



# South Sudan

## Sectoral Scenarios for South Sudan

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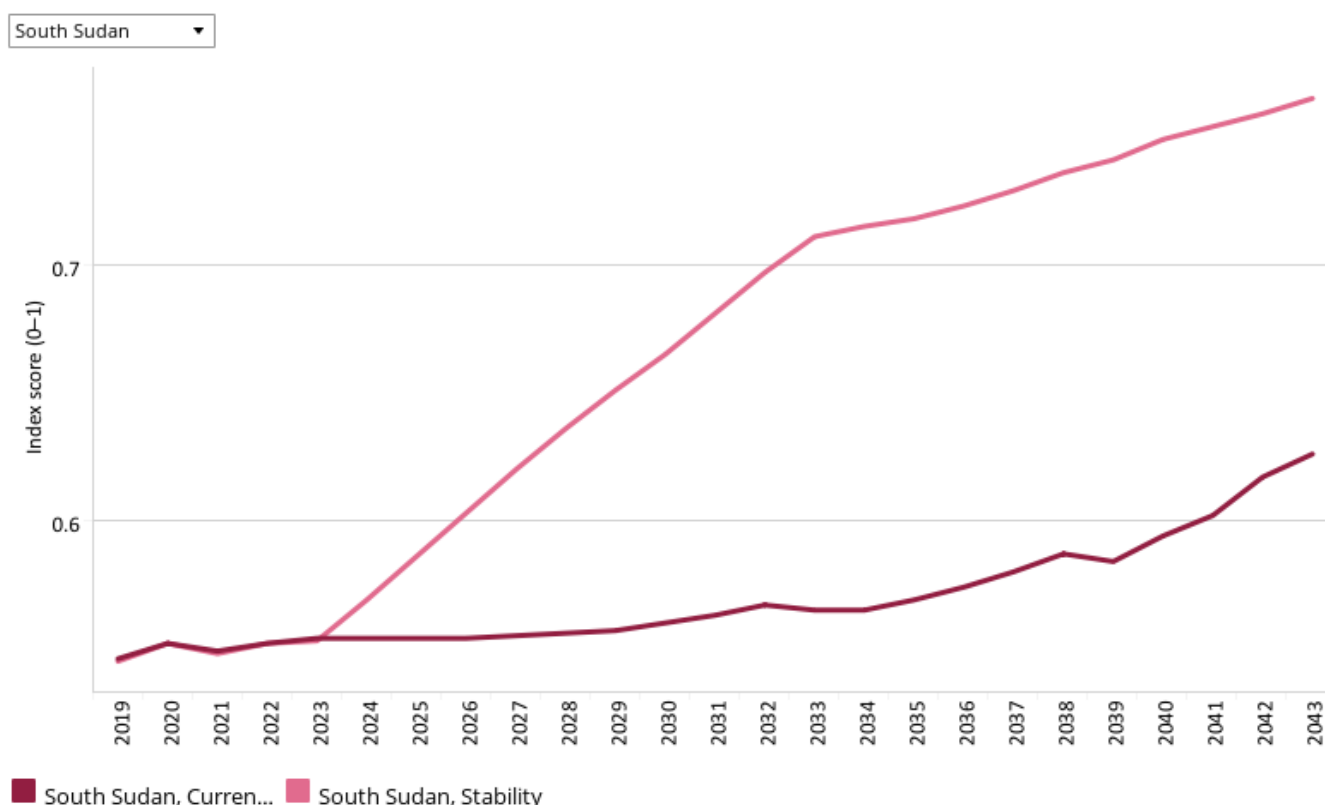
## Sectoral Scenarios for South Sudan

- Stability scenario
- Demographic scenario
- Health/WaSH scenario
- Agriculture scenario
- Education scenario
- Manufacturing scenario
- Leapfrogging scenario
- Free Trade scenario
- Financial Flows scenario
- Infrastructure scenario
- Governance scenario
- Impact of scenarios on carbon emissions



### 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 in [here](#) in the thematic part of the website.

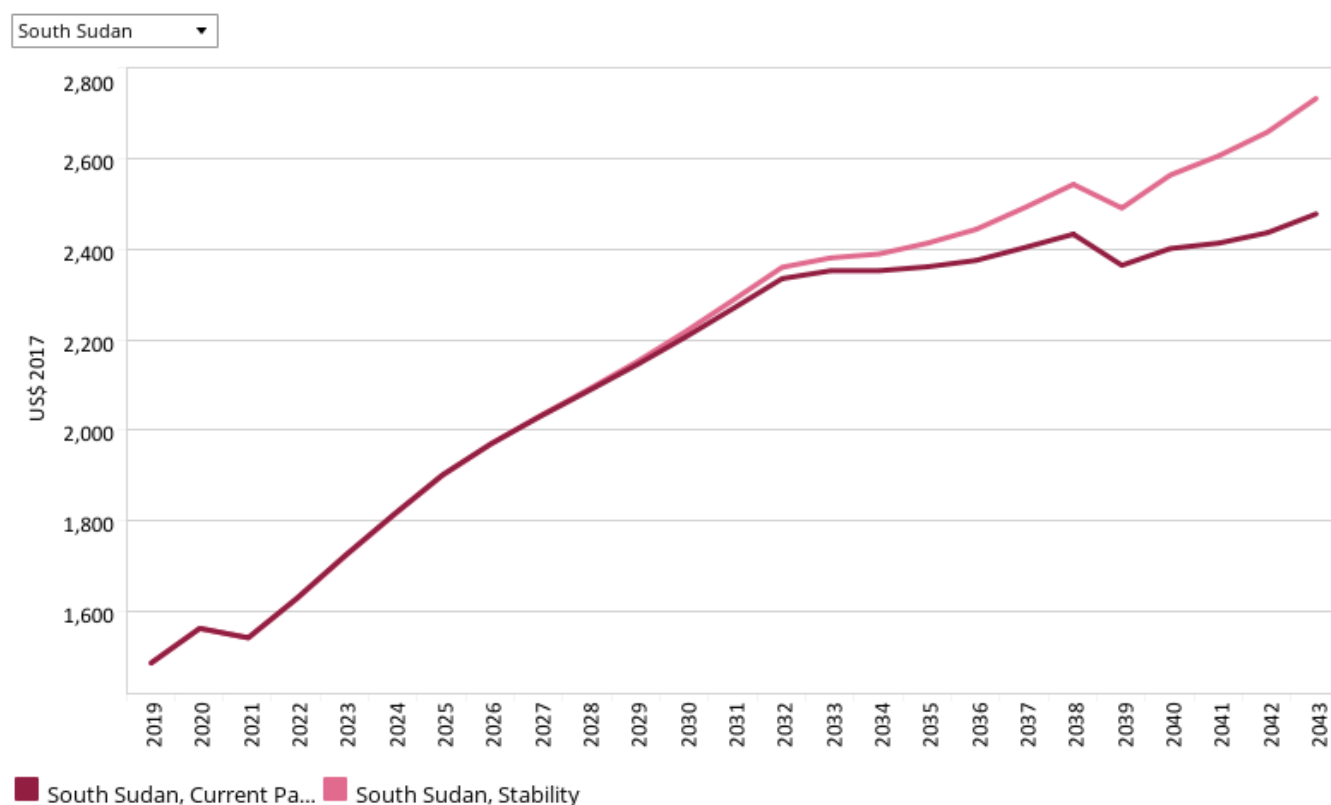
South Sudan remains caught in a web of fragility, economic stagnation and instability a decade after independence. Insecurity is widespread as the state's monopoly over power is challenged with only a semblance of government control evident in small parts of the country. The country's political space is dominated by the military owing to its long history of armed liberation struggle. In addition to its limited capacity, the government is unable to protect the civilian population as its national police, security forces and other armed actors are themselves involved in infighting and large-scale abuses of human rights. Overall, South Sudan's governance institutions are dysfunctional. The lack of elite consensus among the political and military leaders (at both national and local levels), who prioritise their own interests instead of the population's needs, threatens the country's stability and security and development.

IFs' governance security index ranges from 0 (low security) to 1 (high security). The Current Path forecast shows lower stability in South Sudan than the average for low-income Africa. South Sudan's score on the government security index was 0.55 in 2019, compared with 0.64 for low-income African countries.

This scenario improves security and stability in South Sudan. By 2043, the score in the Stability scenario is 0.77, about 22% higher than in the Current Path forecast and 8.5% higher than the projected average of 0.71 on the Current Path for low-income African countries.

A state's capacity to maintain order is one of the most important conditions for development. Thus, the government and policymakers in South Sudan should take proactive measures for more social and political stability.

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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Increased stability would promote peace and political consensus in the country, which will attract greater domestic and foreign investment, positively affecting per capita income growth.

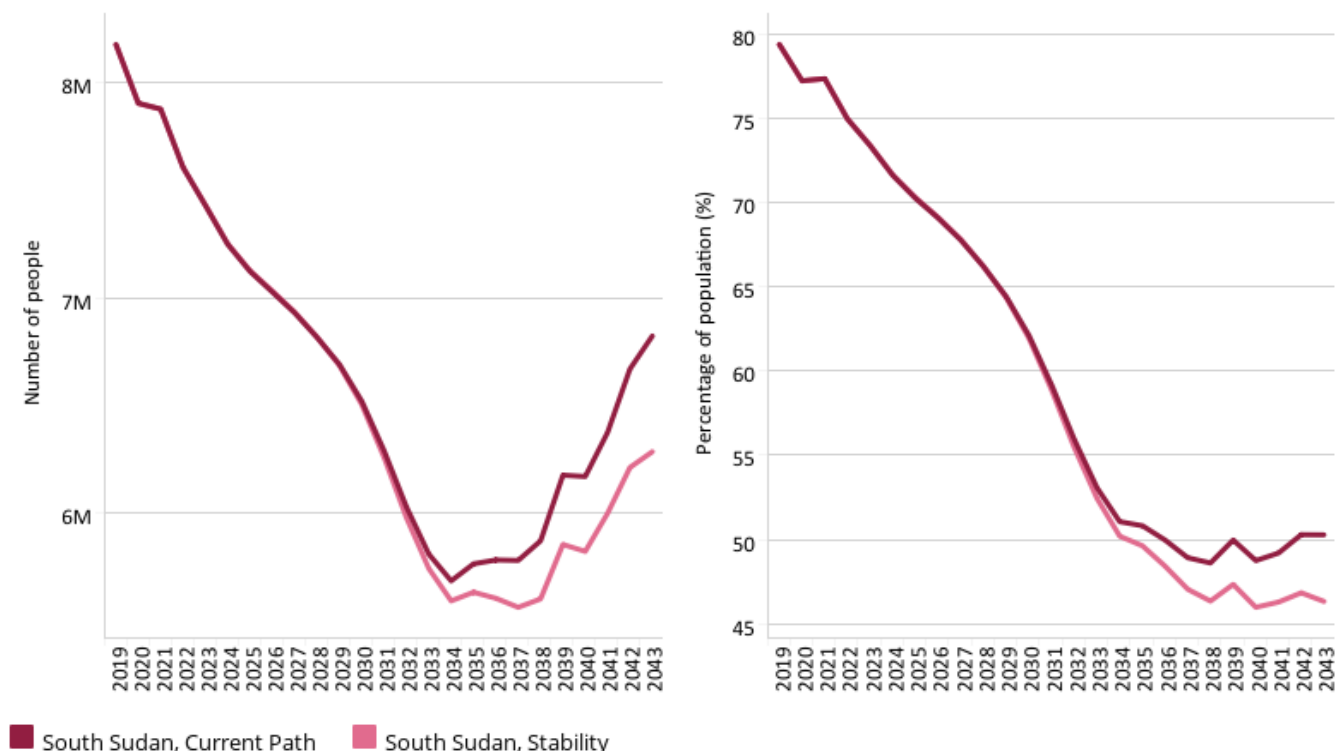
Thus, by 2033, South Sudan's GDP per capita would be US\$29 higher in the Stability scenario than in the Current Path forecast for that year. In 2043, the difference is expected to increase to US\$255, with South Sudan likely recording GDP per capita at US\$2 733, 10.3% higher than the Current Path's US\$2 478. However, GDP per capita in the Stability scenario would still be below the projected average for low-income African countries in 2043.

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

Millions of people and % of total population



South Sudan \$1.90



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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Stability is an essential condition for economic growth and poverty reduction. Measured at the threshold of US\$1.90, 8.2 million South Sudanese (79.4% of the population) were considered to be extremely poor in 2019.

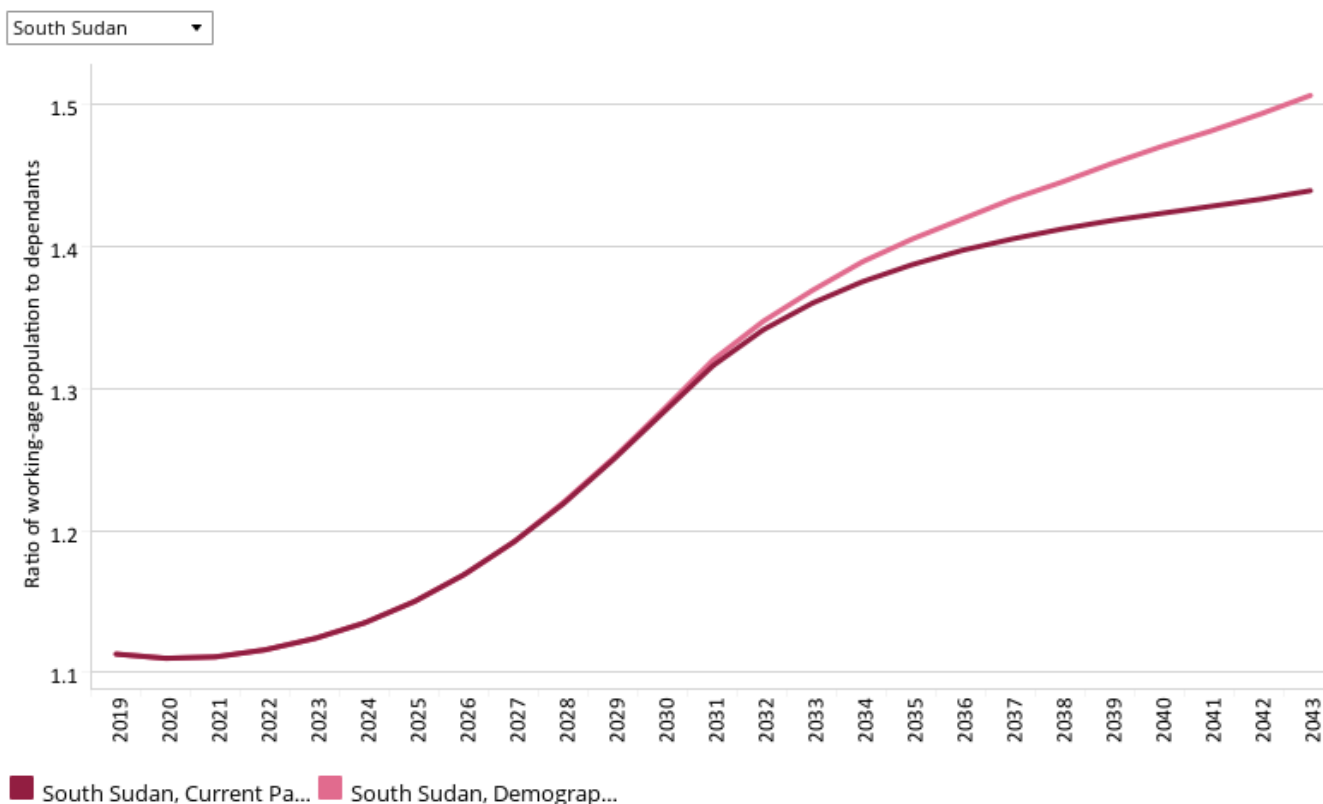
In the Stability scenario, the number of poor people will stand at 6.3 million (46.3% of the population) in 2043 compared with 6.8 million (50.3% of the population) in the Current Path forecast for that year, translating to 0.5 million fewer people living in extreme poverty. In 2043, the poverty rate in the Stability scenario (at US\$1.90 per day) is almost twice the projected average of 25.2% for low-income African countries in 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 in [here](#) in the thematic part of the website.

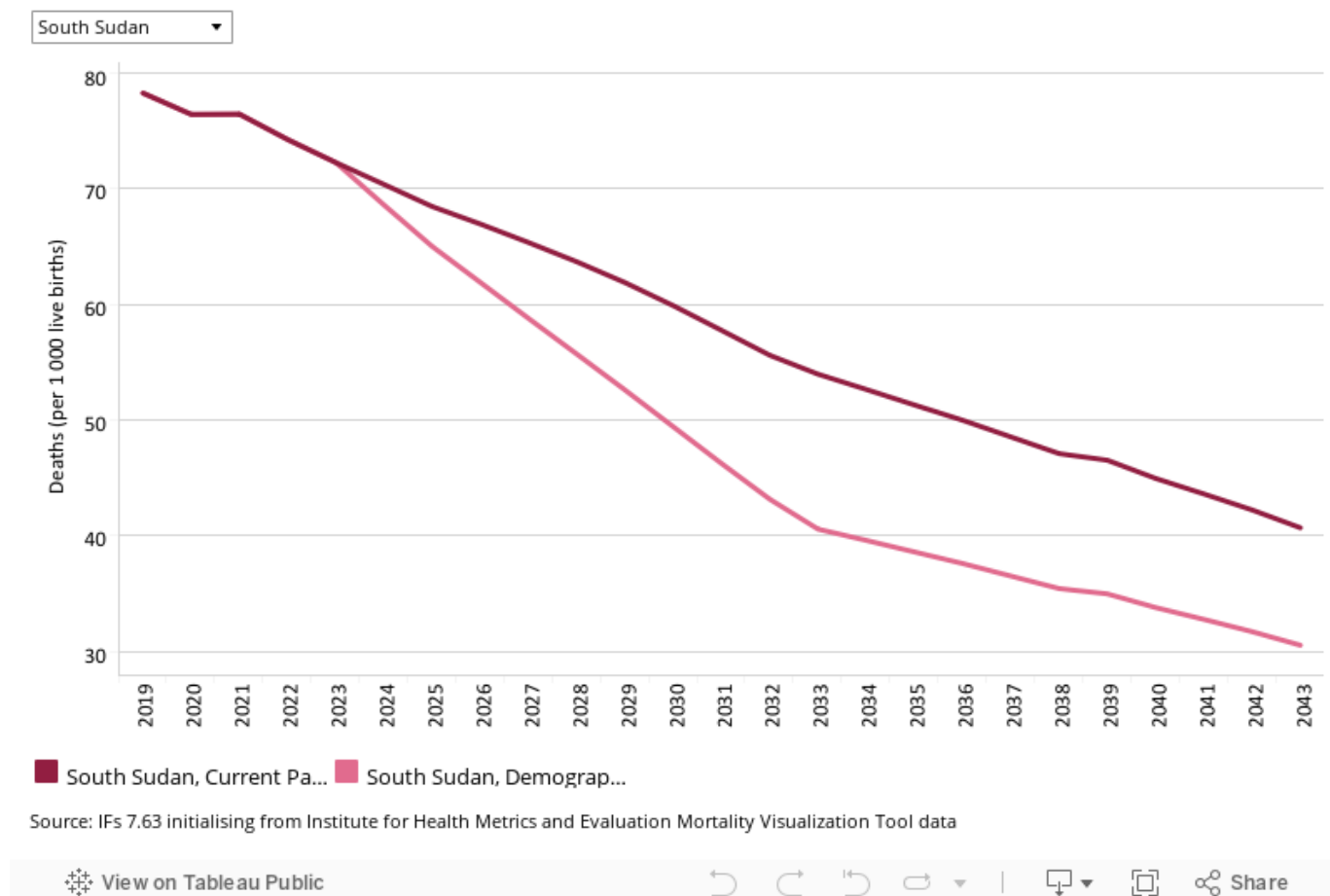
Demographers typically differentiate between a first, second and even a third demographic dividend. We focus here on the first dividend, namely the contribution of the size and quality of the labour force to incomes. It refers to a window of opportunity that opens when the ratio of the working-age population (between 15 and 64 years of age) to dependants (children and the elderly) reaches 1.7.

