CITY OF CAPE TOWN
ISIXEKO SASEKAPA
STAD KAAPSTAD

STATE OF CAPE TOWN 2022

Research Branch

Policy and Strategy Department

Future Planning and Resilience Directorate

Acknowledgements

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Note: The General Household Survey sample size for 2020 was significantly smaller than in previous years. This would influence the statistical findings flowing from the survey data.

Abbreviations

ARV	Antiretroviral Treatment
BioNet	Biodiversity Network
City	City of Cape Town municipal administration
city	the geographic area of Cape Town
Covid-19	Coronavirus disease (severe acute respiratory syndrome coronavirus 2, or SARS-CoV-2)
E.coli	Escherichia coli
GDP	gross domestic product
HIV	Human Immunodeficiency Virus
IDP	Integrated Development Plan
LEAP	Law Enforcement Advancement Programme
NEET	Not in Education, Employment or Training
Province	Western Cape Government
SAPS	South African Police Service
SDG	Sustainable Development Goal
TB	Tuberculosis

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EXECUTIVE SUMMARY

The State of Cape Town 2022 report provides an objective analysis of Cape Town's state of urban development. It analyses the context in which residents live, the services they access, and the challenges and opportunities with which they are presented.

Before the onset of the Covid-19 global pandemic,[1] Cape Town and South Africa already struggled with slow economic growth. Between 2014 and 2019, Cape Town recorded an average annual economic growth rate of 1,2% (constant 2010 prices), while the national economy recorded 0,8% over the same period,[2] with an increase in reported unemployment. The significant safety and security challenges faced in Cape Town also suggest a decline in social cohesion. In addition, the city suffered a severe drought, almost running out of potable water. Against this backdrop, the City recognised the need to improve and build resilience in every sector of Cape Town.

The pandemic laid bare many of Cape Town's urban development gaps and challenges. Social and economic issues worsened as unemployment increased, food security declined drastically, and economic growth slowed to an unprecedented rate.

In 2022, after two Covid-19-plagued years, the City is starting to recover from the impact of the pandemic and is rebuilding within the context of national recovery. While the pandemic is not necessarily over, the number of cases has declined considerably, assisted by the rapid development and distribution of vaccines.

This State of Cape Town (SOCT) 2022 report details not only the impact of the pandemic on Cape Town, but also how Cape Town is faring in terms of population, socioeconomic development, economy and employment, health and wellbeing, environmental resources, urban form and mobility, and urban governance. The report seeks to use the most recent data, which in this instance relates predominantly to 2020.

The SOCT 2022 shows that despite sluggish economic growth, there has been an increase in employment as well as quarter-on-quarter growth as economic sectors pick up post-Covid-19.

The population of Cape Town is growing at a slow (average) annual rate of 2,1% (2014–2020).[3] Household size is decreasing, with the average household now comprising approximately three people. In the aftermath of the pandemic in Cape Town, residents are still feeling the impact of increased unemployment and the associated increase in vulnerability, food insecurity, and perceptions of being unsafe.

[1] As at 24 August 2022, the coronavirus is still mutating, and the World Health Organisation has not officially declared the end of the pandemic.
[2] State of Cape Town 2020 full report. Available: https://resource.capetown.gov.za/documentcentre/Documents/City%20research%20reports%20and%20review/State_of_Cape_Town_Report_2020.pdf
[3] City of Cape Town. 2021. Overview of demographic and socioeconomic characteristics of Cape Town. Internal document.

The challenges of spatial inequality and unequal access to services remain and continue to be addressed by the City. However, the expansion of unplanned settlements delays efforts to meet housing needs in Cape Town. This potentially disadvantages those already vulnerable and renders spatial equality more challenging to achieve.

The City has approved its new Integrated Development Plan 2022–2027 and outlined key strategic objectives to guide its work. The administration remains focused on building resilience, both institutionally and in broader Cape Town. One of the key tools to build resilience is partnerships, collaboration and communication with the various City stakeholders. The City is committed to building better partnerships across communities, academia, business and industry to enhance its service delivery mechanisms and objectives.

During the current Covid-19 recovery period, governments globally are focused on becoming future-ready, and the City is no exception. The administration recognises the need to anticipate possible future scenarios and put in place measures to secure the preferred future for Cape Town.

INTRODUCTION

This State of Cape Town 2022 report (SOCT 2022) is the ninth in a series of biennial State of Cape Town reports and provides the status quo of Cape Town and the City administration. The aim is to inform and offer analyses of Cape Town's key issues.

This State of Cape Town report is aligned with the Integrated Development Plan (IDP) 2022–2027 (see figures below).[4] It highlights the state of service delivery, access to services, and the visionary outcomes the City wants to achieve (resilience, inclusion and collaboration). In addition, this report incorporates a look ahead, highlighting key areas of concern and potential growth that may affect the future functioning of Cape Town.

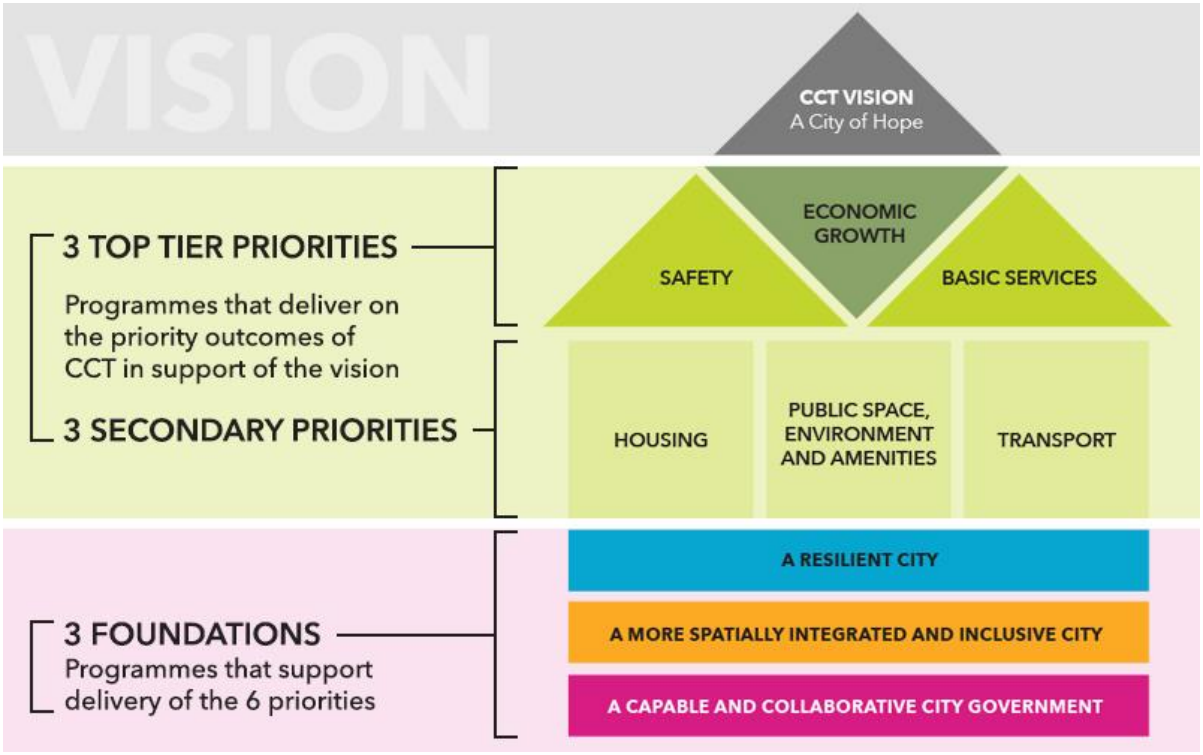


Figure 1: The framework of the Integrated Development Plan 2022–2027 (Source: City of Cape Town IDP 2022–2027)

[4] The IDP 2022–2027 contains six priority areas for programmatic intervention, and three foundations that serve as transversal outcomes to work towards. The three foundations are resilience, capable and collaborative governance, and a spatially integrated and inclusive city.

Figure 2: Alignment between State of Cape Town 2022 and the Integrated Development Plan 2022–2027

Cape Town is home to more than four million people[5] (June 2021) and has the second-largest population of all South African cities.[6] Before Covid-19, it was a popular tourist destination and was viewed as the second-largest economic centre in South Africa, comprising a vibrant finance, services, manufacturing and tourism sector. Cape Town is also host to UNESCO world heritage sites such as Table Mountain, Robben Island and the fynbos biome.[7]

Yet the city struggles with crime and safety (particularly in the south-eastern parts of the metro), high vulnerability and significant risks relating to the impact of climate change. Cape Town also experiences long-term stresses such as the quality of life in informal settlements, substance abuse, a lack of social cohesion, traffic congestion, food security and trauma.[8] Additionally, the Covid-19 pandemic has had a severe effect on the local economy, having worsened the situation of already vulnerable residents.

[5] Statistics South Africa, 2016 Community Survey and 2021 mid-year population estimates.
[6] World Population Review. 2022. Cape Town population. Available: https://worldpopulationreview.com/world-cities/cape-town-population.
[7] City of Cape Town integrated annual report 2020/21. Available: https://www.capetown.gov.za/local%20and%20communities/city-publications/publications-and-reports/annual-reports.
[8] City of Cape Town. 2019. Resilience Strategy. Available: https://resource.capetown.gov.za/documentcentre/Documents/City%20strategies%2C%20plans%20and%20frameworks/Resilience_Strategy.pdf.

CAPE TOWN IN CONTEXT

Like other countries across the globe, South Africa too is in recovery from the Covid-19 pandemic. This comes after five waves of the virus, each marked by high numbers of Covid-19-related deaths, which affected the national mortality rate. In Cape Town, at the peak of the second wave (December 2020 to January 2021), the number of deaths rose to 112 per day. From the first wave (May to July 2020) to the fifth (May 2022), the daily number of people who tested positive for Covid-19 skyrocketed from 2 003 (at the peak of the first wave) to 6 174 (at the peak of the fourth wave), and then declined again to 2 103 (at the peak of the fifth wave).[9]

The Covid-19 vaccine became available in February 2021 and was first administered to frontline workers such as healthcare staff and teachers. At the time of compiling this report, 52% of adults in the Western Cape (2 598 337 people) had been vaccinated.[10]

Before the national lockdown[11] was first imposed at the end of March 2020, Cape Town had already experienced slower economic growth and social challenges (including in its spatial and environment context), in line with the national and global trend. This economic slowdown was exacerbated by the pandemic, setting Cape Town back in terms of economic and social progress. In South Africa, vulnerability increased as people became poorer and lost their jobs in large numbers: Those earning R3 500 or less per month increased from 22,6% to 28% between 2019 and 2020.[12] A year after the pandemic reached South African shores (March 2021), men's employment conditions seemed to have generally returned to February 2020 (pre-Covid-19) levels. Women's working conditions, on the other hand, remained beneath the pre-Covid-19 baseline.[13]

Climate change is also making its impact felt in various ways, notably on ecological systems and resource availability. Between 2015 and 2017, Cape Town was in the grip of a severe drought and came close to running out of potable water. More recently, other South African municipalities also experienced shocks such as extreme rain and catastrophic floods (e.g. eThekwini Municipality) as well as drought conditions (e.g. Nelson Mandela Bay Municipality).

Climate change impacts have resulted in shifting weather patterns that threaten food production and have seen an increase in heatwaves, storm surges as well as flood risk due to rising sea levels.[14] As shock weather events in cities and countries in the global north have illustrated, the impacts of climate change have become much more

[9] Western Cape Government. 2022. Covid-19 cases dashboard. Available: https://coronavirus.westerncape.gov.za/vaccine/covid-19-cases-dashboard
[10] SA Coronavirus. 2022. Latest vaccine statistics. Available: https://sacoronavirus.co.za/latest-vaccine-statistics/.
[11] A measure introduced to stem the spread of the virus.
[12] Supplied by the Research Branch, Policy and Strategy Department, City of Cape Town, based on Statistics South Africa, General Household Survey 2016–2020.
[13] Casale, D. & Shepherd, D. 2021. The gendered effects of the Covid-19 crisis and ongoing lockdown in South Africa: Evidence from NIDS-CRAM Waves 1 – 5. Available: https://cramsurvey.org/reports/.
[14] United Nations. Climate change. Available: https://www.un.org/en/global-issues/climate-change.

unpredictable and are felt differently depending on communities' level of vulnerability.

Other global stresses include conflict and warfare, which are threatening resource supplies to many countries, including South Africa. The current Russia-Ukraine war has disrupted global supply chains, affecting the production of a range of consumer goods, from cars to cellphones. Food and fuel prices also rose sharply in 2021, and the war subsequently caused critical food shortages in 2022. This comes on the back of Covid-19-related disruptions to supply and production chains.[15]

These challenges affect both South Africa and Cape Town. Unemployment in Cape Town remains high (largely also due to the mismatch between labour supply and demand), albeit still lower than the national average.[16] The lack of employment opportunities for vulnerable communities, along with inequitable access to opportunities, has contributed to a range of social challenges in Cape Town.

This report summarises Cape Town's key challenges and opportunities under the six themes of population and socioeconomic trends, economy and employment, health and wellbeing, environmental resources, urban form and mobility, and urban governance.[17] Under each theme, the report unpacks the status quo of Cape Town and the risks the city faces.

Overall, the SOCT 2022 aims to provide critical analyses informed by urban development research and indicators, and to outline Cape Town's urban challenges and their context at a particular point in time. At the same time, the report highlights possible matters of importance for Cape Town and the City going forward.

[15] City of Cape Town. 2022. Supply chain risks newsletter. Available: https://resource.capetown.gov.za/cityassets/Files/Newsletter/Supply%20chain%20risks%20newsletter.pdf.
[16] City of Cape Town IDP 2022–2027. Available: https://www.capetown.gov.za/Family%20and%20home/City-publications/the-citys-five-year-plan-(idp).
[17] The same themes reported on in previous State of Cape Town reports so as to add to the trends highlighted previously.

ECONOMY AND EMPLOYMENT

This chapter covers the Cape Town economy and employment statistics, with a particular focus on the Covid-19 recovery period and the local economic impacts of the pandemic. According to the forecasts, economic growth will remain at the lower end in the next two to five years.

Cape Town economy in the national context

Although economic output is slowly returning to pre-2019 levels, unemployment in Cape Town remains high, albeit the lowest in the country. The pandemic resulted in a severe recession, and recovery is further being hindered by the war in Europe and subsequent global challenges, such as energy insecurity, supply chain constraints and rising inflation. Local challenges include rising interest rates and ongoing problems with national electricity supply. Nevertheless, pockets of innovation in Cape Town include the finance, technology and business process outsourcing sectors, as well as firms in the food value chain.

As a significant role-player in the regional economy, Cape Town accounts for around 70% of the Western Cape gross domestic product (GDP), while it contributes approximately 10% to national GDP. The city generates a gross geographic product of around R541 billion (2021), is the second-largest urban economy in the country, and the third-largest employer (see figure 3). The diverse services sector continues to dominate and made up some 80% of the economy in 2021.

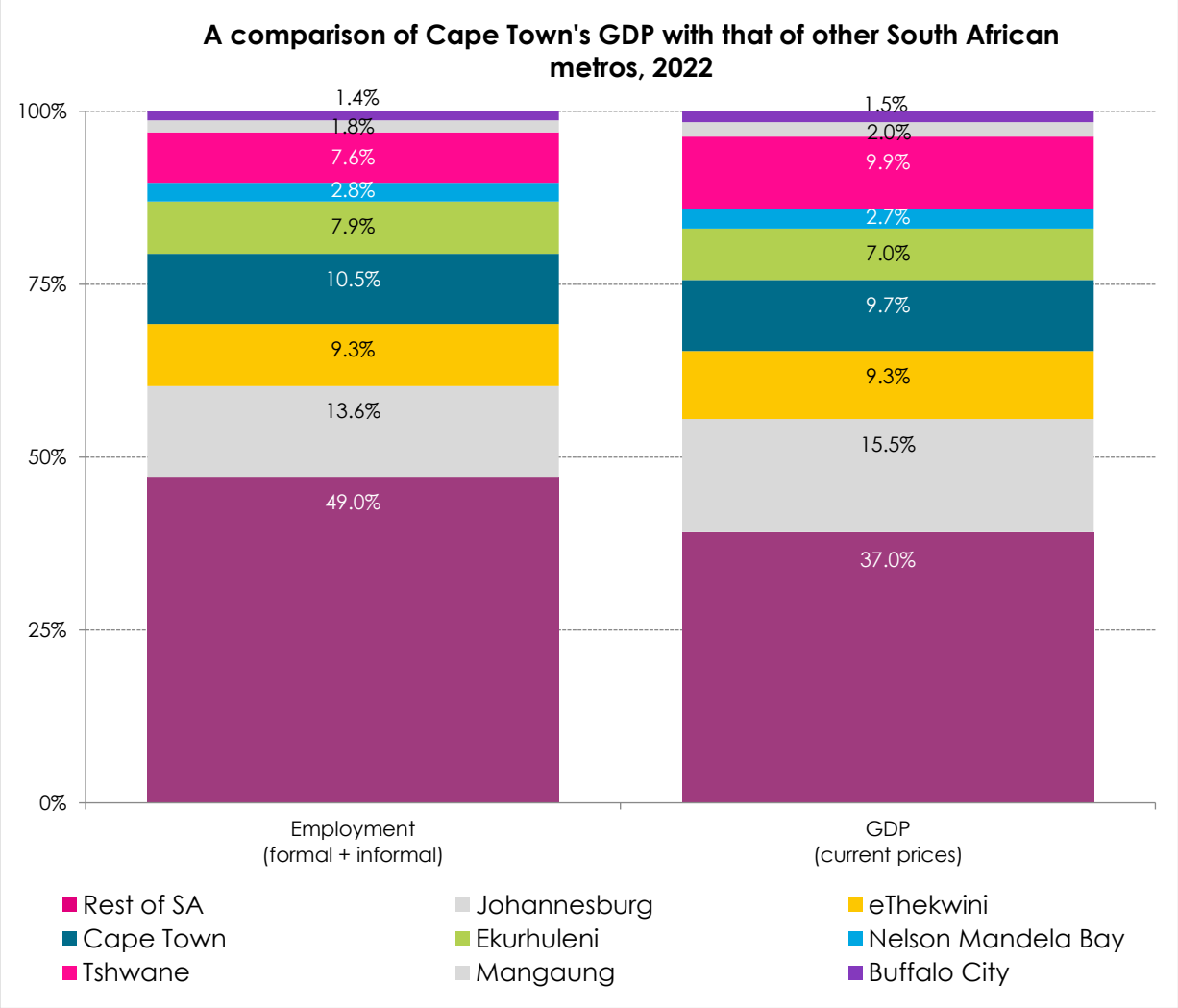


Figure 3: A comparison of Cape Town's gross domestic product with that of other metros (Source: Regional eXplorer, IHS Market, January 2022)

Economic growth at both a national and city level has not managed to keep pace with population growth, which may increase further due to semigration[18] trends. Growth deteriorated in 2020 due to the impact of Covid-19 and government's response to the pandemic. GDP per capita, which had been on a negative trajectory over the past decade, declined to R99 649 in 2020 (constant 2015 prices) (see figure 4). Like GDP growth, GDP per-capita growth too is expected to gain momentum until pre-Covid-19 levels are reached, but is expected to remain sluggish thereafter.

South Africa, including Cape Town, is strongly affected by developments in the global economy. In 2020, the pandemic and its associated restrictions saw the Cape Town economy contract by 5,6% – the worst decline in economic output ever recorded for

[18] When people relocate to another part of the same country, as opposed to 'emigration' out of a country, in search of better opportunities, safety, a well-run administration, etc. This trend has been enabled by remote working. According to real-estate agents, Cape Town has been a major semigration destination since Covid.

the city.[19] On average, all sectors in Cape Town shrunk between 2017 and 2021, with the exception of agriculture, finance and community services (see figure 5). Economic output remained below 2019 levels throughout 2021, although economic growth was 5% in 2021. GDP per capita also declined significantly in 2020, decreasing by 7,2%.[20]

A return to 2019 output levels seemed likely in the first quarter of 2022, in line with the national GDP recovery. The tertiary sectors' ability to adapt to new working conditions, coupled with transitory low interest rates and higher-than-normal exports, contributed to a faster-than-expected pace of recovery. Yet multiple shocks, not least the war in Europe, have hindered global supply chains and have caused inflation to rise (above the South African Reserve Bank target) and borrowing costs to increase. Power rationing has also continued. South African GDP is forecast at 2,3% for 2022, and at 1,8% and 2% for 2023 and 2024 respectively.[21] Cape Town GDP may likely perform similarly (or perhaps somewhat better than) these figures as the depressed tourism industry slowly recovers and load-shedding[22] mitigation measures are implemented.[23]

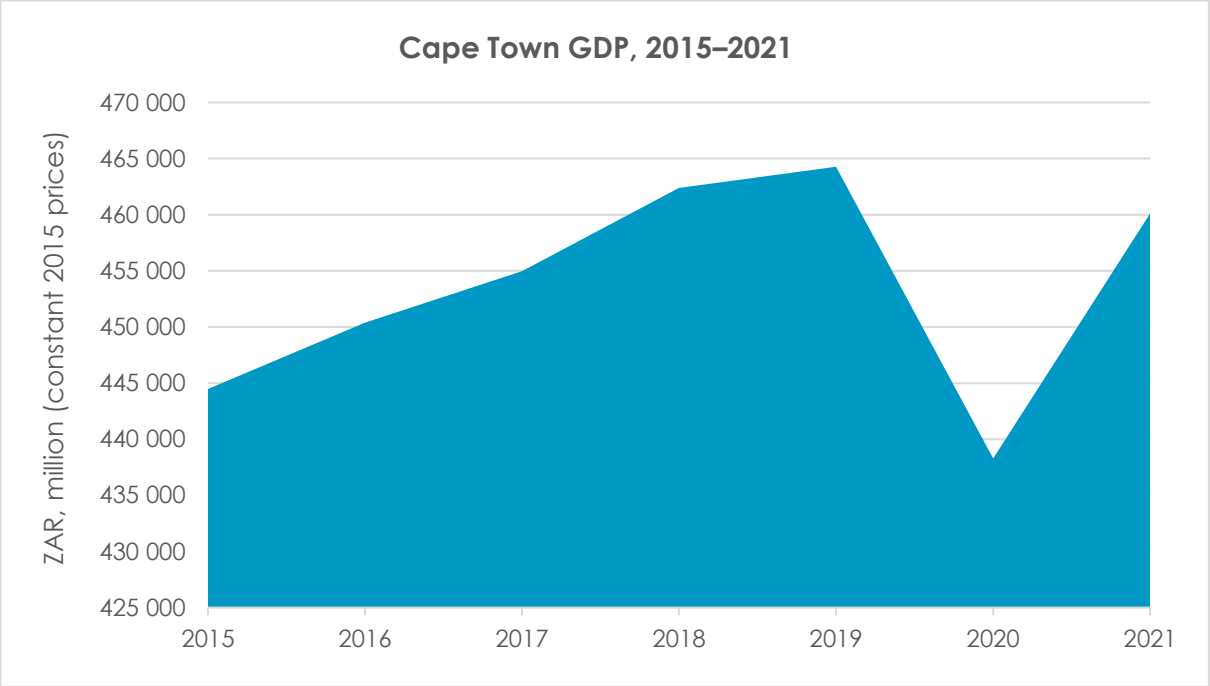


Figure 4: Cape Town's gross domestic product, 2015–2021 (Source: Regional eXplorer, IHS Market, January 2022)

[19] Regional eXplorer, IHS Market, January 2022.
[20] Regional eXplorer, IHS Market, January 2022.
[21] BER, April 2022.
[22] Rolling blackouts due to severe energy supply constraints experienced by the national power utility Eskom.
[23] BER, April 2022.

