

# Chad

## Chad: Current Path

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## Chad: Current Path forecast

### Chart 1: Political map of Chad

This page provides an overview of the key characteristics of [Chad] 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 Republic of Chad is a landlocked former French colony that borders Libya, Sudan, Central African Republic (CAR), Cameroon, Nigeria and Niger. It is the sixth largest country in Africa by land area at approximately 1 284 000 km<sup>2</sup>, and it is a member of the Community of Sahel-Saharan States (CEN-SAD) and the Economic Community of Central African States (ECCAS).

Chad is home to Lake Chad, the most significant water body in the Sahel. It provides freshwater and sustains the livelihood of millions of people across the Chad basin. Cycles of drought, land degradation and a shifting climate have resulted in large numbers of herdsman migrating southwards, encroaching on settlements and farmlands, sparking farmer-herder conflicts, particularly in the south of the country. [1] The conflict between herdsman and farmers has spread in neighbouring Nigeria as well and has become the largest source of such conflict deaths, even surpassing fatalities from Boko Haram. [2]

Politically, Chad endured three decades of civil war after independence (1965–1975 and 1979–1990) and has seen many other rebellions and attacks since the 1990s. Most recently, the Lake Chad region has suffered multiple attacks by the terrorist group Boko Haram. [3]

French and Arabic are the official languages (though there are over 120 different languages and dialects) and Islam is the predominant religion. The capital city is N'Djamena, one of the warmest large cities in the world. [4]

Rich in gold and uranium, Chad also became an oil-producing nation in 2003, with the completion of a US\$4 billion pipeline linking its oilfields to terminals on the Atlantic coast through neighbouring Cameroon. [5]

Despite its resources, Chad falls within the top five countries with the lowest Human Development Index (HDI) and remains one of the poorest countries with the fourth youngest population in the world (a median age of approximately

16.5 years) after Niger, Somalia and Mali.

## Demographics: Current Path

In 2019, Chad's population was estimated at 16.2 million and in the Current Path forecast is expected to more than double, reaching 34.2 million people by 2043. This represents 18 million more people over the next 24 years. As a result of ongoing conflict in the region, Chad is reported to host around 450 000 refugees from neighbouring Sudan, CAR and Nigeria, who represent approximately 4% of the country's total population. [6]

The total fertility rate was 5.8 births per woman in 2019, placing Chad among the highest globally. In 2019, life expectancy at birth in Chad was 59.4 years, 6.4 years below the average for African countries. By 2043, in the Current Path forecast, it is expected to reach about 66.6 years, roughly 5.5 years below the African average. As a result of the relatively high fertility rates and low life expectancy levels, the region has a very youthful population.

With a median age of about 16.5 years in 2019, according to IFs, Chad is the fourth youngest country globally and its median age only gets to 18 years around 2034, and by 2043, the country will only have aged by one year making it the second youngest country in the world. As a result of this youthful age structure, Chad's relatively small working-age population struggles to support the large dependant youthful population.

The dependency ratio quantifies this relationship and is calculated as the number of children (15 years and below) and the elderly (65 and over) relative to the working-age population (15 to 64). The average dependency ratio for Chad in 2019 was 0.96. This means that on average there are 96 dependant persons for every 100 people of working age. For Chad, the large majority of the dependant population are children under 15 years. For context, the global and African dependency ratios are about 0.53 and 0.79 respectively, meaning that there are 43 and 17 additional dependants per 100 workers in Chad relative to the global and African averages. Although the average dependency ratio is forecast to decline through the years, it will still be high and only reach 0.78 in 2043.

In the absence of economic opportunities, the large youthful population poses a threat to social stability. Additionally, this age structure constrains economic growth because the majority are not of working-age and are therefore dependent on the small working-age population tasked with providing basic needs. As such, the prospects for a demographic dividend (the economic growth that accrues from a large working-age population and a small dependant population) is unlikely within the next couple of decades.

Chad's population is largely rural at about 77.1% in 2019. In the forecast horizon, the rural population is only expected to reduce by 3.3 percentage points to reach 73.8% by 2043. This means that urbanisation also only marginally increases from about 22.9% in 2019 to 26.2% by 2043. The capital city N'Djamena is one of the few urban areas in Chad. [7]

Low life expectancy, low levels of education (expected years of schooling at birth and mean years of schooling) and low standards of life all contribute to the stagnation of socio-economic growth within the country. The system is in many ways self-generating with the prevailing circumstances.