In 2019, the ratio of the working-age population to dependants was 1.1, meaning that there was almost one person of working age for every dependant. On the Current Path, it is forecast to be 1.4 by 2043. In the Demographic scenario, the ratio of the working-age population to dependants will reach 1.5 by 2043. The minimum ratio of 1.7 will only be reached in 2055, five years later than the average for low-income countries in Africa.

The increasing size of the working-age population in South Sudan can be a catalyst for growth if sufficient education and employment are generated to successfully harness their productive power. However, without sufficient education and

employment opportunities, the situation could turn into a demographic 'bomb', as many people of working age may remain unemployed and in poverty, potentially creating frustration, social tension and conflict.

**Chart 17: Infant mortality in CP and Demog scenario, 2019–2043**  
Deaths per 1 000 live births



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.

As of 2019, the infant mortality rate in South Sudan was 78 deaths per 1 000 live births, above the average of 48.5 for Africa's low-income countries.

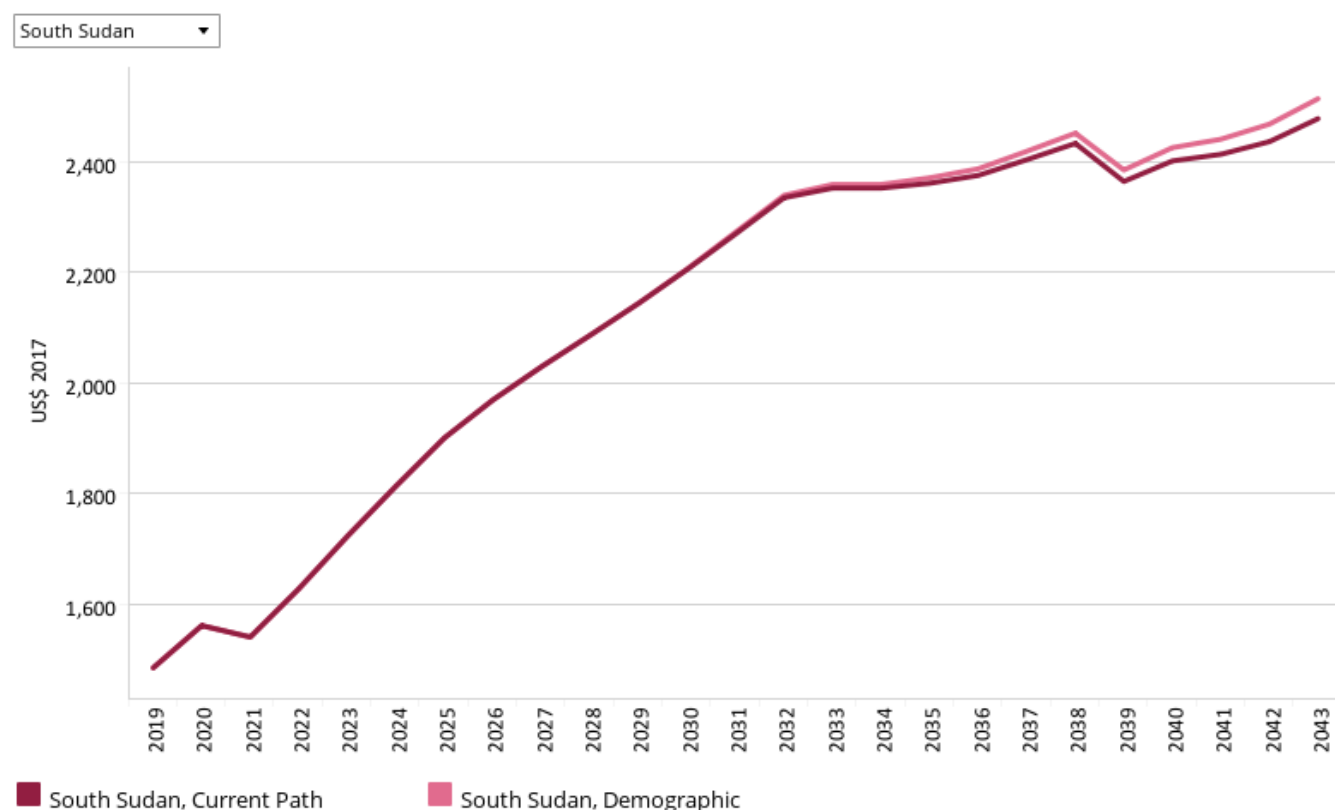
The Demographic scenario reduces infant mortality to 40.6 per 1 000 live births by 2033, compared with 54 in the Current Path forecast. By 2043, the infant mortality rate will be 31 in the Demographic scenario, compared with 41 in the Current Path forecast.

At 21.2 deaths per 1 000 live births, the infant mortality rate in the Demographic scenario will be about 10 percentage points above the average for low-income countries in Africa by 2043. Nearly 75% of all child deaths in South Sudan are caused by preventable conditions such as diarrhoea, malaria and pneumonia.[1] Almost 90% of South Sudan's population has no access to improved sanitation, and only 17% of schools have suitable latrines. The risk of contracting waterborne diseases such as diarrhoea, cholera, hepatitis, typhoid or Guinea worm disease is one of the world's highest.[2]

Continuing conflicts, instability and bad governance have resulted in limited access to clean water, which often leads to tensions between communities.



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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The Demographic scenario's impact on per capita income is marginal: only US\$7 above the Current Path's forecast of US\$2 352 in 2033. By 2043, the average South Sudanese will have about US\$36 more than the Current Path's forecast of US\$2 514, an improvement of 1.5%.

However, this is US\$1 276 less than the average projected by 2043 for Africa's low-income countries in the Current Path forecast.

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

Millions of people and % of total population



South Sudan \$1.90



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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Measured at the threshold of US\$1.90, 8.2 million people in South Sudan (79.4% of the population) were considered to be extremely poor in 2019. In the Demographic scenario, the number of poor people will be 6.6 million by 2043, representing 49.3% of the population, compared with 6.8 million, equivalent to 50.3%, in the Current Path forecast for that year. This is 200 000 fewer people living in extreme poverty by 2043.

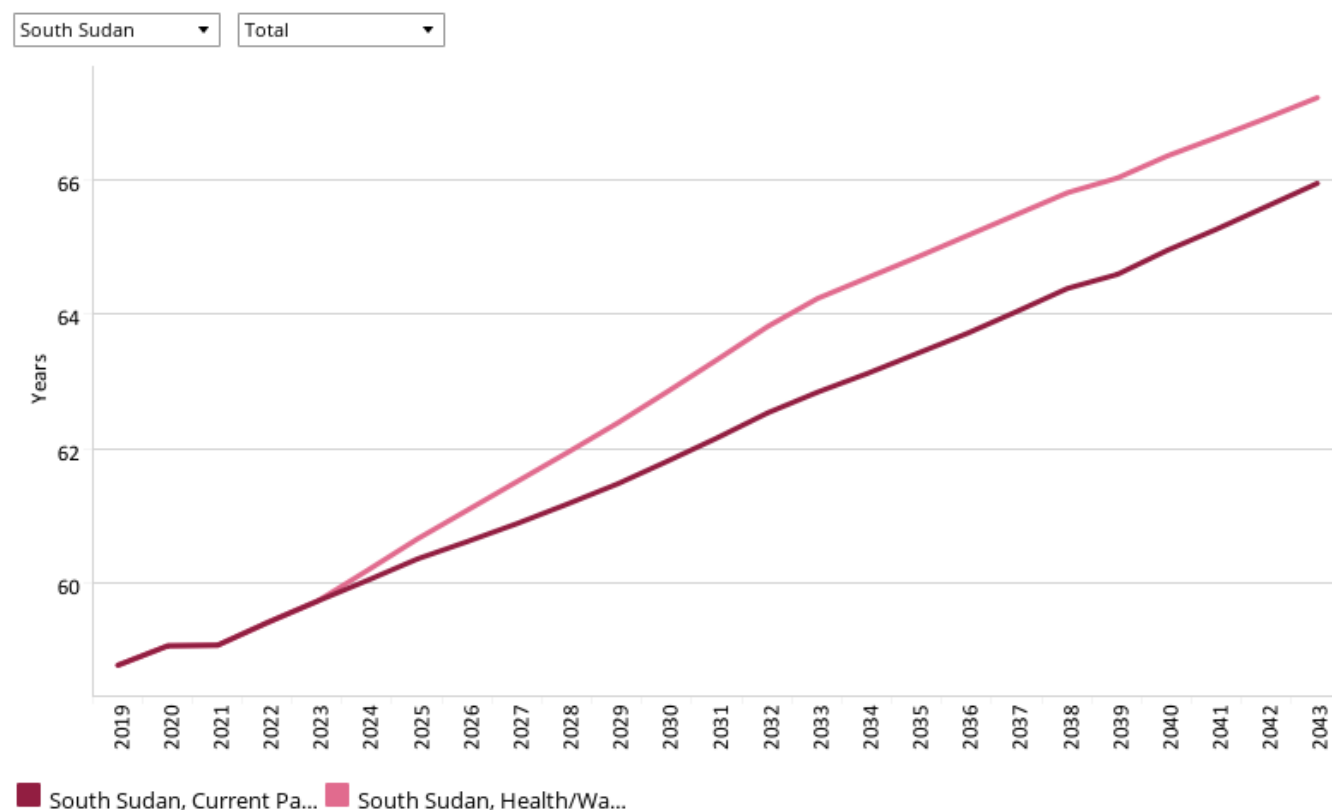
The poverty rate in the Demographic scenario in 2043 is almost twice the Current Path forecast's average of 25.1% for low-income countries in Africa.

South Sudanese authorities should try to accelerate the demographic transition, which can be another source of growth and contribute to poverty reduction.



## 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.

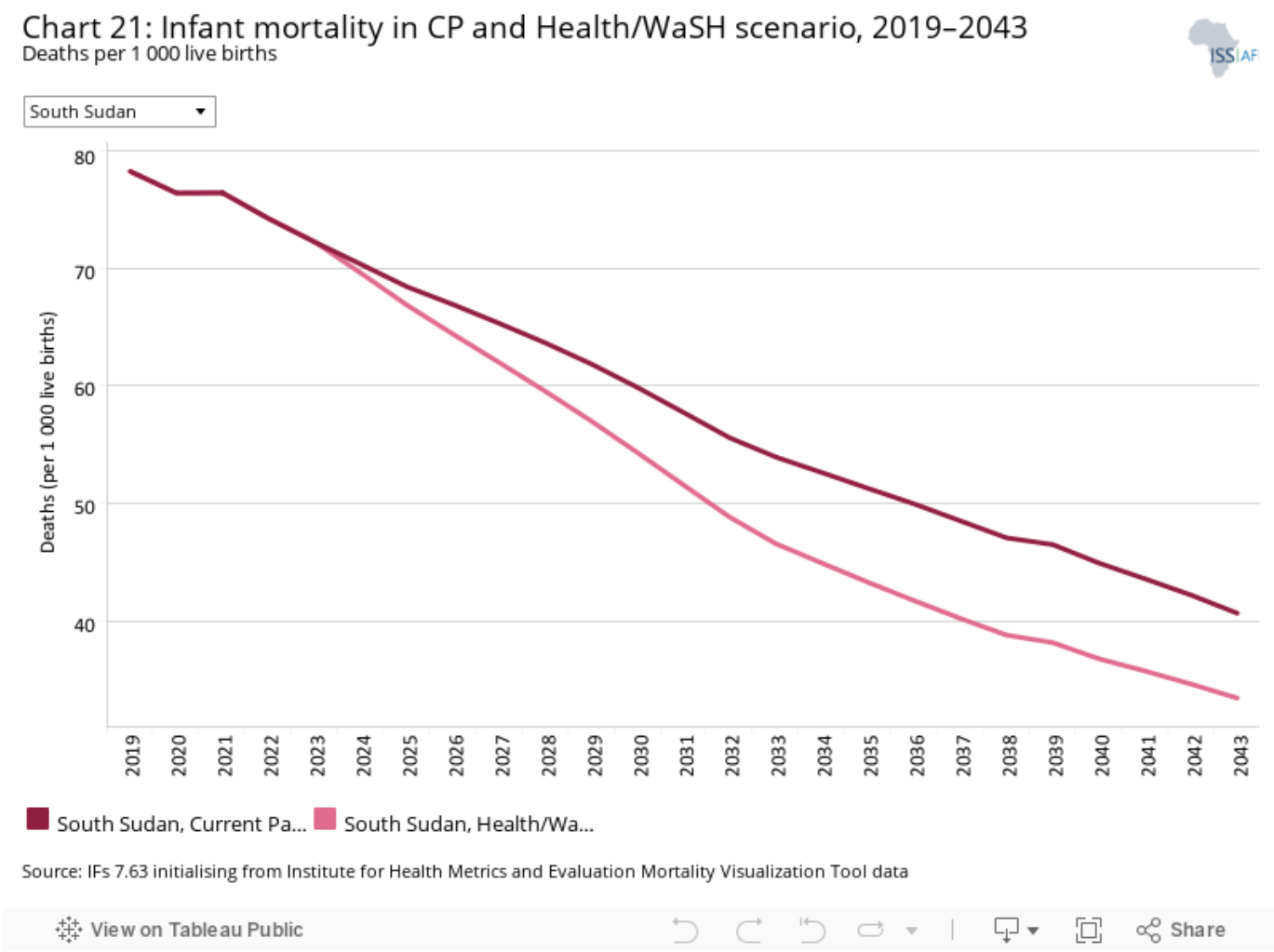
The intervention is explained in [here](#) in the thematic part of the website.

The quality of a nation's health system can be gauged through indicators such as life expectancy, maternal mortality and infant mortality, among others. South Sudan lags behind its low-income peers on several health indicators. The civil war created health personnel shortages and destroyed health infrastructure. South Sudan has only one physician per 65 574 people and one midwife per 39 088.[3] As a result, access to healthcare in South Sudan remains dangerously low, with a negative effect on life expectancy.

Life expectancy in South Sudan was 58.8 years in 2019, below the average of 63.8 years for low-income countries in Africa.

Based on the Health/WaSH scenario, life expectancy is estimated to increase to 67.2 years by 2043, compared with 66 years in the Current Path forecast. Even in the Health/WaSH scenario, life expectancy in South Sudan is more than three years below the projected average for low-income countries in Africa (70.9 years) in 2043.

On average, women had a higher life expectancy at birth (60 years) than men (57.6 years) in 2019. In the Health/WaSH scenario, life expectancy at birth for women is projected to be 68.8 years by 2043 compared with 65.8 years for men.



About 75% of all child deaths in South Sudan are due to preventable conditions such as diarrhoea, malaria and pneumonia. Nearly 90% of South Sudan's population has no access to improved sanitation, and only 17% of schools have suitable latrines. The risk of contracting waterborne diseases such as diarrhoea, cholera, hepatitis, typhoid or Guinea worm disease is one of the world's highest.[4]

Continuing conflicts, instability and bad governance have results in limited access to clean water, which often leads to tensions between communities.

The infant mortality rate in South Sudan was 78.2 deaths per 1 000 live births in 2019.

The Health/WaSH scenario reduces the infant mortality rate to 46.6 deaths per 1 000 live births by 2033, compared with 54 in the Current Path forecast. By 2043, this rate is set to decline to 33.5 deaths per 1 000 in this scenario, compared with 40.7 in the Current Path forecast.

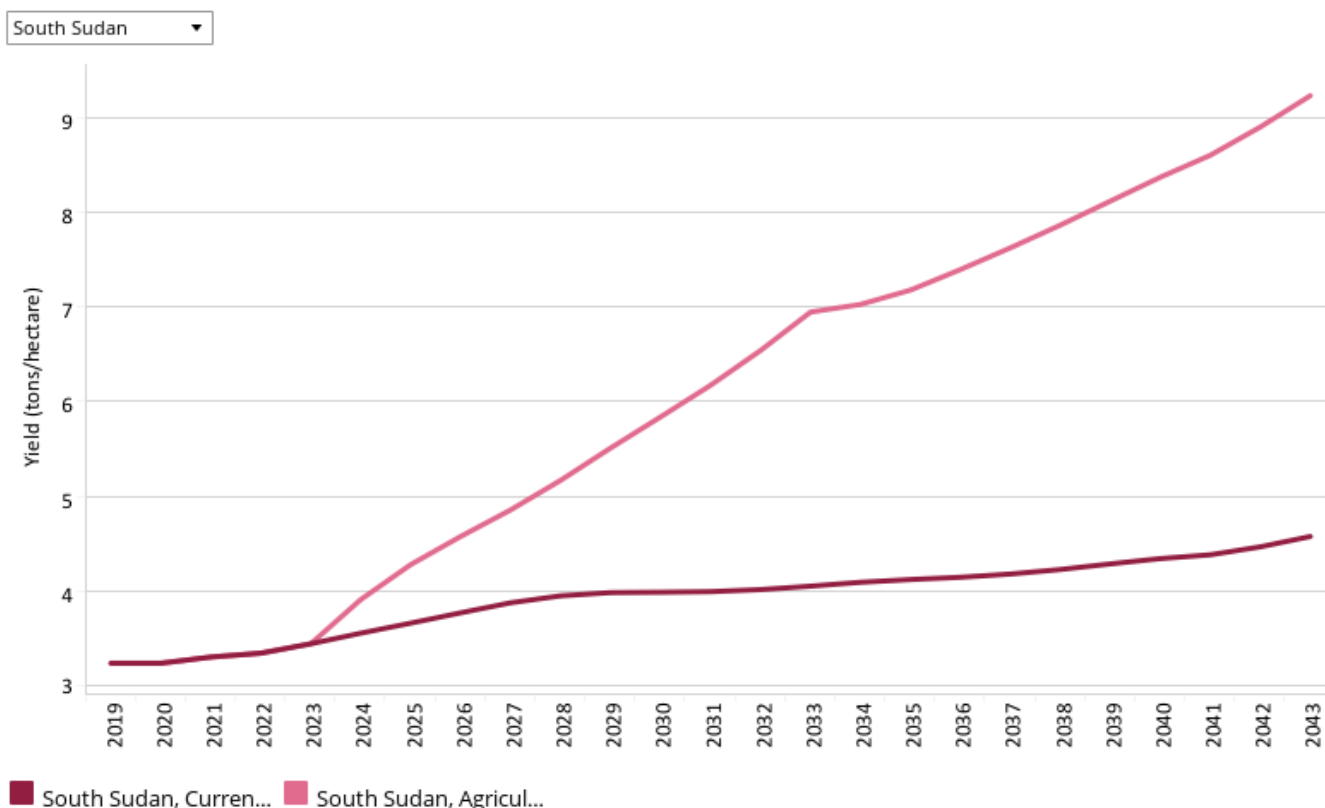
The infant mortality rate in the Health/WaSH scenario is still above the 2043 projected average of 21.2 for low-income countries in Africa.