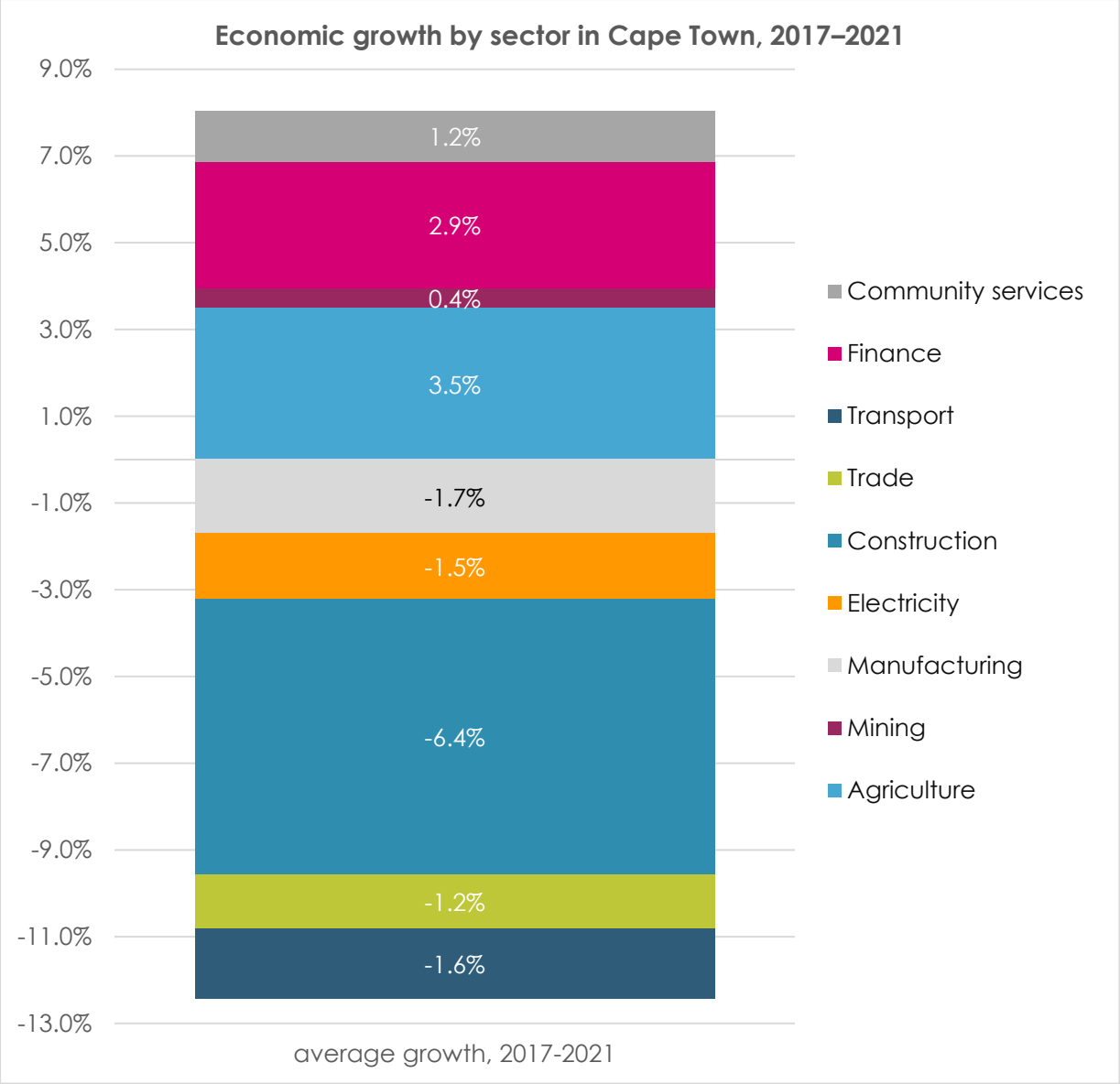
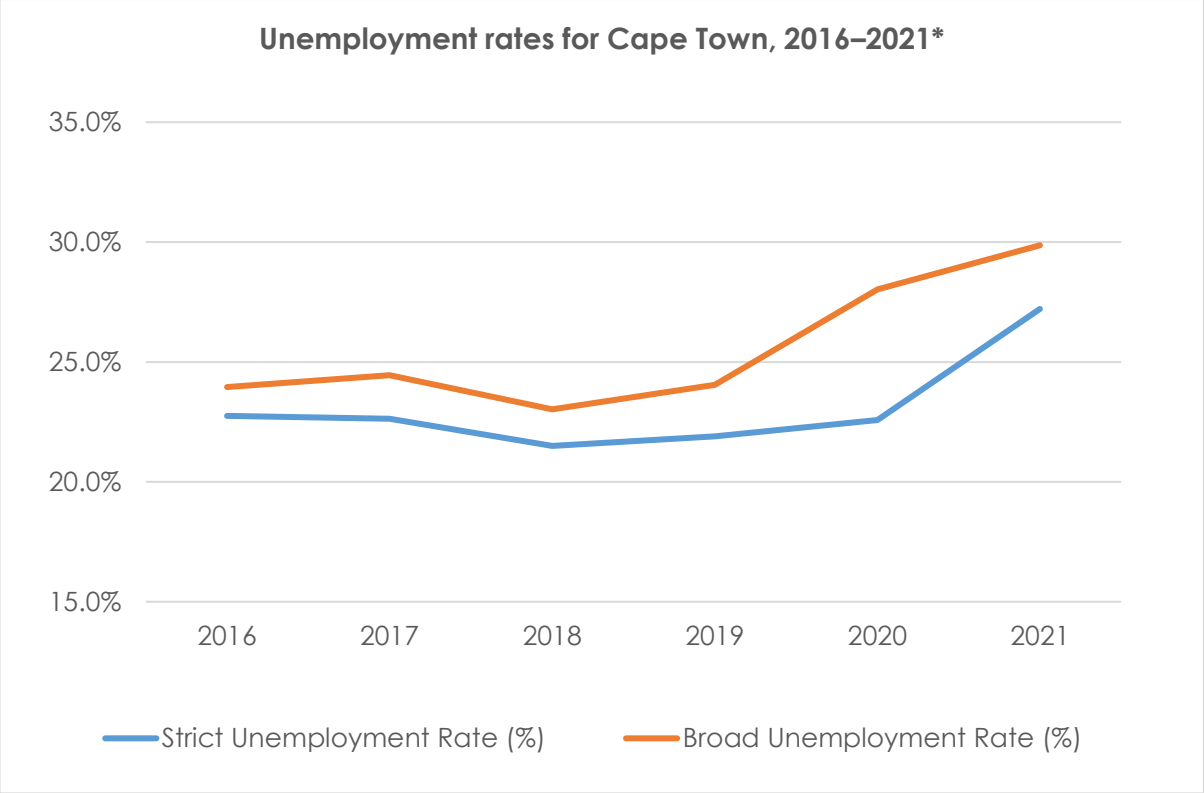


Figure 5: Economic growth by sector, 2017–2021 (Source: Regional eXplorer, IHS Market (January 2022).

Employment and skills

The global shocks of the pandemic and the Russia-Ukraine war have affected, and continue to affect, the labour market in Cape Town. Although Cape Town's broad unemployment rate (which includes unemployed people who are not actively searching for a job) remained lower than that of the other metros, the 30,2% recorded in the third quarter of 2021 was the city's highest broad unemployment rate since 2008 (see figure 6). This is expected to improve slightly as labour-intensive industries slowly recover following the pandemic. Unfortunately, high-growth sectors such as business services, finance and insurance as well as real estate are not the most labour-intensive, which in some cases results in GDP growth, but with lower-than-expected employment growth.



* Note: The figures for 2021 are averages over three quarters, excluding the fourth quarter.

Figure 6: Unemployment rates for Cape Town, 2016–2021 (Source: Quarterly Labour Force Survey 2016–2021, Stats SA)

In 2021, 1,46 million individuals in Cape Town were employed, 544 832 were unemployed yet searching (the narrow or strict unemployment rate), and another 26 831 were discouraged job seekers. The narrow unemployment rate among youth (ages 15–24) increased to 56% in 2021 from 45,2% in 2019, which is notably higher than in other developing countries such as India (28,3% in 2021).[24] Of particular concern is the high percentage of youth who are not in education, employment or training (NEET), which reached 25% in 2021.

[24] World Bank. 2022. Global Economic Prospectus. Available: https://www.worldbank.org/en/publication/global-economic-prospects.

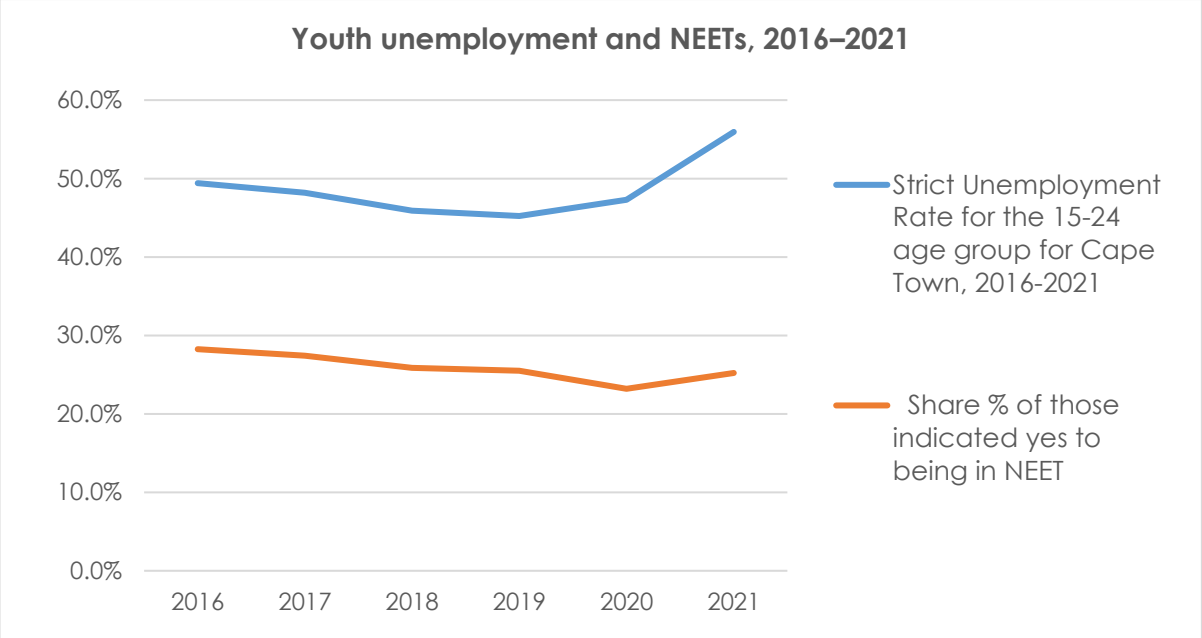


Figure 7: Youth who are not in employment, education or training (NEET), 2016–2021 (Source: Quarterly Labour Force Survey, Stats SA 2016–2021)

Informal employment, which contributes some 10% to total employment in Cape Town, declined by 33% from pre-COVID levels (see Figure 8), with women being disproportionately affected. Additionally, women's employment is lower than men (see figure 9). Record unemployment at both a national and city level is likely to have a knock-on effect on the incidence of poverty in Cape Town.

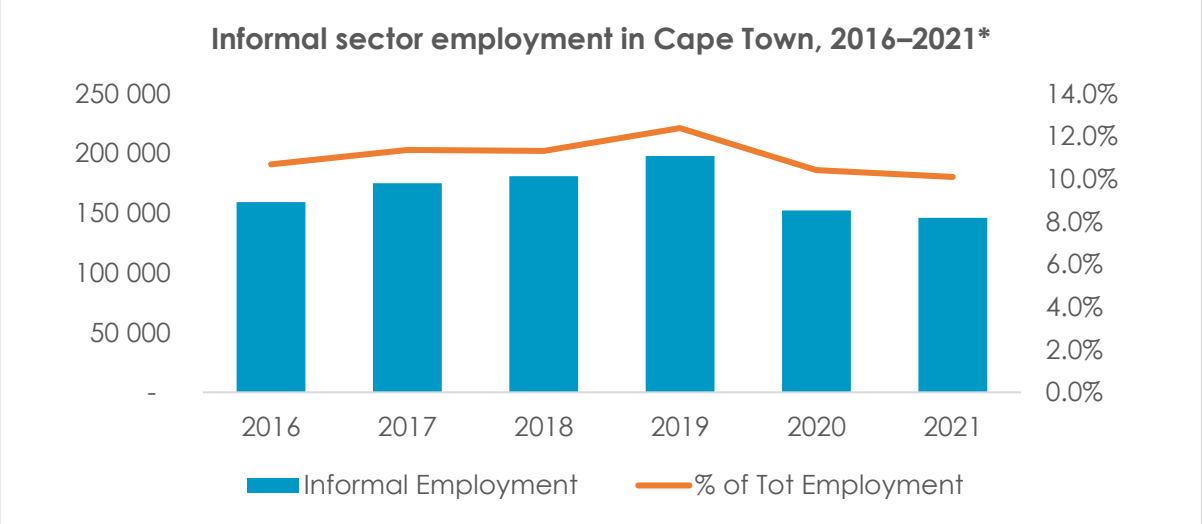


Figure 8: Informal sector employment in Cape Town, 2016–2021 (Source: Quarterly Labour Force Survey, Stats SA 2016–2021)

* Note: The figures for 2021 are averages over three quarters, as there was no metro data available for the fourth quarter.

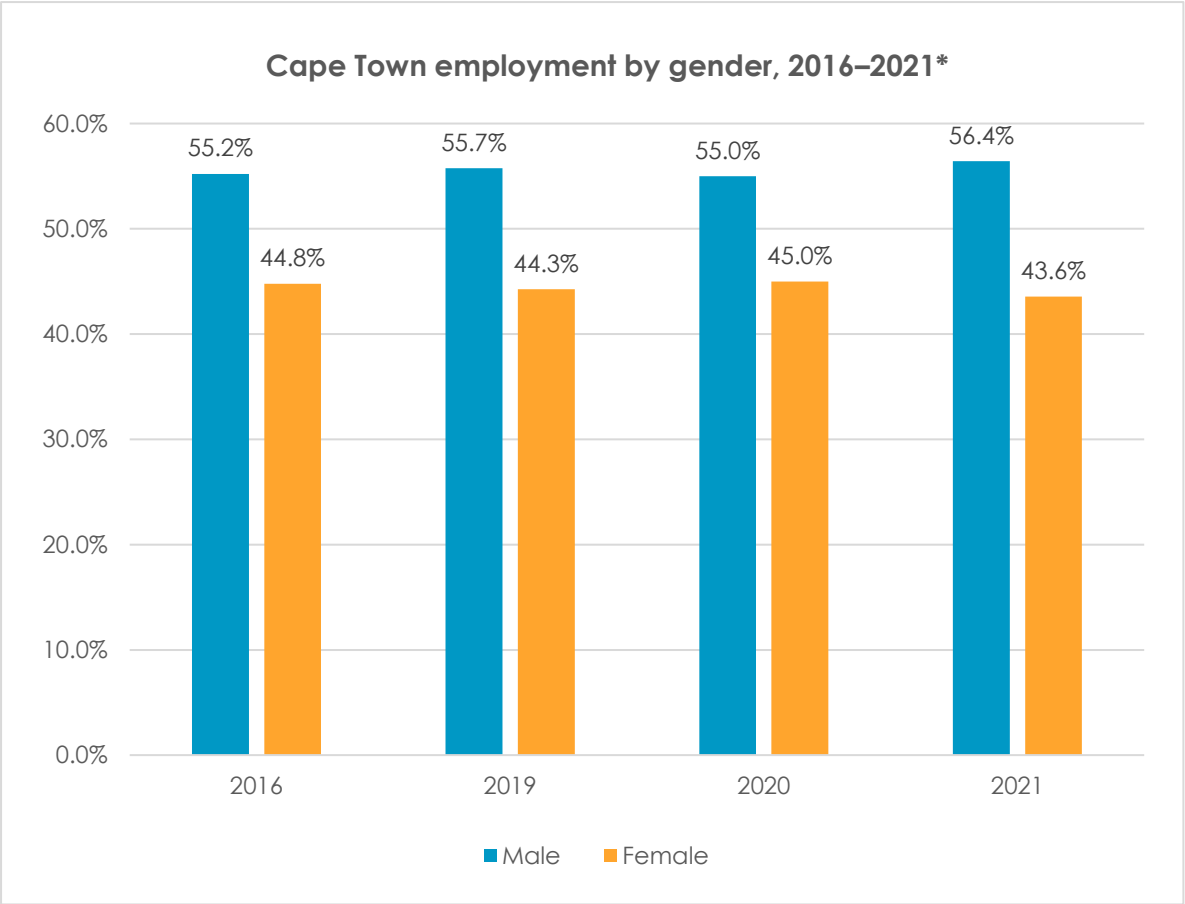


Figure 9: Cape Town employment by gender, 2016–2021 (Source: Quarterly Labour Force Survey, Stats SA 2016, 2019, 2020, 2021)

* Note: The figures for 2021 are averages over three quarters, excluding the fourth quarter.

Structural unemployment trends are also likely to persist because of the mismatch between the demand for labour in the higher-skilled tertiary sectors and the supply of labour, which mostly falls in the lower-skilled categories of the labour market. As figure 10 below shows, Cape Town's top three sectors in terms of employment remain (i) finance, real estate and business services, (ii) trade, hotels and restaurants, and (iii) community, social and other personal services.

Informal employment has been showing signs of recovery in 2022 and is expected to return to pre-pandemic levels in the next two to five years.

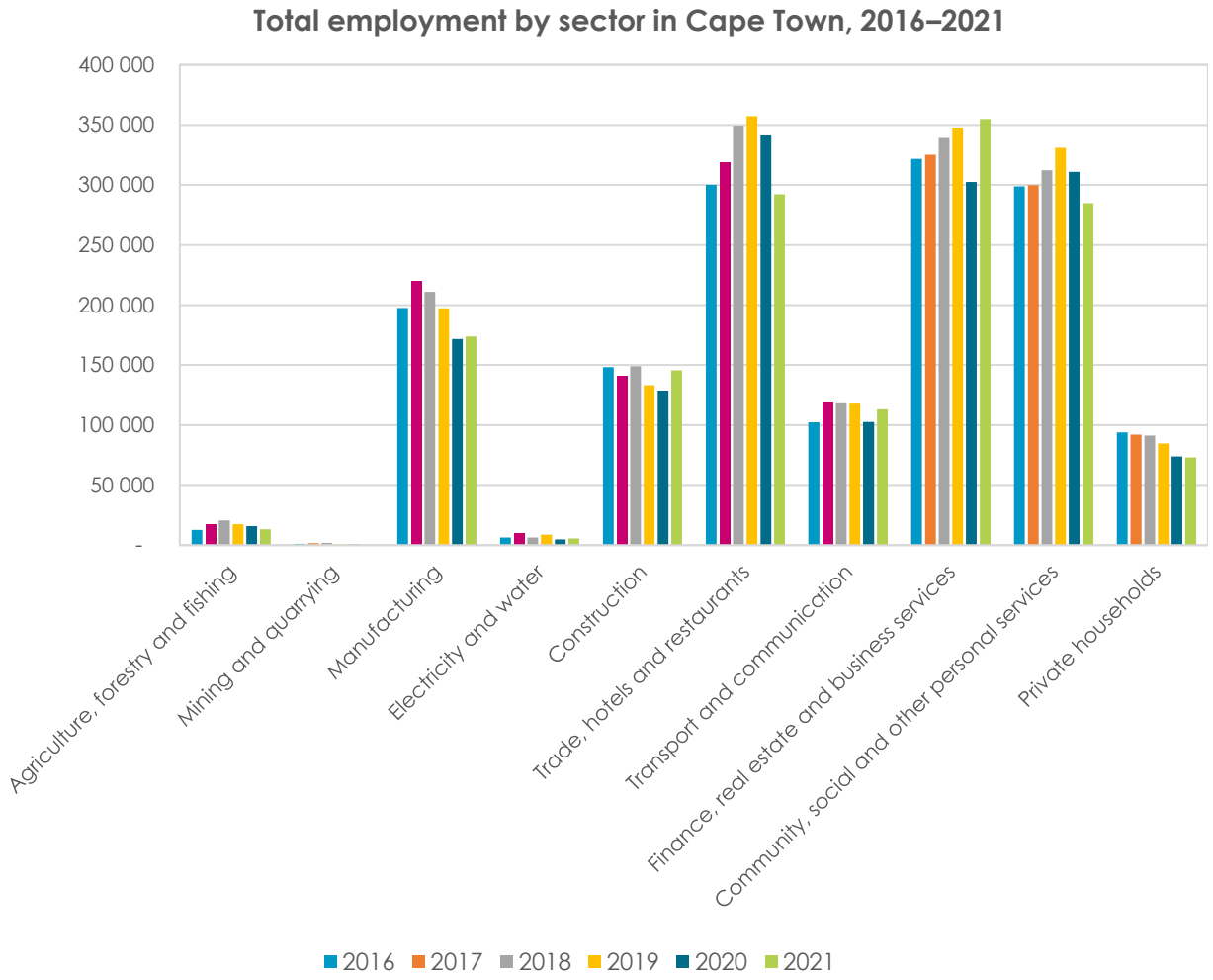


Figure 10: Total employment by sector in Cape Town, 2016–2021 (Source: Quarterly Labour Force Survey, Stats SA 2016–2021)

Chapter summary: Economy and employment

- **GDP is likely to recover to 2019 levels in 2022, but growth is expected to remain sluggish thereafter.**
- **Unemployment in Cape Town has increased year on year since 2019 and peaked in 2021.**
- **A gender gap in employment sees lower employment levels among women than among men.**
- **Informal employment is expected to recover in the short term (two to five years).**
- **While there is a demand for labour in the tertiary sectors, most people in need of jobs are in the lower-skilled categories.**
- **Tertiary economic sectors contribute the largest proportion of jobs to the market.**

POPULATION AND SOCIOECONOMIC TRENDS

This chapter shares the local population and socioeconomic trends that have emerged in Cape Town over the past five years, while also relating these to global and national shifts. It further details how households' vulnerability has increased due to the Covid-19 pandemic and provides information on life expectancy, education and literacy as well as safety and security in Cape Town.

Globally, African cities are projected to grow the fastest, mostly because of rural-to-urban migration, as a large proportion of residents still live in rural areas. Africa will also have the fastest-growing aged population as life expectancy rises. It is expected that small and intermediate cities will absorb the majority of this urban growth.[25]

Nationwide, more than two-thirds of those living in South Africa reside in urban areas. The South African population is expected to increase by an additional 19 to 24 million people by 2050, most of whom will reside in urban towns and cities.[26] In the Western Cape, 72% of the population growth will occur in city regions, including Cape Town.[27] The Cape Town population is expected to grow to 5,8 million by 2040, representing an increase of 1,75 million over the current (2022) figure.[28] With the increase in population and decrease in household size, the need for accommodation, resources and access to opportunities in Cape Town continues to grow. Additionally, life expectancy is rising, and the increased proportion of non-working people may create a greater reliance on working-aged people for generating fiscal resources in support of government grants and service delivery.

The population of Cape Town has been growing slowly but surely. Currently, Cape Town is home to an estimated 4 678 900 people, which is nearly 62% more than in 2001 (see figure 11). While household size has been decreasing (from an average of 3,5 members in 2011 to 3,2 in 2016),[29] the number of households is climbing. Therefore, the need for affordable accommodation and related resources in Cape Town is increasing.

Nearly a quarter of the city's population is aged 14 and below, and just under 7% are aged 65 and above (2021). This suggests that approximately 30% of the people of Cape Town potentially depend on the working-aged population.

[25] World Bank. 2021. Demographic trends and urbanisation. Available: https://www.worldbank.org/en/topic/urbandevelopment/publication/demographic-trends-and-urbanization.
[26] South African Cities Network. 2021. State of Cities Report 2021. Available: https://www.sacities.net/wp-content/uploads/2022/04/SoCR-V-2021_WEB-144dpi.pdf.
[27] CSIR. 2019. Our urban future. South Africa's settlement story. Available: https://pta-gis-2-web1.csir.co.za/portal/apps/GBCascade/index.html?appid=5180459a765c4e63bfb3fa527c7302b3.
[28] City of Cape Town. 2022. Draft Municipal Spatial Development Framework. Volume 1 Technical supplement A. Available: https://resource.capetown.gov.za/documentcentre/Documents/City%20strategies%2c%20plans%20and%20frameworks/MSDF_Vol_I_Ch1-6_Tech_Suppl_A.pdf.
[29] Statistics South Africa, 2016 Community Survey.

The old-age dependency ratio is projected to increase from 10% in 2021 to 14% in 2030 and 18% in 2040.[30] That said, as people tend to live longer, more also appear to remain economically active beyond the age of 65, which is the customary retirement age.

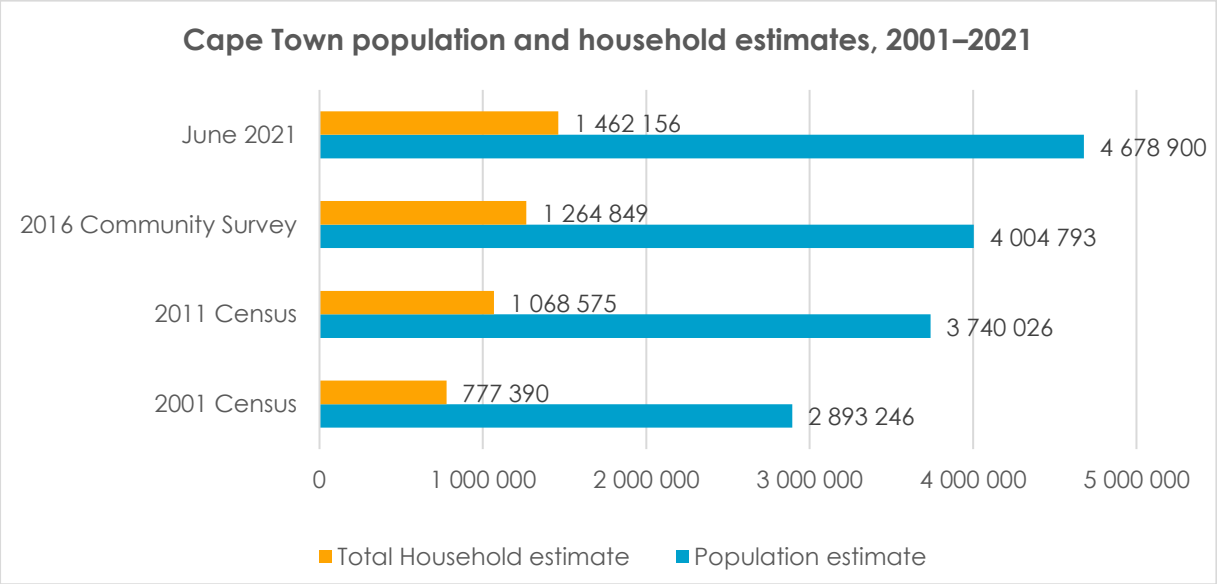


Figure 11: Cape Town population and household estimates, 2001–2021 (Source: Policy and Strategy Department, City of Cape Town, based on Statistics South Africa 2001 Census, 2011 Census and 2016 Community Survey, mid-year population estimates (2021) and own calculations)

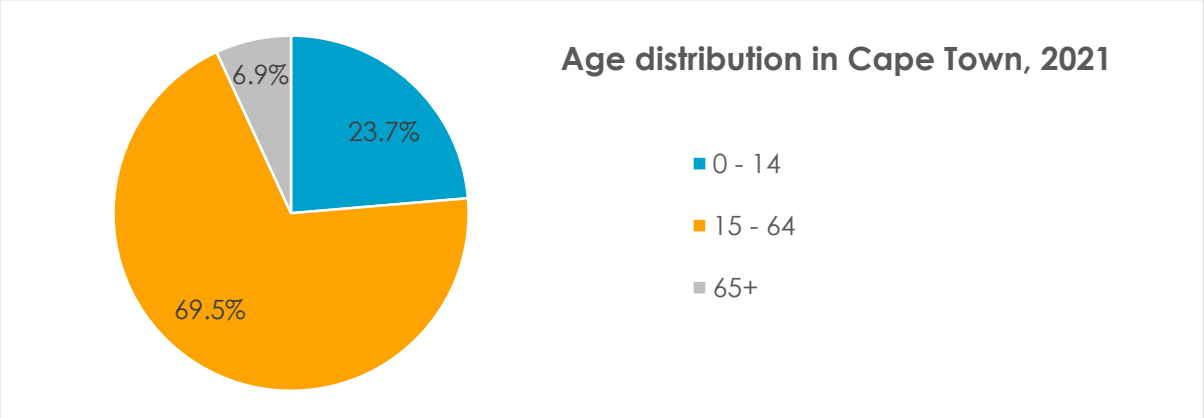


Figure 12: Age distribution in Cape Town, 2021 (Source: Statistics South Africa mid-year population estimates, 2021, and calculations of City of Cape Town Research Branch, Policy & Strategy Department)

Globally, most populations struggled economically and socially during the pandemic. As countries start to emerge from the worst of Covid-19, there is still much work to be done to move towards economic and social recovery.

