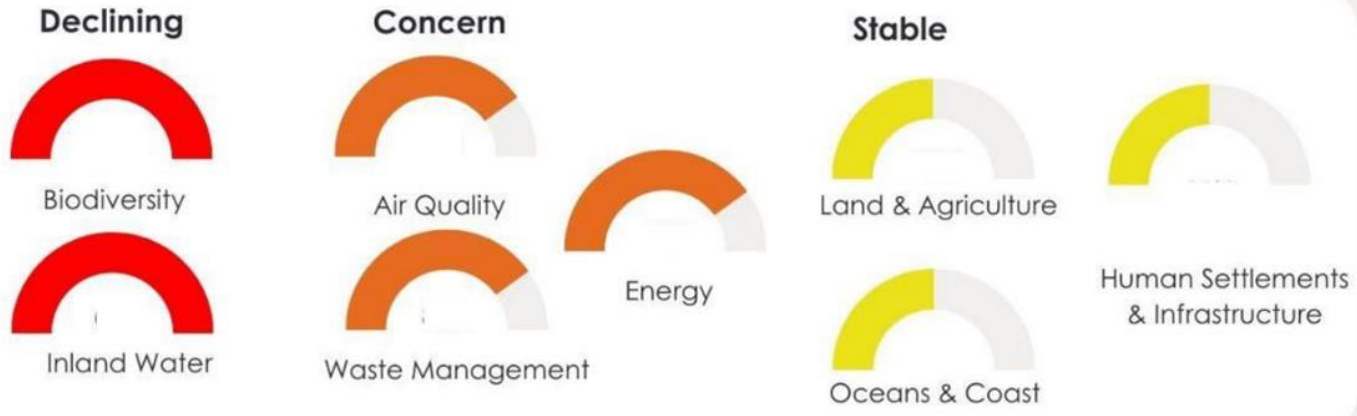
Western Cape Government
FOR YOU
Environmental Affairs and Development Planning

WESTERN CAPE

STATE OF ENVIRONMENT OUTLOOK REPORT 2024

Reporting Period:
2019 - 2024

Sustainability Performance



Outlook Statement

The sustainability outlook for the Western Cape reveals a mixed scenario of progress and ongoing challenges. Despite improvements in protecting biodiversity through increased conservation area, biodiversity is threatened by a declining ecosystem status for the Western Cape, the inadequate management of invasive alien plants, and ongoing habitat loss, particularly of threatened ecosystems. Urgent action is needed to address coastal issues such as ecosystem transformation, pollution, and declining fish resources. Water scarcity poses significant risks to ecological reserves, agricultural production, infrastructure, and the economy, while waste management facilities are critically overburdened, exacerbated by regulatory non-compliance and service delivery challenges. Although air quality of the province is stable, its monitoring is in a state of decline. On a positive note, provincial sustainability is supported by renewable energy initiatives, agricultural responses to climate change, alongside improving settlement and housing quality. However, balancing land transformation, overcoming fiscal and economic constraints, and adapting to climate change are crucial for achieving long-term resilience and equitable development in the region.

Purpose

State of Environment Outlook reporting shows how the Western Cape is handling environmental, climate, social and development pressures. It is crucial for guiding governance and impact management.

Provincial change

Notable changes across human settlements, agriculture, air quality and the biophysical environment are recorded; these align with the latest population statistics confirming rapid growth of the province.

Human Rights & Gender

To enhance the DPSIR framework, a Human Rights and Gender lens was applied to the state of environment and aspects of programme or policy development and implementation in the province.

Action Points

Each theme identified 'critical action points' which must be responded to for the outlook to improve - and the majority of these are within provincial mandate.

BIODIVERSITY

OUTLOOK: DECLINING

GAINS

Some improvement was experienced in the ecosystem protection level of specific vegetation types due to the establishment of new conservation areas or the expansion of existing ones.
The species threat status of some species has improved.

LOSSES

More species are deteriorating in their threat status as opposed to those improving in threat status, particularly relating to already-threatened species moving into higher threat categories. Overall decline in the ecosystem threat status of vegetation types, is primarily due to the loss of approximately 102 057 ha of habitat between 2017 and 2023.

CONCERNS

Unlawful habitat destruction in Critical Biodiversity Areas (CBAs) and Ecological Support Area (ESA) continues to contribute to biodiversity decline.