## 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 in [here](#) in the thematic part of the website.

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

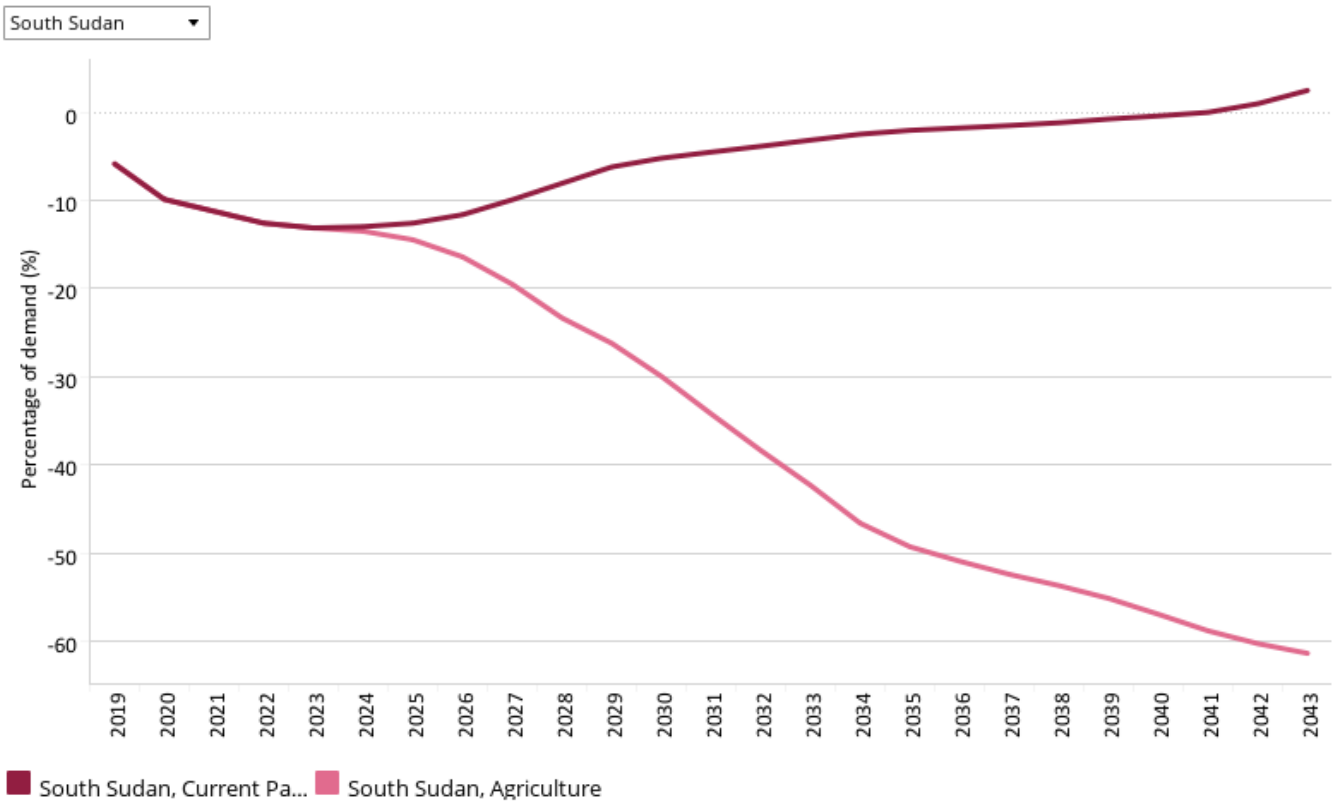
A thriving agriculture sector is crucial to long-term peace and development in South Sudan. Up to 95% of the country's population depends on farming, fishing or herding for their livelihoods.[5] However, levels of crop and vegetable production in the country remain low. As is the case in much of East Africa, farmers rely heavily on rain-fed crop production, meaning erratic or delayed rains can result in poor harvests. Limited access to quality seeds and planting materials constrain yields.

In the Agriculture scenario, crop yields in South Sudan improve from 3.2 tons per hectare in 2019 to 9.2 tons per hectare in 2043, which is twice the value forecast on the Current Path (4.6 tons) by 2043. By 2043, average crop yields in the Agriculture scenario are above the projected Current Path average for low-income Africa (3.5 tons per hectare) for that



year.

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

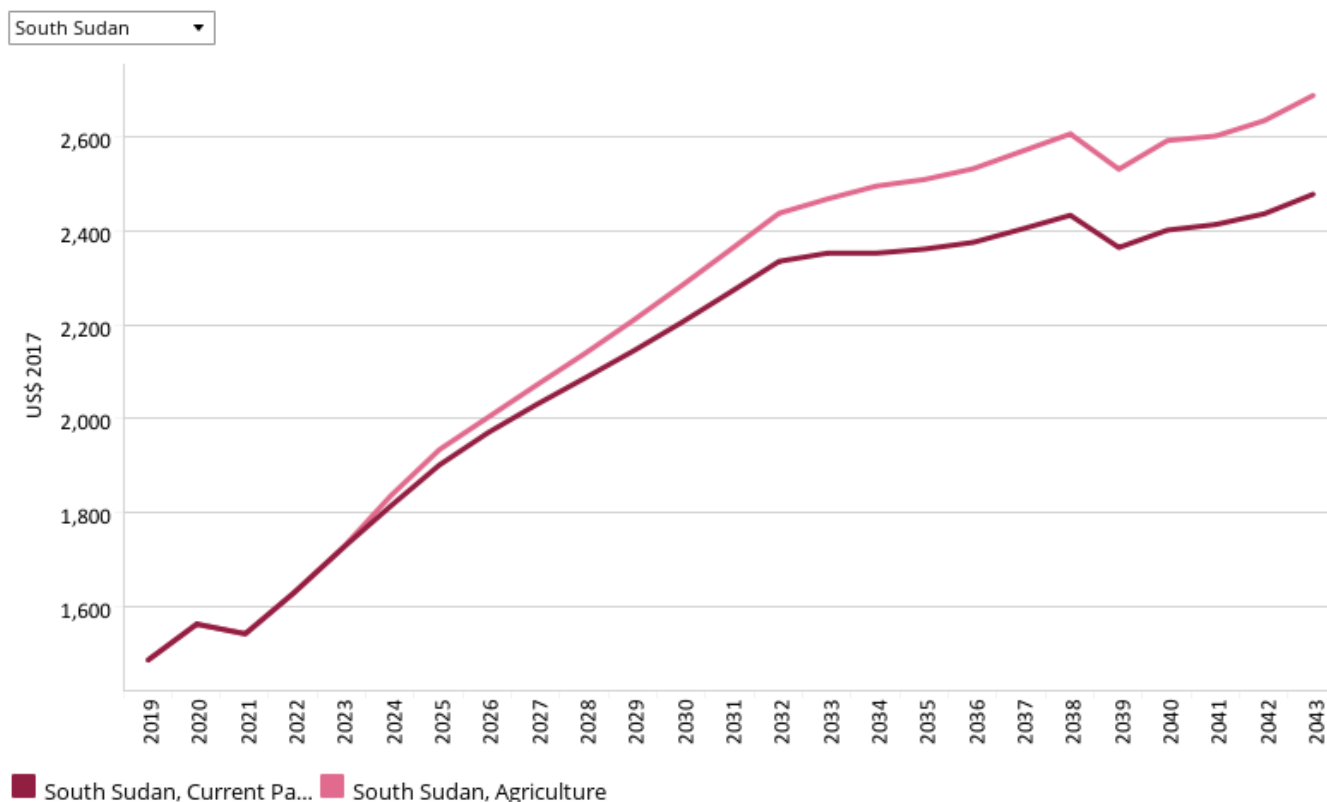
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Without significant efforts to improve agricultural production, the current low crop yield will keep South Sudan a net food importer (the country imports as much as 50% of its food needs). Total food imports are estimated to be US\$200–300 million a year.<sup>[6]</sup> This points to major underperformance given the country's huge agricultural potential, and is unsustainable in the long run.

On the Current Path, the food import dependence will be about 2.5% of total agricultural demand by 2043. However, in the Agriculture scenario, the food import dependence will be completely eliminated, with agricultural surplus representing 61.4% of total demand in 2043.

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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The Agriculture scenario significantly impacts GDP per capita in South Sudan (Chart 24).

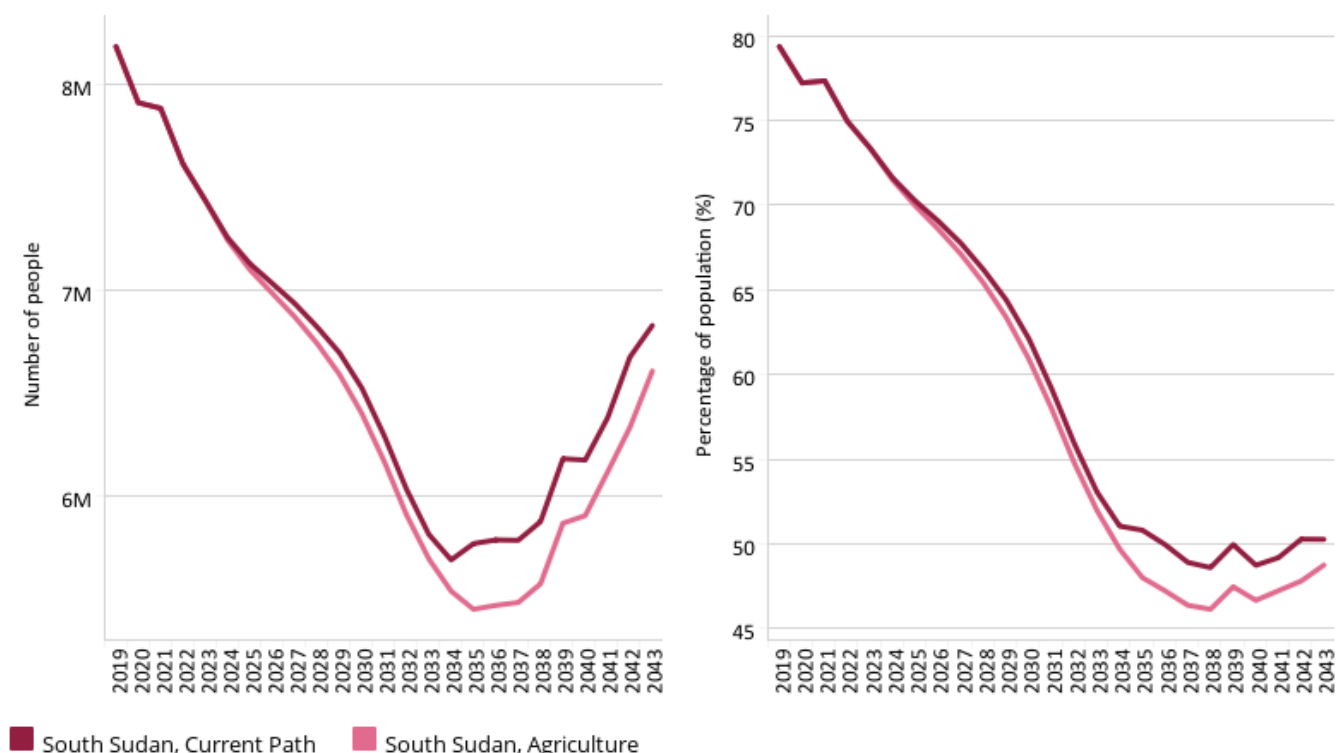
By 2043, the Agriculture scenario improves GDP per capita by about US\$210 compared with the Current Path forecast, meaning the average South Sudanese will be earning US\$2 688 at that stage. However, this is US\$1 102 less than the projected average for low-income countries in Africa in 2043.

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

Millions of people and % of total population



South Sudan \$1.90



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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The agriculture sector is a lifeline for millions of people in South Sudan, as 95% of the country's population depends on the sector to meet their food and income needs.

Measured at the US\$1.90 threshold, the poverty rate in the Agriculture scenario will be 48.8% by 2043, compared with 50.3% in the Current Path forecast for the same year. This is equivalent to 200 000 fewer people living in extreme poverty. In the agriculture scenario, the number of poor people declines to a minimum (5.5 million) in 2035, before increasing to 6.6 million by 2043; the reason may be linked to population growth.

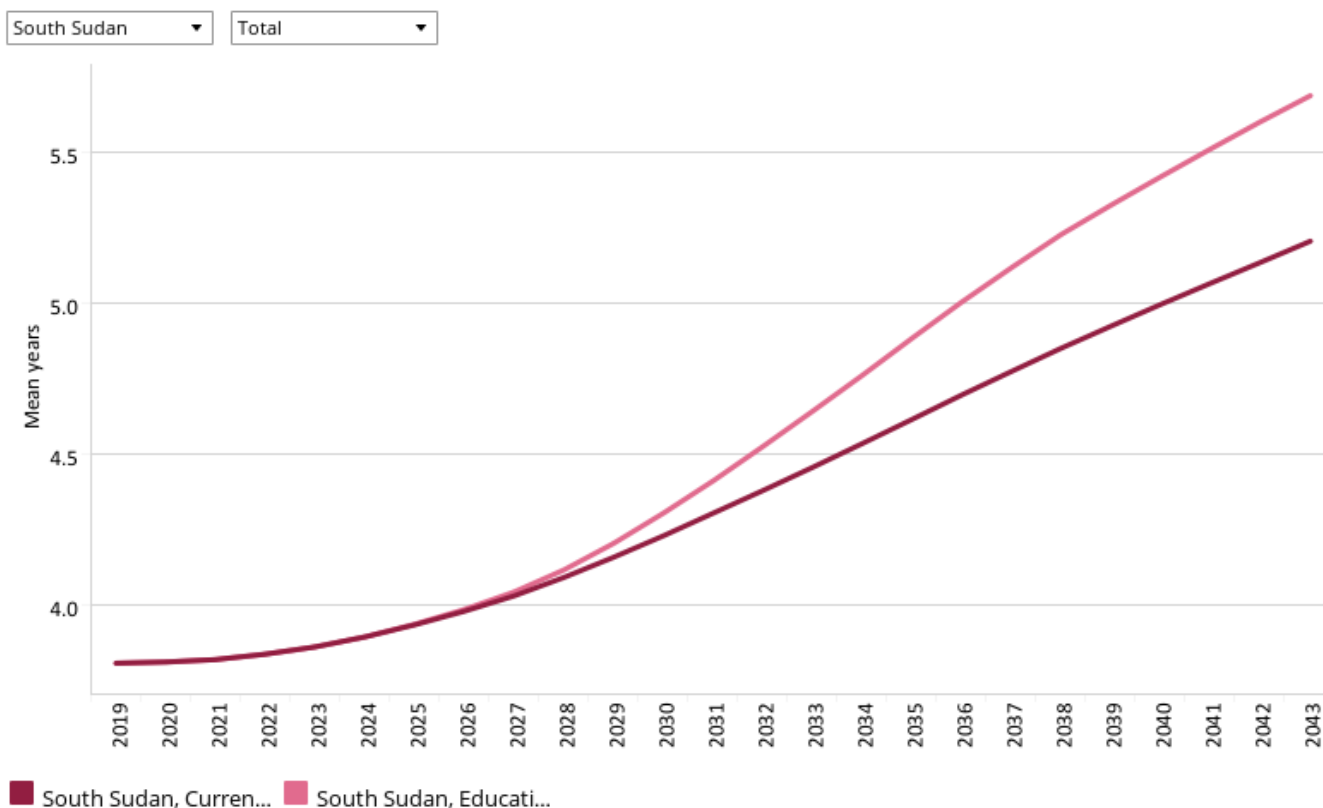
Further development in the agriculture sector is a viable option to reduce poverty in South Sudan. More investment in the sector will increase consumption and income, and pave the way for an agri-industry, positively affecting growth and poverty reduction.