[30] Statistics South Africa 2021 mid-year population estimates; City of Cape Town population projections and own calculations.

The pandemic significantly altered economic and social structures. At the aggregate level, the world economy is in recession, which causes dwindling public revenues and a shrinking fiscal space.[31] Inequality has also worsened in the areas of health care, education, digital access and economic growth, mostly affecting the poor, women and girls, and other marginalised groups.[32] The major setback to income growth and poverty reduction in developing economies is likely to result in poorer public services and higher income inequality, including in Cape Town.[33]

As the risks associated with the pandemic abated, new global disasters and risks emerged, which further disrupted global supply chains and resource flows. The fallout from the Russia-Ukraine war, for instance, adds to the pandemic shocks of the past two years. Therefore, in 2023, it is estimated that real income per capita will remain below pre-COVID-19 levels in some 40% of developing economies.[34] The adverse socioeconomic effects of the war will persist for the near future, affecting consumption and investment behaviours.[35] These may also create more regulatory challenges to which policymakers would need to respond.

Household earning and inequality

From 0,65 in 2015,[36] Cape Town's Gini coefficient[37] improved to 0,6 in 2020.[38] Although not available at the time of compiling SOCT 2022, the Gini coefficient for Cape Town for 2022 will likely be close to the South African coefficient of 0,63.[39] This decline is expected because of the ongoing impact of legacy policies and the more recent effects of Covid-19 on global, national and local economies.

A monthly household income of R3 500 or less is used as an indicator of household poverty in Cape Town. In 2020, as the coronavirus reached South Africa, household poverty in Cape Town increased by approximately 5 percentage points, with households in the black African and white population groups being worst affected (see figure 13). Following a considerable reduction in the proportion of black African households earning R3 500 or less from 40,3% in 2016 to 31,6% in 2019, the pandemic resulted in a major setback in 2020, when the figure shot back up to 43,9%. Of the total number of households earning R3 500 or less in 2020, close to 45% were black African (see figure 13).

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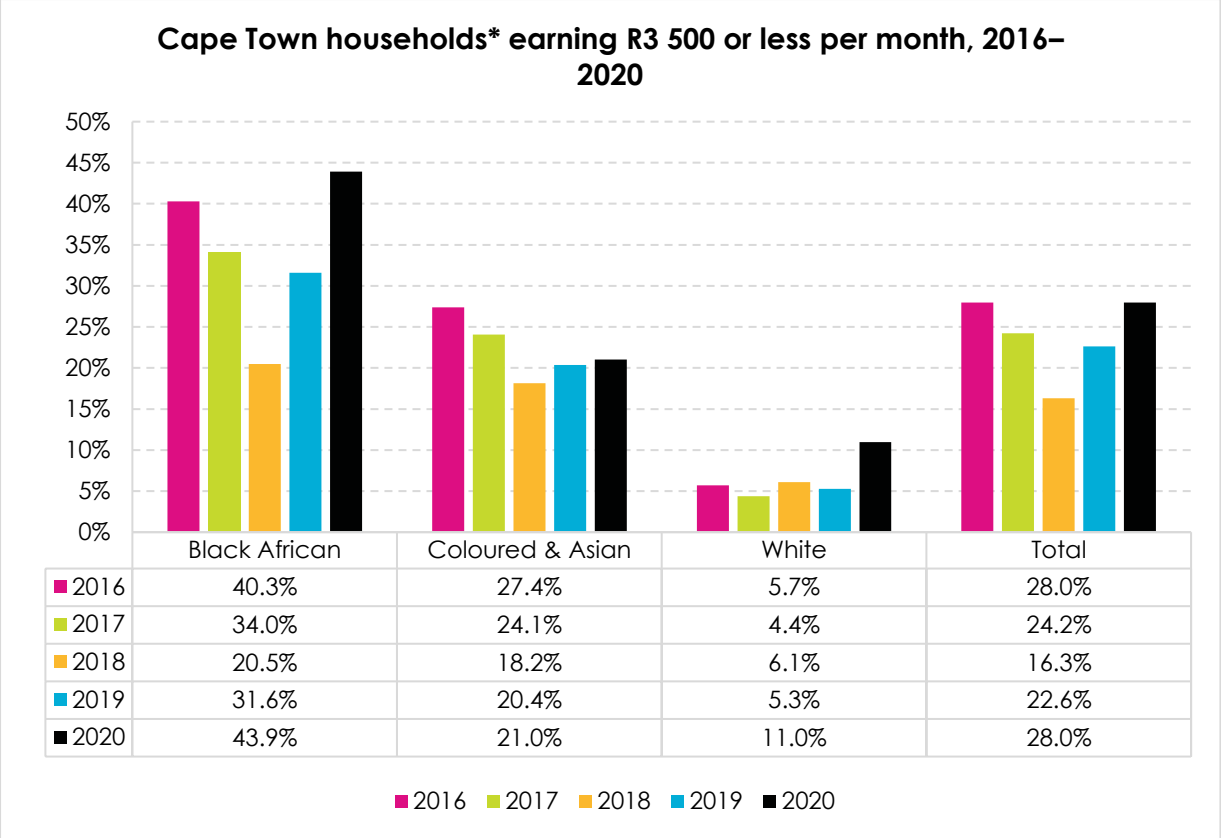
[31] United Nations. 2021. Recover Better. Available: https://www.un.org/development/desa/en/wp-content/uploads/2020/07/RECOVER_BETTER_0722-1.pdf.
[32] World Bank. 2022. Global Economic Prospectus. Available: https://www.worldbank.org/en/publication/global-economic-prospects.
[33] United Nations. 2021. Recover Better. Available: https://www.un.org/development/desa/en/wp-content/uploads/2020/07/RECOVER_BETTER_0722-1.pdf.
[34] United Nations. 2021. Recover Better. Available: https://www.un.org/development/desa/en/wp-content/uploads/2020/07/RECOVER_BETTER_0722-1.pdf.
[35] United Nations. 2021. Recover Better. Available: https://www.un.org/development/desa/en/wp-content/uploads/2020/07/RECOVER_BETTER_0722-1.pdf.
[36] Statista. 2021. Gini coefficient in South Africa from 2006 to 2015. Available: https://www.statista.com/statistics/1127860/gini-coefficient-in-south-africa/.
[37] Measure of income distribution across a population.
[38] State of Cape Town 2020 full report. Available: https://resource.capetown.gov.za/documentcentre/Documents/City%20research%20reports%20and%20review/State_of_Cape_Town_Report_2020.pdf.
[39] World Population Review. 2022. Gini coefficient by country. Available: https://worldpopulationreview.com/country-rankings/gini-coefficient-by-country.



	Black African	Coloured & Asian	White	Total
2016	40.3%	27.4%	5.7%	28.0%
2017	34.0%	24.1%	4.4%	24.2%
2018	20.5%	18.2%	6.1%	16.3%
2019	31.6%	20.4%	5.3%	22.6%
2020	43.9%	21.0%	11.0%	28.0%

* Note: Households that did not specify their income were excluded.

Figure 13: Cape Town households earning R3 500 or less per month, 2016–2020 (Source: Policy and Strategy Department, City of Cape Town, based on Statistics South Africa, General Household Survey 2016–2020).

Life expectancy

The average life expectancy at birth in the Western Cape has been increasing steadily for both females and males. For the period 2016–2021, the average life expectancy for males was 64,9 years, and 70,3 years for females.[40] This is partly linked to better access to and quality of health care in South Africa generally and in the Western Cape specifically.

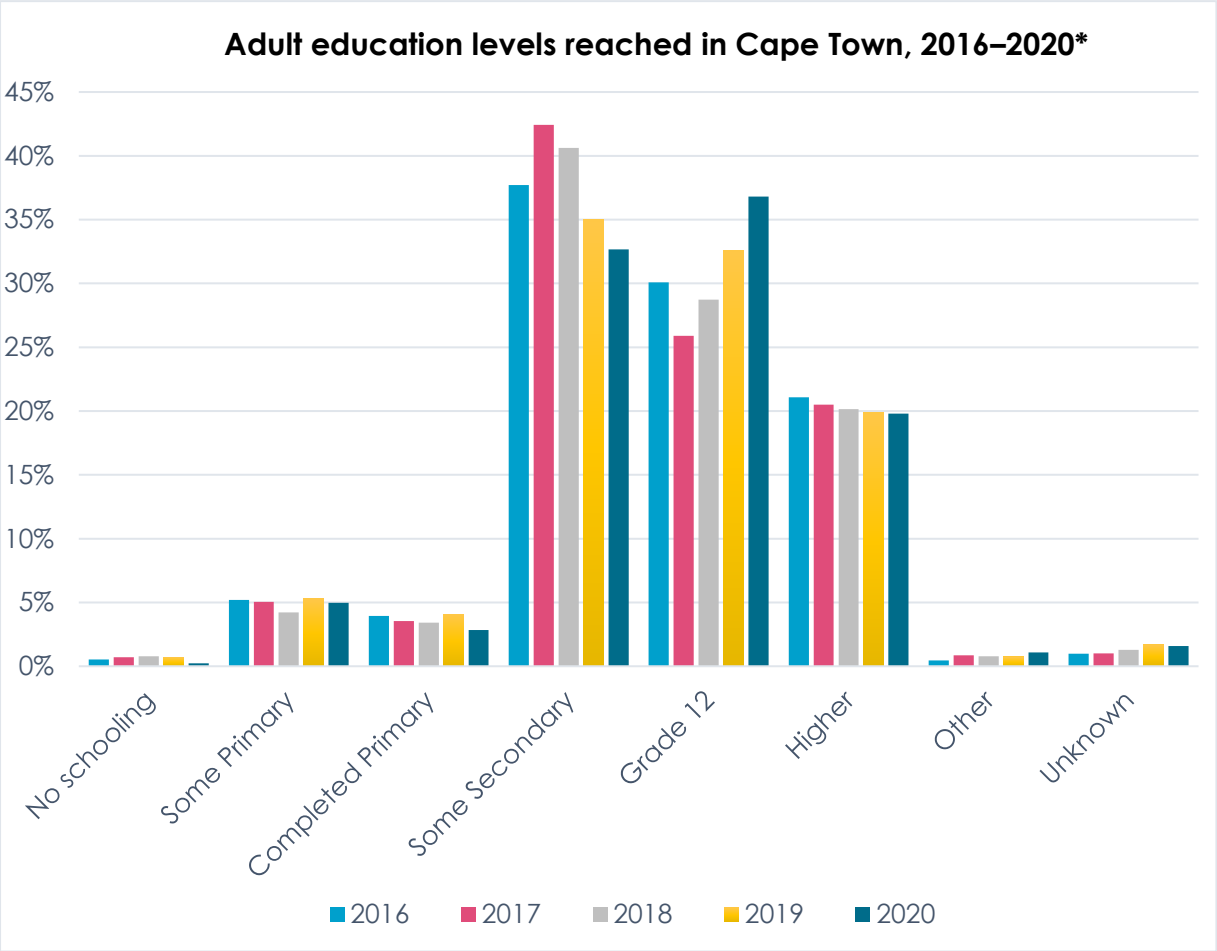
Education and literacy

The Western Cape Education Department is responsible for primary and secondary education in the Western Cape, including in Cape Town.[41]

While education levels for people of different population groups in Cape Town vary, the majority of the population have achieved some level of secondary schooling (see figure 14). The percentage of adults (people aged 20 and above) with some secondary schooling dropped from 37,7% to 32,7% between 2016 and 2020; yet the percentage with matric (grade 12) increased. The proportion attending higher education institutions decreased over the same period, albeit by only 2 to 3

[40] Statistics South Africa mid-year population estimates 2021.
[41] Education in South Africa is a shared responsibility between the Department of Basic Education and the Department of Higher Education and Training.

percentage points. Nevertheless, this remains a concern, considering that employment opportunities in Cape Town increasingly require the type of high-level skills acquired from tertiary education.



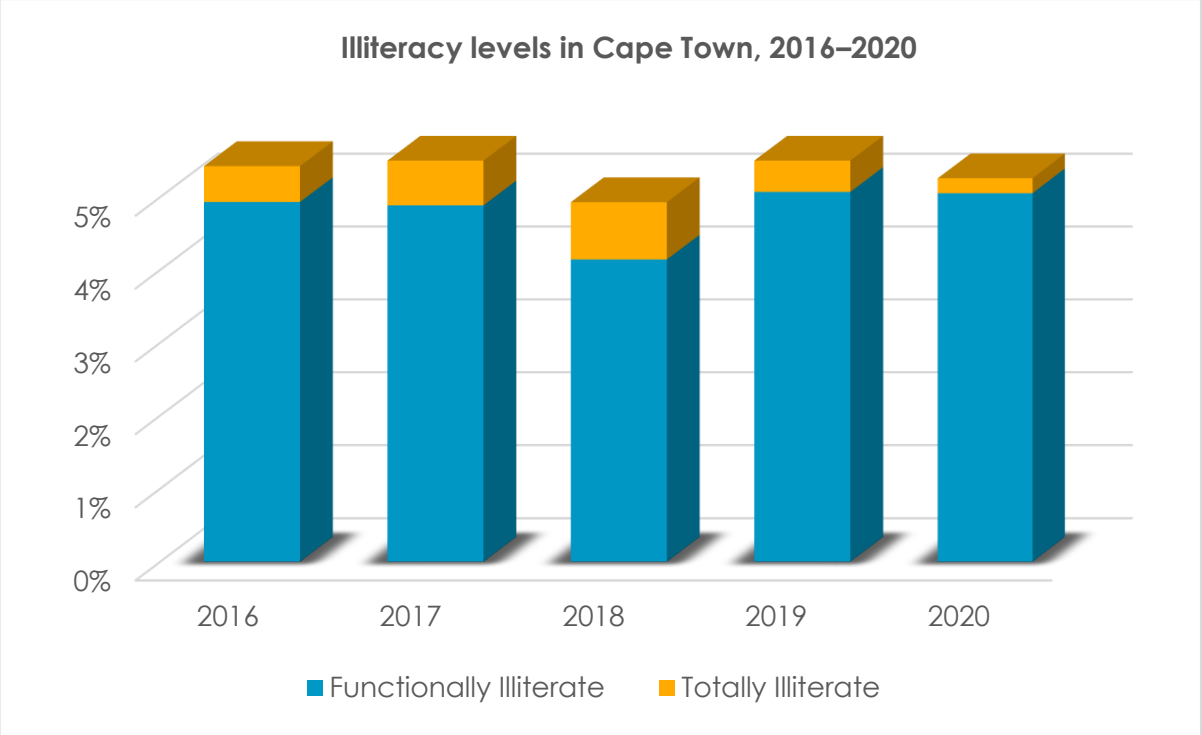
* Note: The General Household Survey sample size for 2020 was significantly smaller than in previous years, which would affect the statistical findings flowing from the survey data.

Figure 14: Adult education levels reached in Cape Town, 2016–2020 (Source: Research Branch, Policy and Strategy Department, based on Statistics South Africa, General Household Survey 2016–2020)

The literacy level in Cape Town in 2020 was 93,3% compared to the global average of 86,48% (2019).[42] The illiteracy rate in Cape Town remains highest among black African residents compared to other population groups. Illiteracy levels are also higher among females (12,5%) than males (11,6%) (2019). This is, among other reasons, because of teenage pregnancy, which reduces participation and performance,[43] as

[42] Macrotrends. 2022. World literacy rate 1976-2022. Available: https://www.macrotrends.net/countries/WLD/world/literacy-rate.
[43] Rarieya, J., Sanger, N. & Moolman, B. 2014. Gender Inequalities in education in South Africa. Available: https://hsrc.ac.za/uploads/pageContent/4991/Gender%20inequalties%20in%20education%20in%20South%20Africa.pdf.

well as due to historical factors and enduring social customs.[44] Functional literacy[45] in Cape Town increased from 2016 to 2020 (see figure 15) and empowers a growing number of people to participate more fully in society, including in the policies and processes that affect their lives.[46]



*Note: The General Household Survey sample size for 2020 was significantly smaller than in previous years, which would affect the statistical findings flowing from the survey data.

Figure 15: Illiteracy levels in Cape Town, 2016–2020 (Source: Research Branch, Policy and Strategy Department, based on Statistics South Africa, General Household Survey 2016–2020).

The impact of the pandemic on education has likely been most severe in countries with already low learning outcomes, high dropout rates and low resilience to shocks. As Covid-19 has taught us, remote and hybrid education has the potential to transform the future of education. Steps that could be taken to increase the efficiency of education spending in middle-income countries such as South Africa include enhancing digitalisation and providing more affordable broadband connectivity. The

[44] Kachiwanda, S.O. 2011. Gender disparity in the acquisition of literacy in sub-Saharan Africa: the case of Malawi. Journal of Humanities (Zomba, Malawi), 22:24–43. Available: https://www.ajol.info/index.php/jh/article/download/153388/142980/0.
[45] Having the reading and writing skills necessary for everyday living, equivalent to the literacy levels of a person who has completed grade 7. Conversely, functionally illiterate people are those who have not completed at least grade 7, while totally illiterate people are those with no schooling.
[46] Khuluvhe, M. 2021. Fact sheet: Adult illiteracy in South Africa. Available: https://www.dhet.gov.za/Planning%20Monitoring%20and%20Evaluation%20Coordination/Fact%20Sheet%20on%20Adult%20Illiteracy%20in%20South%20Africa%20-%20March%202021.pdf.

City is well placed to improve access to connectivity for public benefit and potentially also improve access to resources for better (adult) education outcomes.[47]

Safety and security

The crime rate in Cape Town remains consistently higher than the national and metro average rate. Crime statistics of the South African Police Service for 2021 show that the police precincts with the highest number of murder cases are located in Cape Town. These precincts, most of which are in close proximity to one another and situated in the southeast of the city, accounted for 46,6% (1 795) of all murder cases in the province in 2020/21.[48] These areas are characterised by high levels of socioeconomic inequality and increasing unemployment.

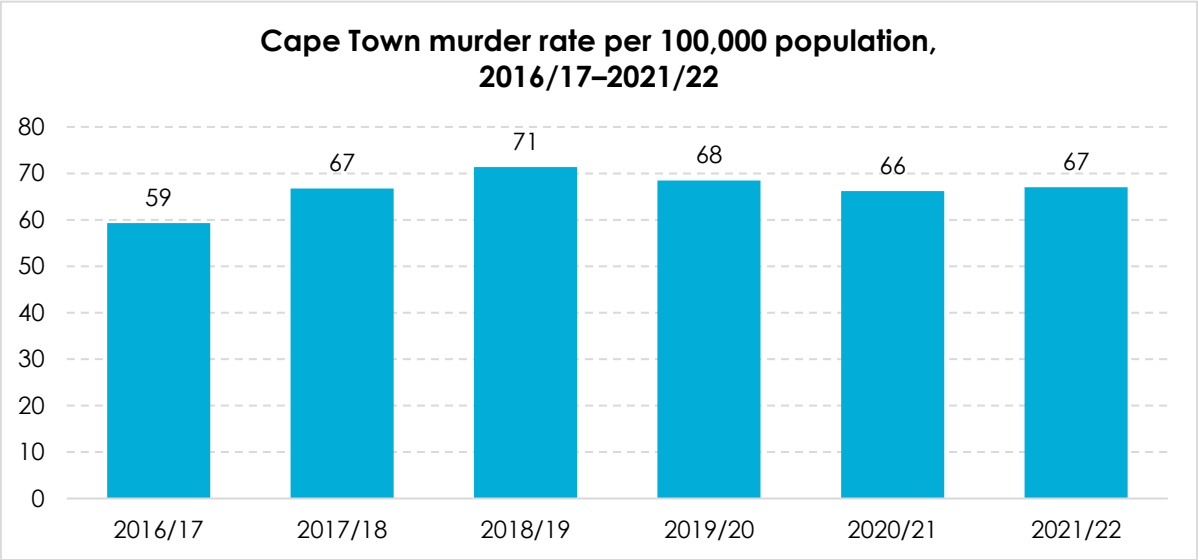


Figure 16: Cape Town murder rate per 100,000 population, 2016/17–2021/22 (Source: Policy and Strategy Department, City of Cape Town, based on SAPS crime statistics 2016/17–2021/22 (2022) and South African population estimates (2016–2021) using Statistics South Africa (2021) mid-year population estimates)

Between 2016/17 and 2018/19, the murder rate in Cape Town increased, followed by a decrease from 2018/19 to 2020/21, likely due to the Covid-19 lockdown and curfew (see figure 16). Since then, the murder rate has increased slightly. A similar trend is observed for the overall crime and drug-related crime rates, which decreased from 2016/17 to 2020/21, but have since shown increases (see figure 17).

The leading cause of death for males aged 15 to 24 in Cape Town is injury,[49] accounting for 80% of deaths in this category.[50] This coincides with the prevalence of gangsterism and gang violence in low-income Cape Town communities. An added and growing concern is the fact that a further 47% of males in the age bracket 5 to

[47] World Bank. 2022. Global Economic Prospectus. Available: https://www.worldbank.org/en/publication/global-economic-prospects.
[48] SAPS South African crime stats report 2020/21.
[49] Injury includes death by mechanical forces such as guns, road accidents, death by fire, threats to breathing (including accidental hanging and strangulation) and interpersonal violence.
[50] Massyn, N., Day, C., Ndlovu, N. & Padayachee, T. 2020. District Health Barometer 2019/20. Available: https://www.hst.org.za/publications/District%20Health%20Barometers/DHB%202019-20%20Complete%20Book.pdf.

14 die due to injury.[51] (See also the chapter on health and wellbeing for additional information on causes of death.)

