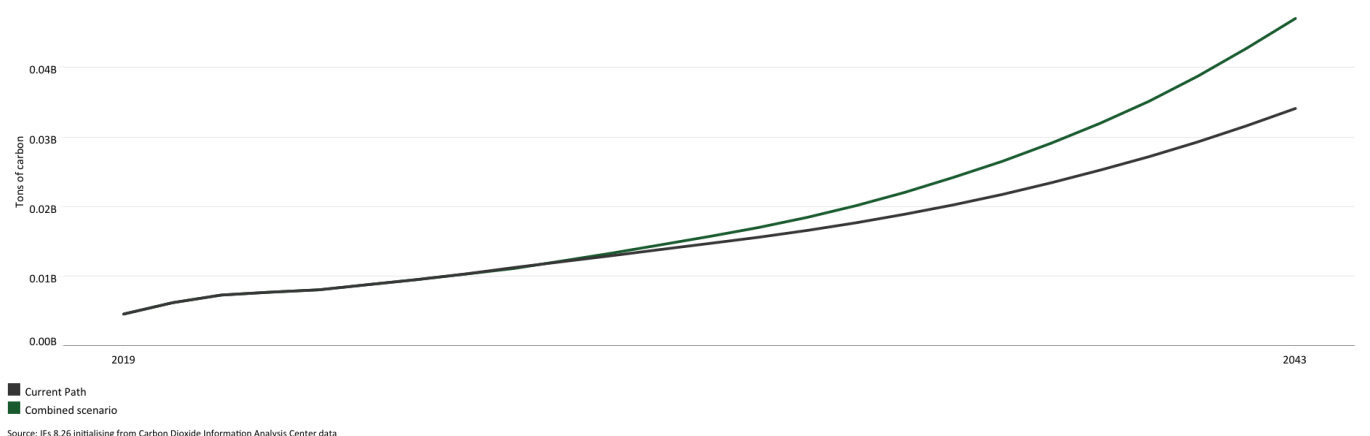


Chart 36 compares carbon emissions in the Current Path with the Combined scenario from 2019 to 2043.

Carbon emissions cause climate change, see the [climate theme](#). In 2023 Ethiopia released about 8 million tons of carbon, which accounted for about 1.8% of Africa's total carbon emissions in that year. On the Current Path, Ethiopia will emit 35 million tons of carbon, accounting for about 4.2% of Africa's carbon emissions by 2043. Africa emitted about 456 million tons of carbon, which was just 4.6% of the world's total carbon emissions in 2023.

While carbon emissions are expected to rise with increased economic activity in Ethiopia, the country's emissions start from a very low level. Like many other African countries, Ethiopia will disproportionately face the impacts of climate change, despite contributing very little to it. However, Ethiopia still needs to reduce its emissions and transition to renewable energy to ensure sustainable growth and help mitigate climate change.

The Combined scenario will increase Ethiopia's carbon emissions to 47 million tons by 2043 –about 38.2% above the Current Path by 2043. The Governance, AfCFTA and Manufacturing scenarios will have the largest contribution (respectively) to carbon emissions in 2043. The Demographics and Health scenario would reduce carbon emissions below the Current Path over the forecast horizon.

Chart 37: Energy demand and production by type in the Current Path and Combined scenario, 2019-2043

