South African Weather Service

ANNUAL PERFORMANCE PLAN

2024|25

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DOCUMENT CONTROL

Version and Amendment Schedule

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1	2023-08-31	Dithuso Mogapi	Document created
2	2023-12-01	Dithuso Mogapi	Update of environmental analysis
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Approval and Control Schedule

APPROVED BY	DESIGNATION	RESPONSIBILITY	SIGNATURE	DATE OF APPROVAL	DOCUMENT STATUS
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ABBREVIATIONS AND ACRONYMS

ARS	Automatic Rainfall Stations
AWS	Automatic Weather Stations
B-BBEE	Broad-Based Black Economic Empowerment
COP	Conference of the Parties
DFFE	Department of Forestry, Fisheries and the Environment
EAP	Economically Active Population
GAW	Global Atmosphere Watch
GDP	Gross Domestic Product
GHG	Greenhouse gasses
GISC	Global Information System Centre
GPC	Global Producing Centres for long-range prediction
ICAO	International Civil Aviation Organization
ICT	Information and Communications Technology
IRMSA	Institute of Risk Management South Africa
LDN	Lightning Detection Network
MTEF	Medium-Term Expenditure Framework
NDP	National Development Plan
NT	The National Treasury
PFMA	Public Finance Management Act
PWDs	Persons Living with Disabilities
QES	Quarterly Employment Statistics
RADAR	Radio Detection and Ranging
RCMS	Regulating Committee for Meteorological Services
RTC	Regional Training Centre
RTH	Regional Telecommunications Hub
SAAQIS	South African Air Quality Information System
SACAA	South African Civil Aviation Authority
SAWS	South African Weather Service
SCM	Supply Chain Management
SDG	Sustainable Development Goals
SOLAS	Safety of Life at Sea
TAF	Terminal Aerodrome Forecast
UN	The United Nations
WMO	World Meteorological Organization

EXECUTIVE AUTHORITY STATEMENT

I am pleased to present the South African Weather Service (SAWS) Annual Performance Plan (APP) for the 2024/25 financial year.

This APP follows the successful United Nations Framework Convention on Climate Change (UNFCCC) Conference of Parties (COP 28), which took place in Dubai, the United Arab Emirates (UAE), in December 2023.

COP 28 highlighted the pressing need to roll out early warning systems for extreme weather events to save lives and secure livelihoods.

Speaking during one of the conference sessions, the UN Secretary-General Mr António Guterres said, “Delayed action means, quite simply, more deadly extreme weather events. More deaths. More destruction. And less ability to recover. Those on the front line of the climate crisis will continue to pay the highest price”.

During 2023, our Disaster Risk Reduction system warned of extreme weather events in both the Western Cape and in Kwa Zulu Natal and assisted in reducing loss of life.

I am pleased that this APP is geared towards helping ensure that all our citizens are protected from hazardous climate before the end of 2027.

I am particularly pleased with the amount of attention being given to areas such as the timeliness and accuracy of warnings, alerts and advisories; the investment in research and innovation; infrastructure maintenance; and public awareness programmes.

Accordingly, I endorse this APP. Optimally implemented, it will put us on the path to live up to the aims of the UN's Early Warnings for All initiative.

MS BARBARA CREECY, MP

MINISTER OF FORESTRY, FISHERIES AND THE ENVIRONMENT

ACCOUNTING OFFICER STATEMENT

The South African Weather Service (SAWS) was established at the dawn of the third millennium in terms of the SAWS Act, Act No. 8 of 2001 (as amended), and is one among several national public entities contemplated in Schedule 3(a) of the Public Finance Management Act, Act No. 1 of 1999.

In a territory as prone to hazardous weather events as South Africa is, it goes without saying that all 62 million of the country's citizens and residents look to the SAWS to serve as a buffer between them and meteorological dangers.

As such, the SAWS strives to live up to these aspirations through the development and provision of innovative meteorological solutions, products and services, and the generation of new scientific insights in atmospheric and related sciences. The upgrading, expansion and optimisation of infrastructure, as well as the provision of quality data that meets minimum requirements also play a pivotal role in ensuring that the organisation is, to the communities it serves, what they envisaged it to be.