As mentioned, the overall crime and drug-related crime rates for Cape Town dropped over the period 2016/17 to 2020/21 (see figure 17). This trend is further reflected in a positive shift in residents' perception of safety at night. However, less than two thirds of Cape Town residents reportedly feel safe walking alone during the day (figures 18 and 19). Unfortunately, conclusive findings in this regard are complicated by the fact that the data is not disaggregated by gender, sexual crimes are significantly underreported, and comprehensive gender-based violence data for Cape Town is lacking.[52]

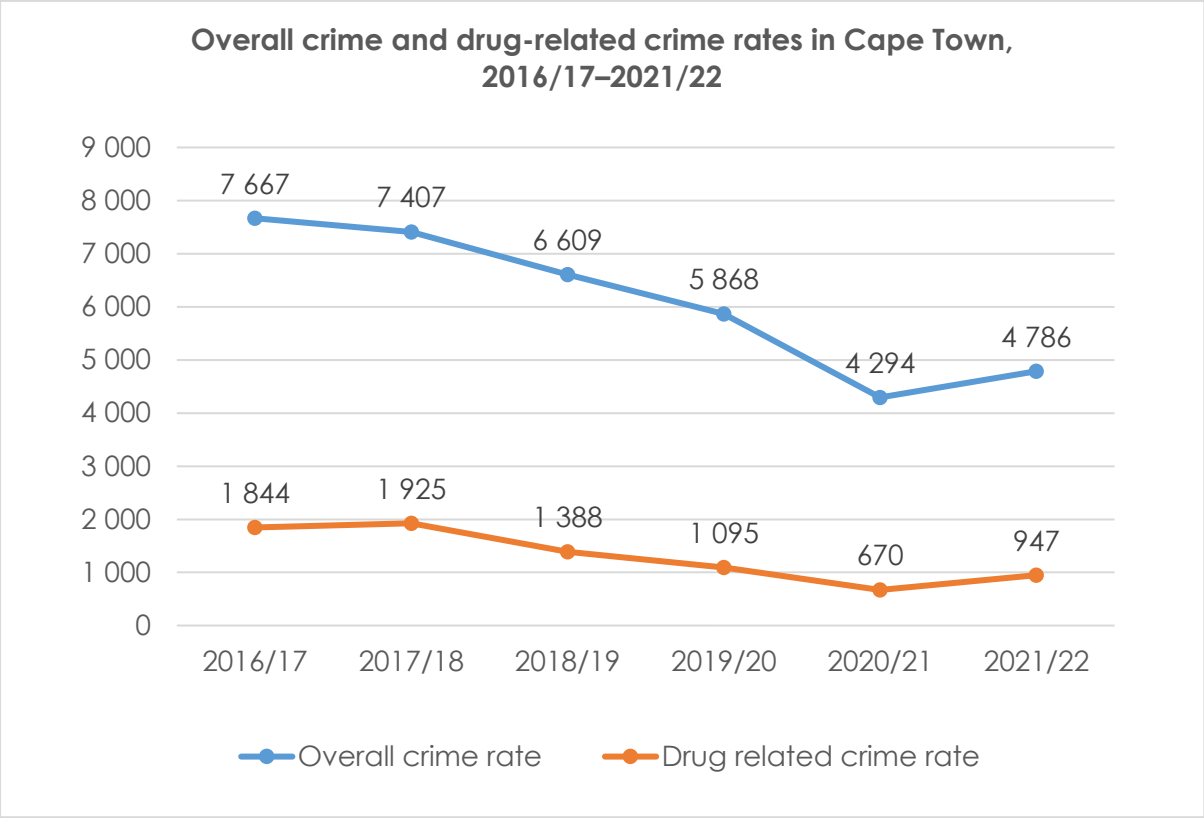
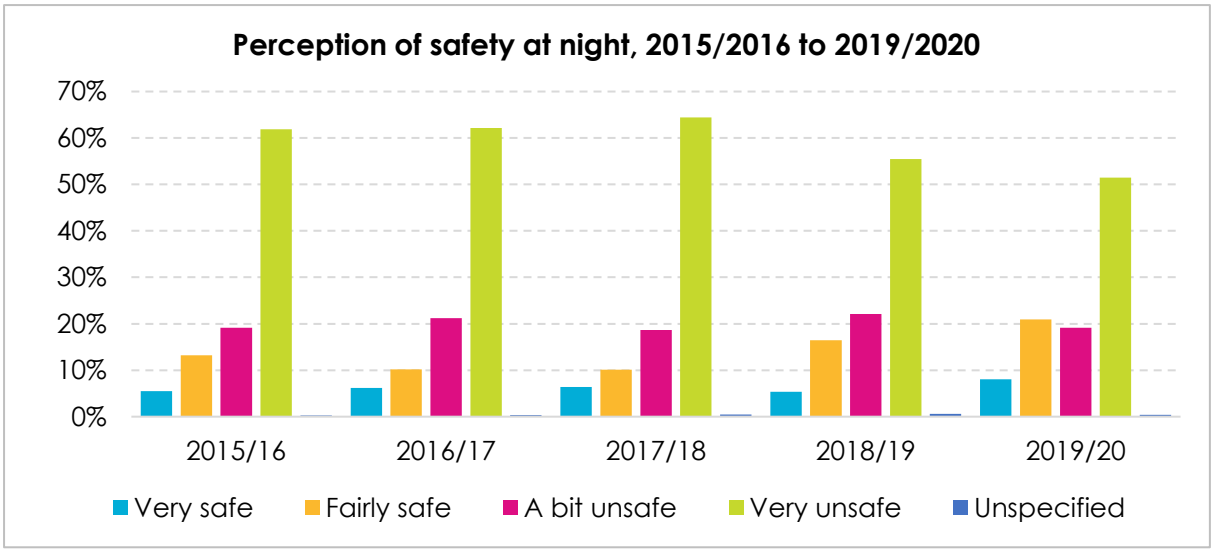


Figure 17: Overall crime and drug-related crime rates in Cape Town, 2016/17–2021/22 (Source: Policy and Strategy Department, City of Cape Town, based on SAPS crime statistics 2016/17–2021/22 (2022) and South African population estimates (2016–2021) using Statistics South Africa (2021) mid-year population estimates)

[51] Massyn, N., Day, C., Ndlovu, N. & Padayachee, T. 2020. District Health Barometer 2019/20. Available: https://www.hst.org.za/publications/District%20Health%20Barometers/DHB%202019-20%20Complete%20Book.pdf.
[52] SAPS crime statistics 2016/17–2020/21 (2021) and South African population estimates (2011–2020) using Statistics South Africa 2021 mid-year population estimates.



Figures 18: Cape Town residents' safety perceptions, 2015/16–2019/20 (Source: Policy and Strategy Department, City of Cape Town, based on Statistics South Africa victims of crime 2015/16–2017/18, GPSJS 2018/19 - 2019/20)

The Law Enforcement Advancement Programme (LEAP) is a joint initiative between the City and the Western Cape government (or 'Province') that trains additional law enforcement officers for deployment in select communities. The City has already appointed more than 1 000 LEAP officers since the programme commenced in 2019 and plans to place another 200 in 2022. LEAP officers provide important support to SAPS and have been instrumental in increasing the number of arrests and removing firearms from the streets of Cape Town.[53]

However, emerging trends suggest that the future of safety and security lies largely in innovative security technologies to enable improved deterrence, detection, prevention and response.[54] The City has allocated significant budget to acquiring digital aids such as closed-circuit television cameras, drones, dashcams and bodycams to assist law enforcement officials in addressing crime. Technology-related security solutions are also increasingly utilising artificial intelligence, combining physical and cybersecurity initiatives to allow for better prediction, surveillance, visibility and, therefore, more control.[55]

Government, the private sector and civil society are all making an effort to make Cape Town communities safer. Improved communication and information- sharing between the City, Province and other partners strengthen this collective effort, which includes initiatives such as local area safety plans, neighbourhood watches, city improvement districts and vetted private security companies.

[53] Francke, R. 2022. 100 new LEAP officers deployed to Cape Town streets. Available: https://www.iol.co.za/news/crime-and-courts/100-new-leap-officers-deployed-to-cape-town-streets-10dc334c-d899-45b9-96a0-aa5ba777ad3a.
[54] Openpath. 2022. Security technology guide and 2022 trends. Available: https://www.openpath.com/blog-post/security-technology.
[55] Openpath. 2022. Security technology guide and 2022 trends. Available: https://www.openpath.com/blog-post/security-technology.

In addition to the **1 029** LEAP officers deployed to date, the City also employs 411 Metro Police officers, who have increased in number by nearly 20% since 2016.[56]

Chapter summary: Population and socioeconomic trends

- **Urban towns and cities are the centre of population growth, both in South Africa and on the rest of the continent.**
- **Cape Town is estimated to grow to 5,8 million people by 2040.**
- **The city has an increasing proportion of older people.**
- **Poverty and vulnerability have increased.**
- **Literacy levels have increased. Although a higher proportion of people are matriculating, fewer are pursuing higher education.**
- **Overall crime, drug-related crime and murder rates decreased up to and including 2020/21, but have since increased.**
- **Data on sexual crimes is lacking due to underreporting.**

[56] City of Cape Town Safety and Security Directorate internal communication.

HEALTH AND WELLBEING

This chapter covers the City's approach to the health and wellbeing of Cape Town residents, including the administration's efforts to help reduce household hunger. It also provides an update on key health issues such as HIV/AIDS, tuberculosis (TB) and access to antiretroviral treatment (ARVs). In addition, as the city is recovering from the impacts of the pandemic, the chapter offers an overview of how the coronavirus affected people and mortality in Cape Town.

Cities and health

Public health outcomes are the product of a range of multidimensional and complex factors linked to the social determinants of health. These factors are often not directly related to health, but affect health outcomes (such as a healthy and clean living and natural environment). Ultimately, the conditions required for good health go beyond access to medical facilities, but also include factors such as a healthy living environment, access to food, peace, safety, education and an income, all being key components of a wellbeing approach.[57]

To reduce the burden of disease in Cape Town, all residents need to have access to preventative (primary) healthcare services and an improved quality of life. Urban settings are now the prime space for addressing issues of inequality, access and human health, considering that urban towns and cities, particularly those in Africa and Asia, will account for 90% of estimated future population growth by 2050.[58]

The City takes a transversal, holistic approach to health and wellbeing, understanding that the very purpose of government is to implement a developmental approach and establish enabling conditions for people to thrive.[59] It does this in conjunction with the Western Cape Department of Health, which shares the mandate to provide health services in Cape Town and the rest of the Western Cape Province.

The City's Health Department facilitates access to primary healthcare services to those most in need, with more than 100 healthcare facilities located in communities across the metropolitan area as well as a number of mobile and satellite clinics. In addition, Province's Metro District Health Services operate 47 community health centres and 24-hour emergency services at a primary care level, along with six district hospitals located in Cape Town.

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[57] Better Health Channel. Ottawa Charter for Health Promotion. Available: https://www.betterhealth.vic.gov.au/health/servicesandsupport/ottawa-charter-for-health-promotion.
[58] UN Habitat. 2019. The Strategic Plan 2020-2023. Available: https://unhabitat.org/sites/default/files/documents/2019-09/strategic_plan_2020-2023.pdf.
[59] McGregor, J.A., Gough, I. & Camfield, L. 2019. Theorising well-being in international development, in I. Gough & J.A. McGregor (eds.). Wellbeing in developing countries: From theory to research. Cambridge University Press. Available: https://www.researchgate.net/publication/291574661_Theorising_wellbeing_in_international_development.

City Health continues to provide routine primary healthcare services and implement plans to ensure more comprehensive health service delivery closer to residents' homes.

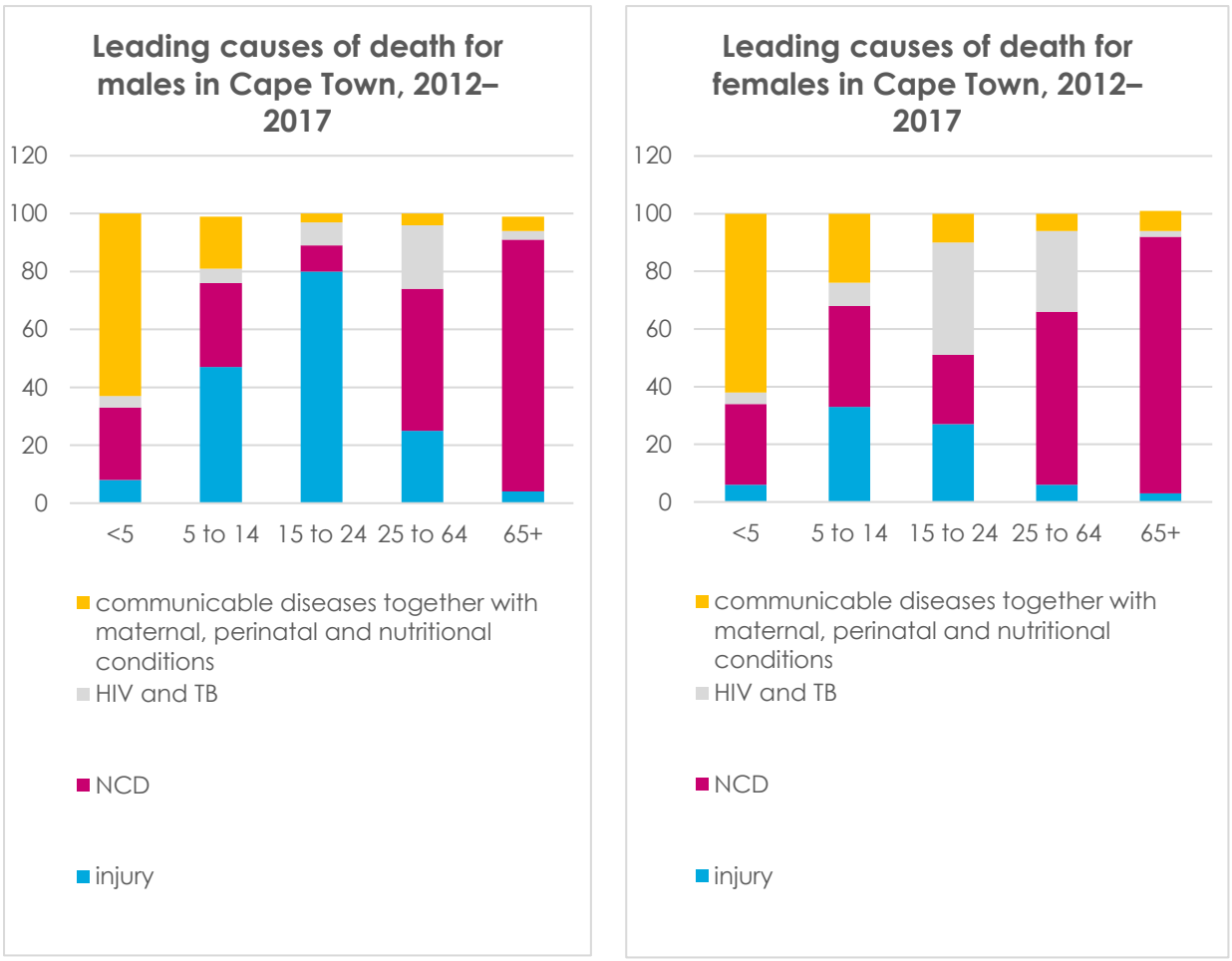
Causes of death

The leading causes of death in Cape Town relate to lifestyle, vulnerability and poverty. In 2018, the top three clinical causes of death were diabetes, heart disease and human immunodeficiency virus (HIV), with TB ranking seventh and hypertension ninth.[60]

However, when assessing causes of death by gender and age category, other causes also emerge. The leading causes of death for females in Cape Town are HIV, TB and non-communicable diseases. These are significant among all ages from 5 upwards.

For males aged 5–14 and 15–24, the leading cause of death is injury, which accounts for 47% and 80% of deaths respectively. This reflects the unfortunate reality of gangsterism in Cape Town, in which many males (predominantly) become involved from a young age. The proportion of females dying as a result of injury is much lower, namely 33% in the age bracket 5–14 and 27% in the 15–24 range (see figures 20 and 21 below).

[60] Statistics South Africa. 2021. Mortality and causes of death in South Africa: Findings from death notification. Available: https://www.statssa.gov.za/publications/P03093/P030932018.pdf.



Figures 20 and 21: Leading causes of death for Cape Town males and females, 2012–2017 (Source: Massyn et al., 2020)

HIV/AIDS and antiretroviral treatment

Like the rest of the country, Cape Town too carries a significant HIV/AIDS burden, which has been a major health focus for the City over recent decades.

In 2021, 12,2% (or 382 200) of the Cape Town population aged 15–49 were estimated to be living with HIV. The rate of new infections per annum in this age bracket is 4,76 per 1 000, which equates to 11 600 people.[61]

Access to ARVs is important for HIV-positive people to maintain a good quality of life and to prevent transmission to others (including from mother to child). For this reason, substantial resources have been channelled towards making ARVs more widely accessible. In 2021, altogether 207 459 patients were receiving ARVs in Cape Town compared to 202 097 in 2020.[62]

[61] HIV Data. 2021. South Africa District HIV Estimates September 2021. Available: https://www.hivdata.org.za/. HIV prevalence is the estimated number of people (aged 15–49) living with HIV in the district, divided by the total resident population aged 15–49.
[62] City of Cape Town Health Department internal communication.

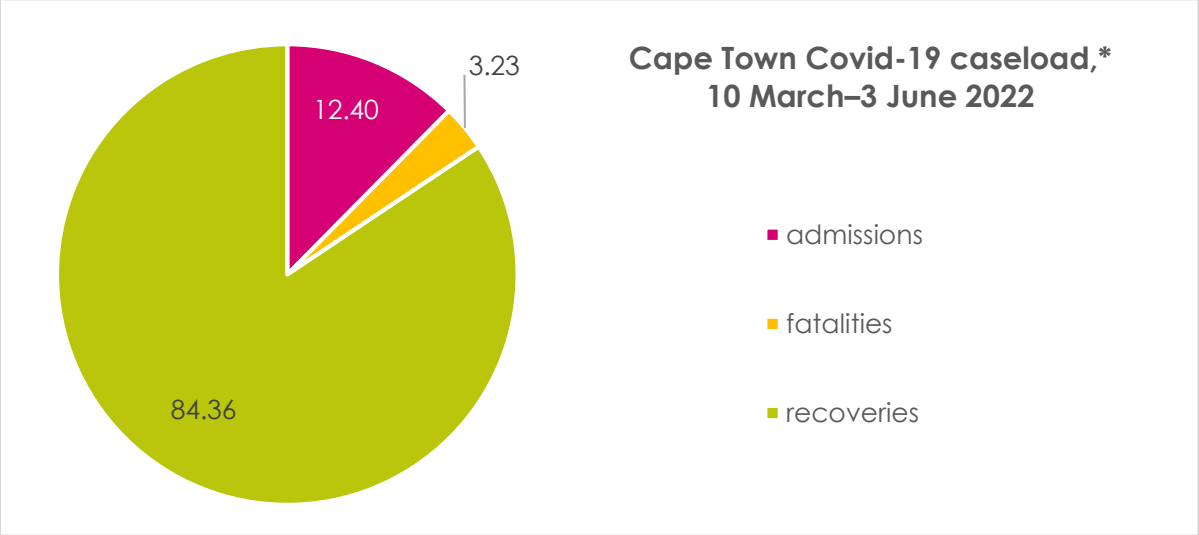
Tuberculosis

As one of the most contagious communicable diseases, TB can harm not only individual health and resilience, but also household and community wellbeing. In the five years preceding the Covid-19 pandemic, Cape Town had an encouraging downward trend in TB cases. Yet over the period 2020/21–2021/22, cases increased from 529 per 100 000 people to 615.

The number of Cape Town patients with drug-resistant TB increased slightly from 1 224 per 100 000 people in 2014/15 to 1 273 in 2020/21 and then decreased again to 1 231 in 2021/22.[63]

Covid-19

The significant challenges posed by the Covid-19 pandemic called for an unprecedented global health response, from the healthcare facilities and systems of both the City and Province, other Cape Town healthcare providers as well as residents. From March 2020, the City's Health Department worked as part of a national multi-agency response to the coronavirus outbreak to slow the rate of infection and lessen the impact of the pandemic on both individuals and the healthcare system.



* Note: Admissions refer to people admitted to hospital with a confirmed Covid-19 diagnosis.

Figure 22: Covid-19 caseload in Cape Town, 10 March–3 June 2022 (Source: City of Cape Town Health Department.

[63] City of Cape Town Health Department internal communication.

Cape Town experienced five waves of the pandemic between March 2020 and mid-2022. The first four[64] were characterised by high daily infection rates and high death rates, with more than 3 000 people diagnosed with Covid-19 in a single day at the peak of waves 3 and 4. Overall, approximately 3% of Covid-19 patients succumbed to the virus, while 84% recovered. According to a high-level gender analysis of infections, women were more likely than men to contract Covid-19, although Covid-19-associated mortality was higher among men.[65]

Household hunger

Food security is strongly influenced by global events such as climate change, warfare, supply chain disruptions and the ability of urban environments to source food. Global food insecurity has increased since 2019: In 2021, a total of 828 million people were affected by hunger, representing an increase of approximately 48 million since 2020 and 150 million since 2019.[66] Food prices globally have skyrocketed[67] as a result of the global pandemic and, more recently, the Russia/Ukraine war. Agricultural commodity prices for countries with low to mid-range incomes increased from 83 index points[68] in 2019 to 118,1 in 2022.[69] Global supply chains are under severe strain, and as a result, years of development in the area of food security has been reversed.[70] Since the start of the Russia/Ukraine war in February 2022, more than 80% of countries have experienced food price inflation of at least 5%, which has put households' food security at risk. The World Bank estimates that food prices will remain high until at least 2024.[71]

In the period 2016–2019, more than 70% of Cape Town households reported that no adult went hungry (see figure 23). This number dropped to below 70% in 2020, most likely because of job losses associated with the pandemic. The City and other spheres of government provided food packages and grants, and also assisted community soup kitchens to help meet the increased need for food assistance.

The trend regarding adult hunger in Cape Town households in 2020 was mixed: Households who reported high food security decreased, while those who reported medium food security increased.

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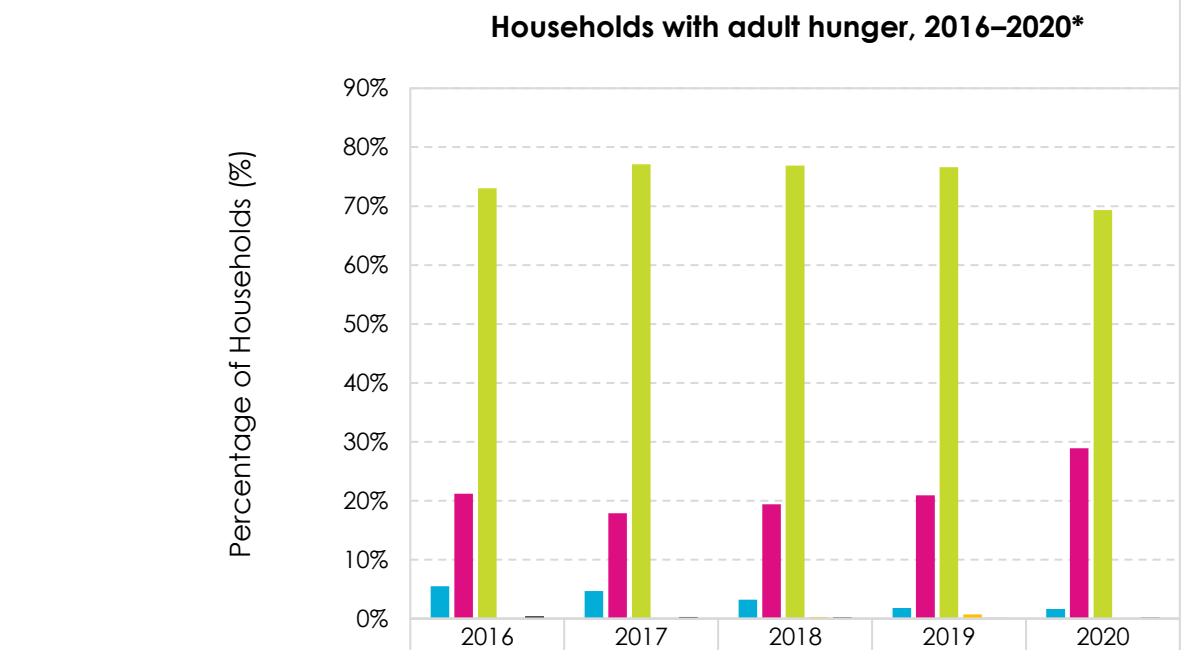
[64] First wave: May to July 2020; second wave: December 2020 to January 2021; third wave: July to August 2021; fourth wave: December 2021; fifth wave: May 2022. See Western Cape Government. 2022. Covid-19 cases dashboard. Available: https://coronavirus.westerncape.gov.za/vaccine/covid-19-cases-dashboard.
[65] Western Cape Government. 2022. Covid-19 cases dashboard. Available: https://coronavirus.westerncape.gov.za/covid-19-dashboard.
[66] World Bank. 2022. Food security update: World Bank response to rising food insecurity. Available: https://www.worldbank.org/en/topic/agriculture/brief/food-security-update.
[67] World Bank. 2022. World Bank Commodities Price Data (The Pink Sheet). Available: https://thedocs.worldbank.org/en/doc/5d903e848db1d1b83e0ec8f744e55570-0350012021/related/CMO-Pink-Sheet-September-2022.pdf.
[68] The Agricultural Price Index indicates how the price of agricultural produce has changed, compared to its base. https://ec.europa.eu/eurostat/cache/metadata/en/apri_pi_esms.htm
[69] World Bank. 2022. World Bank Commodities Price Data (The Pink Sheet). Available: https://thedocs.worldbank.org/en/doc/5d903e848db1d1b83e0ec8f744e55570-0350012021/related/CMO-Pink-Sheet-September-2022.pdf.
[70] World Bank. 2022. Food security update: World Bank response to rising food insecurity. Available: https://www.worldbank.org/en/topic/agriculture/brief/food-security-update.
[71] World Bank. 2022. Food security update: World Bank response to rising food insecurity. Available: https://www.worldbank.org/en/topic/agriculture/brief/food-security-update.

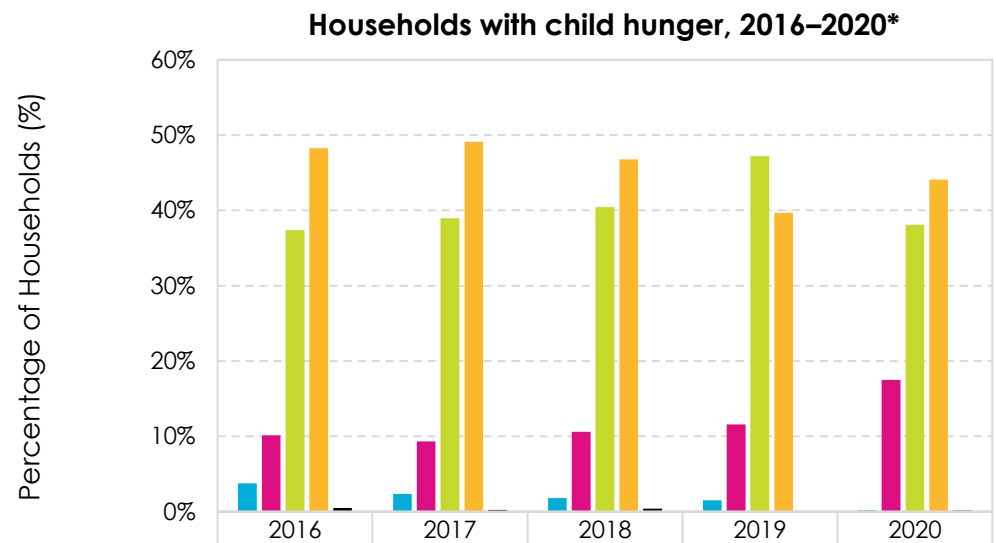


	2016	2017	2018	2019	2020
Low Food Security (Often or Always go hungry)	5.5%	4.7%	3.2%	1.8%	1.6%
Medium Food Security (Seldom or Sometimes go hungry)	21.2%	17.9%	19.4%	20.9%	28.9%
High Food Security (Never go hungry)	73.0%	77.1%	76.9%	76.6%	69.3%
Not Applicable (no adults in the household)	0.00%	0.00%	0.30%	0.70%	0.0%
Unspecified	0.40%	0.30%	0.20%	0.10%	0.2%

* Note: The General Household Survey sample size for 2020 was significantly smaller than in previous years.