## 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 in [here](#) in the thematic part of the website.

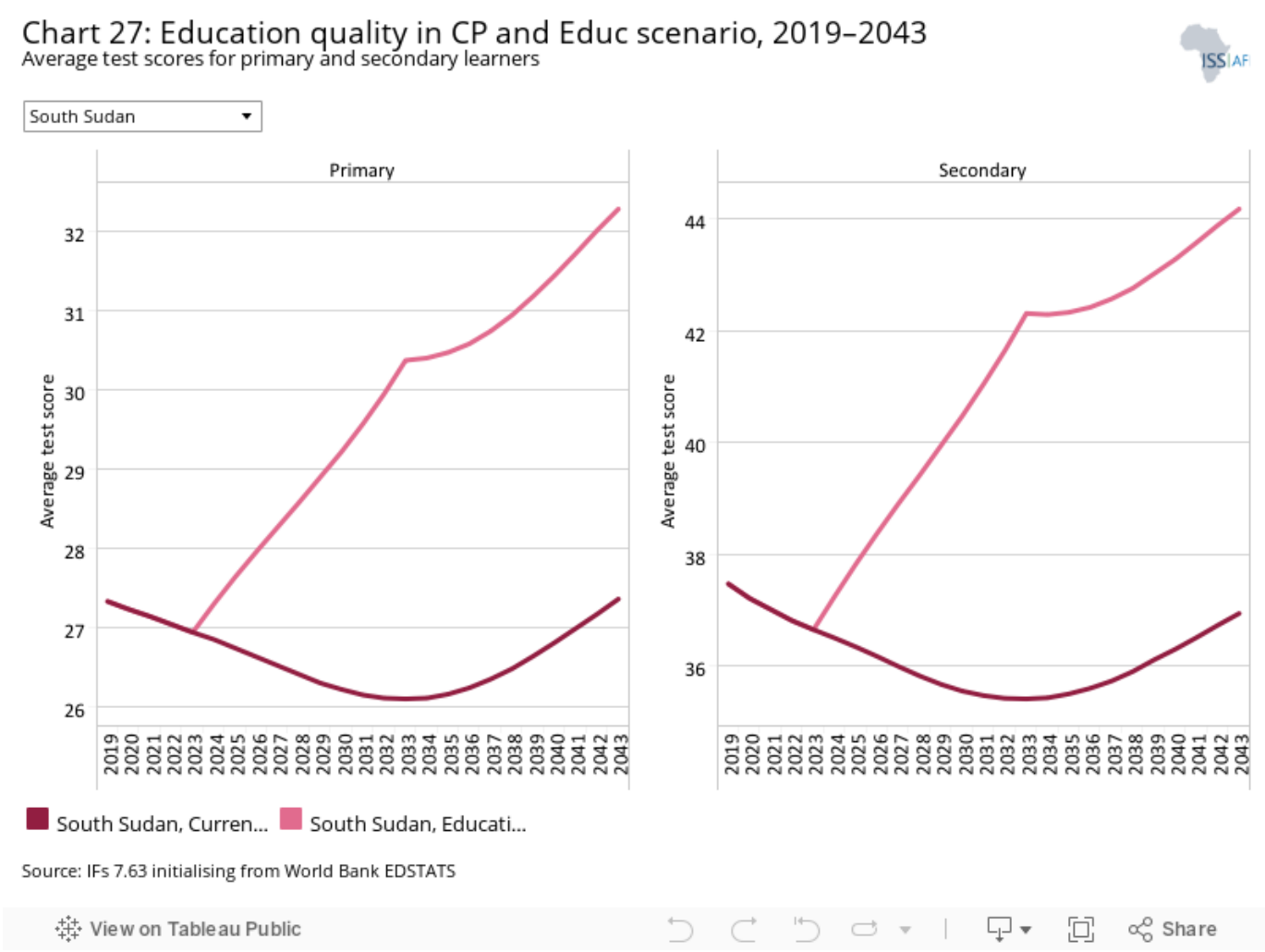
Years of conflict, displacement and economic collapse continue to deprive children of education, harming the country's future. According to UNESCO, at least 2.2 million children in South Sudan are not in school, representing one of the highest rates of out-of-school children in the world. The majority of these children are girls, child soldiers, children with disabilities and children who are just too hungry, too busy working to help their families, or too afraid of the journey to school.[7]

The average years of education in the adult population (aged 15 years and older) is a good indicator of the stock of education in a country. School life expectancy in South Sudan is among the lowest in the world. The mean years of education for adults aged 15 years and over stood at 3.8 years in 2019, below the average of 4.4 years for low-income countries in Africa. On the Current Path, it is projected to improve to 5.2 years by 2043, which will just be a year below the

average for low-income countries in Africa. Technically, this means that most people in South Sudan will not have primary education by 2043. However, in the Education scenario, the mean years of education improves by about six months above the Current Path forecast for 2043.

The situation facing girls at all ages is particularly alarming in South Sudan. About 60% of 7-year-old girls are not in school. The gender gap widens with age: while 10.6% of boys were in secondary school at age 16 in 2018, this was the case for only 1.3% of 16-year-old girls.[8]

In 2019, the mean years of education for men was 4.4 compared with 3.2 for women. In the Education scenario, the mean number of years of education for men reaches 6.1 by 2043, versus 5.2 for women.



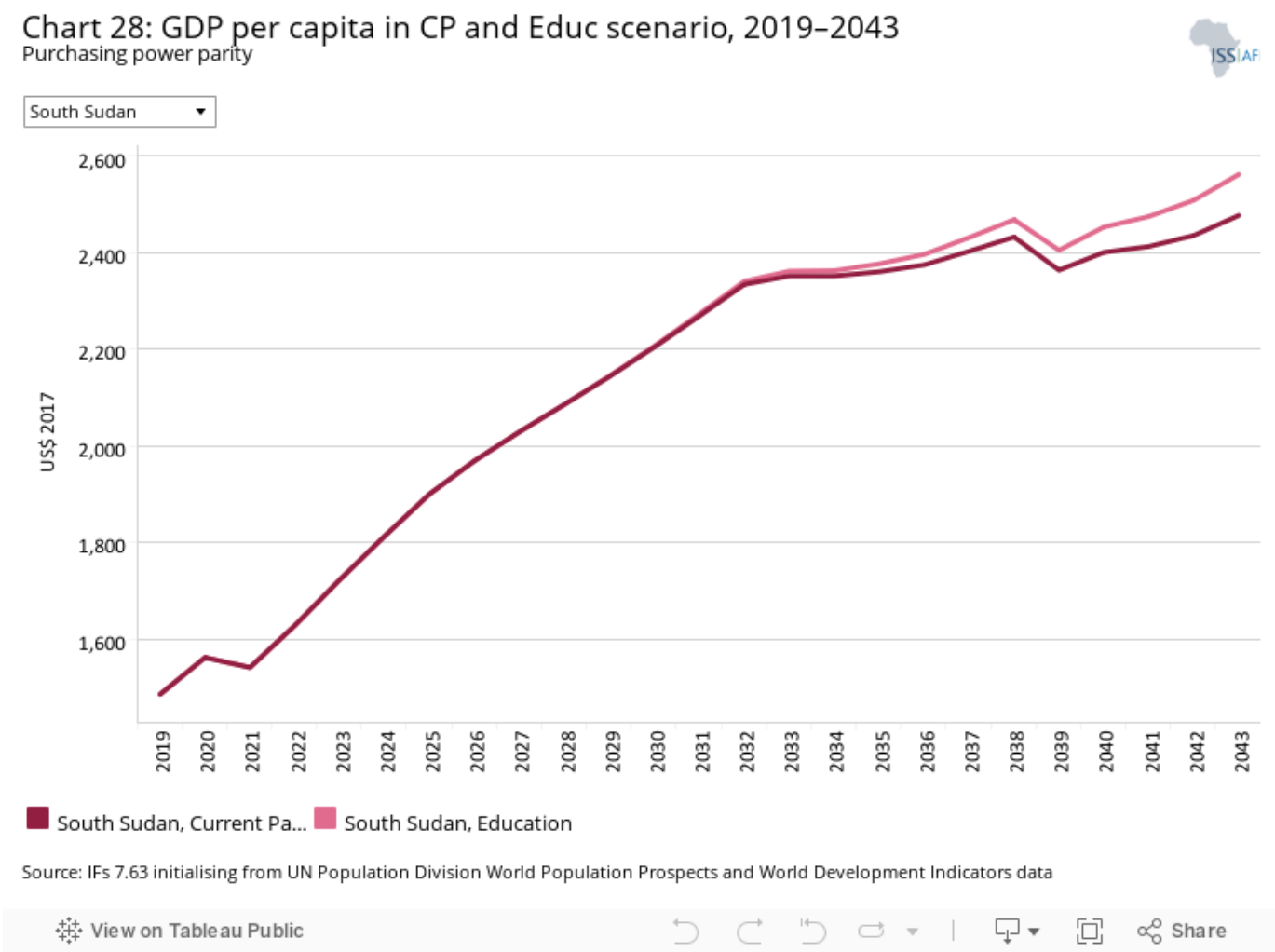
The legacy of the civil war, combined with the cumulative effects of years of conflict, political instability and extreme poverty, has taken a toll on the quality of the education system in South Sudan. With a new peace agreement in place, development partners are making efforts to support the government’s effort in bringing children back to school and providing them with a quality education. However, the road to quality education for all children in South Sudan is still long.

In the Education scenario, the score for the quality of primary education improves from 27.3 in 2019 to 32.3 in 2043, an increase of 18% increase compared with the Current Path forecast of 27.4 and about 6% higher than the average of 30.6 for low-income African countries in the same year.

The score for the quality of secondary education goes from 37.5 in 2019 to 44.2 in 2043 in the Education scenario, an

improvement of 20% compared to the Current Path forecast of 36.9 and the average of 37.8 for low-income African countries by then.

Quality education is crucial for economic development. It allows the country to increase its current added value and create tomorrow's technological innovations. Thus, authorities in South Sudan should accelerate reforms to improve the quality of education in the country.



By 2043, the Education scenario will increase GDP per capita by about US\$85 above the value of US\$2 478 forecast on the Current Path, representing an increase of 3.4%.

Investment in education significantly impacts economic growth, but it takes time to materialise. For instance, it will take more than a decade for a child enrolled in primary school to contribute meaningfully to the economy.



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

Millions of people and % of total population



South Sudan

\$1.90



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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Education is an important tool to reduce poverty, as it improves people’s employment and income prospects. By 2043, South Sudan will record a poverty rate of 48.5% (6.5 million people) in the Education scenario, compared with 50.3% (6.8 million people) in the Current Path forecast. This means 300 000 fewer people will live in extreme poverty by 2043 than in the Current Path forecast. The number of poor people in the Education scenario declines to its minimum (5.6 million) in 2034, before increasing to 6.5 million by 2043, probably due to population growth.



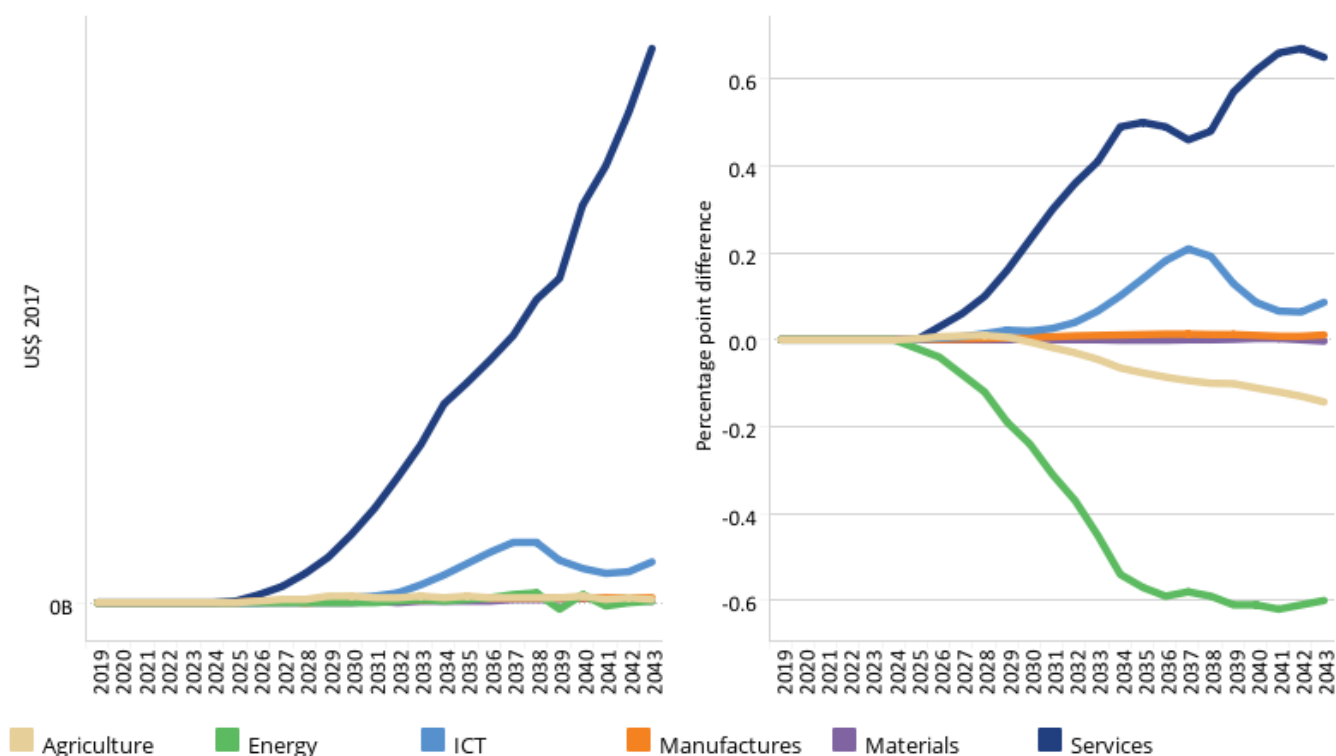
## Manufacturing scenario

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

Absolute and % point difference GDP



South Sudan



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 in [here](#) in the thematic part of the website.

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

In absolute terms, the service sector's contribution to GDP represents the biggest improvement compared with the Current Path forecast for 2043 and is forecast to be US\$400 million larger than in the Current Path. The service sector is followed by ICT, with its contribution of US\$30 million above the Current Path in 2043.

As a percentage of GDP, the share of the service sector is 0.65 percentage points larger than in the Current Path forecast in 2043. ICT follows, being 0.09 percentage points above the Current Path forecast. The contribution of Manufacturing improves slightly (0.01 percentage points) above the Current Path forecast by 2043, while the share of energy declines by

0.6 percentage points compared with the Current Path forecast.

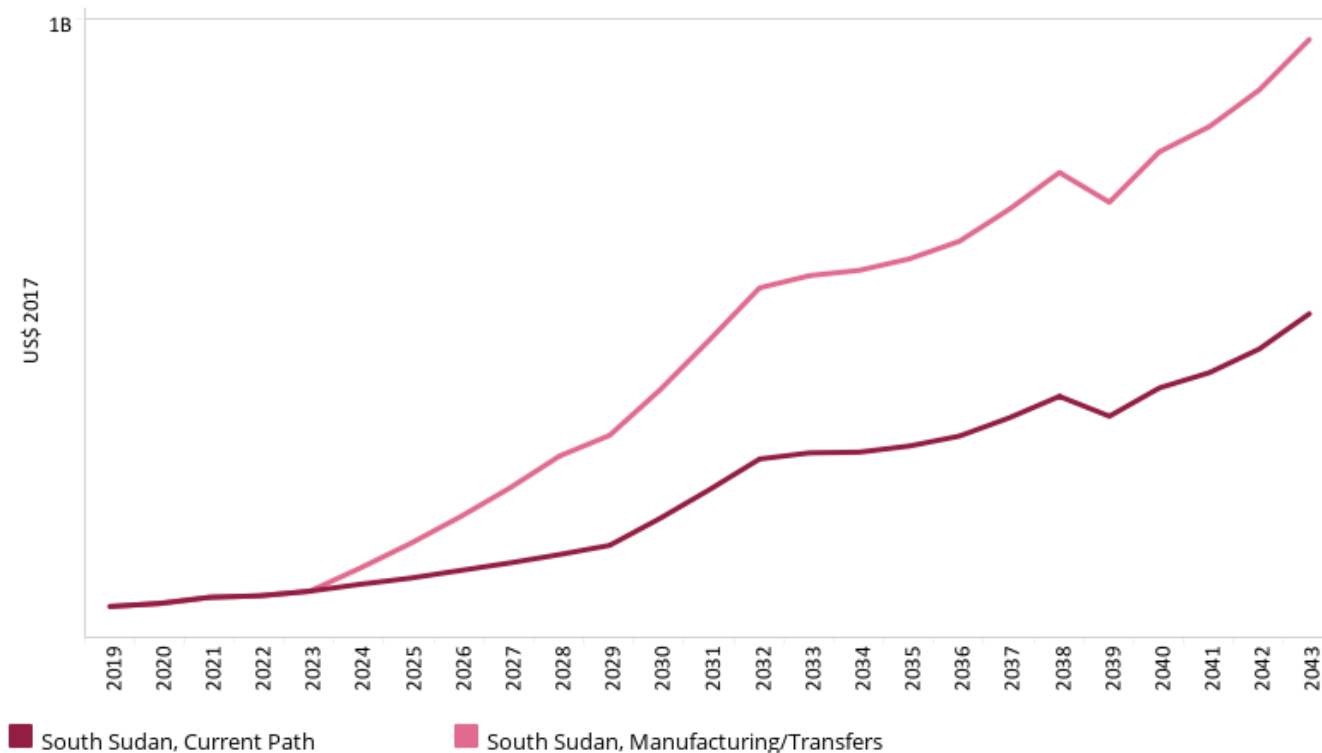
The current growth model of South Sudan, driven by the oil sector, is fragile and holds little promise for improvements in livelihoods. Authorities should make efforts to diversify the economy and focus on the manufacturing and agricultural sectors to create jobs and, ultimately, reduce poverty.

Chart 31: Gov welfare transfers in CP and Manufac/Transfers scenario, 2019–2043

Billions US\$ 2017



South Sudan



Source: IFs 7.63 initialising from World Development Indicators data

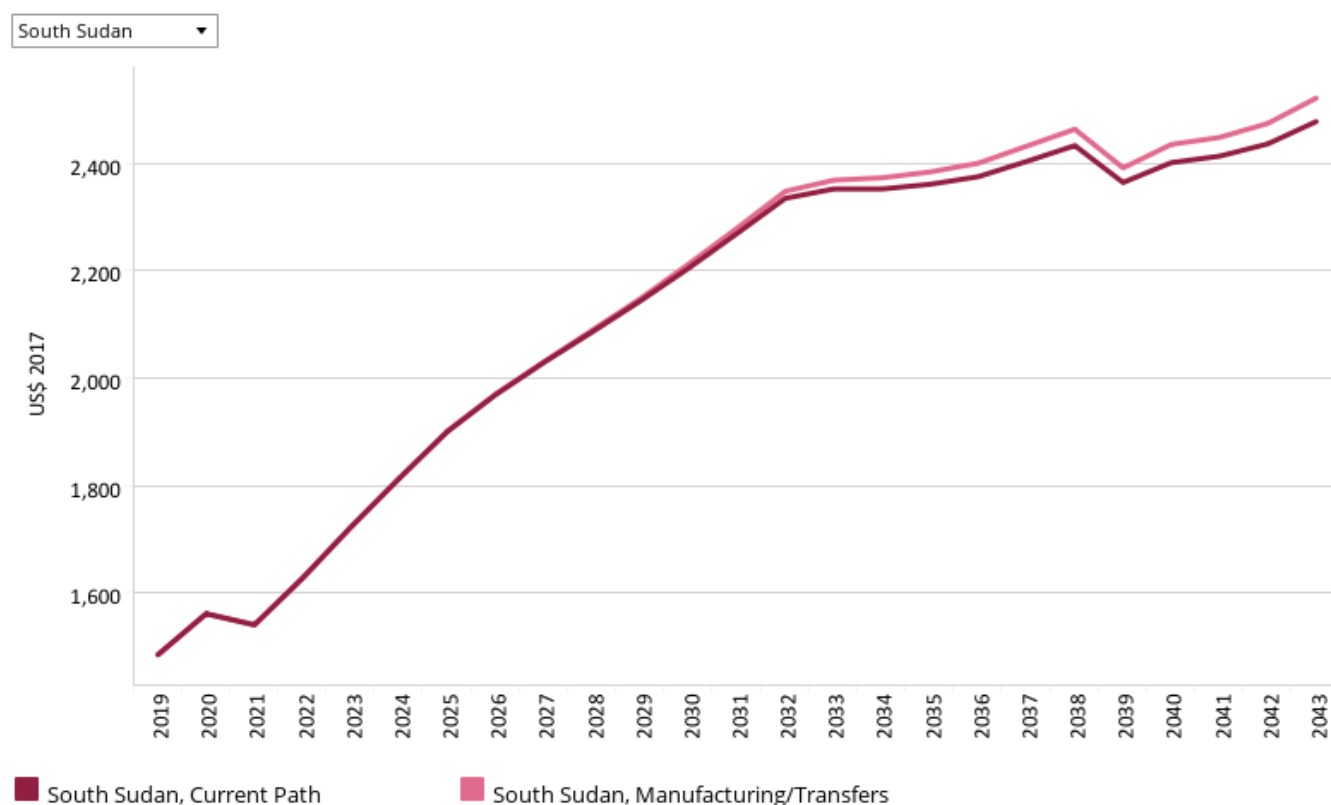
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In 2019, the value of household welfare transfers in South Sudan was about US\$200 million. Compared with the Current Path forecast, the Manufacturing/Transfers scenario increases household transfers by 67.2% in 2043. This is US\$390 million more than in the Current Path forecast (US\$580 million). These transfers will be needed to address the initial increase in poverty associated with investment in the manufacturing sector. Industrialisation is funded by an initial crunch in consumption, which increases poverty in the first few years. However, in the long term, these efforts stimulate inclusive growth, with a greater impact on poverty alleviation.