Invasive alien plant species densities are increasing despite active invasive alien management effort driven by various role-players.

KEY TREND

- The impact on Western Cape biodiversity resources due to degradation continues, with safeguarding and restoration efforts not able to mitigate the overall decline. This continued loss of natural habitat, particularly in Critical Biodiversity Areas (CBAs) and Ecological Support Areas (ESAs), undermines not only the rich natural heritage of the Western Cape, but our very livelihoods and quality of life, our water security, and our resilience in the face of a changing climate.

ECOSYSTEM THREAT STATUS — There is a current increase in threat status for some vegetation types due to habitat loss, which currently declines ecosystem status for the Western Cape.

ECOSYSTEM PROTECTION LEVEL — There are currently positive increases in total conservation area and although total level of protection is increasing, it does not yet apply to all ecosystems with many remaining poorly or not protected at all.

BIODIVERSITY PRIORITY AREAS — Losses are currently being experienced across CR, EN and VU ecosystems, as a result Western Cape biodiversity priority areas are in an unfavourable state of decline.

HABITAT DEGRADATION — Habitat degradation is ongoing, and the concern is that the highest level of change is occurring in areas with the most threatened ecosystems.

SPECIES THREAT STATUS — In the review period, up to 64 species have been uplisted to more threatened categories of the SA Red List.

SUSTAINABILITY . WAY-FORWARD

- Expansion of conversation areas in the Western Cape
  Expand the number of well-protected ecosystems in the Western Cape
- Extended incorporation of vulnerable groups in biodiversity management across the province

OCEANS & COAST

OUTLOOK: STABLE

GAINS

Marine Protected Areas have nearly doubled in number within the Western Cape (9 MPAs to 17 MPAs). Management initiatives such as Western Cape Coastal Management Programme, Estuarine Management Plan development and approval, Coastal Management Lines, Coastal Access Strategy have assisted with an improved and co-ordinated response to the pressures.

LOSSES

There is ongoing loss of threatened ecosystems in the Western Cape coastal zone. Pressures from climate change, resource use and resource extraction exacerbate this loss of threatened ecosystems in the coastal zone. Overall, there is a shift towards high use and depletion of key resource species in the Western Cape.

CONCERNS

Marine and estuarine water quality that are compromised due to various pressures on these systems, ultimately affecting Western Cape ecosystem health.

KEY TRENDS

- There are more threatened ecosystem types in the coast (60%) compared to that for the rest of the land and sea (16%). This trend is driven by the fact that pressures within the land largely result in more habitat loss in localized contexts related to a direct pressure (e.g., mining, urban development) whereas estuarine and marine ecosystem types are more affected by several diffuse pressures that cause severe ecological degradation (e.g., flow modification, pollution, trophic cascades from overfishing).
- Habitat degradation is prevalent within the coast and immediate inland areas of the coast, where the rainfall is higher and agricultural capabilities are greatest.

ESTUARY HEALTH

Large predominantly open estuaries on average are in a fair state, while the temporarily open/closed estuaries vary from good to poor condition depending on the level of pressure on them.

CONSERVATION AREA

There is an increase in extent and adequate management of MPAs. Thirteen estuaries have been identified as priority areas in need of improved conservation and protection.

SPECIES EXPLOITATION

The trend generally continues towards higher usage and depletion. Key resource species (commercial) saw an 3% increase in heavily depleted stocks; depleted stocks indicated a 6% decrease.

SUSTAINABLE WAY-FORWARD

- Implement key coastal & estuary management plans
- Protect sensitive marine and estuarine ecosystems
- Development of sustainable coastal livelihoods programme

INLAND WATER

OUTLOOK: DECLINING

GAINS

The Western Cape planning has improved specifically for planning on water availability, as key lessons have been learnt from the provincial drought event. This strategic planning and management together with good rainfall since 2019 – above average rainfall in 2023 – has not necessitated any major water use restrictions to be put in place in the recent years.

LOSSES

The Western Cape faces a persistent water resource deficit, coupled with the need to allocate water for ecological reserves, which act as a buffer for social and economic resilience. The region's water infrastructure is deteriorating, raising concerns about its long-term sustainability and functionality.