Figure 23: Adult hunger in Cape Town households, 2016–2020 (Source: Policy and Strategy Department, City of Cape Town, based on Statistics South Africa General Household Survey 2016–2020)

In terms of child hunger, the proportion of households with high food security steadily increased from 2016 to 2019 (see figure 24). Between 2019 and 2020, however, households who reported high child food security decreased slightly, with substantially more households reporting medium child food security.



	2016	2017	2018	2019	2020
Low Food Security (Often or Always go hungry)	3.8%	2.4%	1.8%	1.5%	0.2%
Medium Food Security (Seldom or Sometimes go hungry)	10.1%	9.3%	10.6%	11.6%	17.5%
High Food Security (Never go hungry)	37.4%	38.9%	40.4%	47.2%	38.1%
Not Applicable (no children in the household)	48.2%	49.1%	46.8%	39.7%	44.1%
Unspecified	0.5%	0.2%	0.4%	0.1%	0.2%

* Note: The General Household Survey sample size for 2020 was significantly smaller than in previous years.

Figure 24: Child hunger in Cape Town households, 2016–2020 (Source: Policy and Strategy Department, City of Cape Town, based on Statistics South Africa General Household Survey 2016–2020)

The World Economic Forum suggests that a combination of increased food systems innovation (specifically in the field of agriculture) and a decrease in global carbon emissions could yield positive results in the global fight against food insecurity,[72] as could better soil and water resource management. Live and accessible data will play a key part in this regard, enabling food system solutions for both farmers and consumers.

In addition, the City has initiated work on a trauma-informed approach to understand collective and intergenerational trauma levels in Cape Town and how these affect the behaviour and sense of self of both individuals and communities. Commonly used to address issues of violence and build social inclusion, the approach requires synergy and collaboration among government and community stakeholders, with the ultimate aim to inform and change policies, protocols and institutional behaviour. In 2022, the City initiated pilots in three wards known for their low levels of social cohesion and high levels of exposure to violence, and results will be monitored.

[72] World Economic Forum. 2022. How inclusive innovation could transform food systems – and help to end world hunger. Available: https://www.weforum.org/agenda/2022/03/food-systems-innovation-transformation/.

The pandemic highlighted the fragility and vulnerability of the healthcare system, as well as the need for structural and technological improvements to change the system from reactionary to pre-emptive, focusing on prevention and wellbeing. Virtual health,[73] including telemedicine, became more popular during the pandemic and enabled increased access to health services, specifically for underserved populations. The virtual healthcare trend is expected to grow, including the production of more at-home diagnostic health technologies, enabling more patients to take control of their health.[74]

In the future, the patient or customer will increasingly be at the centre of the healthcare system, being able to access their own health data, use at-home diagnostics and be more pre-emptive about managing their own health conditions.[75] Already, more and more people monitor their fitness and general wellness indicators via smart watches and mobile phones. Over time, these technological advancements and the ability to proactively manage one's health may result in a reduction in chronic lifestyle diseases such as diabetes and certain cancers.

Chapter summary: Health and wellbeing

- **The City takes a holistic wellbeing approach to health.**
- **Access to ARVs has increased, while HIV infection rates have decreased.**
- **TB rates increased over the period 2020–2022.**
- **Injury is a leading cause of death in young people in Cape Town, specifically young males aged 5–24. This is linked to gangsterism and high levels of violence in communities.**
- **In 2020, just under 70% of households reported that no adult went hungry, while nearly 40% of households reported that no child went hungry.**

[73] Virtual healthcare is the practice of using remote technologies such as phone calls, videoconferencing, connected devices and online chats to connect with patients.
[74] Deloitte. 2019. Forces of change: The future of health. Available: https://www2.deloitte.com/content/dam/insights/us/articles/5169_forces-of-change-future-of-health/DI_Forces-of-change_Future-of-health.pdf.
[75] Deloitte. 2019. Forces of change: The future of health. Available: https://www2.deloitte.com/content/dam/insights/us/articles/5169_forces-of-change-future-of-health/DI_Forces-of-change_Future-of-health.pdf.

ENVIRONMENTAL RESOURCES

In South Africa, environmental resources such as arable land, energy and water are some of the key elements at risk due to increased urbanisation, while energy security is being threatened by an ongoing overdependence on fossil fuels and coal-based energy.

The effects of climate change are already being felt across South Africa, including in Cape Town, in the form of multiyear droughts, torrential rain and floods as well as seasonal fire. South Africa has signed key environmental and sustainability agreements such as the Paris Agreement from COP 25 to help pave the way to global environmental sustainability. This chapter outlines the City's efforts in this regard, including its initiatives to help achieve global climate change goals and move towards carbon neutrality.[76]

Energy

The City has taken several key steps towards improving energy sustainability in Cape Town. These include efforts to reduce the administration's own energy consumption and to diversify energy supply to include more renewable sources, thereby enhancing sustainability and resilience to energy risks.[77] Having declined between 2017 and 2019, Cape Town's energy consumption increased sharply between 2019 and 2020. This was likely due to the (nearly 4%) increase in the number of households who gained access to the electricity supply system[78] and an increase in hot-water use in the post-drought period.[79] Nevertheless, general energy demand in Cape Town shows a downward trend, which is expected to continue into the future[80].

At the same time, the installation and use of small-scale embedded generation increased among both households and industry between 2014 and 2021. By 2021, installations had passed the 1 500 mark off a minimal baseline of close to zero.[81]

[76] See page 24 of City of Cape Town State of Energy and Carbon 2021 for more on the City's initiatives. Available: https://resource.capetown.gov.za/documentcentre/Documents/City%20research%20reports%20and%20review/CT_State_of%20Energy_and_Carbon_Report_2021.pdf.
[77] Among others, the City is moving towards a phased revenue model that explores new technology and renewable energy, and prioritises poor households in terms of energy needs. Additionally, alternative energy options for unelectrifiable households are being explored and low-income energy education and awareness has been initiated across all City departments. See City of Cape Town integrated annual report 2020/21. Available: https://www.capetown.gov.za/local%20and%20communities/city-publications/publications-and-reports/annual-reports.
[78] Statistics South Africa General Household Survey 2016–2020.
[79] City of Cape Town State of Energy and Carbon 2021. Available: https://resource.capetown.gov.za/documentcentre/Documents/City%20research%20reports%20and%20review/CT_State_of%20Energy_and_Carbon_Report_2021.pdf.
[80] City of Cape Town State of Energy and Carbon 2021. Available: https://resource.capetown.gov.za/documentcentre/Documents/City%20research%20reports%20and%20review/CT_State_of%20Energy_and_Carbon_Report_2021.pdf.
[81] Page 111 of City of Cape Town State of Energy and Carbon 2021. Available: https://resource.capetown.gov.za/documentcentre/Documents/City%20research%20reports%20and%20review/CT_State_of%20Energy_and_Carbon_Report_2021.pdf.

Renewable energy as a percentage of total electricity demand also increased from 0,001% in 2012 to nearly 0,4% in 2018.[82]

During the Covid-19 lockdowns experienced in most countries worldwide, the global electricity demand fell by an estimated 30%; in South Africa, demand dropped by an estimated 15%.[83] However, this trend is estimated to turn around again as lockdown measures ease and sectors with a high energy demand such as refineries and transport resume operations. Globally, it was estimated that energy demand would grow by 5% in 2021 and 4% in 2022.[84]

Clean technologies have been well received globally, despite the increased capital expenditure.[85] In aiming for carbon neutrality and resilience by 2050, the City is embracing the transition to renewable electricity, the electrification of transport (supported by public transport), smart spatial planning, catalytic urban investments, and the diversion of organic waste at source.[86]

In 2018, electricity, diesel and petrol accounted for 89% of carbon emissions in Cape Town.[87] Transport is the biggest CO_2 emitter per ton and also the sector with the highest energy demand, consuming mostly fossil fuels (see figure 25 below). Between 2016 and 2019, transport accounted for at least 85 million gigajoules of energy consumption and 6 million tons of CO_2 equivalent respectively[88] (see figures 25 and 26).

[82] Page 111 of City of Cape Town State of Energy and Carbon 2021. Available: https://resource.capetown.gov.za/documentcentre/Documents/City%20research%20reports%20and%20review/CT_State_of%20Energy_and_Carbon_Report_2021.pdf.
[83] EWN. 2020. SA's energy demand declined by an estimated 15% during lockdown. Available: https://ewn.co.za/2020/05/04/sa-s-energy-demand-during-lockdown-declined-by-an-estimated-15-sanedi.
[84] IEA. 2021. Global electricity demand is growing faster than renewables, driving strong increase in generation from fossil fuels. Available: https://www.iea.org/news/global-electricity-demand-is-growing-faster-than-renewables-driving-strong-increase-in-generation-from-fossil-fuels. In the absence of more recent information, establishing evidence-based data for both short-term and long-term future trends is challenging.
[85] IHS Markit. 2022. 10 Cleantech Trends in 2022. Available: https://cdn.ihsmarkit.com/www/pdf/0222/IHS-Markit-Top-10-Cleantech-Trends-2022-Whitepaper.pdf.
[86] Page 26 of City of Cape Town State of Energy and Carbon 2021. Available: https://resource.capetown.gov.za/documentcentre/Documents/City%20research%20reports%20and%20review/CT_State_of%20Energy_and_Carbon_Report_2021.pdf.
[87] State of Cape Town 2020 full report. Available: https://resource.capetown.gov.za/documentcentre/Documents/City%20research%20reports%20and%20review/State_of_Cape_Town_Report_2020.pdf.
[88] City of Cape Town State of the Environment 2022. Available: https://resource.capetown.gov.za/documentcentre/Documents/City%20research%20reports%20and%20review/CCT_State_of_the_Environment_2022.pdf.

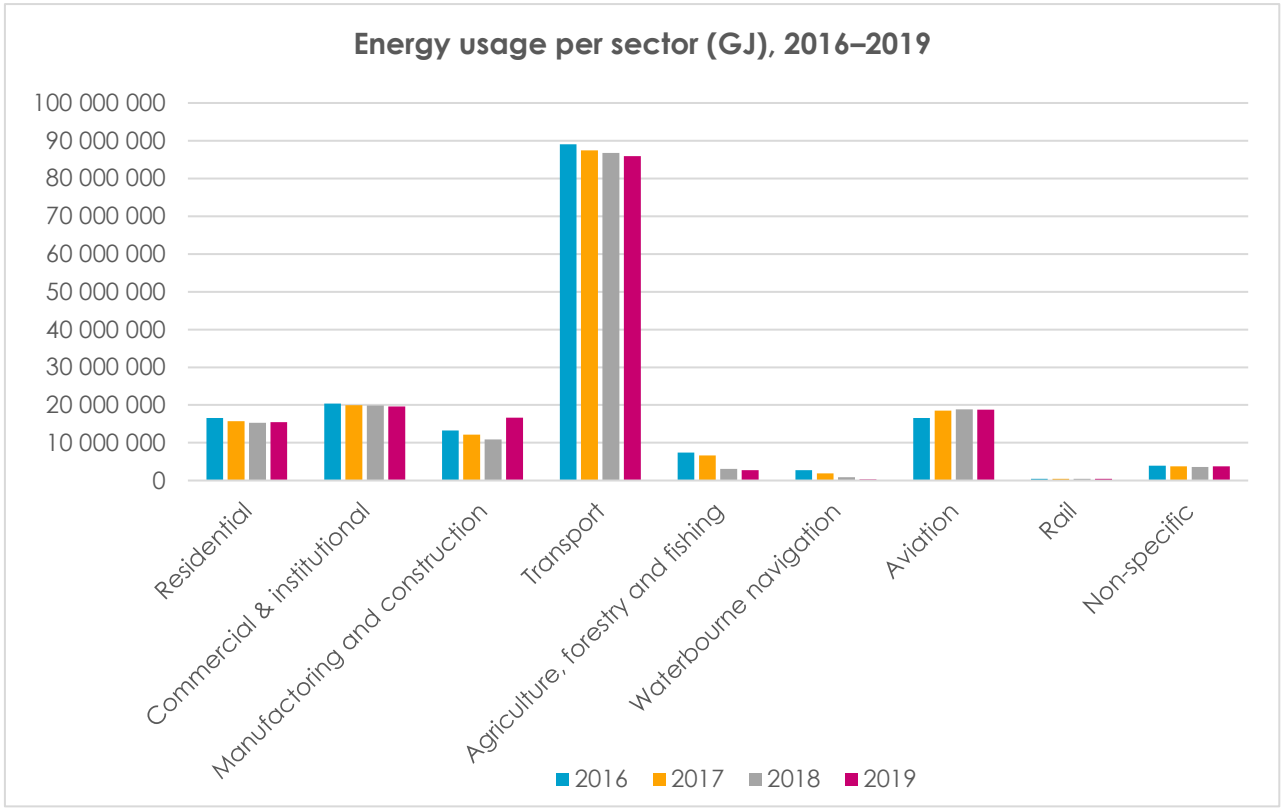


Figure 25: Energy usage per sector in Cape Town, 2016–2019 (Source: City of Cape Town State of Energy and Carbon 2021)

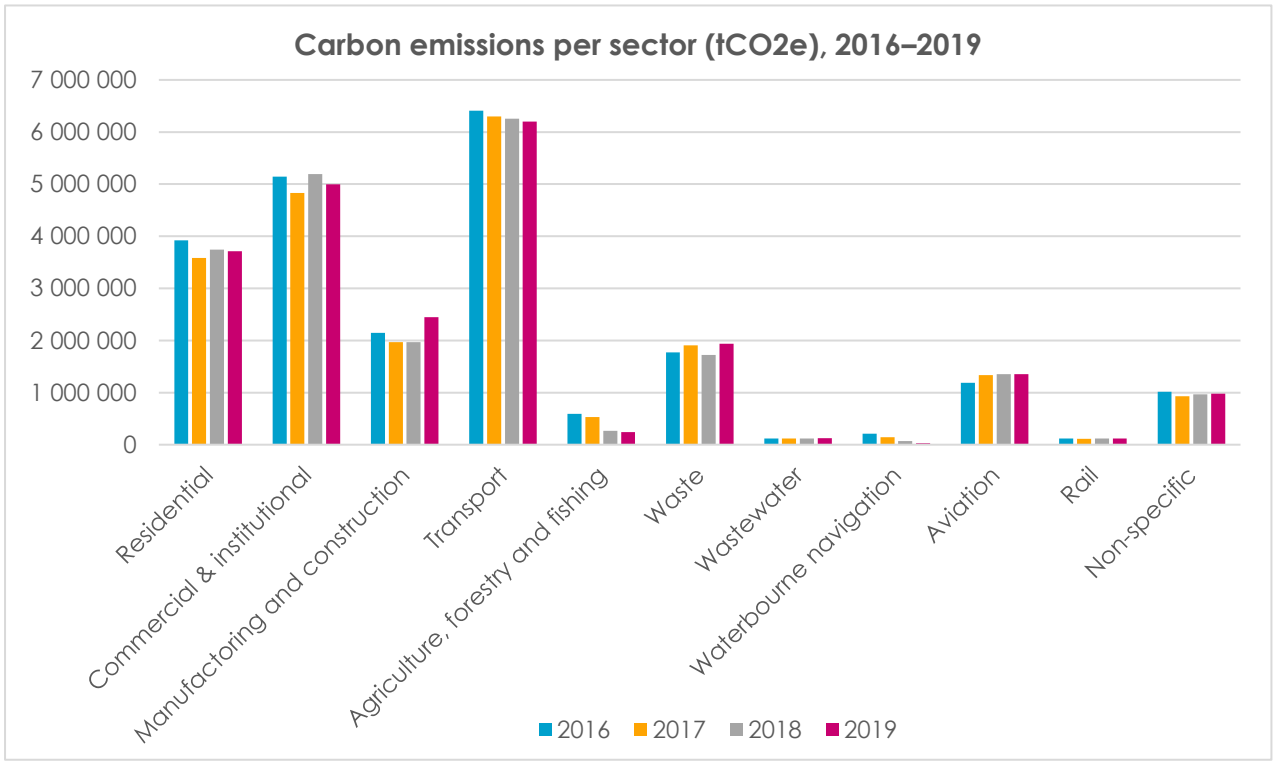


Figure 26: Carbon emissions per sector in Cape Town, 2016–2019 (Source: City of Cape Town State of the Environment 2022)

Water security

Cape Town has recorded three episodes of drought since 1928, with the most recent lasting from 2014 to 2017/18 (see figure 27).

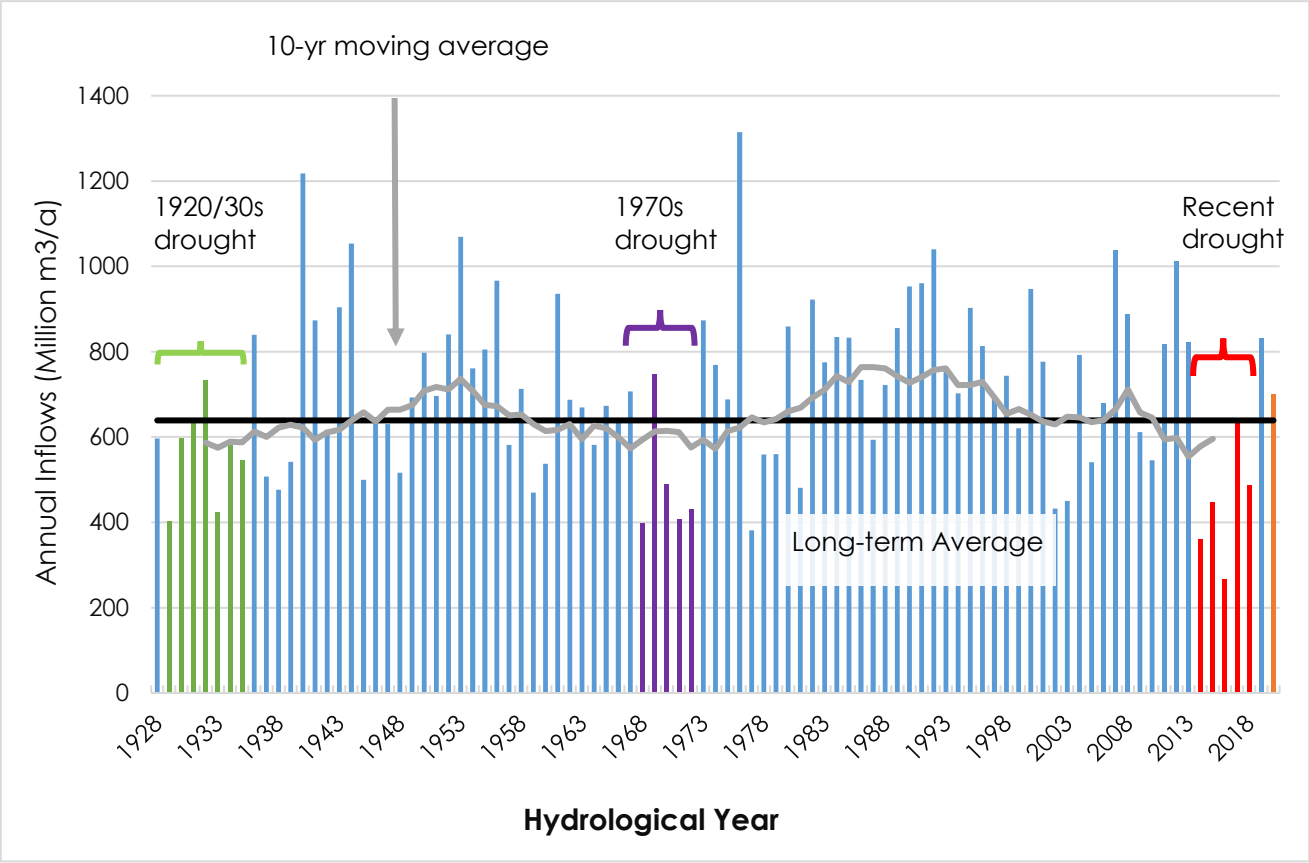


Figure 27: Annual water inflows entering the dams of the Western Cape water supply system, 1928–2020 (Source: City of Cape Town Water and Sanitation Directorate)

In 2020/21, 96% of Cape Town's water supply system was rain-fed (supplied by surface water), while 4% was supplied by groundwater.[89] Considering the collective effect of population growth, an increase in informal settlements and climate change impacts, there is an ever-growing need for greater use of alternative water sources, deeper biodiversity conservation and management, as well as ongoing water demand management strategies. Indeed, these actions have become the backbone of the City's water security measures. Potential alternative water sources and consumption patterns by 2040 include groundwater extraction, higher levels of water reuse, and adding desalination to the mix (see figures 28 and 29).

[89] City of Cape Town integrated annual report 2020/21. Available: https://www.capetown.gov.za/local%20and%20communities/city-publications/publications-and-reports/annual-reports.

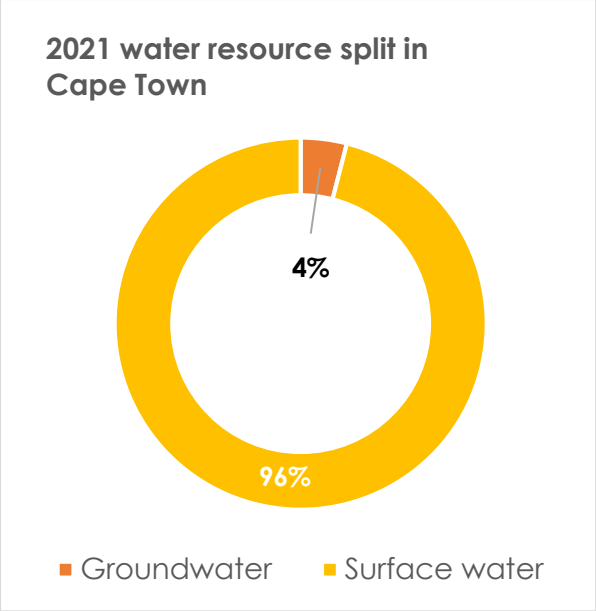


Figure 28: Current water resource split by source (Source: City of Cape Town integrated annual report 2020/21)

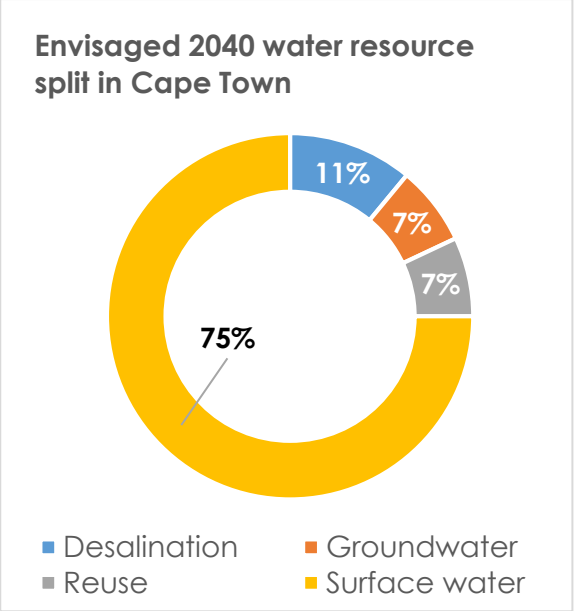


Figure 29: Planned-for water resource split by 2040 (Source: City of Cape Town integrated annual report 2020/21)

Currently, it is estimated that formal residential areas account for the majority of water demand. In 2017, informal settlements were estimated to account for only 4,7% of water consumed in Cape Town, while formal residents consumed 66% of the water in the supply network.[90] This suggests that current water management strategies – in line with the socioeconomic and spatial dynamics of the metropolitan area – will remain effective in helping to maintain water security in the short term.[91]

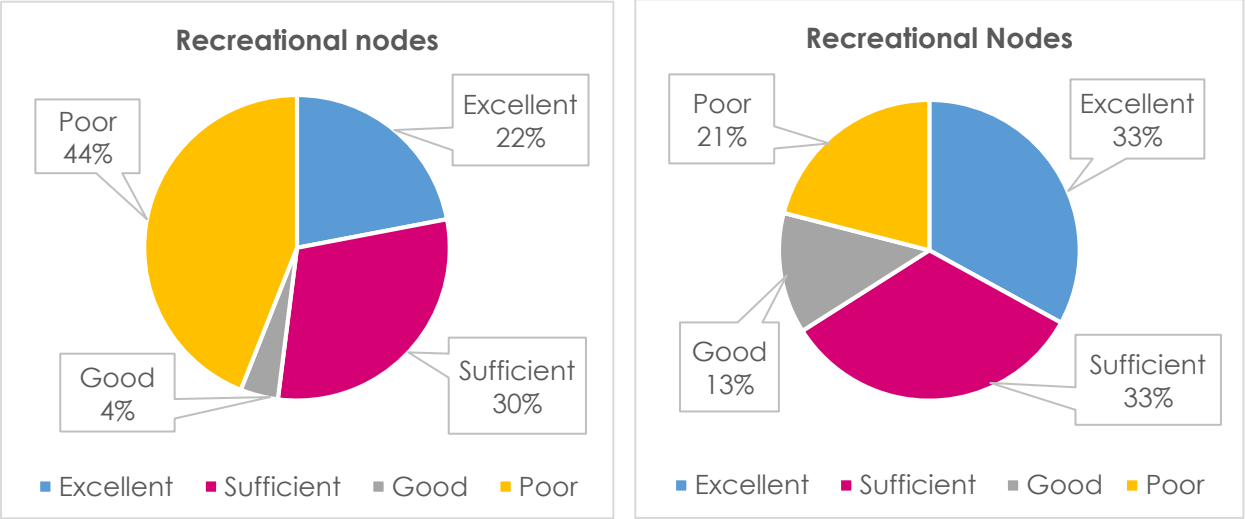
Water quality

Drinking-water quality in Cape Town is carefully tested and monitored against the applicable South African National Standards. The City's laboratories run over 5 700 sample tests annually to ensure that quality requirements are met,[92] and results are published quarterly for transparency.[93] The results show that drinking-water quality in Cape Town has consistently complied with the national regulation standards. For a population greater than 100 000 people, compliance must exceed 99%, which the City managed to achieve for the past three reporting years.[94]

[90] Nicolson, A. 2017. Cape Town's water crisis: Can suburbia save the day? Available: https://www.news.uct.ac.za/article/-2017-09-27-cape-towns-water-crisis-can-suburbia-save-the-daya.
[91] Management devices were installed in low-income households who had high water consumption bills, some primarily due to leaks.
[92] Samples are collected from the following supply systems: raw water (from dams and boreholes), post-treatment water (from treatment plants), water from reservoirs, and water from pipework (taken from designated sampling points across Cape Town). For more, see City of Cape Town. Water quality. Available: https://www.capetown.gov.za/Family%20and%20home/residential-utility-services/residential-water-and-sanitation-services/water-quality.
[93] City of Cape Town State of the Environment 2022. Available: https://resource.capetown.gov.za/documentcentre/Documents/City%20research%20reports%20and%20review/CCT_State_of_the_Environment_2022.pdf.
[94] City of Cape Town. Water quality. Available: https://www.capetown.gov.za/Family%20and%20home/residential-utility-services/residential-water-and-sanitation-services/water-quality.