To make the social safety net programmes more effective at reducing poverty, better targeting and efficient approaches are critical.

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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In the Manufacturing/Transfers scenario, GDP per capita is US\$43 higher by 2043 than the US\$2 478 of the Current Path forecast, an increase of 1.7%.

Manufacturing is important for economic growth owing to its backward and forward linkages with other sectors and its ability to transform the productive structures across an economy. Thus, a robust manufacturing sector is crucial for sustained growth and improves the population's living standard.

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

Millions of people and % of total population



South Sudan \$1.90



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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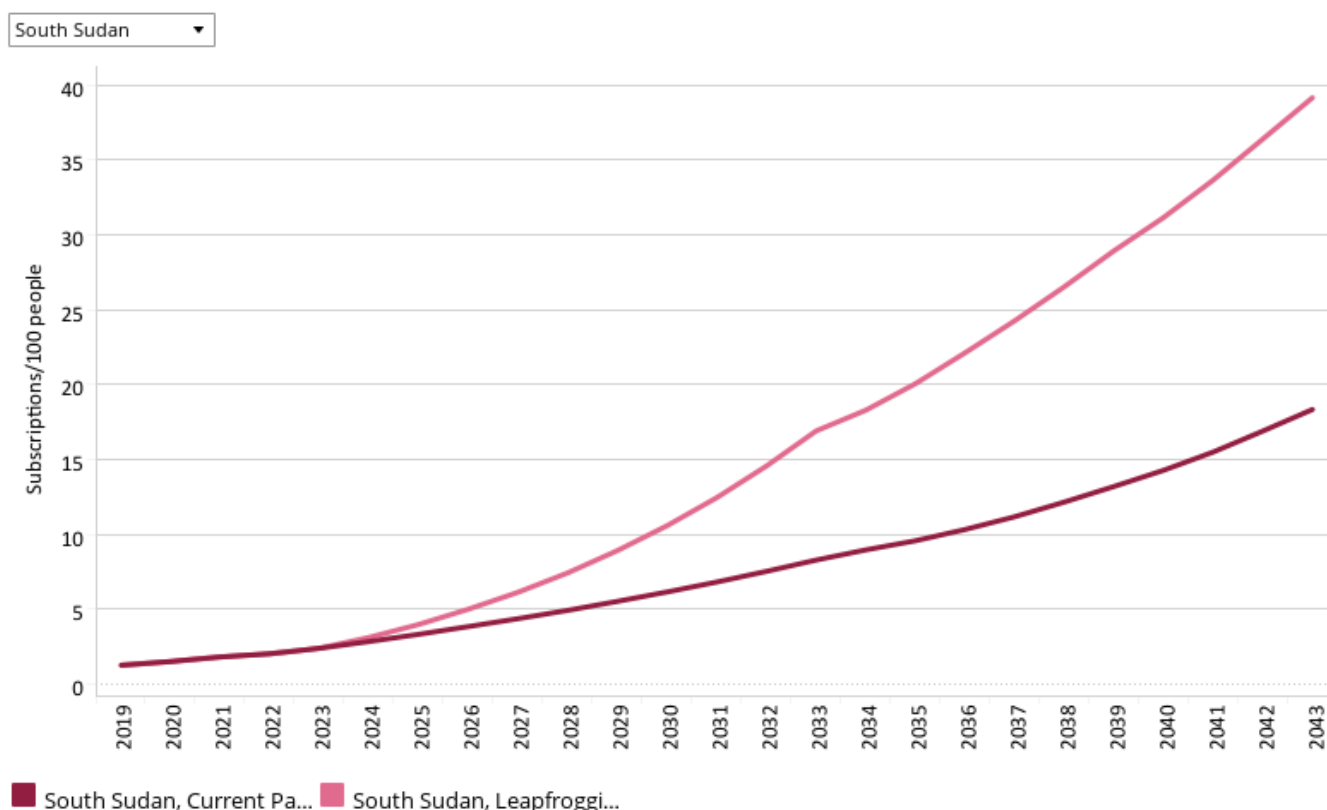
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At the poverty threshold of US\$1.90, 8.2 million people in South Sudan (79.4% of the population) were considered to be extremely poor in 2019. In the Manufacturing/Transfers scenario, the number of poor people will reduce to 6.5 million (47.7% of the population) by 2043, compared with 6.8 million (50.3% of the population) in the Current Path forecast for that year. This is a difference of 300 000 people. In 2043, the poverty rate in the Manufacturing/Transfers scenario is 22.5 percentage points above the average in the Current Path forecast for low-income countries in Africa.



## 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 in [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.).

Despite some improvements, the ICT sector in South Sudan is one of the world's least developed, while future growth of the sector is hindered by instability, insecurity, widespread poverty and low literacy rates.

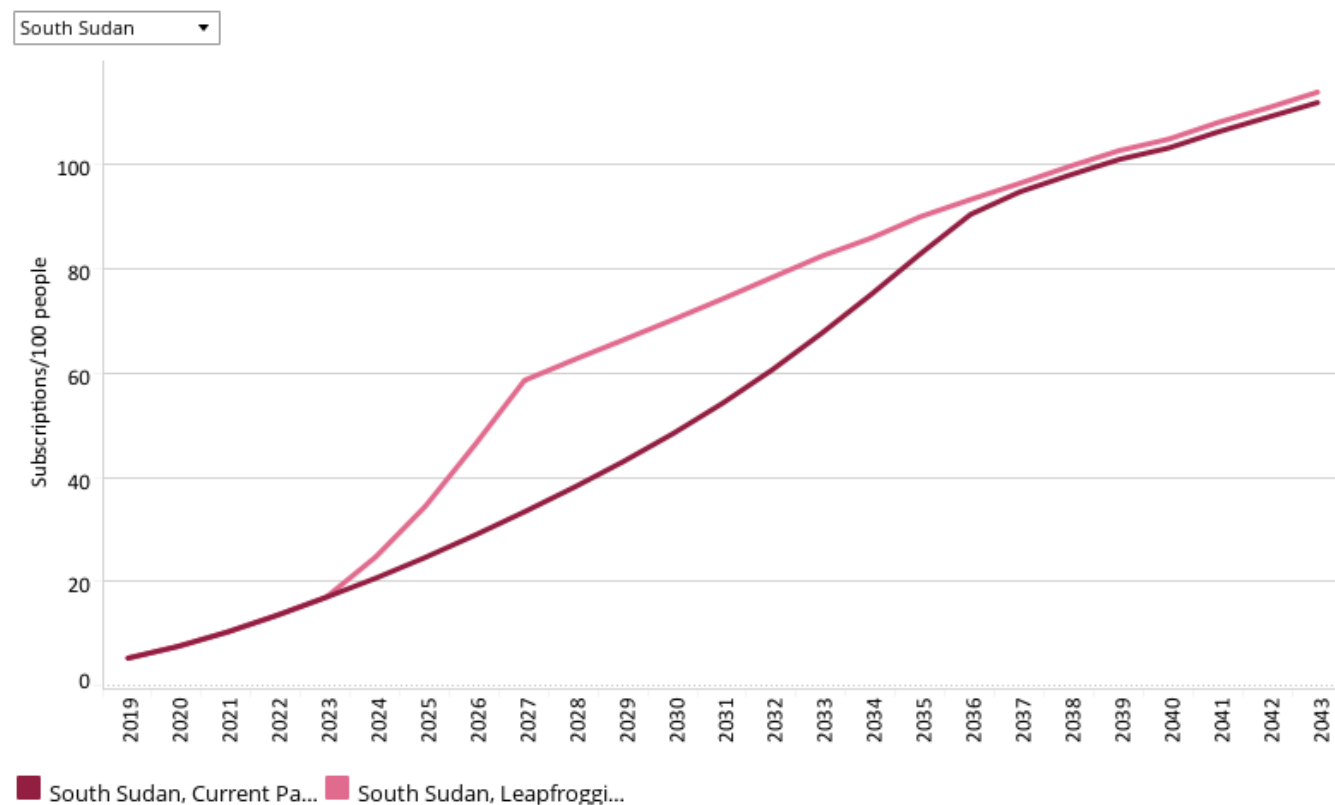
Fixed broadband subscriptions stood at 1.3 per 100 people in 2019, compared with the average of 2.3 for low-income countries in Africa.

In the Leapfrogging scenario, fixed broadband subscriptions increase to 39.1 per 100 people by 2043, more than double



the Current Path forecast of 18.3 subscriptions per 100 people and the average of 30 subscriptions per 100 people for low-income countries in Africa in the same year.

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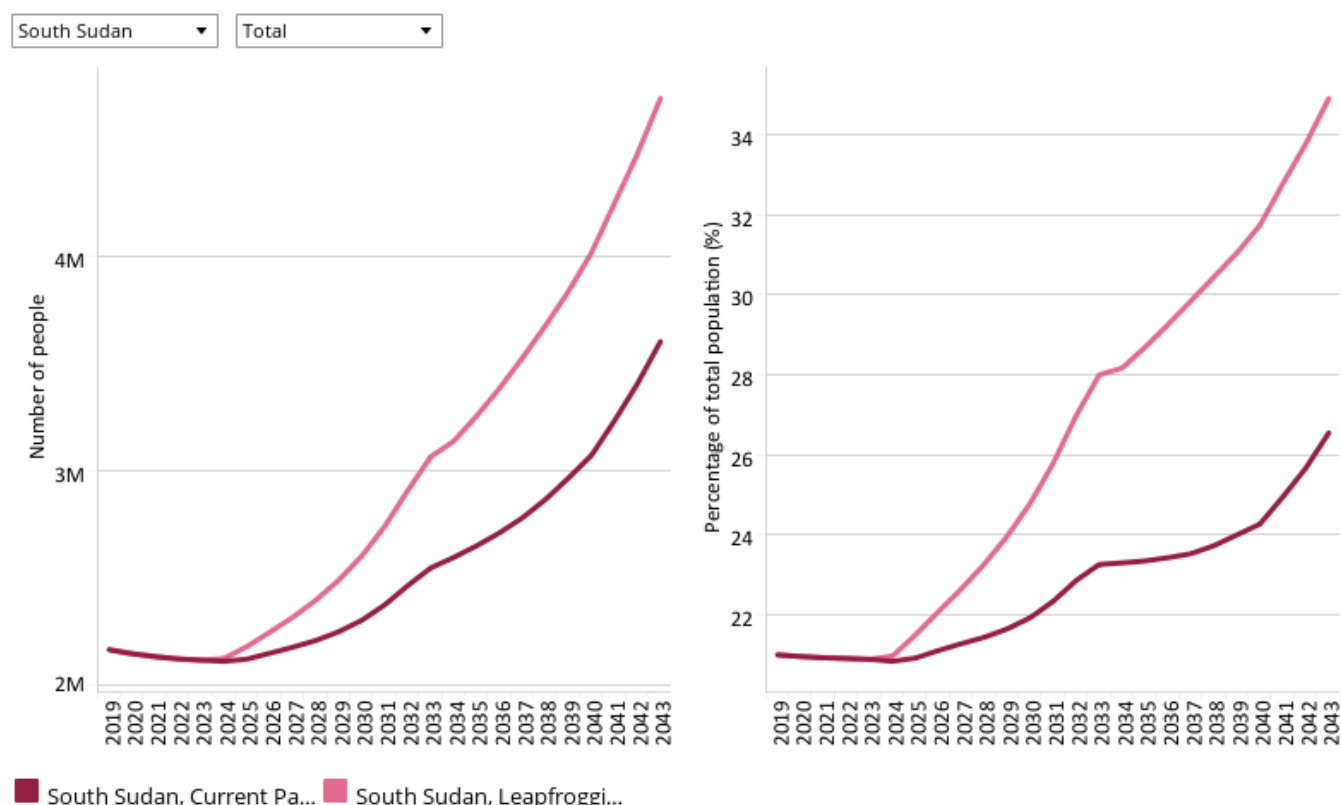
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Mobile broadband refers to wireless Internet access delivered through cellular towers to computers and other digital devices.

Mobile broadband subscriptions stood at 5.3 per 100 people in South Sudan in 2019, significantly below the average of 22.9 for low-income Africa.

In the Leapfrogging scenario, mobile broadband subscriptions in South Sudan increases to 113.9 per 100 people by 2043, slightly above the Current Path forecast of 111.9 — in other words, only two subscriptions more per 100 people than in the Current Path forecast for 2043. Mobile broadband subscriptions in both the Leapfrogging and Current Path scenarios will be below the projected average of 133.9 subscriptions per 100 people in 2043 for low-income Africa.

**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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In 2019, 2.2 million people had access to electricity in South Sudan, representing 21% of the total population. This is below the average of 32.2% for low-income countries in Africa.

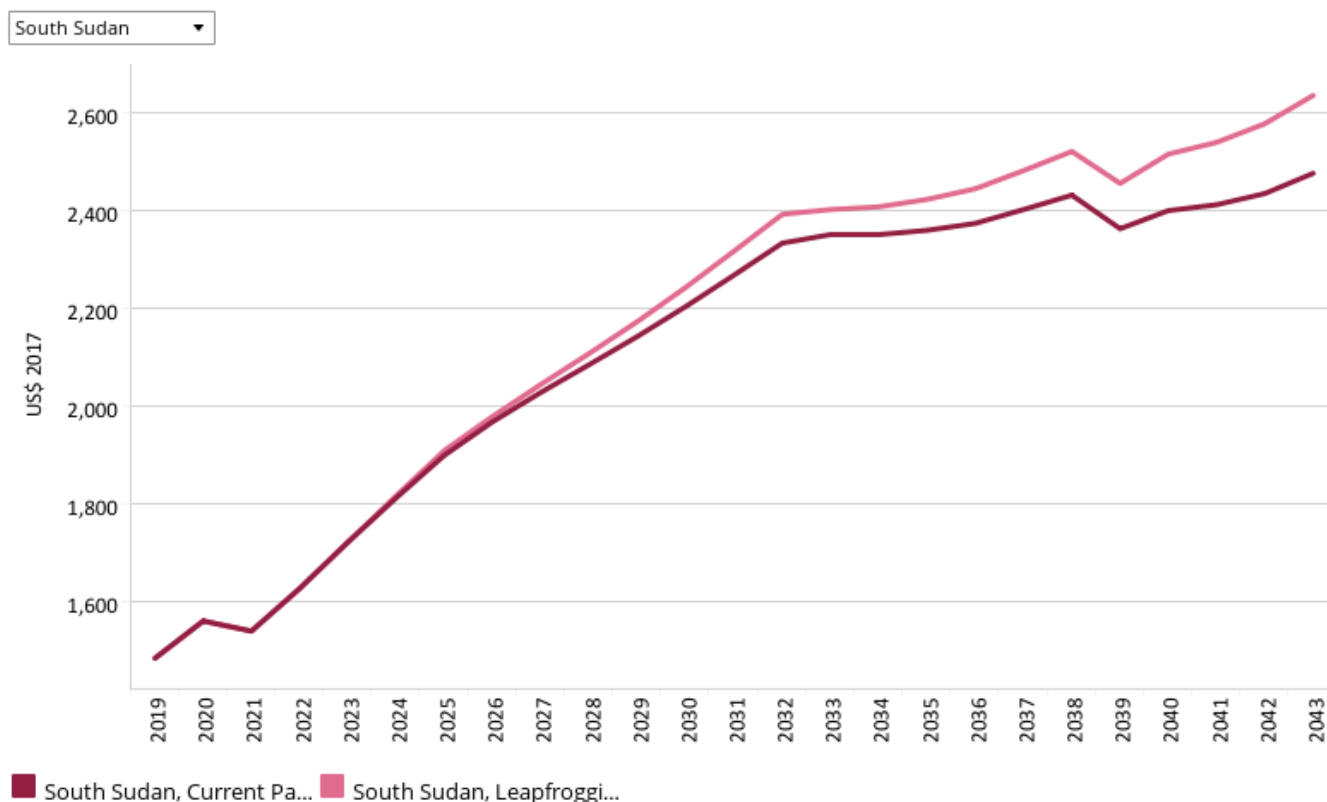
In addition, access to electricity is skewed towards the urban population. In 2019, about 34.7% of the urban population had access to electricity, compared with only 17.6% in rural areas.

In the Leapfrogging scenario, 34.9% of the South Sudanese population (4.7 million people) will have access to electricity by 2043. This is far below the projected average of 60.5% in the Current Path forecast for low-income countries in Africa in the same year.

By 2043, 51.7% of the urban population will have access to electricity in the Leapfrogging scenario, compared with 44.9% in the Current Path forecast.

The Leapfrogging scenario projects that 28.9% of the rural population will have access to electricity by 2043, compared with 20% in the Current Path forecast for the same year.

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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Widespread access to high-speed Internet has the potential to improve a country's socio-economic outcomes. Broadband can increase productivity, reduce transaction costs and optimise supply chains, positively affecting economic growth.

By 2033, GDP per capita will be at US\$2 403 in the Leapfrogging scenario, compared with US\$2 352 in the Current Path forecast, a difference of US\$51. In 2043, this difference will grow to US\$159. GDP per capita in the Leapfrogging scenario is US\$1 153 less than the projected average for low-income countries in Africa in 2043.