CONCERNS

The Western Cape Water Supply System (WCWSS) is presently over-allocated. Consequently, the Western Cape economy faces water constraints, even when the region's dams are full. The inadequate access to water and the lack of reliable supply assurances have a detrimental impact on economic growth.

KEY TRENDS

- The inadequate access to water and the lack of reliable supply assurances have a detrimental impact on economic growth.
- Management of the Western Cape water systems has improved; however the high demand for water consumption and various long-term water quality issues have worsened in the recent years.
- In densely populated regions of the Western Cape, river sites show poor conditions due to inadequate management of sewage treatment works and exceeded carrying capacities with a cumulative impact on freshwater ecosystems.

WATER AVAILABILITY

The Western Cape Water Supply System (WCWSS) is over-allocated, causing water constraints for the economy despite good rainfall. Agricultural water is fully allocated, necessitating the development of alternative sources and improved efficiency. Additionally, dam yields are impacted by invasive alien plants.

FRESHWATER ECOSYSTEM HEALTH

Urban water stream quality is a concern, and key priorities include tackling microbial contamination and rehabilitating inland ecosystems. Outside Western Cape urban areas, river conditions are stable based on habitat assessments.

FITNESS FOR USE

Eighteen water systems in the Western Cape are now in a critical state, up from nine in 2013. The provincial Risk Ratio for treatment plants has slightly increased from 52.7% in 2013 to 53.1% in 2021.

SUSTAINABLE WAY-FORWARD

- For sustainable groundwater resource development, it is crucial to address management challenges identified in regional studies alongside development efforts.
- Loss of ecosystem and ecosystem services must be avoided.

AIR QUALITY

OUTLOOK: CONCERN

GAINS

Gains are found in the adoption and the implementation of the third (3rd) generation Western Cape Air Quality Management Plan (AQMP). All 30 Western Cape Municipalities have designated an Air Quality Officer have adopted their respective AQMPs, which have been integrated as sector plans within their broader Integrated Development Plans (IDPs).

LOSSES

From 2018-2022, the Western Cape faced a major lack of resources insofar as monitoring of air quality, coupled with the challenges of aging monitoring infrastructure. This has resulted in limited air quality monitoring in the province and requires investment and resources to enhance monitoring and infrastructure recapitalisation.

CONCERNS

Concern lies in the inadequate investment in the Western Cape Air Quality Monitoring Network, with several air quality monitoring stations currently not actively monitoring, resulting in data gaps, which does not allow detailed air quality monitoring in the province. This hampers efforts to manage air quality effectively in the Western Cape.

KEY TRENDS

- Overall, the air quality monitoring trends indicate that air quality is stable, but declining in the Province, particularly in the City of Cape Town Metropolitan.
- Utilising Particulate Matter with an aerodynamic diameter of less than 10 μm (PM10) as proxy indicator to estimate economic impact of air pollution on human health in the Western Cape, it is suggested that air pollution is likely one of the largest threats not only to human health, but also to the economy of the Western Cape.

Particulate Matter (PM)

Exceedances of the annual average PM_{10} NAAQS of 40 μg/m³ were observed at Khayelitsha and Wallacedene monitoring stations. It is attributed to local sources such as wind-blown dust and wood burning for cooking and heating. This is a concern as PM_{10} is used as a proxy to understand an areas' level of pollution exposure in correlation with potential health issues.

SULPHUR DIOXIDE

All Western Cape monitoring stations are recording annual average SO_2 concentrations below the annual SO_2 NAAQS of 50 μg/m³, however, the pollutant trends have increased over time.

OXIDES OF NITROGEN

All annual averages of NO_2 concentrations, as depicted for each monitoring station in the Western Cape, were below the annual NO_2 NAAQS of 40 μg/m³. The pollutant trends have increased over time.

SUSTAINABLE WAY-FORWARD

- Revolutionise the provincial transportation system to reduce vehicle emissions
- Follow innovative and sustainable urban development
- Prioritise and improve spatial and temporal resolution of the Air Quality Monitoring network for the Western Cape, to manage air quality effectively in the Province.

ENERGY

OUTLOOK: CONCERN

GAINS

The Western Cape is making rapid progress in its energy landscape by prioritising renewable projects, especially solar and wind power, under the REIPPPP and foreign direct investment in renewable energy, with substantial growth potential.