In addition, some of Cape Town's 242 inland waterbodies, which include waterways, vleis, canals, estuaries, stormwater outlets and estuaries, are monitored for algal as well as bacterial and chemical content. The presence of *E. coli* serves as an indicator of water safety, particularly in rivers, vleis and other recreational water spaces. In Cape Town, approximately 60% of rivers had acceptable levels of *E. coli* for the period 2015–2020.[95] Vleis, dams and detention ponds recorded better results, with more than 80% having acceptable *E. coli* levels over the same period.[96]

In terms of coastal waters, the City's beach areas are monitored based on the compliance criteria set by the national Department of Water and Sanitation. Poor marine water quality was detected at the False Bay monitoring points in 2020, with poor results recorded at 44% of the recreational nodes in this area (figure 30). Some 21% of recreational nodes along the Atlantic Coast recorded poor water quality results, with the remaining 79% having either good, sufficient or excellent water quality (figure 31).[97]



Figures 30 and 31: False Bay (left) and Atlantic coast (right) water quality ratings at recreational nodes (Source: City of Cape Town Know Your Coast 2020 report)

Poor coastal water quality is a concern. Changes in the nutrient composition of coastal water can change the ecological dynamics of marine species as well as species diversity. Therefore, the City has implemented several intervention programmes to better manage and protect its coastal waters.

Biodiversity

Cape Town's Biodiversity Network (BioNet) extends across 85 000 ha, or some 34,18% of the municipal area. The City sets itself annual targets to gradually expand the total

[95] City of Cape Town. Water quality. Available: https://www.capetown.gov.za/Family%20and%20home/residential-utility-services/residential-water-and-sanitation-services/water-quality.
[96] City of Cape Town. Water quality. Available: https://www.capetown.gov.za/Family%20and%20home/residential-utility-services/residential-water-and-sanitation-services/water-quality.
[97] City of Cape Town State of Environment 2022.

area of the BioNet that is being formally conserved. This has seen the formally conserved portion of the BioNet increase from 34,12% in 2009 to 65,41% in 2021, meaning that the City met and exceeded its 2022 target of 65% a year ahead of schedule. The target for 2027 is to have 66,5% (or 56 525 ha) of the BioNet under formal management and conservation.[98]

Climate change, population growth and the need for developable land remain concerns for maintaining biodiversity networks and ecosystem services recovery. That said, however, global sustainability scenarios project that by 2050, climate change will have replaced all other factors as the key driver of biodiversity loss.[99]

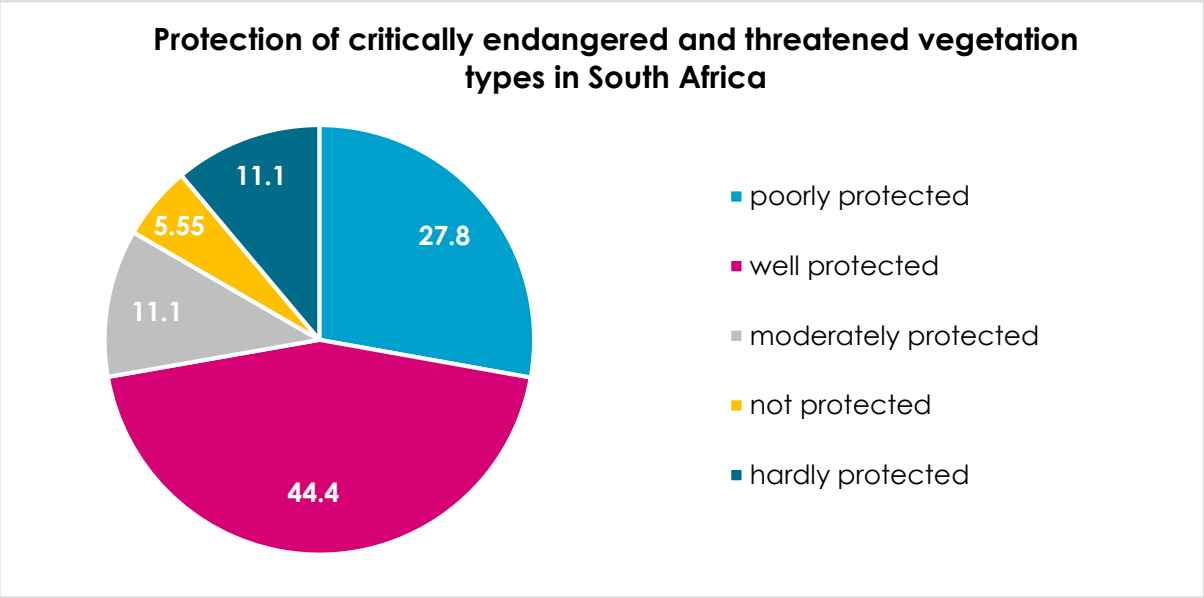


Figure 32: Protection of critically endangered and threatened vegetation types in South Africa (Source: City of Cape Town State of the Environment 2022)

Waste

Urban waste management and waste disposal programmes have become key to the City's climate adaptation work. Global waste generation is expected to grow to 3,4 billion tons by 2050.[100] While cities in countries with low to medium-range incomes are generally projected to cope with waste management processes, rural areas remain a concern, as effective waste management here is on the decline.

[98] City of Cape Town State of the Environment 2022. Available: https://resource.capetown.gov.za/documentcentre/Documents/City%20research%20reports%20and%20review/CCT_State_of_the_Environment_2022.pdf.
[99] Cold Spring Laboratory. 2020. Global trends in biodiversity and ecosystem services from 1900 to 2050. Available: https://www.biorxiv.org/content/10.1101/2020.04.14.031716v2.full.
[100] World Bank. Trends in solid waste management. Available: https://datatopics.worldbank.org/what-a-waste/trends_in_solid_waste_management.html.

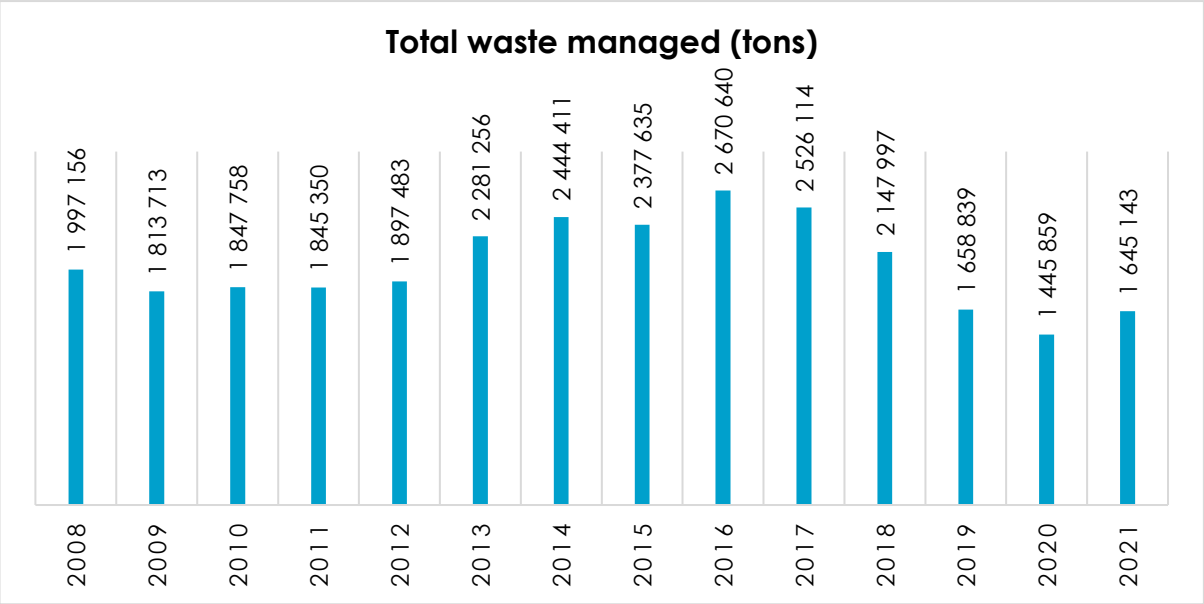


Figure 33: Waste managed at City landfills, 2008–2021 (Source: City of Cape Town State of the Environment 2022)

Table 1: Key waste statistics (Source: City of Cape Town State of the Environment 2022)

NUMBER OF WHEELIE BINS	±850 000
Number of wheelie bins collected per day (various removal frequencies)	±190 000
Waste managed per year	±1,65 million tons (2019)
	±1,45 million tons (2020)
	±1,64 million tons (2021)
Waste diverted per year	±216 000 tons
Waste disposed per year	±1,22 million tons (2019)
	±1,08 million tons (2020)
	±1,09 million tons (2021)
Builder's rubble stockpiled for future use	±370 000 tons
Builder's rubble diverted from landfill per year	±123 545 tons
Organic waste diverted from landfill per year	±53 000 tons
Kerbside recycling programme offered to households	±170 000
Free composting containers distributed	±22 000

Cape Town and the Western Cape province are running out of landfill space.[101] The City has been progressively expanding its interventions to divert waste from landfill so as to reduce the pressure on its existing sites. In 2019/20, the administration managed to divert some 216 000 tons of waste, including approximately 123 545 tons of builder's rubble and 53 000 tons of organic waste. This positive trend was carried over into 2020/21. Total waste managed by the City increased from 1,4 million tons in 2020 to 1,6 million tons in 2021.[102]

The City's Think Twice kerbside recycling programme has now reached over 190 000 Cape Town households, who are estimated to have collectively diverted 24 234 tons of waste from landfill in 2019/20, and 27 292 tons in 2020/21.[103] In addition, the City also distributed about 22 000 free composting containers to households.

Chapter Summary Environmental Resources

- **The effects of climate change are increasingly visible and pose a significant risk to human development and prosperity.**
- **In Cape Town the impacts of climate change are experienced through decreased annual rainfall, the change in seasonality of rainfall, increasing mean annual surface temperatures, increasing intensity of storms (despite being less frequent) and increased frequency of coastal storms.**
- **Electricity remains in high demand in Cape Town, and is one of the leading sources of CO^2 emission in the city.**
- **Burning of coal is another driving cause for the electricity demand thus it is predicted that coal-generated electricity will continue to be in demand as part of the Covid-19 recovery tool.**
- **The bulk of water demand in Cape Town is estimated to be accounted for by formal residential areas.**
- **Unprecedented climate change and human activities are putting conservation areas and critical biodiversity areas under severe stress.**
- **The global sustainability scenarios project that by 2050, climate change will be the key driver of biodiversity loss.**
- **Urban waste management and urban disposal programmes have become key to climate adaptation measures undertaken globally, nationally and by the CCT.**
- **Global waste generation is expected to grow. Cities like Cape Town are generally projected to be able to cope with waste management processes, however, in the rural areas on the outskirts of cities, where effective waste management is on the decline waste management remains an issue of concern**

[101] City of Cape Town. 2020. Solid waste sector plan 2019/20.
[102] City of Cape Town State of the Environment 2022. Available: https://resource.capetown.gov.za/documentcentre/Documents/City%20research%20reports%20and%20review/CCT_State_of_the_Environment_2022.pdf.
[103] City of Cape Town State of the Environment 2022. Available: https://resource.capetown.gov.za/documentcentre/Documents/City%20research%20reports%20and%20review/CCT_State_of_the_Environment_2022.pdf.

URBAN FORM AND MOBILITY

This chapter covers the contextual elements of Cape Town that make up the urban form and transport systems. It details access to basic services, which comprise piped water (either on the property or within 200 m), sanitation (a flush toilet, chemical toilet or pit toilet with ventilation), weekly refuse removal, and energy (electricity from a mains supply for lighting, cooking, etc.). The chapter also contains information on transport use and trends in Cape Town, access to formal and informal housing in the city, and the availability of open and other municipal recreational spaces.

The injustices of apartheid government policies continue to live on in Cape Town's urban form. Spatial inequality and exclusion remains a key challenge for poorer and more vulnerable communities, who live furthest from economic opportunities and have to travel longer distances to places of employment. These circumstances help reinforce existing inequalities and keep communities trapped in a cycle of poverty and vulnerability, impeding prospects of improving their wellbeing.

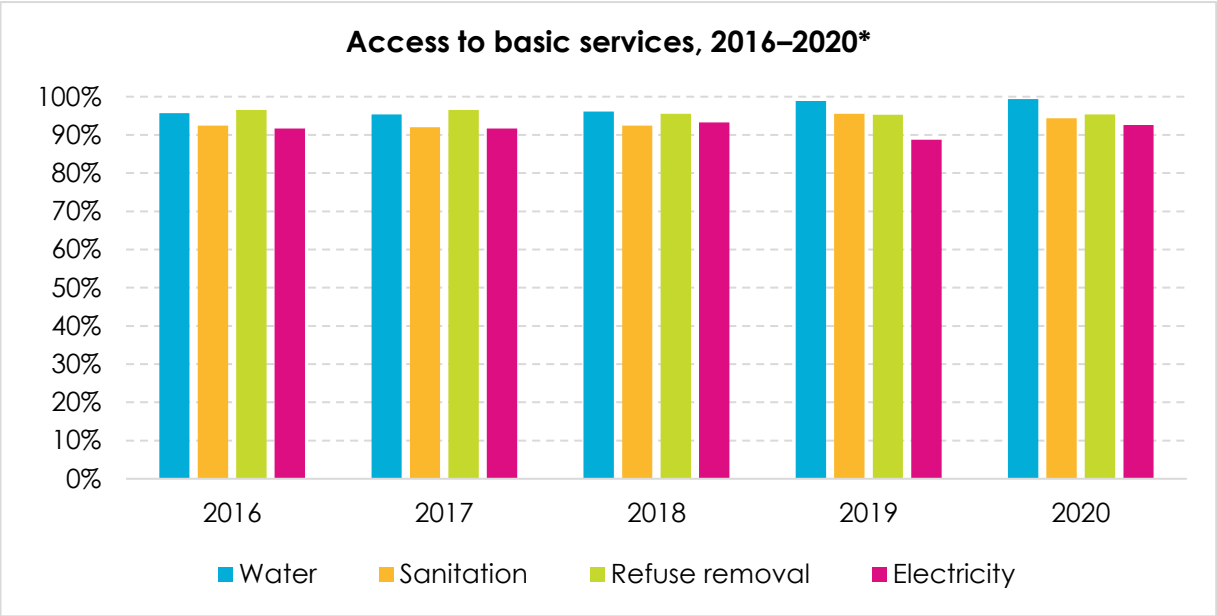
While access to basic services has improved across Cape Town, informality remains high (nearly 20% in 2020). Moreover, residents' public transport use has declined, for various reasons.

Global trends show that by 2050, a projected 68% of the world's population will reside in urban settings.[104] The key trends in urbanisation currently include an increased need for better public transport, affordable housing, infrastructure investment and basic services provision.[105] As global push factors such as conflicts and climate change impacts increase, more displaced people will enter urban spaces. Ultimately, therefore, the urban challenges of the future will require sustainable, low-carbon, people-centred solutions.

Basic services

Basic services include access to piped water, sanitation, refuse removal and electricity supply. The City is performing well in providing these. For the period 2016–2020 (see figure 34), average access levels exceeded 90% for water, sanitation, refuse removal and electricity. Electricity supply dropped to 88,7% in 2019, but increased again to 92,6% in 2020.

[104] United Nations. 2018. 68% of the world population projected to live in urban areas by 2050, says UN. Available: https://www.un.org/development/desa/en/news/population/2018-revision-of-world-urbanization-prospects.html.
[105] World Bank. 2020. Urban development. Available: https://www.worldbank.org/en/topic/urbandevelopment/overview.



* Note: Data includes both formal and informal households. Note also that the General Household Survey sample size for 2020 was significantly smaller than in previous years, which would affect the statistical findings flowing from the survey data.

Figure 34: Access to basic services in Cape Town, 2016–2020 (Source: Policy and Strategy Department, City of Cape Town, based on Statistics South Africa General Household Survey 2016–2020).

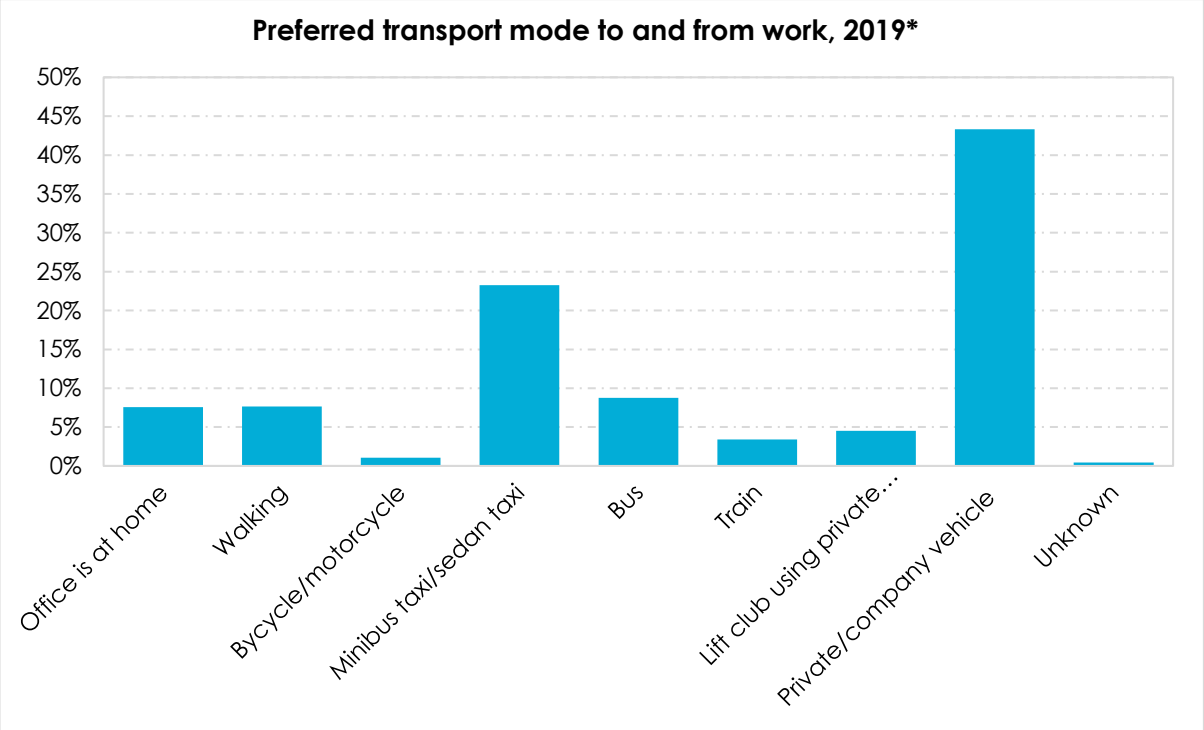
Transport and transit

In developed economies, mass passenger transport innovation is driving a shift towards smarter, sustainable transport solutions. These include digital connections between transport modes and provide an improved customer experience, while using transport and smart technologies to better understand and cater for mobility demand. Major cities increasingly provide a greater variety of transport offerings – including electric transport and transport-sharing services – to lessen their dependence on fossil fuels and reduce their carbon footprint. In line with this trend, the City introduced the MyCiTi bus rapid transit system in 2010 as a public transport option for Cape Town commuters. While still limited at present, the network is gradually being expanded across town, focusing especially on areas with no or limited other mass public transport options.[106]

Overwhelmingly, though, the preferred method of travel in Cape Town remains the private vehicle, in large part due to the lack of availability of safe, reliable public transport services, or where services exist, their poor quality. In 2019, private car use in Cape Town stood at more than 40%. Minibus taxis were the second-biggest provider of commuter transport, ferrying just under 25% of Cape Town commuters. In recent years, commuters have progressively moved away from metro (passenger) rail due to

[106] Fishman, T., Kelkar, M., Tomlinson, C. & Cary, R. 2020. Transportation trends 2022–23. Available: https://www2.deloitte.com/za/en/insights/industry/public-sector/transportation-trends.html; ARUP. Accelerating the journey to net zero transport. Available: https://www.arup.com/climate-change/accelerating-the-journey-to-net-zero-transport?gclid=CjwKCAjwqauVBhBGEiwAXOepkddu-5n76V2mqZCe6q-0N8AMPd2eYwBBgenZYS3yh5JaqEO0m6FRgRoCSN8QAvD_BwE.

reliability and safety issues. Metro rail usage decreased from 14,8% in 2014 to 6,25% in 2018[107] and dwindled even further to 3,4% in 2019 (see figure 35 below).

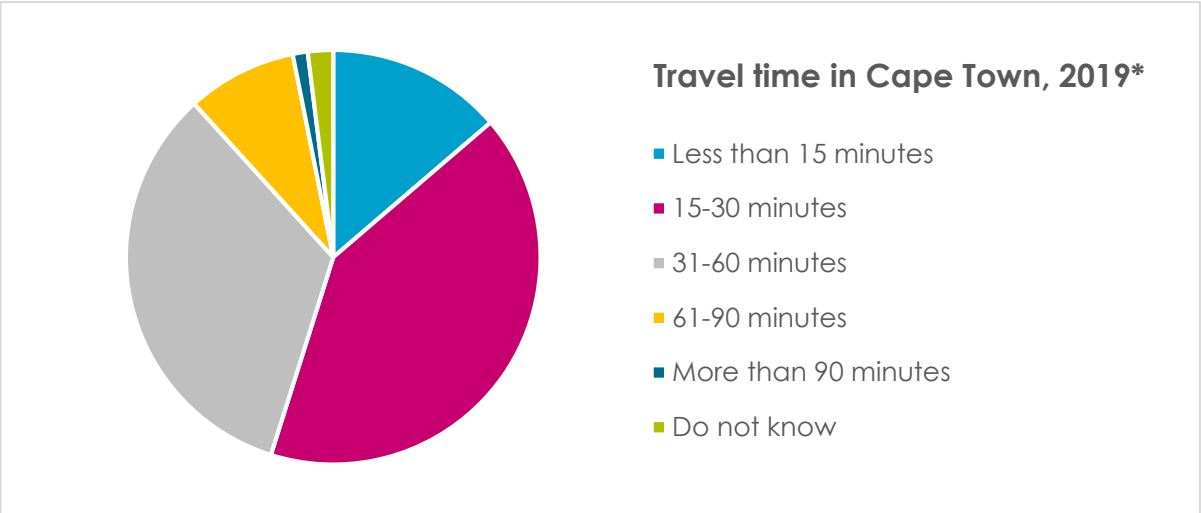


* Note: The 2020 General Household Survey did not include this question.

Figure 35: Preferred transport mode to and from work, 2019 (Source: Policy and Strategy Department, City of Cape Town, based on Statistics South Africa General Household Survey 2019)

Public transport remains the main choice for poorer and low-income commuters, who are also the ones most affected by an inefficient passenger rail system, further adding to their vulnerability. Approximately three quarters of households reportedly spend 15–60 minutes travelling to work, while a third spend 31–60 minutes on their commute (see figure 36). Such longer travel times translate into higher travel costs to and from work and have a negative impact on the affordability of commuting. This reduces the ability of households in far-flung areas to access well-appointed recreational spaces outside their immediate neighbourhoods and detracts from their sense of inclusion and social cohesion.

[107] State of Cape Town 2020 full report. Available: https://resource.capetown.gov.za/documentcentre/Documents/City%20research%20reports%20and%20review/State_of_Cape_Town_Report_2020.pdf.



* Note: The 2020 General Household Survey did not include this question.