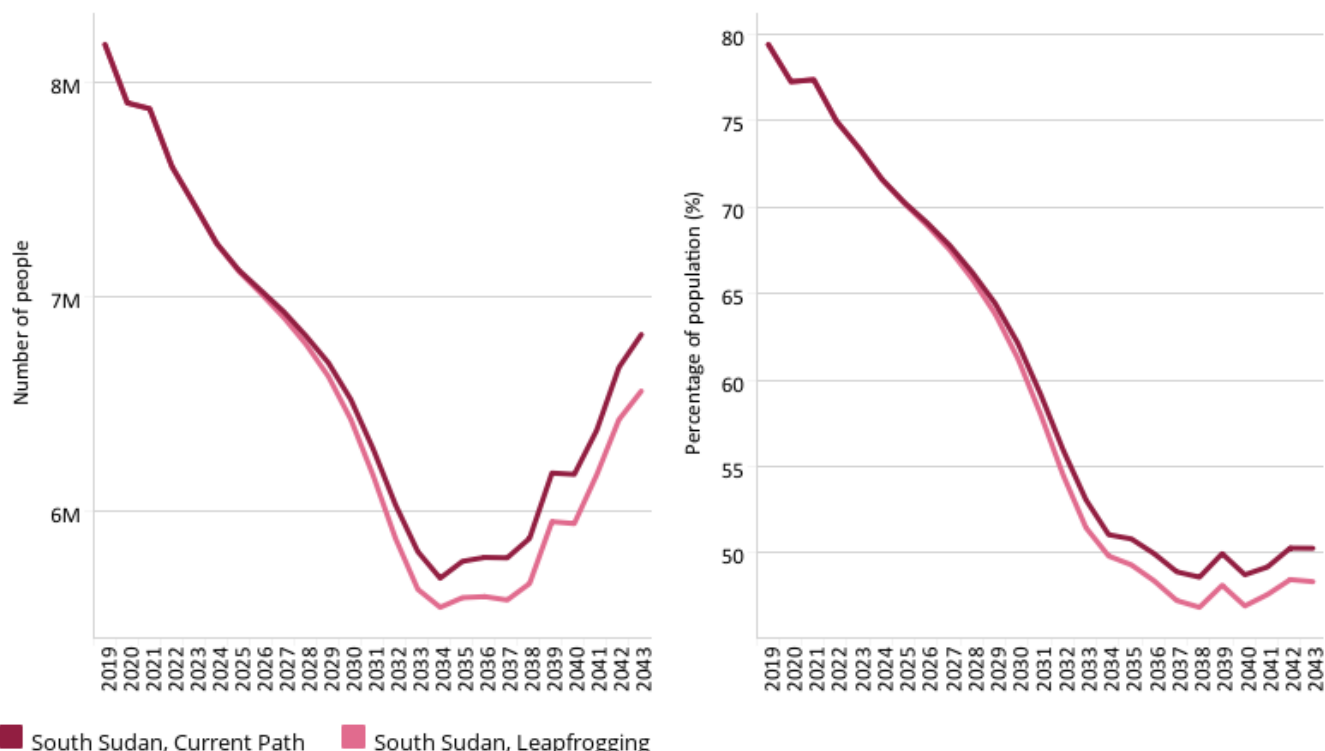
# Chart 38: Poverty in CP and Leapfrogging scenario, 2019–2043

Millions of people and % of total population



South Sudan

\$1.90



South Sudan, Current Path South Sudan, Leapfrogging

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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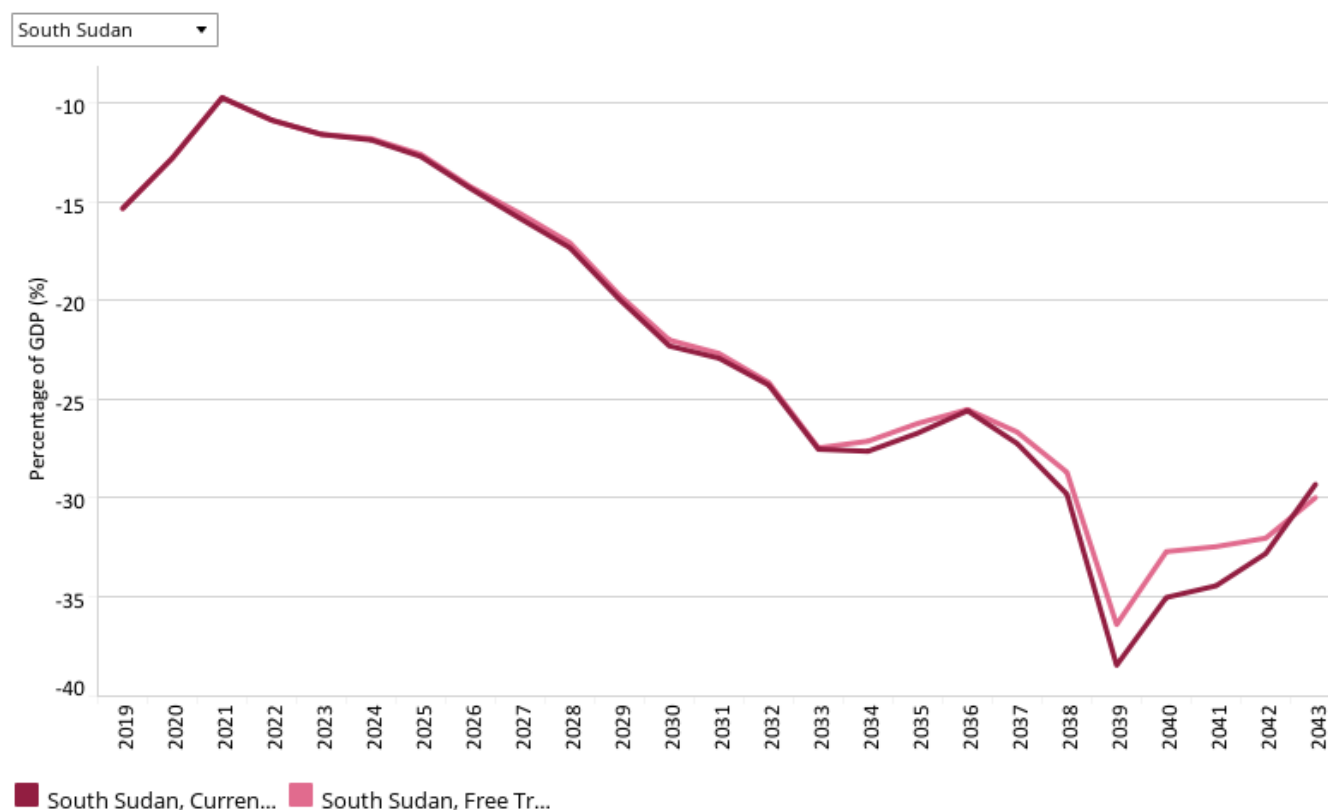
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In the Leapfrogging scenario, the number of poor people is expected to be 6.6 million by 2043, representing 48.4% of the population. This is about 300 000 fewer poor people than in the Current Path forecast for that year. In the Leapfrogging scenario, the poverty rate is 23.2 percentage points above the average for Africa's low-income countries.



## 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 in [here](#) in the thematic part of the website.

A trade balance is the difference between a country's exports and the value of its imports at a given time. 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.

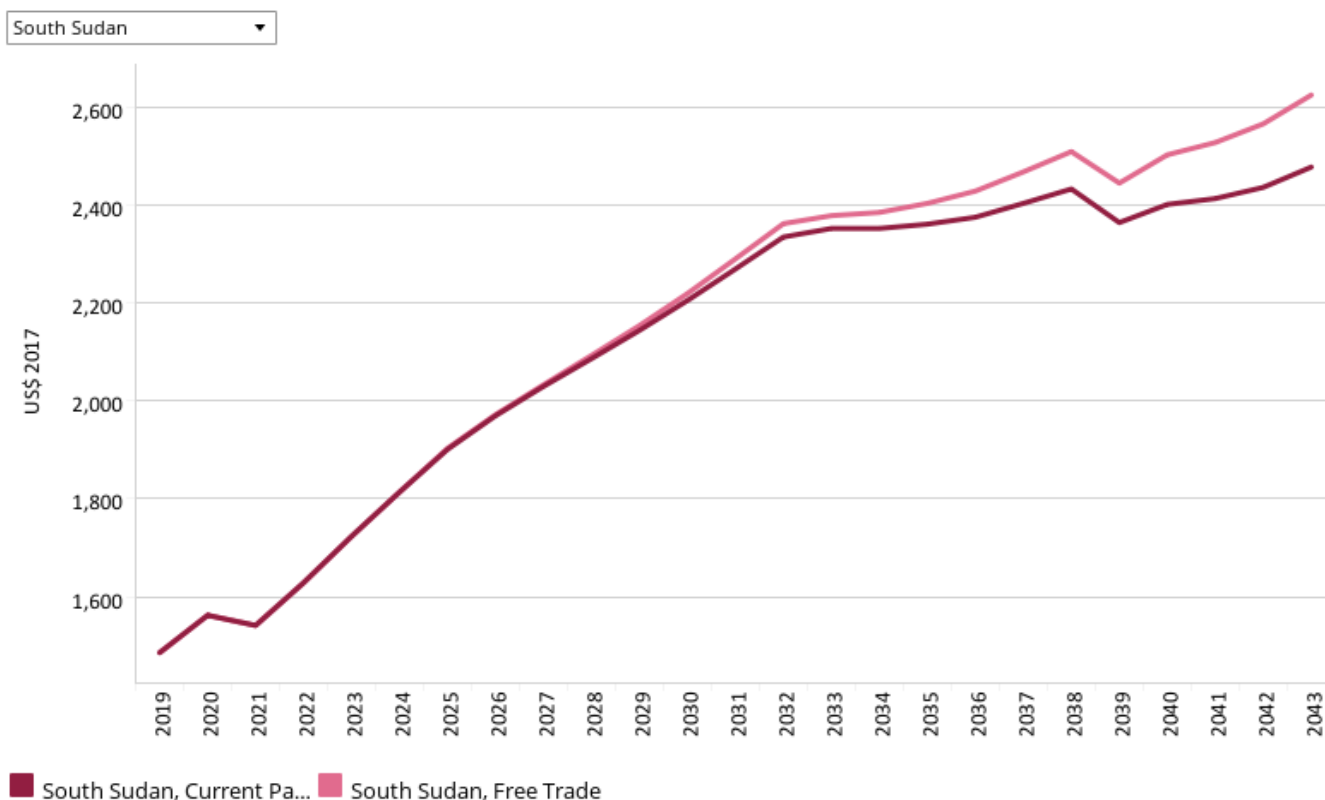
Since its independence in 2011, South Sudan has struggled to integrate into the international trade network. The external trade of South Sudan is dominated by its oil exports, which accounted for 98% of total exports in 2019, putting the country's trade balance at the mercy of international commodity prices volatility.

Like many African countries, the trade balance of South Sudan is structurally in deficit. In 2019, the country's trade deficit amounted to nearly 15.4% of GDP. In the Free Trade scenario, South Sudan's trade balance does not improve and the deficit increases to a peak of 36.4% of GDP in 2039, before declining slightly to about 30% in 2043, in line with the Current Path forecast.

With the removal of trade restrictions following trade liberalisation, it is easier to import goods, especially as the weak manufacturing sector of South Sudan faces intense competition on the export markets.

However, using only the trade balance is not a viable indicator to conclude that South Sudan will be a loser when the AfCFTA is implemented, as other indicators also need to be considered.

**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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Generally, trade liberalisation improves productivity through competition and technology diffusion, stimulating growth and raising income levels.

In the Current Path forecast, GDP per capita increases from US\$1 486 in 2019 to US\$2 478 in 2043. In the Free Trade scenario, this is expected to be US\$2 625, an increase of US\$147 above the Current Path forecast for that year. This shows that the full implementation of the AfCFTA will enhance economic growth in South Sudan.



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

Millions of people and % of total population



South Sudan \$1.90



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

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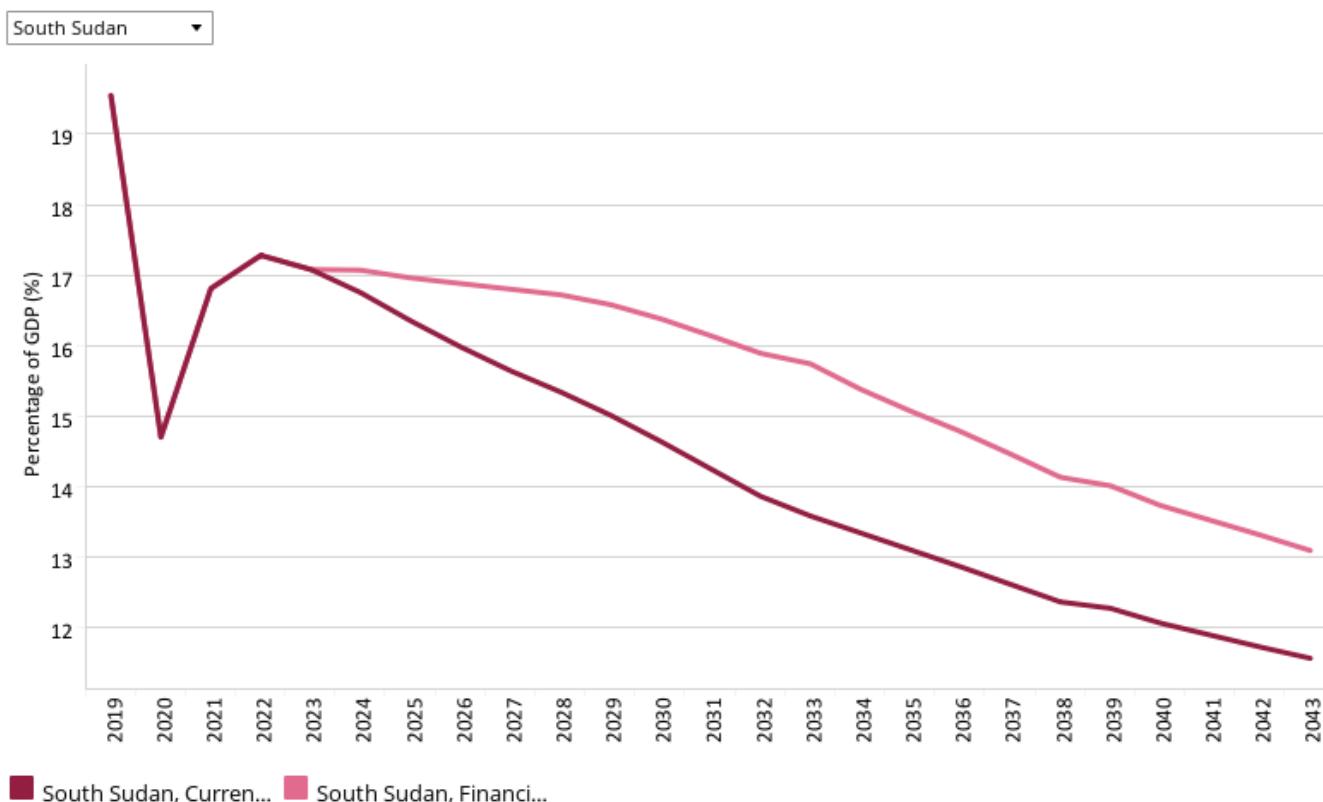
In the Free Trade scenario, the poverty rate (at \$1.90) is 48.7% in 2043, compared with 50.3% in the Current Path forecast. This is equivalent to about 220 000 fewer people living in extreme poverty than on the Current Path. The full implementation of the AfCFTA will improve growth, raise incomes and reduce poverty in South Sudan.

However, the projected poverty rate in the Free trade scenario by 2043 (48.7%) will still be far above the average of 25.1% in the Current Path forecast for low-income 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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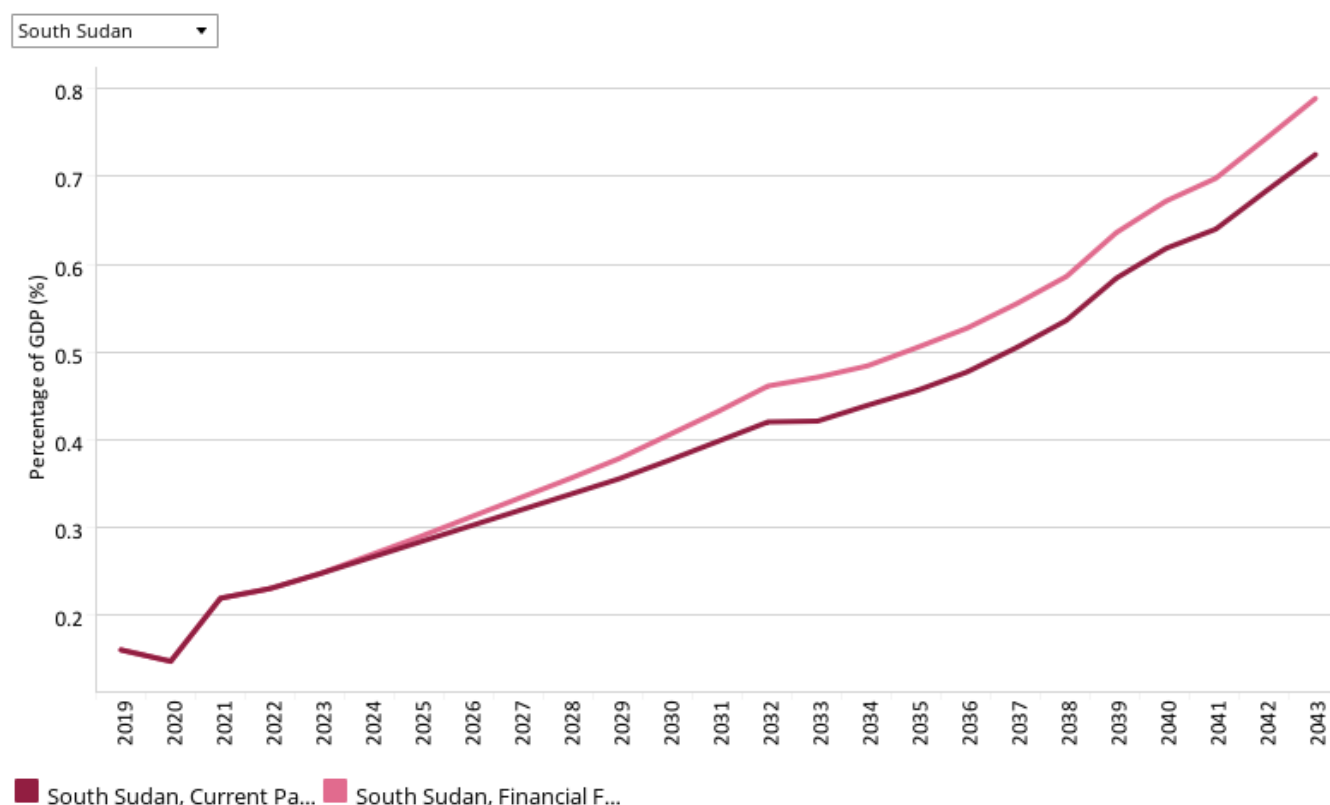
The Financial Flows scenario represents a reasonable but ambitious increase in worker remittances and aid flows to poor countries and an increase in the stock of FDI and additional portfolio investment inflows to middle-income countries. We also reduced outward financial flows to emulate a reduction in illicit financial outflows.