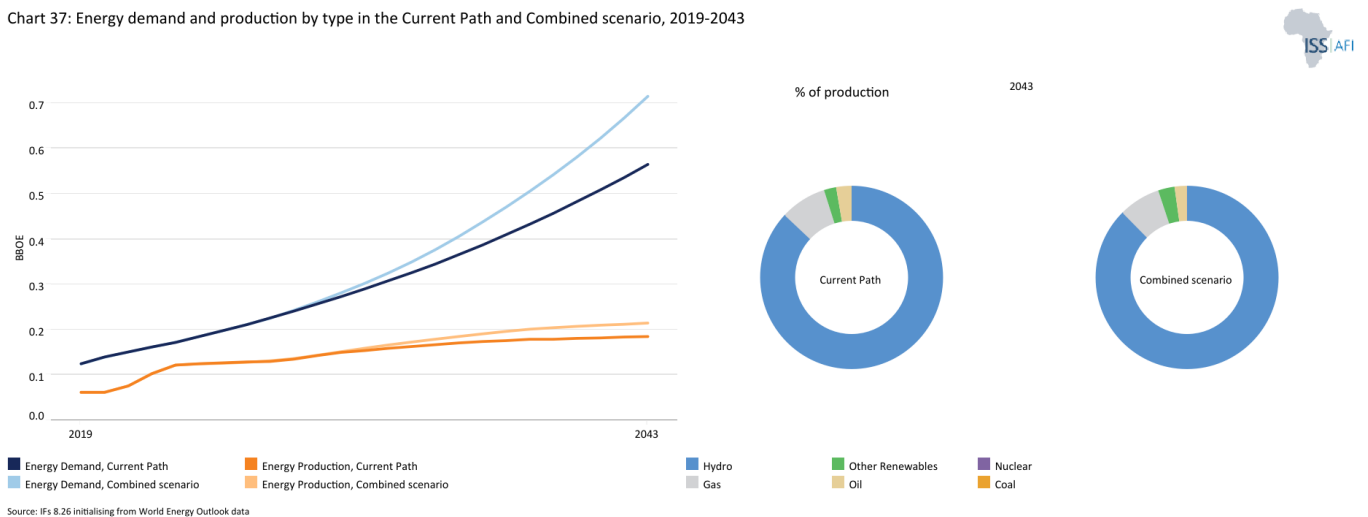


Chart 37 compares energy demand and production in the Current Path forecast with the Combined scenario from 2019 to 2043. Production is done in six types, namely oil, gas, coal, hydro, nuclear and other renewables. The data is converted into billion barrels of oil equivalent (BOE) to allow for comparisons. Note that energy production could be for domestic use or for export.

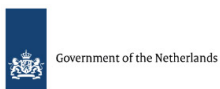
Next to DR Congo, Ethiopia has the largest potential hydropower in Africa, estimated at 45GW and has the largest hydroelectric power plant in Africa and one of the most ambitious infrastructure projects on the continent - the Grand Renaissance dam. Its construction started in 2011 and has been a centerpiece of Ethiopia's development strategy. In February 2022, the first turbine at the Grand Ethiopian Renaissance Dam was officially launched, producing about 375 MW of electricity. A second turbine began operating late in 2022, bringing the total capacity in use to about 750 MW. The dam is expected to be fully operational by 2025 with a total capacity of 5.15 GW.

From an energy perspective, Ethiopia still faces significant challenges. In 2023, Ethiopia produced a total of 122 million billion barrels of oil equivalent (BOE), while energy demand stood at 172 million BOE, creating a deficit of 50 million BOE. The country's main sources of energy production are gas, oil, hydro and renewable energy.

On the Current Path, by 2043 Ethiopia's total energy production will increase to 184 million BOE, while the demand will increase to 594 million BOE, which will only account for 32.6% of the demand. Thus, the deficit will also continue to widen with time; the energy production will only meet 32.6% of the demand in 2043. Ethiopia will have to import in order to meet the growing demand.

The Combined scenario will increase total energy production to 211 million BOE by 2043, an increase of 27 million BOE compared to the Current Path. The Combined scenario will also increase energy demand by 144 million BOE in 2043. Thus, instead of producing 31% of its energy demand, Ethiopia will produce 36%

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Blessing Chipanda (2024) Ethiopia. Published online at futures.issafrica.org. Retrieved from <https://futures.issafrica.org/geographic/countries/ethiopia/> [Online Resource] Updated 17 December 2024.

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Dr **Blessing Chipanda** joined the African Futures and Innovation (AFI) programme in January 2023. Before joining the ISS he worked as an assistant lecturer/ research assistant at the University of Pretoria, Department of Economics. He is particularly interested in tasks within the wider realm of international trade, development economics, public policy, monetary policy, and econometric modelling. Equally interested in economic and socio-economic activities that impact social welfare. Blessing has a PhD in economics from the University of Pretoria, South Africa.

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