Figure 36: Travel time in Cape Town, 2019 (Source: Policy and Strategy Department, City of Cape Town, based on Statistics South Africa General Household Survey 2019)

The inefficiencies in Cape Town's public transport sector provide an opportunity to move to more low-carbon transportation modes in line with global trends, including ride-sharing options (such as through e-hailing service providers) and electric vehicles,[108] which are only available as luxury car brand offerings at present. These have the potential to bring Cape Town closer to its sustainable transport goals.[109] At the same time, though, these options must be balanced with, and informed by, the need of low-income households and communities for safe, reliable, flexible and affordable mass public transport.

Housing access

Housing is a key focus of a number of strategic City documents.

Firstly, the City's IDP 2022–2027[110] highlights housing access as a priority area, with a particular focus on support to the housing market in order to deliver accommodation at scale, and on prioritising the release of well-located land for affordable housing. However, while these initiatives focus predominantly on the provision of formal houses, the City is also working towards improving the conditions in informal settlements and of additional dwelling units (in both formal and informal areas). This is done through upgrades and service delivery improvements, and includes efforts to deliver tenure security.

[108] Marr, B. 2022. The 3 biggest future trends in transportation and mobility. Available: https://www.forbes.com/sites/bernardmarr/2022/01/20/the-3-biggest-future-trends-in-transportation-and-mobility/?sh=2dce515c3783.
[109] Marr, B. 2022. The 3 biggest future trends in transportation and mobility. Available: https://www.forbes.com/sites/bernardmarr/2022/01/20/the-3-biggest-future-trends-in-transportation-and-mobility/?sh=2dce515c3783.
[110] Available: https://www.capetown.gov.za/Family%20and%20home/City-publications/the-citys-five-year-plan-(idp).

Secondly, the 2022 Municipal Spatial Development Framework[111] stresses the need for the City and other stakeholders to be more adaptive in pursuit of settlement formation and upgrades, land assembly and infrastructure provision.

Thirdly, the City's 2021 Human Settlements Strategy[112] focuses on the housing needs of Cape Town's most vulnerable residents, particularly the so-called gap market (households who earn R22 000 per month or less) and those who live in inadequate shelter. From 1996 to 2016, Cape Town experienced a rapid increase in population.[113] While the population growth rate has since slowed down, new household formation continues to drive the need for housing. As the city grew, so did informality, with more than 60% of informal houses situated in informal settlements and the rest located in the backyards of formal housing (as additional dwellings).[114] Between 2016 and 2019, the proportion of formal houses in Cape Town remained steady, followed by a slight decrease (by 1%) in 2020 (see figure 37 below), although this decrease could also be due to the smaller sample size of the 2020 General Household Survey.

As indicated by figure 37, the proportion of informal houses decreased by 1,2% between 2016 and 2020. Yet informality in Cape Town may have increased during the height of the pandemic (end 2020 to mid-2021) as a result of the many job losses suffered across town.

Overall, informality appears to be expanding in Cape Town, with an increase in unlawful occupation and settlements in hazardous areas where residents are exposed to the risks of fire and flooding.[115] Often, these expansions and unlawful occupations affect residents' ability to access basic services.[116]

Nevertheless, informality, whether in backyards or in informal settlements, will likely remain a part of the cityscape in the near to intermediate future, particularly in the anticipated way that Cape Town will grow. It is estimated that less-formal or informal houses will make up just under half of all new dwellings over the period 2022–2040.[117]

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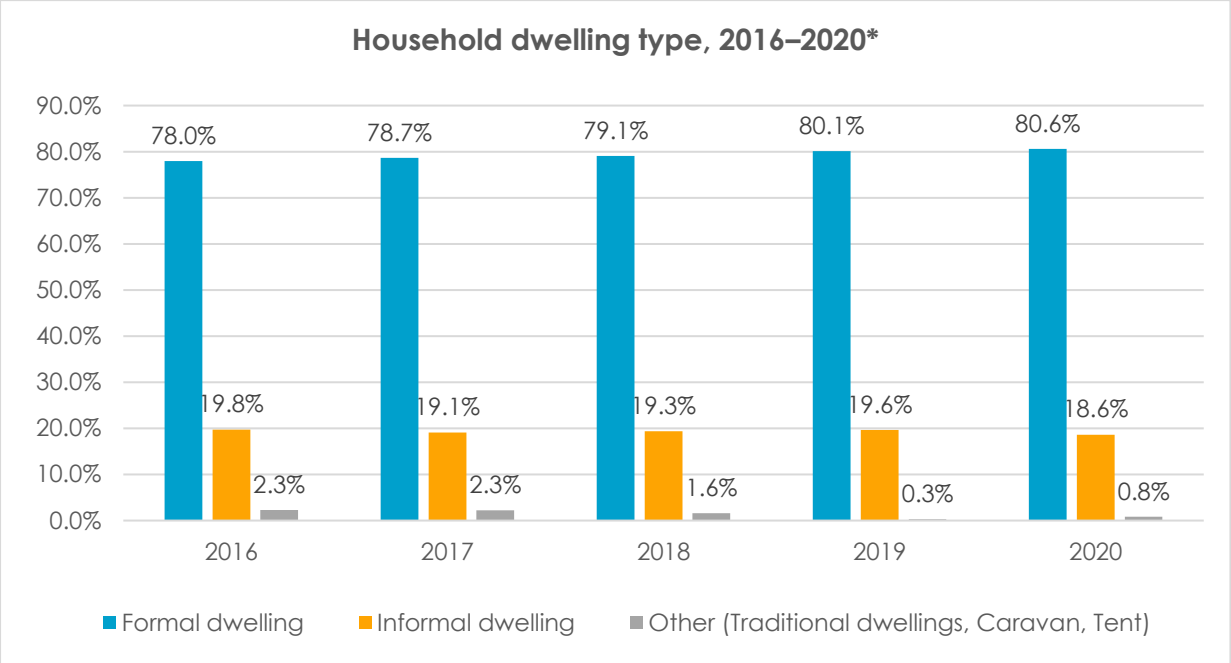
[111] Available: https://resource.capetown.gov.za/documentcentre/Documents/City%20strategies%2c%20plans%20and%20frameworks/MSDF_Vol_I_Ch1-6_Tech_Suppl_A.pdf.
[112] Available: https://resource.capetown.gov.za/documentcentre/Documents/City%20strategies,%20plans%20and%20frameworks/Human_Settlements_Strategy.pdf.
[113] City of Cape Town 2021 Human Settlements Strategy. Available: https://resource.capetown.gov.za/documentcentre/Documents/City%20strategies,%20plans%20and%20frameworks/Human_Settlements_Strategy.pdf.
[114] City of Cape Town 2021 Human Settlements Strategy. Available: https://resource.capetown.gov.za/documentcentre/Documents/City%20strategies,%20plans%20and%20frameworks/Human_Settlements_Strategy.pdf.
[115] City of Cape Town 2022 Municipal Spatial Development Framework. Available: https://resource.capetown.gov.za/documentcentre/Documents/City%20strategies%2c%20plans%20and%20frameworks/MSDF_Vol_I_Ch1-6_Tech_Suppl_A.pdf.
[116] City of Cape Town 2022 Municipal Spatial Development Framework. Available: https://resource.capetown.gov.za/documentcentre/Documents/City%20strategies%2c%20plans%20and%20frameworks/MSDF_Vol_I_Ch1-6_Tech_Suppl_A.pdf.
[117] City of Cape Town 2022 Municipal Spatial Development Framework. Available: https://resource.capetown.gov.za/documentcentre/Documents/City%20strategies%2c%20plans%20and%20frameworks/MSDF_Vol_I_Ch1-6_Tech_Suppl_A.pdf.

Therefore, the City needs to take stock of how it envisions place- making, infrastructure provision and the financing of settlement building.[118]



* Note: The General Household Survey sample size for 2020 was significantly smaller than in previous years, which would affect the statistical findings flowing from the survey data.

Figure 37: Household dwelling types, 2016–2020 (Source: Research Branch, Policy and Strategy Department, based on Statistics South Africa General Household Survey 2016–2020)

Sports and recreational amenities

Recreational spaces are key to promoting individuals' wellbeing, health, productivity and resilience, and building community cohesion.[119] Cape Town manages and maintains a wide variety of social amenities and recreational spaces, including:

- **73** beaches;
- **202** community centres;
- **16** community gardens;
- **3 601** community parks;
- **13** district parks;
- **337** greenbelts;
- **27** sensitive natural areas;
- **163** sportsgrounds;
- **6** spray parks;
- **9** stadia;

[118] City of Cape Town 2022 Municipal Spatial Development Framework. Available: https://resource.capetown.gov.za/documentcentre/Documents/City%20strategies%2c%20plans%20and%20frameworks/MSDF_Vol_I_Ch1-6_Tech_Suppl_A.pdf.

[119] Cohen, M., Burrowes, K. & Gwam, P. 2022. The health benefits of parks and their economic impacts: A review of the literature.
Available: https://www.urban.org/sites/default/files/2022-03/the-health-benefits-of-parks-and-their-economic-impacts_0.pdf.

- **35** swimming pools; and
- **24** tidal pools.[120]

Parks enhance Cape Town's urban environment by creating opportunities for natural and dynamic recreation essential for healthy living and an improved quality of life. However, their unequal distribution and uneven development amount to an environmental injustice towards poorer communities.[121] In terms of sufficiency of recreational spaces in Cape Town, the metro southeast and smaller, newer settlements do not have enough parks to accommodate the size of the population in these areas. The communities located here are also poorer and more vulnerable. Access to community centres is generally good, with the greatest need in newer settlements further from the city centre.[122]

Internet access

The Covid-19 pandemic helped demonstrate the importance of access to broadband or affordable connectivity. The ability to connect to the internet enabled millions of people to continue to work from home, and businesses that could shift their operations online improved their chances of business continuity and survival.

According to the 2020 General Household Survey, 79,8% of all households had internet access, representing an increase over 2016. The survey results also show that an overwhelming majority of households access the internet via a mobile device (see figures 38 and 39), which is the most expensive platform for internet access. These households likely live in low-income areas where broadband service providers do not see a sufficient market to warrant broadband infrastructure investment. Instead, when confronted about the high costs of infrastructure and data, service providers blame governments for failing to release quality-spectrum bandwidth to facilitate cheap access to mobile data. This is an issue to which all spheres of government should lend their advocacy support.

[120] City of Cape Town Recreation and Parks Department internal correspondence.
[121] Willemse, L. 2018. A class-differentiated analysis of park use in Cape Town, South Africa. GeoJournal, 83:915–934. Available: https://doi.org/10.1007/s10708-017-9809-4.
[122] City of Cape Town. 2020. Forward planning 2040: Community facilities and service points in Cape Town: Needs assessment - 2020 & 2040.

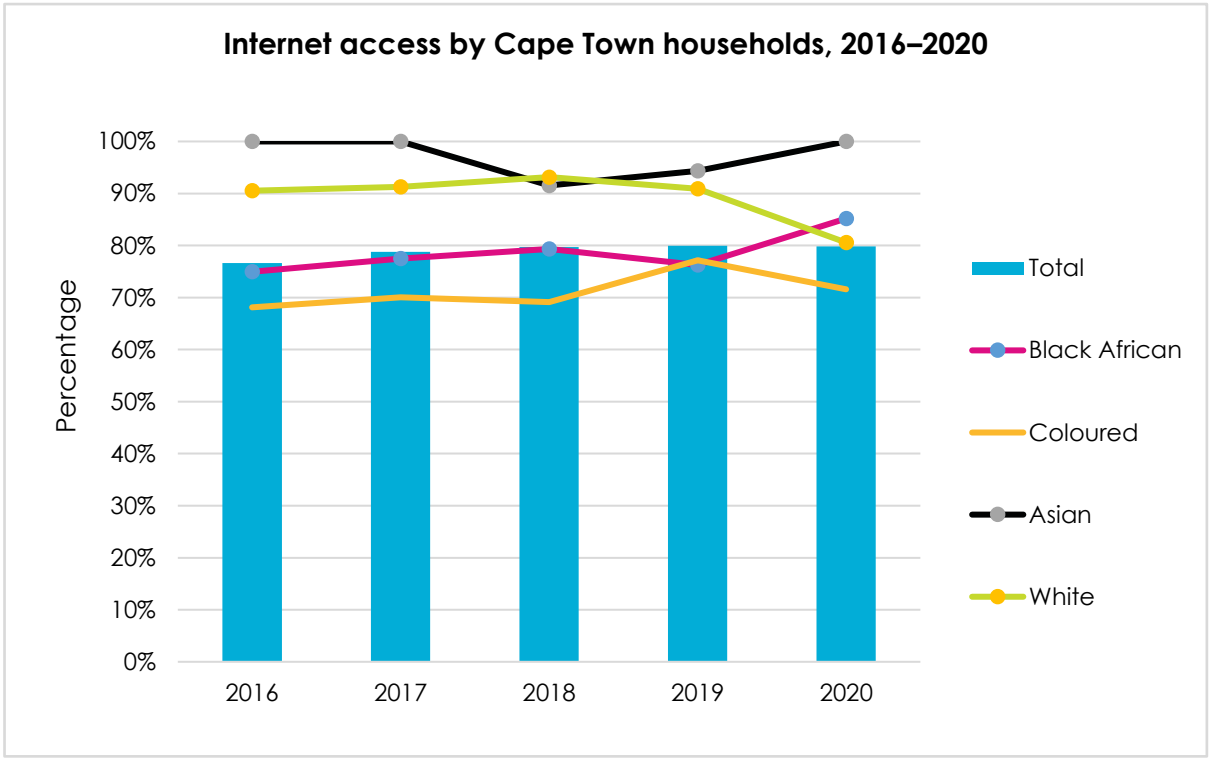
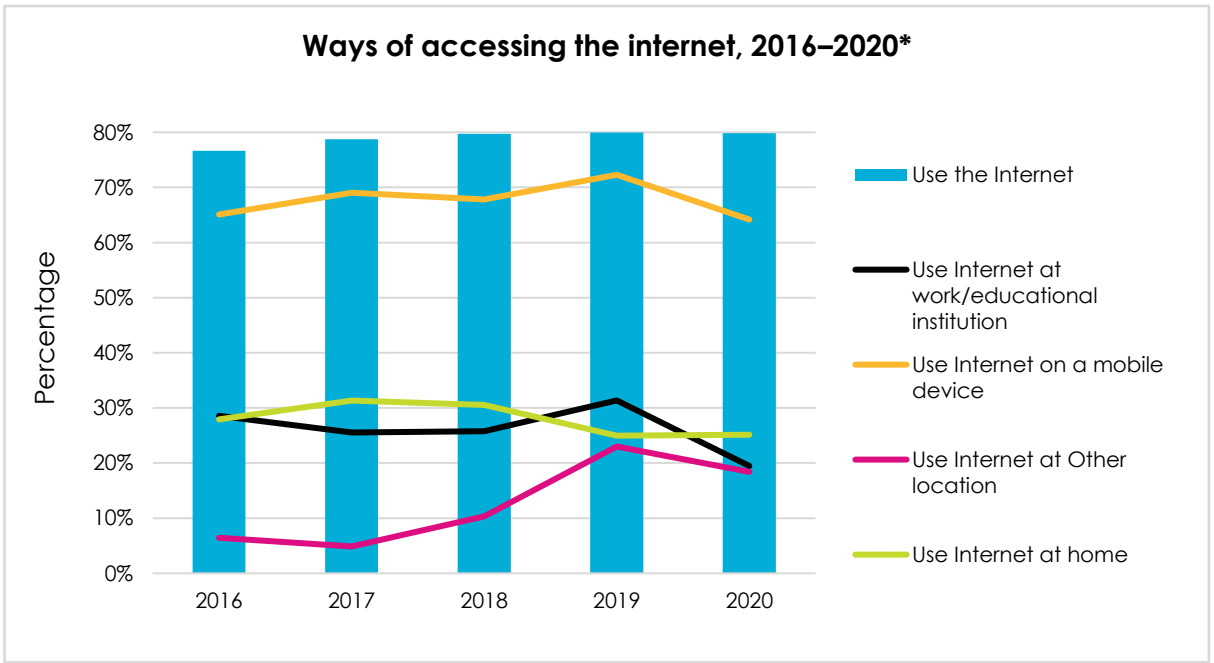


Figure 38: Household internet access in Cape Town by population group, 2016–2020 (Source: Policy and Strategy Department, City of Cape Town, based on Statistics South Africa General Household Survey 2016–2020)



* Note: The General Household Survey sample size for 2020 was significantly smaller than in previous years, which would affect the statistical findings flowing from the survey data.

Figure 39: Ways in which Cape Town households access the internet, 2016–2020 (Source: Policy and Strategy Department, City of Cape Town, Statistics South Africa General Household Survey 2016–2020)

As Cape Town grows, the City continues to work towards densifying established areas to allow for better access to services and opportunities. Notwithstanding the high rate of access to basic services, some households are yet to be connected. These are often households in newly formed informal settlements or in communities located on undevelopable land.

Chapter summary: Urban Form and mobility

- **Access to basic services remains relatively high, notwithstanding the socioeconomic challenges.**
- **It is anticipated that informal and less-formal houses will make up just under 50% of new houses in Cape Town between 2022 and 2040.**
- **The use and reliability of public transport, specifically rail, have declined in recent years.**
- **Recreational spaces remain unevenly spread across Cape Town.**
- **Internet access via mobile phone is the most common way in which low-income residents access the internet, despite it being more expensive.**

URBAN GOVERNANCE

The mandate of the City, being a category A municipality, is detailed in schedules 4 and 5 of the Constitution of the Republic of South Africa, 1996. In accordance with this mandate and the Municipal Systems Act 32 of 2000, cities across South Africa develop an IDP every five years, in which the newly elected political leadership sets out its strategic plan. Council approved the latest IDP for the City in May 2022. The plan applies to the 2022–2027 term of office.

Over the past two decades, cities globally were compelled to change their urban management approach from "government to governance", from "managerialism to entrepreneurialism",[123] and from "command-and-control" state leadership to a more "multi-actor network approach".[124] As a result, cities have also increasingly had to incorporate future plans and local contexts into their policy and implementation approaches.[125]

In addition, urban governance is often distributed across various government stakeholders. Against the backdrop of an urbanising population, environmental threats,[126] resource constraints,[127] inequality,[128] technological innovations[129] and governance,[130] urban development actors and stakeholders are required to engage and collaborate in order to jointly deliver effective urban development results. To lessen the chance of disjointed approaches to urban development, one needs a capable and collaborative government that is modernised, administratively efficient, financially sustainable and inclusive, which empowers its residents to contribute to urban decision-making and city improvement.[131]

More recently, the Covid-19 pandemic also prompted certain changes to governance and government – some of them specific to the government environment, and others experienced across all large organisations, especially relating to service delivery and shifts in the work environment. The pandemic

[123] Da Cruz, N., Rode, P. & McQuarrie, M. 2018. New urban governance: A review of current themes and future priorities. Available: https://www.tandfonline.com/doi/full/10.1080/07352166.2018.1499416.
[124] Baud, L.S.A. & Hordijk, M.A. 2009. Dealing with risks in urban governance: What can we learn from 'resilience thinking'. Presentation at 4th international conference of the International Forum on Urbanism (IFoU), Amsterdam/Delft; Bontenbal, M. 2009. Strengthening urban governance in the South through city-to-city cooperation: Towards an analytical framework. Habitat International, 33(2):181–189. Available: https://doi.org/10.1016/j.habitatint.2008.10.016.
[125] Jenkins, P. 2000. Urban management, urban poverty and urban governance: planning and land management in Maputo. Environment & Urbanization, 12(1):137–152.
[126] Rapid urbanisation puts strain on basic infrastructure and, coupled with increased global climate change events, is exacerbating the impact of environmental threats, resulting in both the loss of human lives and financial losses.
[127] As urban sprawl reduces available urban resources, fresh water may become scarce, fertile lands may diminish and food prices may escalate, which hit the poorest the hardest.
[128] The provision of basic resources and resilience against environmental threats is distributed unevenly across different urban groupings. As the gap between the haves and have-nots is accentuated in the megacities of the future and inequalities are left unchecked, it will destabilise society and upend any benefits of urban development.
[129] Technology, specifically smart planning, smart mobility and environmental technologies, will be increasingly used in the development and running of the cities of the future.
[130] World Economic Forum. 2018. 5 big challenges facing big cities of the future. Available: https://www.weforum.org/agenda/2018/10/the-5-biggest-challenges-cities-will-face-in-the-future/.
[131] City of Cape Town IDP 2022–2027. Available: https://www.capetown.gov.za/Family%20and%20home/City-publications/the-citys-five-year-plan-(idp).

highlighted the need for resilient systems and flexible processes in organisations, as well as for changes to the traditional model of working. Moreover, the relationship between employee and employer requires continuous recalibration. In the interest of business continuity, governments and organisations had to become more agile and future-fit, and build resilience into their systems and processes.[132, 133]

Some of the key emerging trends show that governments now focus on the following three broad themes:[134]

- *Building resilience* – Focusing on complex and intersecting challenges such as climate change, disruptive technology as well as economic and supply chain disruptions
- *Establishing connections, or breaking down silos* – Addressing complex problems outside the typical silos of government by arranging capacity, structures and processes around problems rather than departmental boundaries
- *Inclusive care* – Addressing the need for inclusive access to the technologies and opportunities needed to build social and economic resilience. This includes access to digital technology for all citizens, designing systems for inclusive engagement, and improved social care.

Global development goals and becoming future(s)-fit (ready)

The IDP 2022–2027 includes actions to put in place a planning process with a 2050 horizon scanning viewpoint. This process may include developing futures literacy in the City, exploring possible futures for Cape Town and the administration, and determining what needs to be put in place in the short to medium term to realise the preferred future(s) by 2050.

Over the past six years, the City has strengthened its capacity to measure and report on local urban trends and development goals by using global urban performance indices. These include the World Council on City Data[135] and ISO 37120[136] indicator sets, preparing the Cape Town City Resilience Index[137] in 2018, and using the C40 platform[138] to report on progress with the City's carbon goals.

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[132] Peregrine, M. 2021. A 'twist' on top 10 governance trends for 2022. Available: https://www.forbes.com/sites/michaelperegrine/2021/12/29/a-twist-on-top-ten-governance-trends-for-2022/?sh=77cafeb02c66.
[133] Deloitte. 2022. Government Trends 2022: What are the most transformational trends in the public sector today? Available: https://www2.deloitte.com/za/en/insights/industry/public-sector/government-trends.html.
[134] Deloitte. 2022. Government Trends 2022: What are the most transformational trends in the public sector today? Available: https://www2.deloitte.com/za/en/insights/industry/public-sector/government-trends.html.
[135] The World Council on City Data coordinates all efforts relating to open-source city data to ensure a consistent and comprehensive platform for standardised urban metrics.
[136] ISO 37120 is the first international standard for cities ever published by the International Organisation for Standardisation in Geneva.
[137] The City Resilience Index provides a comprehensive, technically robust, globally applicable basis for measuring city resilience. It consists of 52 indicators that are assessed based on qualitative and quantitative responses to 156 questions.
[138] C40 is a network of the world's megacities committed to addressing climate change. C40 members are supported to collaborate effectively, share knowledge and drive meaningful, measurable and sustainable climate change action.

To drive future-readiness, the City has created a new, dedicated Directorate of Future Planning and Resilience, which will build capacity and processes for the period 2022–2027 and beyond.

In the short to medium term, the City has aligned its IDP 2022–2027 with the 2030 global sustainable development goals (SDGs). In 2021, the City produced an internal Voluntary Local Review report[139] to share the administration's progress in meeting the SDGs in Cape Town. Efforts are also under way to explore how to measure and report on SDG alignment and achievement at City programme level, possibly using the Potsdam sustainability campus. The concept of the Potsdam sustainability campus, which is still in the development phase, brings together multiple urban development themes and City departments into one cross-departmental project that will be aligned with at least ten of the 17 SDGs.

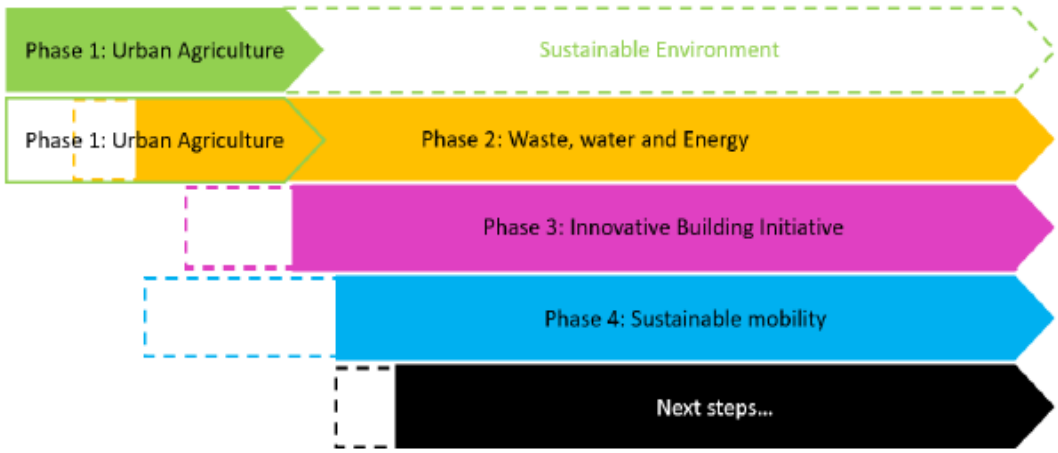

Figure 40: Phased implementation of the proposed Potsdam sustainability campus (Source: City of Cape Town Urban Sustainability Department, 2021)

The aim with the proposed sustainability campus will be to provide a platform for change and display adaptability to dynamic demands and needs. The site is anticipated to offer a place for learning, experimentation and 'failing forward', and for producing prototypes for Cape Town issues. Among others, it is intended to provide a test bed for novel construction methods, waste management processes, infrastructure maintenance and management opportunities on mixed-use sites, and for assessing the cumulative impact of related and complex systems.