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

Many countries in sub-Saharan Africa are still heavily dependent on foreign aid to provide basic services such as education and health. This is also the case for South Sudan, despite its immense oil deposit. The European Commission estimates that nearly 8.7 million people, representing 75% of the South Sudanese population, will require humanitarian aid in 2022. This is as a result of the combined effect of conflict, climate change, economic crises and the COVID-19 pandemic.[9] Aid constituted 19.5% of the country's GDP in 2019, significantly above the average of 8.5% for low-income Africa.

In the Financial Flows scenario, foreign aid flows to South Sudan will account for 13.1% of GDP by 2043, above the Current Path forecast of 11.5%, and the average of 3.8% for low-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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The poor business climate, recurrent political instability and conflicts deter foreign investment inflows to South Sudan. In the World Bank's 2020 Doing Business report, South Sudan ranked 185th out of 190 countries. South Sudan is ahead of only Somalia and Eritrea in terms of the business environment in the Horn of Africa.

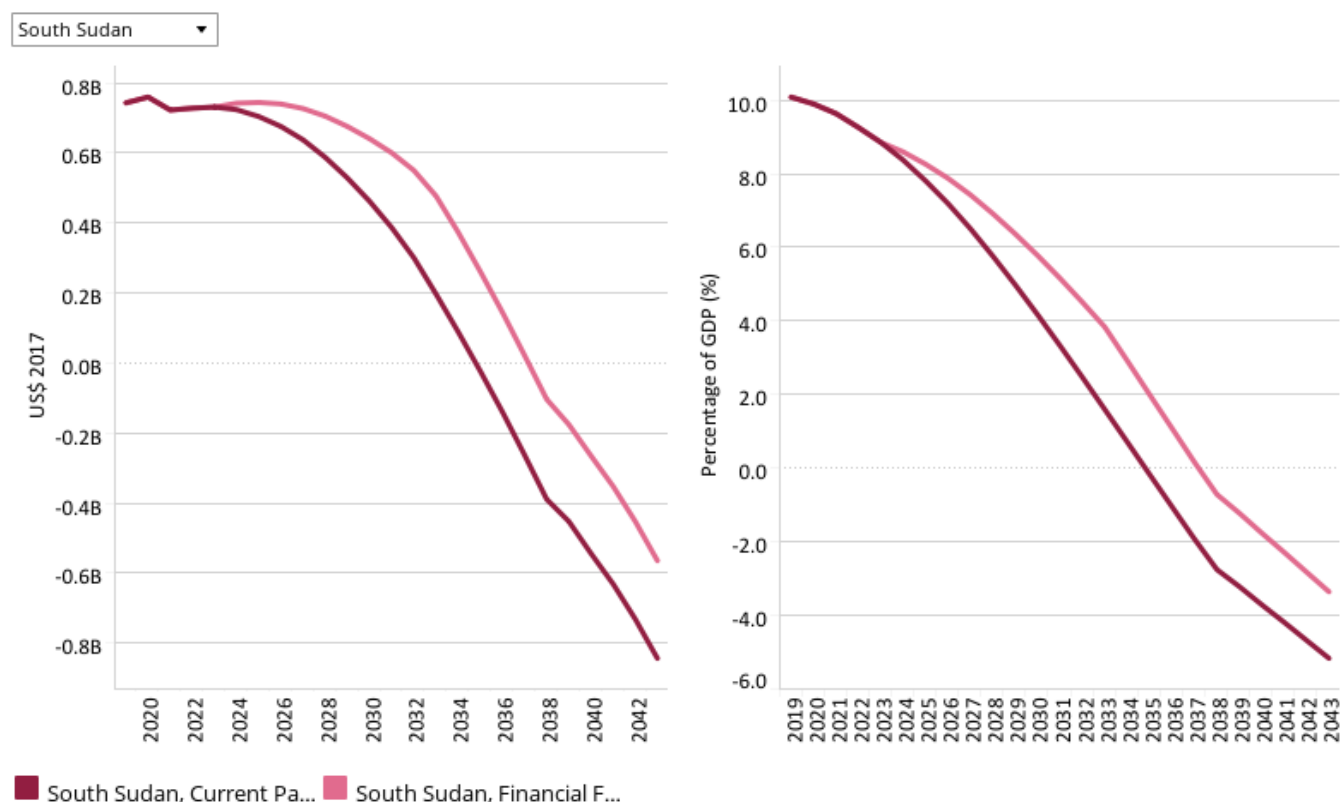
In 2019, FDI inflows represented 0.16% of the country's GDP, significantly below the average of 4.3% for low-income African countries.

In the Financial Flows scenario, FDI inflows will represent about 0.8% of GDP by 2043, compared with 0.7% on the Current Path.

FDI can act as a catalyst for economic growth and development as it brings much-needed capital and technology to recipient countries. Authorities in South Sudan should improve stability and make the necessary reforms to attract more FDI, especially for manufacturing.

# 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

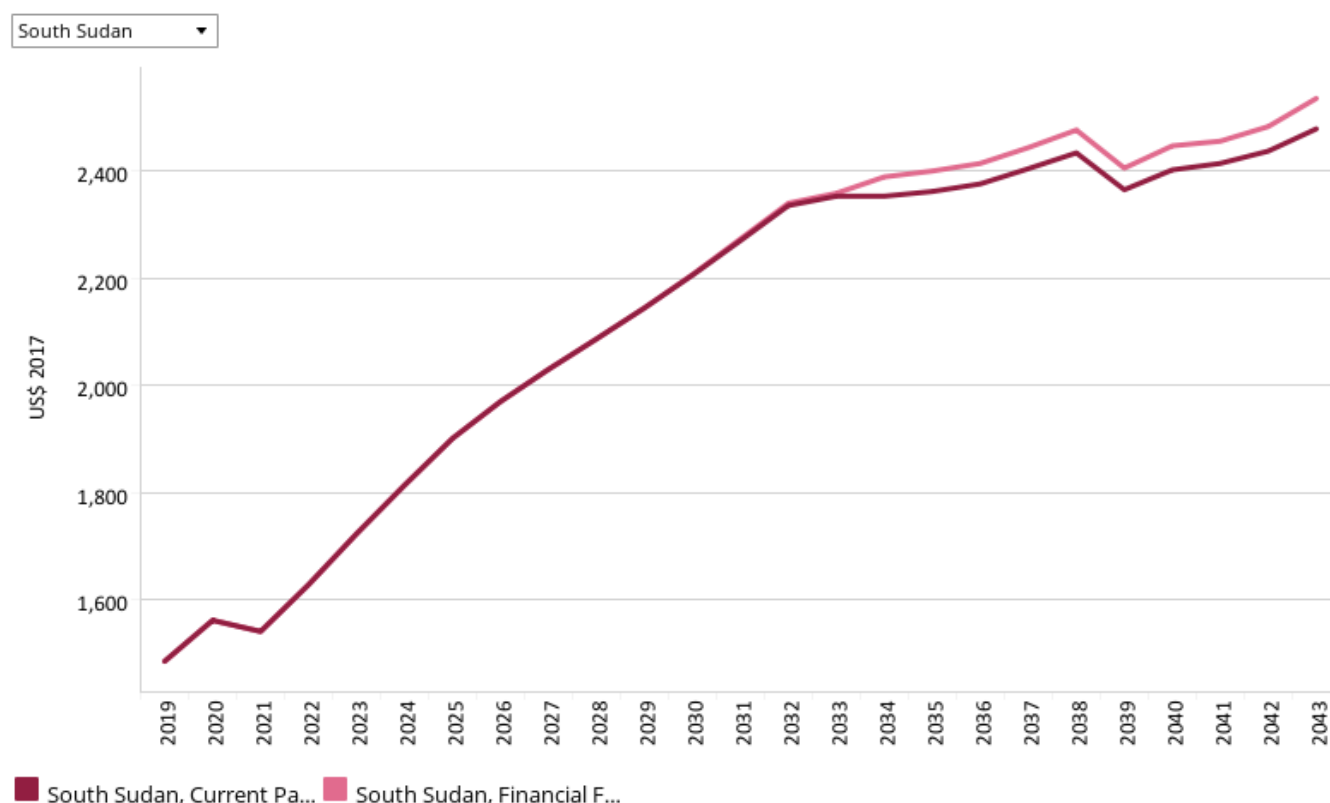
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South Sudan is a net recipient of remittances, which amounted to US\$700 million in 2019. This is equivalent to 10.1% of GDP for that year. the country remains a net recipient of remittances until 2034. In the Financial Flows scenario, the total net remittances to the rest of the world amounts to US\$600 million (3.4% of GDP) by 2043, compared with US\$800 million (5.2% of GDP) in the Current Path forecast.

It is worth mentioning that as South Sudan gained its independence from Sudan only in 2011, there is no historical data regarding remittance inflows for the young country. The IFs model therefore initialises from 2015. According to the forecast, South Sudan will be a net supplier of remittances from 2034. This is not realistic. IFs' forecast on this issue will improve over time as historical data become available.

**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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In the Financial Flows scenario, the GDP per capita of South Sudan increases from US\$1 486 in 2019 to US\$2 534 in 2043, which is US\$56 higher than on the Current Path for the same year. Overall, the Financial Flows scenario has a modest impact on GDP per capita in South Sudan. FDI can boost growth and development through capital accumulation and technology transfer, but has not yet reached the level that would make it a game-changer in the country owing to continued instability .

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

Millions of people and % of total population



South Sudan \$1.90



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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Measured at the US\$1.90 threshold, the Financial Flows scenario reduces the number of extremely poor people in South Sudan by only 400 000 by 2043 compared with the Current Path forecast. This is because FDI is concentrated in the oil sector, which does not have strong forward and backward linkages with other sectors of the economy. As a result, it does not substantially impact job creation, incomes or poverty reduction. Whereas 79.4% of South Sudan's population lived in extreme poverty in 2019, it would be 47.5% by 2043 in the Financial Flows scenario, compared with 50.3% in the Current Path forecast.



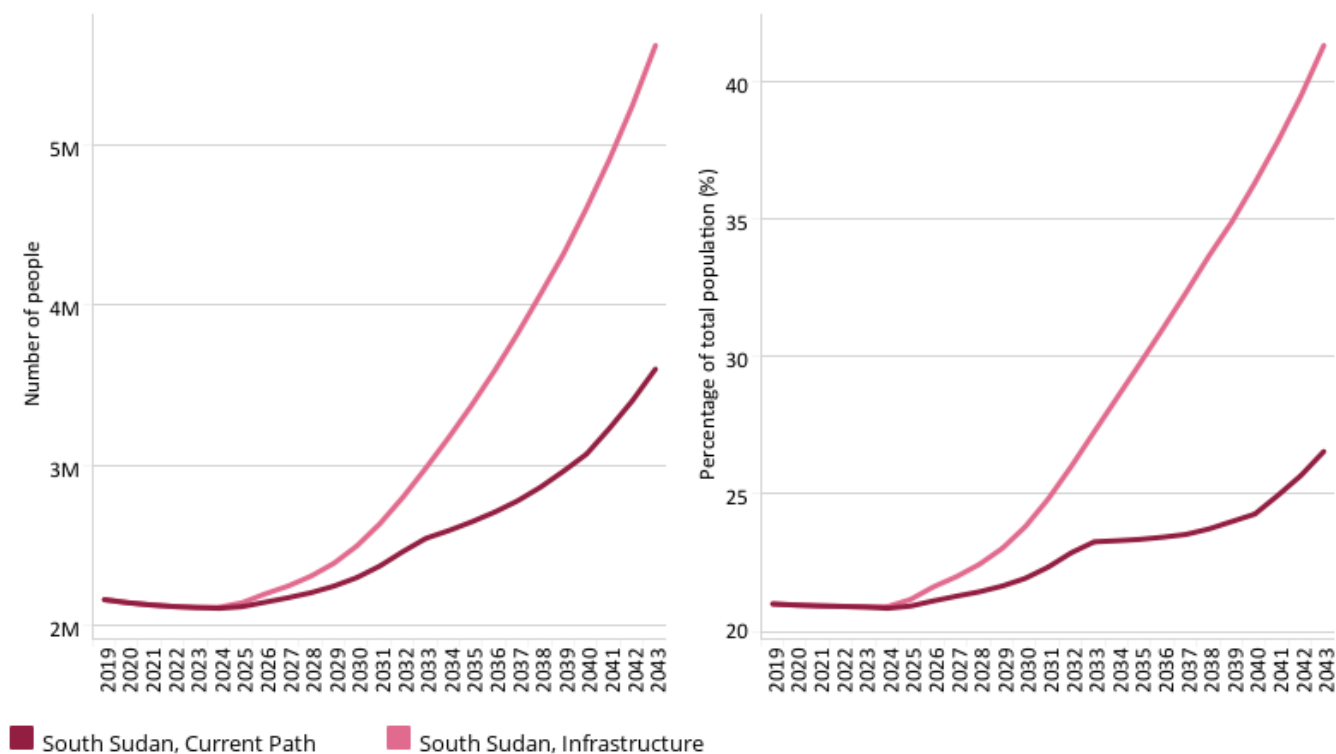
## Infrastructure scenario

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

Millions of people and % of population



South Sudan ▼ Total ▼



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.

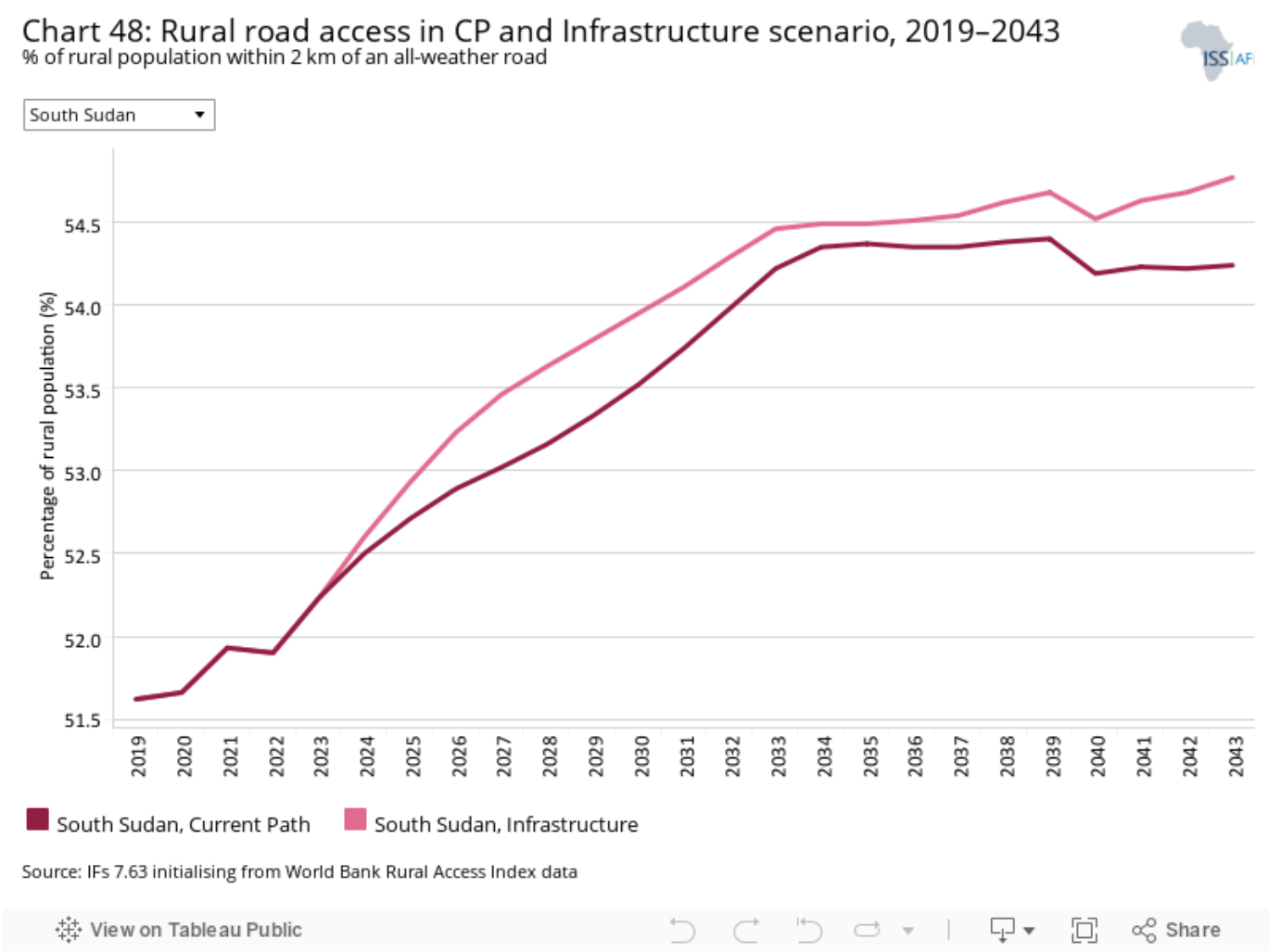
The intervention is explained in [here](#) in the thematic part of the website.

Infrastructure, whether in transportation, telecommunications, electricity or water and sanitation, is severely lacking in South Sudan. Since the colonial era, there has never been a backbone for electricity transmission, and none was developed during Sudanese rule.

In 2019, about 2.2 million people had access to electricity in South Sudan, representing 21% of the population. This is below the average of 32.2% for low-income countries in Africa. The Infrastructure scenario increases the number to 5.6

million by 2043, constituting 41.3% of the population. This is above the projected number of 3.6 million (26.5% of the population) in the Current Path forecast.

In the Infrastructure scenario, it is projected that 55% of the urban population in South Sudan will have access to electricity by 2043, compared to 44.9% in the Current Path forecast. However, by 2043 only 36.4% of the rural population (3.6 million people) will have access to electricity in the described scenario, compared with 20% (2 million people) in the Current Path forecast. This points to the huge disparity in access to electricity between the urban and rural population in South Sudan.