Additionally, limited supply of energy, infrastructure deficit, limited skills, a stringent business regulatory system and poor access to finance impede the productivity potential of Chad's urban areas. [8]

#### Chart 4: Population density map for 2019

The population distribution of Chad is closely linked to its physical geography and climate. The harsh dry climate in the north is characterised by very low population densities and few inhabitants, while the southern regions with distinct rainfall seasons, forests and perennial rivers are home to the vast majority of the population. The highest population densities are located in the Logone Occidental Region and the capital of N'Djamena. [x]

## Economics: Current Path

Chad joined the ranks of oil-producing countries in 2003 and has been dependent on oil since. The country's economy has been negatively impacted in the last few years due to a decline in world oil prices, although things have been improving since 2016. [9]

Chad's economic growth has been slow; apart from challenges related to the slump in oil prices, its economy generally suffers as a result of its geographical remoteness, ongoing conflict and insecurity in the region, lack of investment in infrastructure and a harsh climate.

In 2018, Chad restructured its oil-collateralised loan with the Glencore petroleum company. This agreement was expected to reduce the public debt-to-GDP ratio from 51.9% in 2017 to 41.2% in 2020. However, the risk of external debt still remains high in the country. [10]

In 2019, the size of Chad's economy was just over US\$16 billion, and by 2043, it is forecast to reach only US\$43.4 billion. In the Current Path forecast, the average annual growth rate between 2019 and 2043 is expected to be around 4%.

Oil is likely to remain a key driver of economic growth for the near-term future in Chad. However, this means that the country remains vulnerable to oil price volatility, insecurity and the negative impacts of climate change. Investments in key sectors such as education, health and agriculture are urgently needed to promote diversity in the economy and mitigate these risks. [11]

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 Chad.

In 1990, Chad placed tenth among its low-income African peers in GDP per capita. The country has improved this position, ranking seventh in 2019 with a value of US\$1 908. This is US\$248 above the average for its income peers.

In the Current Path forecast, the country is expected to reach a GDP per capita of US\$2 726 (Chart 6) by 2043. Chad's economy is growing much slower compared to other low-income countries in Africa and will drop to 15th position by 2043. In 2019, Chad's per capita income was US\$248 higher compared to the average for its low-income peers.

Although the forecast for economic growth is optimistic, it will not keep up with projected population growth, and by 2030, the average for low-income countries would surpass that of Chad. By 2043, Chad's per capita income is forecast to be US\$1 064 below the average for low-income Africa.

An OECD report released in 2002 showed that in 1996 over 40% of Chad's GDP came from the informal economy and contributed half of all urban activity and three-quarters of non-agricultural activity in the countryside. [12] There are no recent reliable statistics on the size of the informal economy, although a large majority of the population are considered to

be involved in informal economic activities for their livelihoods. The World Bank in 2015 estimated that among active workers, 79% of the poor rely on crops and/or livestock as their main source of income and another 14% work in the non-agricultural informal sector. [13]

IFs estimates that in 2019, the size of the informal economy stood at 35% and by 2043, will only slightly reduce to about 31.3%.

As a result of structural challenges suffered by the country, many of its workforce is forced to work in the informal sector that is not subjected to national labour legislation, income taxation, social protection or entitlement to employment benefits. [14] Structural challenges, such as poor and inadequate infrastructure, [15] poor governance, instability, poor health and education outcomes, lack of economic opportunities and repeated natural disasters, have hampered development significantly.

In addition to the precarious employment situation of the informal sector, there are also deleterious effects on the process of state formation and the development of the social contract in a vicious cycle that further undermines development in Chad.

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

Chad exhibits a weak structural transformation in the contribution of various sectors to its GDP. In Chad, the share of agriculture's value-add to the GDP was 44% in 2019, indicating a high dependency on this sector. It is followed by services (typically low value-added services) at 40.6% of GDP. Manufacturing only contributes 6% of the GDP and energy 5.4% of the GDP. The energy sector has typically not been able to create many employment opportunities in Chad.

In the Current Path forecast, the agriculture sector's share is forecast to decline to 27.3% of GDP and the service sector will increase to 41.3% of GDP by 2043. Manufacturing will record about 18.7% of GDP (representing US\$8.1 billion) and energy will remain almost stagnant at 5.7% of GDP. These improvements represent the structural transformation that is expected if Chad's authorities work to develop the country.