Deepening evidence-based decision-making

The City has several mechanisms and processes in place to inform strategic decision-making. Key components include its Data Strategy, which is supported by expanded data science capabilities in the administration. With a specific view to managing large infrastructure projects, the City has deepened its capacity to undertake project-based cost-benefit analyses as well as its project management capacity and related stage-gate analysis processes.

[139] Available: https://sdgs.un.org/sites/default/files/vlrs/2022-04/cape_town_vlr_2021.pdf.

As a support framework, and to help generate reliable evidence and understand urban development dynamics in Cape Town, the new IDP includes the development of a City research agenda and plan. This work is supported internally through various research-based initiatives, including institutionalising memoranda of understanding with the four universities in the region and building internal City research management tools and research capacity.

Harnessing its data capabilities to monitor and report on Covid-19 infections and deaths in Cape Town, the City made a significant contribution to public health monitoring in partnership with Province. Similarly, its ability to keep track of staff working from home has been instrumental in shaping the City's Future of Work programme, which sees the City embrace flexible working arrangements.

City government structures

The City comprises 21 subcouncils and 116 wards,[140] which are served by 231 elected councillors (including both proportional representation and ward councillors). These structures are geared towards increasing active engagement and the effective performance of duties.[141] An increase in the number of structures has expanded the avenues available for public engagement and participation (see figure 41 below).

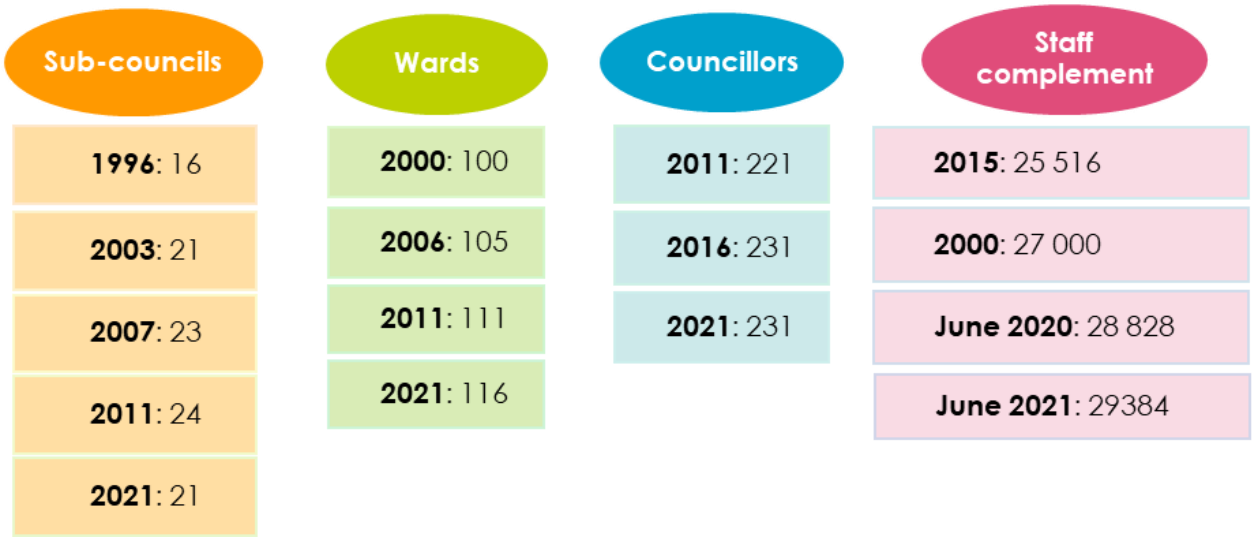

Figure 41: City structures and staff in numbers (Source: State of Cape Town 2016; City of Cape Town integrated annual report 2020/21)

[140] City of Cape Town. 2022. Find your councillor, ward or subcouncil. Available: https://www.capetown.gov.za/Family%20and%20home/Meet-the-City/City-Council/find-your-councillor-ward-or-subcouncil/show-subcouncils.
[141] State of Cape Town 2016. Available: https://resource.capetown.gov.za/documentcentre/Documents/City%20research%20reports%20and%20review/16429%20COCT%20State%20of%20Cape%20Town%20Report%202016%20FINAL.pdf.

The City continues to engage new technology, optimise service delivery through digitisation, and build greater resilience to future shocks and stresses.

In addition, the City has instituted a hybrid-working model, which aims to develop a more resilient, flexible, accessible and responsive staff complement able to adapt to new ways of working while maintaining service delivery standards.[142]

Financial resilience

For the 2021/22 financial year, the City approved a budget of R56,6 billion (an operating budget of R48,3 billion and a capital budget of R8,3 billion). The bulk of the capital budget was allocated to core infrastructural services projects relating to water, sanitation, electricity, solid waste, human settlements, transport, roads and stormwater. The operating budget has increased year on year since 2015/16. Changes in the capital budget have been more uneven, with an increase noted between 2015/16 and 2017/18, followed by a drop towards 2018/19, after which it increased again up until 2020/21. Between 2020/21 and 2021/22, however, the capital budget decreased by more than R1 billion, likely due to the global pandemic and its impact on the national fiscus.

The City's budget reflects its key policy decisions and priorities, informs revenue generation options (such as increases in municipal rates), and details where and how public funds will be spent.[143] Property rates and service charges are important municipal income sources, as are tariffs charged for water and sanitation, electricity and solid waste management.[144] These supplement the budget received from National Government (including allocations via Province) intended for capital project implementation.

The general drop in water consumption since the drought has caused some concern about reduced City income from service charges. Going forward, this will be exacerbated by the increased uptake of small-scale embedded energy generation by households and businesses. For this reason, the City is reassessing its service fee structures and service models to ensure longer-term financial sustainability and help subsidise service provision across residential types and income levels.

The administration's current (August 2022) credit rating sits at Ba3/NP at a global scale and Aa3.za/P-1.za at a national scale[145] based on the ratings agency's analysis of the entire local government sector as well as increasing shortfalls in revenue collection.

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[142] In terms of internal City of Cape Town Remote Working Guidelines, June 2022.
[143] City of Cape Town. 2022. How does the budget work? Available: https://www.capetown.gov.za/Family and home/Meet-the-City/the-city-budget/how-does-the-budget-work.
[144] City of Cape Town. 2022. How does the budget work? Available: https://www.capetown.gov.za/Family and home/Meet-the-City/the-city-budget/how-does-the-budget-work.
[145] City of Cape Town. 2022. The City's credit rating. Available: https://www.capetown.gov.za/Work and business/Invest-in-cape-town/The-Citys-investor-relations/The-Citys-credit-rating; City of Cape Town integrated annual report 2020/21. Available: https://www.capetown.gov.za/local%20and%20communities/city-publications/publications-and-reports/annual-reports.

However, compared to its peers, the City still performs above average in terms of operating surplus despite capital expenditure constraints, a weak economy and the post-pandemic recovery.[146]

Online services (eServices)

To facilitate greater stakeholder input and partnerships and extend multilevel engagement, the City has expanded and streamlined its online services, particularly during the pandemic. Residents and businesses now have quick access to a number of City services, requests, applications and payments through various portals, applications and data platforms.[147]

Participation and collaboration

Formal public participation is undertaken by the City's Public Participation Unit,[148] which is responsible for all processes affecting stakeholders, intergovernmental spheres and departments, sectors and residents. Different line departments also have their own participation mechanisms, including memoranda of agreement specific to certain partnerships and sectors as well as working groups and steering committees, all aimed at facilitating collaboration with various stakeholders.

Customer satisfaction

As a way of measuring its own performance, the City undertakes the annual Customer Satisfaction Survey. The survey provides insight into how Cape Town businesses and residents perceive the City's performance and enables the administration to identify potential areas for improvement. The inputs by residents and businesses are used to inform line departments' work and to assess where and how City operations and services could be further streamlined.

Covid-19 seems to have influenced residents' perception of the City's overall performance, as results dropped from 2,7 in 2020 to 2,5 in 2021, yet increased again to 2,7 in 2022 on three of the four key indicators. Businesses highlighted the need for stronger investment support and crime mitigation assistance for entrepreneurs, and these areas have subsequently been prioritised for the next five years. An overwhelming majority of business owners (98% of large businesses, 93% of medium-sized businesses and 88% of small businesses) reported that they had no plans to relocate, sell or close their businesses in the next two years, which is a clear testament to their confidence in the City and Cape Town.

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[146] City of Cape Town. 2022. The City's credit rating. Available: https://www.capetown.gov.za/Work and business/Invest-in-cape-town/The-Citys-investor-relations/The-Citys-credit-rating; City of Cape Town integrated annual report 2020/21. Available: https://www.capetown.gov.za/local%20and%20communities/city-publications/publications-and-reports/annual-reports.

[147] City of Cape Town. 2022. All our online services. Available: https://www.capetown.gov.za/City-Connect/All-City-online-services/All-our-online-services/All our online services.

[148] Guided by the City of Cape Town Public Participation Strategy, 2019.

Residents, in turn, highlighted housing, employment, crime and safety as key areas for attention. These too are reflected in the IDP 2022–2027, which not only includes initiatives to boost the local economy, but also prioritises safety and security as well as basic services[149] and aims to make Cape Town a city where collective governance reduces crime and violence.[150]

Chapter summary: Urban governance

- **The pandemic has highlighted the need for resilient systems and processes in organisations, including changes in the traditional ways of working.**
- **Governments globally now focus on being future-fit following the pandemic.**
- **Covid-19 appears to have influenced residents' perception of the City's overall performance, as customer satisfaction results dropped from 2,7 in 2020 to 2,5 in 2021, but returned to 2,7 in 2022.**
- **The SDGs are a key strategic alignment tool for the City, and the administration is actively working towards implementing more of the SDGs in the Cape Town context.**

[149] IDP "Safety" priority, objectives 5 and 6.
[150] City of Cape Town IDP 2022–2027. Available: https://www.capetown.gov.za/Family%20and%20home/City-publications/the-citys-five-year-plan-(idp).

Conclusion

Cape Town is in a post-pandemic recovery phase, and residents and businesses still struggle with the social and economic effects of Covid-19. Recent supply chain disruptions, among others due to the Russia/Ukraine war, have added to these challenges and affected residents even further.

Although economic growth and employment rates are showing signs of improvement, they are not expected to recover past 2019 levels and will likely stagnate. This trend, coupled with rising inflation, ongoing electricity shortages, increasing oil prices and escalating food price inflation, highlights the urgent need for the City and its residents to actively work together to ensure socioeconomic stability and increase growth.

As the City forges ahead, moving into its first year of implementing the new five-year IDP for the period 2022–2027, it will be placing people at the centre of everything it does. The administration is focused on service delivery through partnerships, driving economic growth, fostering inclusivity (socially and in the physical environment), building resilience, and creating a collaborative government.

Cities are home to the majority of the world's population and increasingly need to build resilience and sustainability into their systems and services. This has become more evident as climate change makes its impact felt. In this regard, the City continues to diversify its resource base (both in terms of water and electricity supply), and more and more residents and businesses are embracing small-scale embedded energy generation and alternative water sources.

An increasingly volatile, unpredictable, complex and ambiguous world requires a more integrated systems approach to how societies operate and engage with the environment. The City will need to look to current and emerging trends to assess what actions are required in the present to bring about the desired futures for Cape Town and its residents and businesses. To this end, the administration is taking a longer-term view of its sustainability plans and actions.

New and disruptive technologies will increasingly become part of nearly every aspect of society. Governments will need to embrace these and find ways of making new technologies inclusive. In addition, since the pandemic has highlighted inequalities in access, governments will be expected to do more, including provide better services and improve funding.[151] The City continues to make good progress in this regard.

[151] City of Cape Town IDP 2022–2027. Available: https://www.capetown.gov.za/Family%20and%20home/City-publications/the-citys-five-year-plan-(idp).

References

ARUP. Accelerating the journey to net zero transport. Available: https://www.arup.com/climate-change/accelerating-the-journey-to-net-zero-transport?gclid=CjwKCAjwqauVBhBGEiwAXOepkddu-5n76V2mqZCe6q-0N8AMPd2eYwBBgenZYS3yh5JaqEO0m6FRgRoCSN8QAvD_BwE

Baud, L.S.A. & Hordijk, M.A. 2009. Dealing with risks in urban governance: What can we learn from 'resilience thinking'. Presentation at 4th international conference of the International Forum on Urbanism (IFoU), Amsterdam/Delft.

Better Health Channel. Ottawa Charter for Health Promotion. Available: https://www.betterhealth.vic.gov.au/health/servicesandsupport/ottawa-charter-for-health-promotion

Bontenbal, M.C. 2009. Strengthening urban governance in the South through city-to-city cooperation: Towards an analytical framework. Habitat International, 33(2):181–189. Available: https://doi.org/10.1016/j.habitatint.2008.10.016

Bureau for Economic Research (BER). April 2022.

Casale, D. & Shepherd, D. 2021. The gendered effects of the Covid-19 crisis and ongoing lockdown in South Africa: Evidence from NIDS-CRAM Waves 1–5. Available: https://cramsurvey.org/reports

City of Cape Town. 2016. State of Cape Town 2016. Available: https://resource.capetown.gov.za/documentcentre/Documents/City%20research%20reports%20and%20review/16429%20COCT%20State%20of%20Cape%20Town%20Report%202016%20FINAL.pdf

City of Cape Town. 2019. Public Participation Strategy. Available: www.capetown.gov.za

City of Cape Town. 2019. Resilience Strategy. Available: https://resource.capetown.gov.za/documentcentre/Documents/City%20strategies%2C%20plans%20and%20frameworks/Resilience_Strategy.pdf

City of Cape Town. 2020. Forward planning 2040: Community facilities and service points in Cape Town: Needs assessment - 2020 & 2040. Internal document.

City of Cape Town. 2020. Solid waste sector plan 2019/20. Internal document.

City of Cape Town. 2020. State of Cape Town Full Report. Available: https://resource.capetown.gov.za/documentcentre/Documents/City%20research%20reports%20and%20review/State_of_Cape_Town_Report_2020.pdf

City of Cape Town Know Your Coast 2020 report. Available: https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&cad=rja&uact=8&ved=2ahUKEwjgpfiT6Jz9AhWMg1wKHSOeD4oQFnoECBsQAw&url=https%3A%2F%2Fresource.capetown.gov.za%2Fdocumentcentre%2FDocuments%2FCity%2520research%2520reports%2520and%2520review%2FKnow_Your_Coast_2021_Report.pdf&usg=AOvVaw0o3L8ZeD9WzdCueJKcKjW5

City of Cape Town. 2021. Overview of demographic and socioeconomic characteristics of Cape Town. Internal document.

City of Cape Town. 2021. Cape Town Voluntary Local Review. Available: https://sdgs.un.org/sites/default/files/vlrs/2022-04/cape_town_vlr_2021.pdf

City of Cape Town. 2021. Human Settlements Strategy. Available: https://resource.capetown.gov.za/documentcentre/Documents/City%20strategies,%20plans%20and%20frameworks/Human_Settlements_Strategy.pdf

City of Cape Town. 2021. Integrated annual report 2020/21. Available: https://www.capetown.gov.za/local%20and%20communities/city-publications/publications-and-reports/annual-reports

City of Cape Town. 2022. The City's credit rating. Available: https://www.capetown.gov.za/Work%20and%20business/Invest-in-cape-town/The-Citys-investor-relations/The-Citys-credit-rating

City of Cape Town integrated annual report 2020/21. Available: https://www.capetown.gov.za/local%20and%20communities/city-publications/publications-and-reports/annual-reports

City of Cape Town. 2021. State of Energy and Carbon 2021. Available: https://resource.capetown.gov.za/documentcentre/Documents/City%20research%20reports%20and%20review/CT_State_of%20Energy_and_Carbon_Report_2021.pdf

City of Cape Town. 2022. All our online services. Available: https://www.capetown.gov.za/City-Connect/All-City-online-services/All-our-online-services/All%20our%20online%20services

City of Cape Town. 2022. Find your councillor, ward or subcouncil. Available: https://www.capetown.gov.za/Family%20and%B20home/Meet-the-City/City-Council/find-your-councillor-ward-or-subcouncil/show-subcouncils

City of Cape Town. 2022. How does the budget work? Available: https://www.capetown.gov.za/Family%20and%20home/Meet-the-City/the-city-budget/how-does-the-budget-work

City of Cape Town. 2022. Integrated Development Plan 2022–2027. Available: https://www.capetown.gov.za/Family%20and%20home/City-publications/the-citys-five-year-plan-(idp)

City of Cape Town. 2022. Municipal Spatial Development Framework. Available: https://resource.capetown.gov.za/documentcentre/Documents/City%20strategies%2c%20plans%20and%20frameworks/MSDF_Vol_I_Ch1-6_Tech_Suppl_A.pdf

City of Cape Town. 2022. State of the Environment 2022. Available: https://resource.capetown.gov.za/documentcentre/Documents/City%20research%20reports%20and%20review/CCT_State_of_the_Environment_2022.pdf

City of Cape Town. 2022. Supply chain risks newsletter. Available: https://resource.capetown.gov.za/cityassets/Files/Newsletter/Supply%20chain%20risks%20newsletter.pdf

City of Cape Town. 2022. Water quality. Available: https://www.capetown.gov.za/Family%20and%20home/residential-utility-services/residential-water-and-sanitation-services/water-quality

Cohen, M., Burrowes, K. & Gwam, P. 2022. The health benefits of parks and their economic impacts: A review of the literature. Available: https://www.urban.org/sites/default/files/2022-03/the-health-benefits-of-parks-and-their-economic-impacts_0.pdf

Cold Spring Laboratory. 2020. Global trends in biodiversity and ecosystem services from 1900 to 2050. Available: https://www.biorxiv.org/content/10.1101/2020.04.14.031716v2.full

CSIR. 2019. Our urban future. South Africa's settlement story. Available: https://pta-gis-2-web1.csir.co.za/portal/apps/GBCascade/index.html?appid=5180459a765c4e63bfb3fa527c7302b3

Da Cruz, N., Rode, P. & McQuarrie, M. 2018. New urban governance: A review of current themes and future priorities. Available: https://www.tandfonline.com/doi/full/10.1080/07352166.2018.1499416

Deloitte. 2019. Forces of change: The future of health. Available: https://www2.deloitte.com/content/dam/insights/us/articles/5169_forces-of-change-future-of-health/DI_Forces-of-change_Future-of-health.pdf

Deloitte. 2022. Government Trends 2022: What are the most transformational trends in the public sector today? Available: https://www2.deloitte.com/za/en/insights/industry/public-sector/government-trends.html

EWN. 2020. SA's energy demand declined by an estimated 15% during lockdown. Available: https://ewn.co.za/2020/05/04/sa-s-energy-demand-during-lockdown-declined-by-an-estimated-15-sanedi

Fishman, T., Kelkar, M., Tomlinson, C. & Cary, R. 2020. Transportation trends 2022–23. Available: https://www2.deloitte.com/za/en/insights/industry/public-sector/transportation-trends.html

HIV Data. 2021. South Africa District HIV Estimates September 2021. Available: https://www.hivdata.org.za

IEA. 2021. Global electricity demand is growing faster than renewables, driving strong increase in generation from fossil fuels. Available: https://www.iea.org/news/global-electricity-demand-is-growing-faster-than-renewables-driving-strong-increase-in-generation-from-fossil-fuels

IHS Markit. 2022. 10 Cleantech Trends in 2022. Available: https://cdn.ihsmarkit.com/www/pdf/0222/IHS-Markit-Top-10-Cleantech-Trends-2022-Whitepaper.pdf

Jenkins, P. 2000. Urban management, urban poverty and urban governance: planning and land management in Maputo. Environment & Urbanization, 12(1):137–152.

Kachiwanda. S.O. 2011. Gender disparity in the acquisition of literacyin sub-Saharan Africa: the case of Malawi. Journal of Humanities (Zomba, Malawi), 22:24-43. Available: https://www.ajol.info/index.php/jh/article/download/153388/142980/0

Khuluvhe, M. 2021. Fact sheet: Adult illiteracy in South Africa. Available: https://www.dhet.gov.za/Planning%20Monitoring%20and%20Evaluation%20Coordination/Fact%20Sheet%20on%20Adult%20Illiteracy%20in%20South%20Africa%20-%20March%202021.pdf

Macrotrends. 2022. World literacy rate 1976–2022. Available: https://www.macrotrends.net/countries/WLD/world/literacy-rate

Marr, B. 2022. The 3 biggest future trends in transportation and mobility. Available: https://www.forbes.com/sites/bernardmarr/2022/01/20/the-3-biggest-future-trends-in-transportation-and-mobility/?sh=2dce515c3783

Massyn, N., Day, C., Ndlovu, N. & Padayachee, T. 2020. District Health Barometer 2019/20. Available:

https://www.hst.org.za/publications/District%20Health%20Barometers/DHB%202019-20%20Section%20B,%20chapter%2018%20-%20Western%20Cape%20Province.pdf

McGregor, J.A., Gough, I. & Camfield, L. 2019. Theorising well-being in international development, in I. Gough & J.A. McGregor (eds.). Wellbeing in developing countries: From theory to research. Cambridge University Press. Available: https://www.researchgate.net/publication/291574661_Theorising_wellbeing_in_international_development

Nicolson, A. 2017. Cape Town's water crisis: Can suburbia save the day? Available: https://www.news.uct.ac.za/article/-2017-09-27-cape-towns-water-crisis-can-suburbia-save-the-daya

Openpath. 2022. Security technology guide and 2022 trends. Available: https://www.openpath.com/blog-post/security-technology

Openpath. 2022. Security technology guide and 2022 trends. Available: https://www.openpath.com/blog-post/security-technology

Peregrine, M. 2021. A 'twist' on top 10 governance trends for 2022. Available: https://www.forbes.com/sites/michaelperegrine/2021/12/29/a-twist-on-top-ten-governance-trends-for-2022/?sh=77cafeb02c66

Rarieya, J., Sanger, N. & Moolman, B. 2014. Gender inequalities in education in South Africa. Available: https://hsrc.ac.za/uploads/pageContent/4991/Gender%20inequalties%20in%20education%20in%20South%20Africa.pdf

Regional eXplorer, IHS Market, January 2022. Internal resource.

SA Coronavirus. 2022. Latest vaccine statistics. Available: https://sacoronavirus.co.za/latest-vaccine-statistics

South African Cities Network. 2021. State of Cities Report 2021. Available: https://www.sacities.net/wp-content/uploads/2022/04/SoCR-V-2021_WEB-144dpi.pdf

South African Police Service (SAPS). South African crime stats report, 2016/2017–2020/2021. Available: https://www.saps.gov.za/services/crimestats.php

Statista. 2021. Gini coefficient in South Africa from 2006 to 2015. Available: https://www.statista.com/statistics/1127860/gini-coefficient-in-south-africa

Statistics South Africa. General Household Surveys 2016, 2018, 2020. Available: https://www.statssa.gov.za/publications/P0318/P03182018.pdf

Statistics South Africa. 2016. Community Survey. Available: https://www.statssa.gov.za/?page_id=6283#:~:text=The%20Community%20Survey%202016(CS,Survey%20was%20conducted%20in%202007

Statistics South Africa. 2021. Mid-year population estimates. Available: https://www.statssa.gov.za/publications/P0302/P03022021.pdf

Statistics South Africa. 2021. Mortality and causes of death in South Africa: Findings from death notification. Available: https://www.statssa.gov.za/publications/P03093/P030932018.pdf

UN Habitat. 2019. The Strategic Plan 2020-2023. Available: https://unhabitat.org/sites/default/files/documents/2019-09/strategic_plan_2020-2023.pdf

United Nations. Climate change. Available: https://www.un.org/en/global-issues/climate-change

United Nations. 2018. 68% of the world population projected to live in urban areas by 2050, says UN. Available: https://www.un.org/development/desa/en/news/population/2018-revision-of-world-urbanization-prospects.html

United Nations. 2021. Recover Better. https://www.un.org/development/desa/en/wp-content/uploads/2020/07/RECOVER_BETTER_0722-1.pdf

Western Cape Government. 2022. Covid-19 cases dashboard. Available: https://coronavirus.westerncape.gov.za/covid-19-dashboard

Willemse, L. 2018. A class-differentiated analysis of park use in Cape Town, South Africa. GeoJournal, 83:915–934. Available: https://doi.org/10.1007/s10708-017-9809-4

World Bank. Trends in solid waste management. Available: https://datatopics.worldbank.org/what-a-waste/trends_in_solid_waste_management.html

World Bank. 2020. Urban Development. Available: https://www.worldbank.org/en/topic/urbandevelopment/overview

World Bank. 2021. Demographic trends and urbanisation. Available: https://www.worldbank.org/en/topic/urbandevelopment/publication/demographic-trends-and-urbanization

World Bank. 2022. Global Economic Prospectus. Available: https://www.worldbank.org/en/publication/global-economic-prospects

World Bank. 2022. World Bank Commodities Price Data (The Pink Sheet). Available: https://thedocs.worldbank.org/en/doc/5d903e848db1d1b83e0ec8f744e55570-0350012021/related/CMO-Pink-Sheet-September-2022.pdf

World Economic Forum. 2018. 5 big challenges facing big cities of the future. Available: https://www.weforum.org/agenda/2018/10/the-5-biggest-challenges-cities-will-face-in-the-future

World Economic Forum. 2022. How inclusive innovation could transform food systems - and help to end world hunger. Available: https://www.weforum.org/agenda/2022/03/food-systems-innovation-transformation

World Population Review. 2022. Cape Town population. Available: https://worldpopulationreview.com/world-cities/cape-town-population

World Population Review. 2022. Gini coefficient by country. Available: https://worldpopulationreview.com/country-rankings/gini-coefficient-by-country