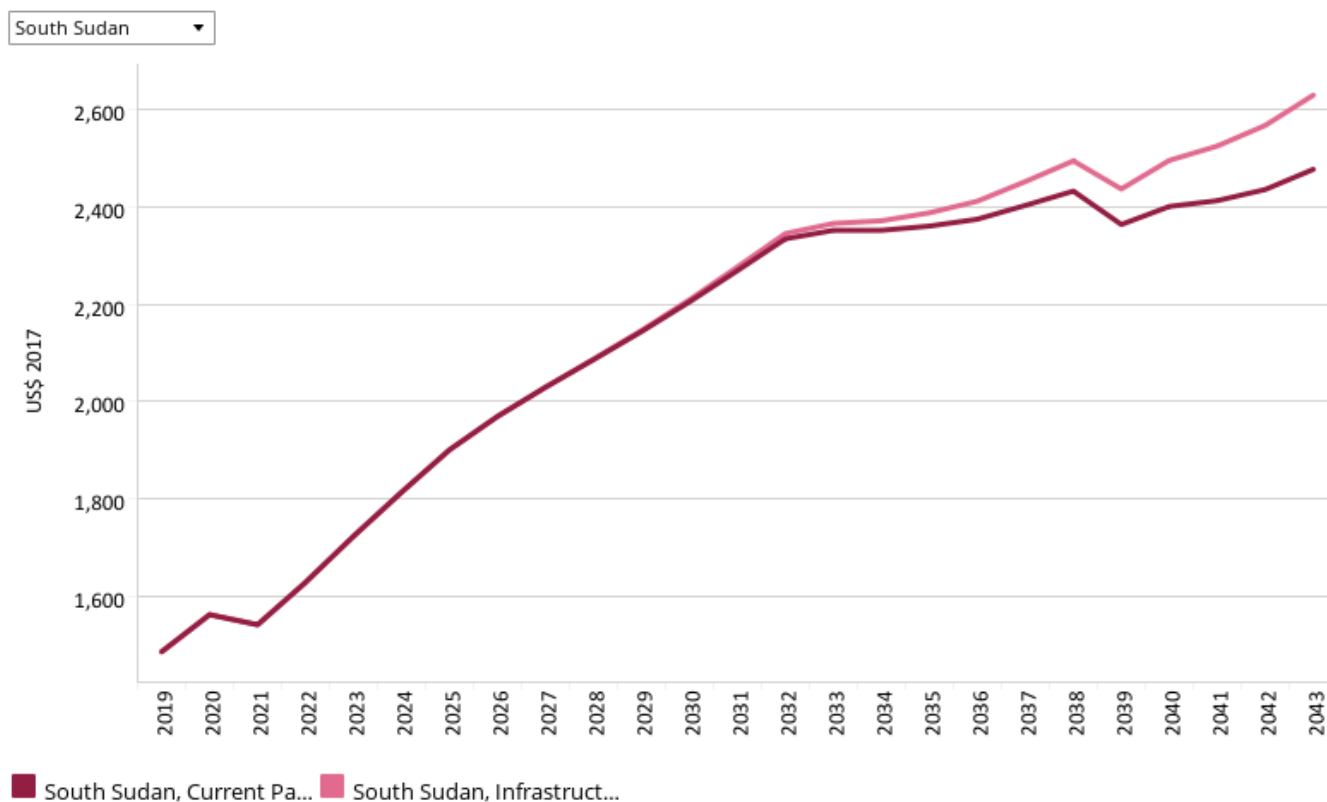
Indicator 9.1.1 in the Sustainable Development Goals refers to the proportion of the rural population who live within 2 km of an all-season road and is captured in the Rural Access Index.

Accessibility to rural areas encourages socio-economic development and improves the rural population's living standards. Better rural roads facilitate trade between rural and urban areas and, for example, allow the rural population to enjoy products from nearby urban areas while giving the urban population easier access to agricultural products supplied by rural areas.

By 2019, 51.6% of the rural population in South Sudan resided within 2 km of an all-weather road, above the average of 43% for low-income African countries. In the Infrastructure scenario, it is projected to increase to 54.8% by 2043, slightly above what is projected on the Current Path (54.2%) for that year.



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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Quality infrastructure facilitates business and industry development and increases efficiency in the delivery of social services. Critical basic infrastructure such as roads and electricity play a vital role in achieving sustainable and inclusive economic growth. Lacking infrastructure impedes productivity and growth.

South Sudan's GDP per capita is forecast to rise to US\$2 630 by 2043 in the Infrastructure scenario. This is US\$152 more than on the Current Path for the same year but below the Current Path average of US\$3 790 for low-income countries in Africa.

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

Millions of people and % of total population



South Sudan

\$1.90



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

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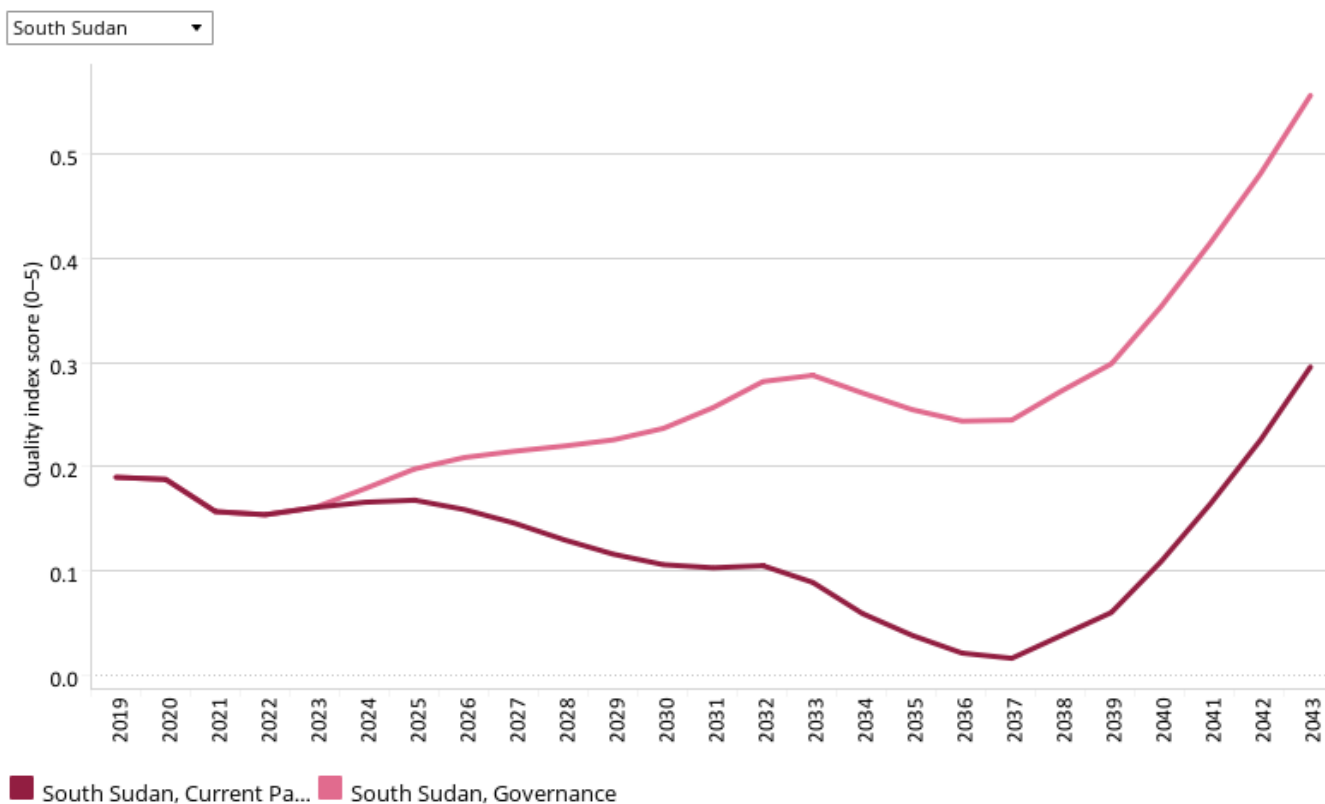
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In the Infrastructure scenario, the extreme poverty rate is projected to decline from 79.4% in 2019 to 48.2% in 2043. This translates to 6.56 million people living in extreme poverty by 2043, compared with 6.8 million in the Current Path forecast. This is a decrease of 240 000 people. The extreme poverty rate for 2043 (48.2%) in the Infrastructure scenario is higher than the projected Current Path average of 25.1% for low-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.

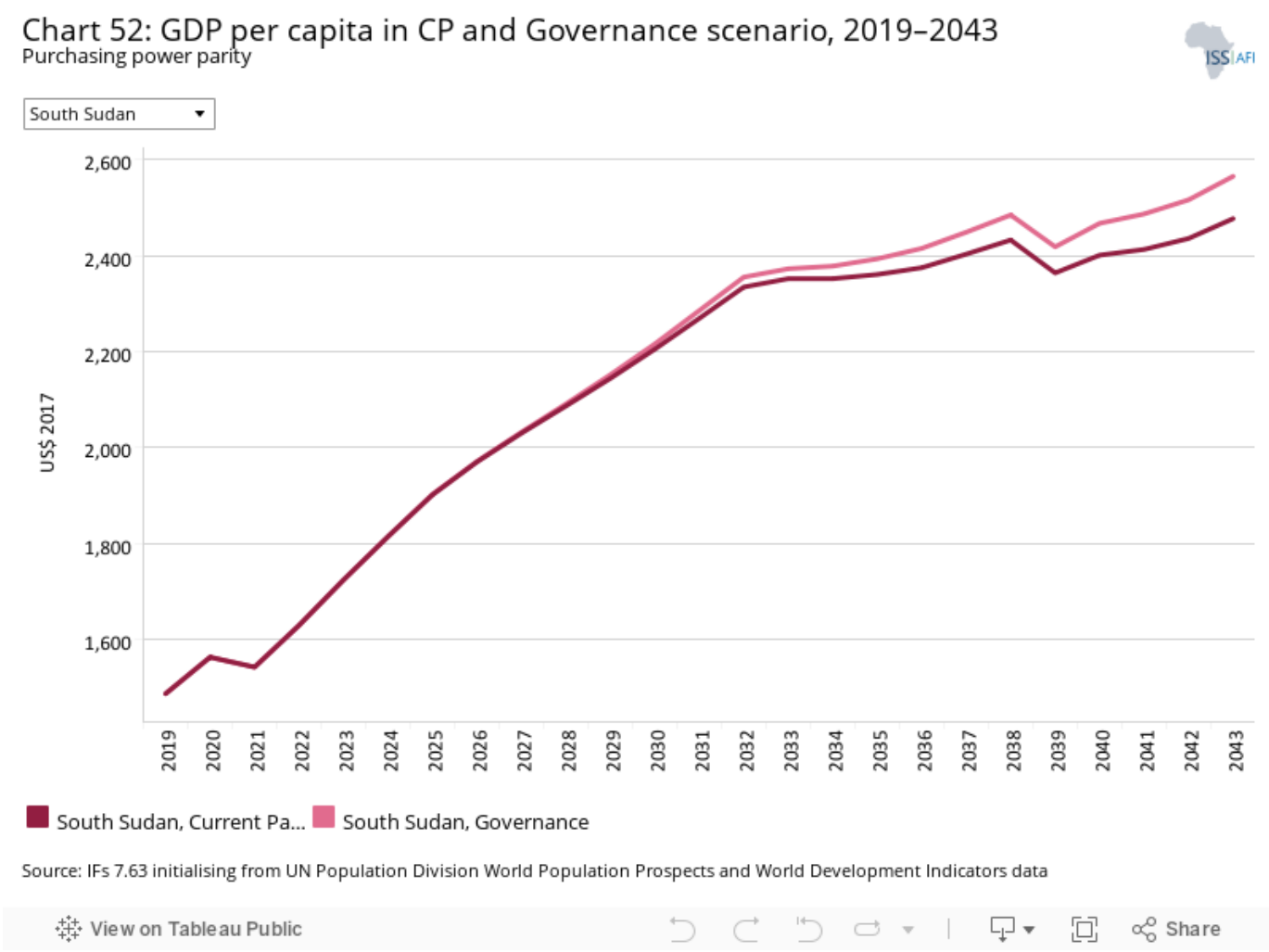
The intervention is explained in [here](#) in the thematic part of the website.

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'.

Weak government effectiveness and the absence of strong institutional and legal mechanisms to ensure accountability hamper economic progress in South Sudan. According to the Ibrahim Index of African Governance, the country was the second worst performer in governance in Africa after Somalia and rates similarly with regard to corruption.

The government effectiveness score for South Sudan was 0.19 (out of a maximum of 5) in 2019, which is projected to increase in both the Current Path forecast and the Governance scenario by 2043 — to 0.3 and 0.56, respectively. The score in the Governance scenario is therefore 0.26 points higher than the projected score in the Current Path forecast for that year.

However, the score will still be lower than 2043 average in the Current Path forecast (1.9) for low-income countries in Africa.



In the Governance scenario, South Sudan's GDP per capita is projected to increase to US\$2 566 by 2043, which is US\$88 more than in the Current Path forecast. However, this Governance scenario's forecast is lower than the Current Path average of US\$3 790 for low-income countries in Africa for the same year.

Critical determinants of growth depend on governance and the institutional settings in a country. The governing elite in South Sudan should set aside their personal differences and focus on the national interest in order to promote good governance for sustainable development.

**Chart 53: Poverty in CP and Governance scenario, 2019–2043**  
 Millions of people and % of total population



South Sudan    \$1.90



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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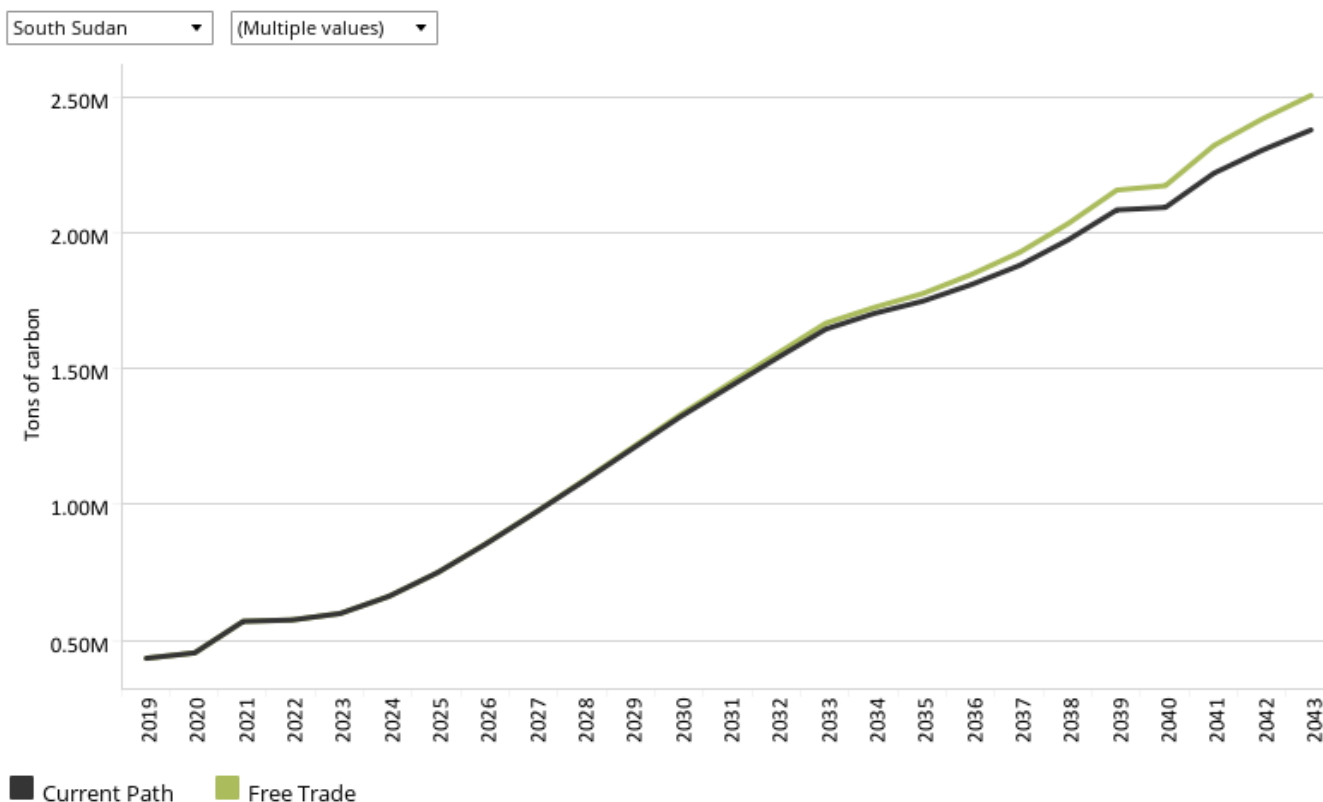
Measured at the US\$1.90 threshold, the poverty rate in South Sudan is projected to decline to 49% by 2043 in the Governance scenario. This is almost twice the average for low-income countries in Africa (25.1%). South Sudan’s expected 2043 poverty rate in the Governance scenario translates to roughly 200 000 fewer people living in poverty by 2043 than in the Current Path forecast.



## 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 South Sudan and the 11 scenarios. Note that IFs uses carbon equivalents rather than CO<sub>2</sub> equivalents.

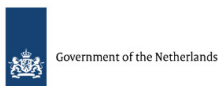
In 2019, South Sudan released about 0.4 million tons of carbon, and on the Current Path it is expected to emit 2.4 million tons by 2043. This is an increase of 500%. Although carbon emissions are set to increase as economic activity increases, South Sudan's carbon emissions come from a very low base. Like many developing countries, the country will suffer disproportionately from climate change, which it has contributed very little to. Nonetheless, the country must reduce its carbon emissions and move towards using renewable energy for sustainable growth to mitigate climate change.

The Agriculture scenario has the most significant impact on carbon emissions. The Demographic scenario has the lowest level of carbon emissions. The reduction in population growth curtails pressure on resources and hence minimises environmental degradation. By 2043, the amount of carbon emissions is higher than in the Current Path forecast in all scenarios, except for the Demographic scenario. Carbon emissions range from 2.6 million tons (Agriculture scenario) to 2.3 million tons (Demographic scenario).

## Endnotes

1. The Borgen Project, [Five key facts about healthcare in South Sudan](#).
2. Malteser International, [South Sudan: Safe water, sanitation and hygiene](#).
3. The Borgen Project, [Five key facts about healthcare in South Sudan](#).
4. The Borgen Project, [Five key facts about healthcare in South Sudan](#).
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6. African Development Bank, [Development of Agriculture in South Sudan](#).
7. UNESCO Institute for Statistics, [New report shows 2.2. million children are out of school in South Sudan](#).
8. UNESCO Institute for Statistics, [New report shows 2.2. million children are out of school in South Sudan](#).
9. European Commission, [South Sudan factsheet](#).

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**Dr Kouassi Yeboua** is a senior researcher in African Futures and Innovation programme in Pretoria. He recently served as lead author on ISS studies on the long-term development prospects of the DR Congo, the Horn of Africa, Nigeria and Malawi. Kouassi has published on various issues relating to foreign direct investment in Africa and is interested in development economics, macroeconomics, international economics, and economic modelling. He has a PhD in Economics.

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