Manufacturing is particularly important for job creation and employment. However, these improvements are also dependent on Chad's ability to improve its human resource skills and create a conducive business climate.

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.

Chad's agricultural potential is constrained by unreliable and poor infrastructure, frequent droughts and soil erosion. Chad's agricultural sector also suffers from low productivity and limited access to rural financial services that prevent poor



farmers from developing alternative income opportunities or improving productivity. [16]

As a result, agricultural yields remain low, and in 2019 Chad had a yield estimate of 1.2 metric tons per hectare, 1.5 metric tons lower than the average for low-income countries in Africa. In 2019, the country produced 7.3 million metric tons of agricultural produce, of which 5.9 million were crops. Agricultural losses remain very high and an estimated 10.7% of yield is lost due to poor processing and insufficient transport and storage infrastructure.

The demand for agricultural produce only slightly exceeded production by 320 000 metric tons in 2019. This production and demand gap is likely to grow in the Current Path forecast. By 2043, agricultural production is forecast to be 12.6 million metric tons and demand would exceed 20 million metric tons, translating to an 8.1-million-metric ton shortfall. This situation will further strain Chad's food security for a country that already suffers from high malnutrition. Over 40% of children suffer from stunting, which can have long-term implications for their cognitive development. This has broader repercussions on the economic productivity of Chadians and the state of overall development in the country. This is a similar pattern as those observed in other low-income countries across Africa.

## Poverty: Current Path

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

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

Poverty in Chad has significantly declined over the last two decades but remains persistent. Households that tend to have more children, low education, and work in the agricultural sector in unfavourable farming conditions are some of the poorest in the country. Despite improvement in other non-monetary aspects, many Chadians continue to experience poor living conditions with low access to basic services such as clean water, improved sanitation and electricity and limited access to assets. [17]

In 2019, 6 million people (37.1% of the population) lived below the US\$1.90 per person per day extreme poverty threshold. This is 10.7 percentage points lower than the average for low-income countries in Africa. By 2043, Chad's poverty rate is projected to decline in the Current Path forecast to 27.5%, although the absolute number of people in extreme poverty will increase to 9.4 million people — the result of a rapidly growing population with slow economic growth.

However, on the Multidimensional Poverty Index, over 82% of Chadians are considered poor and 63% are considered destitute, the fourth highest globally in both instances. [18] There is also a high disparity in the distribution of poverty across regions in the country. The north records lower poverty rates compared to the other regions (except the capital city).

Given the high level of multidimensional poverty, pro-poor policies such as investments in basic services and infrastructure are crucial. Policies to cushion the large informal sector which employs most of the urban and rural poor should also be implemented. [19]

## Carbon Emissions/Energy: Current Path

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.

Chad is endowed with significant oil reserves. It also has solar and wind resource potential. The majority of its existing capacity comes from fossil fuels in the form of crude oil and gas (Chart 11). Chad currently has only about 314 MW of installed generation capacity to serve its population of over 16 million people. [20]

In the Current Path forecast, oil will continue to make the greatest contribution to Chad's energy mix and by 2043 will account for 86.5%, down from 93% in 2019. Gas will be the second biggest contributor in 2043 at 12.2%, up from 6.3% in 2019.

Chad has potential for renewable energy sources, especially solar. The government is making an effort to expand its electricity supply and is encouraging investment in the energy sector to stimulate the economy. In addition, with support from Power Africa, the country is advancing its first independent power producer project. The 32 MW Djermaya Solar PV project will contribute approximately 10% of the country's energy supply. [21]

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

Chad is one of the most environmentally degraded countries in the world and significantly vulnerable to the effects of climate change. The country experiences frequent droughts, increasing temperatures, variable rain patterns and declining water sources.

Chad makes a negligible contribution to global CO<sub>2</sub> emissions at about 300 000 tons of carbon in 2019 (Chart 12). In the Current Path forecast, it is projected that Chad's emissions will increase to only 7.8 million tons of carbon by 2043.

Despite the challenges associated with climate change, Chad has found innovative adaptation practices to mitigate some of the effects of climate change. For example, farmers in arid and semi-arid regions use an indigenous rainwater harvesting technique called Zaï, which involves the digging of small pits and sowing crops in them. The pits retain water for longer and are particularly efficient during drought. [22]

## Endnotes

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