LOSSES

In 2022, Eskom supplied 16.9% less electricity to the Western Cape compared to 2013, equating to a reduction of 3,920 gigawatt-hours (GWh). This decline is influenced by factors including loadshedding, energy efficiency, increased non-grid renewable energy, and the Western Cape's energy resilience programs.

CONCERNS

A major concern for the Western Cape is the development and maintenance of transmission and distribution networks to handle the growing demand and facilitate the integration of renewable energy projects – electricity infrastructure that is not under provincial management.

KEY TRENDS

- In response to nearly two decades of load shedding affecting energy security, the Western Cape's Energy Resilience Programme (ERP) is diversifying the energy mix and sustain economic growth by promoting Small-Scale Embedded Generation (SSEG) and rooftop solar PV installations, reducing reliance on Eskom.
- Non-grid based renewable energy, i.e. rooftop PV, is trending for the province mostly because large scale renewable energy equates to Eskom supply.
- Through its Energy Resilience Programme, the Western Cape is reducing its reliance on Eskom, resulting in fewer stages of loadshedding compared to other provinces in the country.

ENERGY SUPPLY

The Western Cape's energy supply is improving due developments including two gas turbines (207 MW), eight wind farms, seven solar power plants and small-scale embedded generation (SSEG) is being implemented across 24 municipalities.

ENERGY USE

Overall consumption trend is fluctuating as shown by the Western Cape emissions profile (GHG inventory reporting). The City of Cape Town and West Coast energy consumption combined stands at 86% of total energy use, with the CCT dominating at 56% consumption (2018).

ENERGY INTENSITY

The West Coast has higher industrial intensity compared to other districts, while Cape Town's relatively low intensity is due to its focus on the service industry. Data remains limited however there is indication of a decrease in intensity per unit of GDP.

ENERGY SECURITY

Loadshedding significantly worsened during the review period, with 2023 experiencing the highest levels of load shedding hours and the lowest total energy availability.

SUSTAINABLE WAY-FORWARD

- Ensure the availability of affordable, reliable, sustainable energy supply
- Creating an enabling environment for the transition from fossil fuel to renewable sources of energy

HUMAN SETTLEMENTS & INFASTRUCTURE

OUTLOOK: STABLE

GAINS

There is an improvement in access to basic services – access to piped water, access to flush toilets, grid access to lighting and weekly refuse removal. There has also been an improvement in the quality of housing construction but despite the use of better building materials, many dwellings remain informal.

LOSSES

Significant losses for provincial human settlements and infrastructure include electricity supply failures and passenger rail services failures. There is also a notable decline in subsidised housing deliveries. Due to national fiscal constraints, capital grants for subsidised housing have been substantially cut compared to the previous period, leading to a roughly 40% annual reduction in the number of new subsidised units.

CONCERNS

Water losses and infrastructure condition are highlighted as concerns. Actual water losses have increased dramatically in the review period and are currently at historic highs and is the result of deteriorating infrastructure the condition of which are resulting in leaks and water losses.

KEY TRENDS

- The Western Cape is experiencing **a significant rate of population growth** across the province, which places significant pressure on the state to provide adequate services that caters for new growth, whilst prior service delivery backlogs remain not fully addressed in the province.
- There has been a significant shift towards **higher density housing typologies** in the Western Cape, which is a positive trends towards improving urban form, and crucial for improving the sustainability of urban settlements and infrastructure services in the province.

HOUSING ADEQUACY

The number of households residing in overcrowded conditions has declined by 13% in the review period; the proportion of households living in adequate dwellings (defined as formal or built with from brick/concrete and not overcrowded) has markedly increased.

ACCESS TO WATER

Direct household access to piped water has improved from 88% to 93% of households; however, with population expansion the number of households with no access to piped water (direct or communal) has remained static at 20,000 households.

SANITATION & WASTEWATER

The proportion of households without adequate sanitation has declined marginally although similar to housing adequacy, the absolute number of households without adequate sanitation increased slightly. The main constraint is wastewater treatment capacity.

SUSTAINABLE WAY-FORWARD

- Infrastructure maintenance and expansion is critical to sustainable communities of the Western Cape.
- Open space provision is an important feature of sustainable human settlements, particularly towards lessening 'urban heat islands'.
- Reducing system losses of water.

LAND & AGRICULTURE

OUTLOOK: STABLE

GAINS

The Western Cape is transitioning to sustainable farming, moving away from harmful practices like agrochemicals and tillage while adopting water management technologies and climate-smart farming. Market pressures such as rising costs and limited arable land also drives this shift to meet food security and land resource conservation needs.

LOSSES

Soil erosion poses a significant threat to land resources in the province, driven by factors such as climate change and improper land use practices. This erosion diminishes agricultural productivity, impacting food security and livelihoods. While other losses, such as those from urban and agricultural expansion due to population growth, are currently minor, they strain land resources.

CONCERNS

Water security and extreme weather events related to temperature rise and changing rainfall variability raise concern for land use practices. The Western Cape must move towards land use practices that are climate-resilient otherwise climate change will exert pressure on land resources leading to increased land degradation.

KEY TREND

The Western Cape faces persistent pressure on its land resources due population growth, urbanisation, urban sprawl, and poverty which exacerbate existing spatial limitations. Agricultural production is closely tied to land resources, but demand often surpasses availability. Occurrences of inappropriate land use, such as intensive farming in threatened areas like Renosterveld, and settlements encroaching on fragile environments like mountainsides causes on-going pressure on land resources. The interface between wildlands and urban areas increases the risk of fires, while coastal development frequently occurs in vulnerable and high-risk zones.

LAND COVER

There has been minimal changes to the Western Cape land cover since 2018, with nominal increase in urban expansion. Land cover change in the Western Cape is currently stable.

Transformation is a result of agricultural activities, urban expansion and degradation and is largely driven by land use. Since 2018, there has been a significant decline in land transformation as a result of agriculture. Land transformation at current more attributed to urban land uses which are also minimal for the current reporting cycle.

LAND TRANSFORMATION

AGRICULTURE & LAND USE POTENTIAL

The Western Cape agricultural footprint is stable to decreasing while the agricultural production is increasing. A concern is the climate change-soil nexus which could intensify an already vulnerable agricultural sector which is dependent on high economic inputs.

- Increased application of conservation agriculture
- Implementation of climate responsive agricultural management
- Sustainability footprints (water, carbon, land) of Western Cape agriculture.

SUSTAINABLE WAY-FORWARD

WASTE

OUTLOOK: CONCERN

GAINS

Implementation of diversion initiatives and alternative waste management projects has improved waste diversion rates.

The waste economy has been identified as a key sector for economic growth and job creation. A key focus should thus be to expand waste skills training and job creation initiatives, which is aimed specifically at the youth and other marginalised groups.

LOSSES

A large percentage of provincial sewage sludge is still being disposed at landfill. With limited landfill airspace in the province, municipalities are encouraged to consider diversion and beneficiation options.

CONCERNS

There is an increasing shortage of municipal waste disposal facilities (WDF) airspace and challenges exist around securing available land for new WDFs. Furthermore, inequality in waste management services persist coupled with a lack of service delivery and infrastructure provision in rural areas.

KEY TRENDS

- The total amount of waste generated in the Western Cape province has decreased by 14%, and waste disposal by 4% in the period 2018 to 2022. Waste recovery and recycling have increased by 3% over the same period. For 2022, the Western Cape currently had an overall diversion rate of 29%; and organic waste diversion rate of 22%.
- A problematic trend is the expanding of informal settlements in often unsuitable terrains without waste management service delivery, resulting in waste management challenges such as dumping and pollution – a cost to communities and local authorities.

WASTE GENERATION

Waste generation across the province is increasingly annually (and as a function of local economic status, provincial population growth and consumption patterns). This is placing increasing pressure on already strained airspace of the majority of municipal waste disposal facilities.

WASTE CHARACTERISATION

Organic waste (food waste (28.9%) plus garden waste (6.3%)) represents the largest portion of waste generated i.e. approximately 35% of municipal waste generated. This offers opportunities for waste diversion and waste economy stimulation.

WASTE MANAGEMENT FACILITIES

Western Cape WMFs have reached critical levels in operational capacity. All districts have plans (in different stages) for regional waste facilities and services. Non-compliant WMFs remain significant with license conditions and a matter of provincial concern.

SUSTAINABLE WAY-FORWARD

- Expand infrastructure and technological options for waste diversion and beneficiation of organic waste.
- Stimulate societal behaviour change on waste minimisation and separation at source to support recycling initiatives.