Throughout the 2023/24 financial year, and in line with its Strategic Plan, the SAWS carried on with efforts to provide dependable public weather, aviation, maritime forecasts and severe weather guidance maps. Its early warnings system efforts continued to be underpinned by the concept of Impact-Based Severe Weather Warning System, which introduced a shift from the type of weather predicted to the potential effect thereof on lives and property. Further attention was directed towards research and innovation, infrastructure maintenance as well as public awareness programmes. All these took place under difficult circumstances as the organisation sought to shake off the financial squeeze brought about by the COVID-19 pandemic.

This financial year, the SAWS whittled down the number of its performance targets from 24 to 12, focusing the annual performance plan (APP) on more strategic matters. However, the targets that have been removed from the document are not inconsequential and have thus not been lost, but will continue to be monitored operationally. The effect of this has been that, unlike its forerunner, this leaner APP prioritises the timeliness and accuracy of warnings, alerts and advisories; investment in research and innovation; infrastructure maintenance; and public awareness programmes. We are hopeful that this tactic will result in a better performing and highly impactful SAWS.

This organisation would not be what it is without the collective backing of stakeholders, whose unfailing support remains the wind beneath its wings. Therefore, on behalf of the management and staff of the SAWS, I wish to extend a word of gratitude to these valuable partners of ours. They include the government at large, our parent department of Forestry, Fisheries and the Environment, the Minister, Deputy Minister, the Portfolio Committee on Environment, Forestry and Fisheries, the Auditor-General of South Africa, and the SAWS Board. In addition, I wish to thank the public and business community, the media, the disaster management colleagues both in the public and non-governmental sectors as well as academia, and not forgetting our international Colleagues and the World Meteorological Organization (WMO), for their respective assistance and invaluable contributions.

We will continue to draw from this support as we set out to join the rest of the global community in rolling out early warnings for all to ensure that everyone in the country and our neighbours are protected from hazardous weather, water or climate events by the end of 2027.

Ishaam Abader

MR ISHAAM ABADER
CHIEF EXECUTIVE OFFICER

OFFICIAL SIGN-OFF

It is hereby certified that this Annual Performance Plan:

(i) Was developed by the management of the South African Weather Service, under the guidance of the Department of Forestry, Fisheries and the Environment (DFFE).

(ii) Considers all the relevant policies, legislation and other mandates for which South African Weather Service is responsible.

(iii) Accurately reflects the Impact, Outcomes and Outputs which the South African Weather Service will endeavour to achieve over the period 2024/2025. Weather Services Act (Act No.8 of 2001) as amended, as well as the limited financial resources available to it.

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PART A

OUR MANDATE

PART A

OUR MANDATE

1. UPDATES ON THE CONSTITUTIONAL, LEGISLATIVE AND POLICY MANDATE

There are no updates to the Constitutional, Legislative and Policy Mandates for the South African Weather Service (SAWS). The mandate as stated in the 2020/21 to 2024/25 Strategic Plan remains relevant.

1.1 Constitutional mandate

In terms of the Constitution of the Republic of South Africa, Act No. 108 of 1996 (as amended) the mandate of the South African Weather Service is aligned to Chapter 2, Section 24 on the environment, which reads:
Everyone has the right-

a) to an environment that is not harmful to their health or well-being; and
b) to have the environment protected, for the benefit of present and future generations, through reasonable legislative and other measures that-
   (i) prevent pollution and ecological degradation
   (ii) promote conservation and
   (iii) secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development.

1.2 Legislative mandate

The legislative mandate of SAWS is derived from the South African Weather Services Act (Act No.8 of 2001), as amended in 2013, the Public Finance Management Act (Act No.1 of 1999) and associated Treasury Regulations. The SAWS is a schedule 3A entity as per the PFMA. In terms of its enabling Act, Act No. 8 of 2001 (as amended), the functions of SAWS and its mandate include:

- To provide reliable weather services to support public good and its commercial ventures.
- To ensure ongoing collection of meteorological and ambient air quality data over South Africa and the surrounding southern oceans
- Providing aeronautical and marine meteorological services
- To be the long-term custodian of a reliable national climatological and ambient air quality record

The mandate of the entity and its objectives as stipulated in the South African Weather Services Act (Act No.8 of 2001) as amended, also requires the SAWS to provide services that are sensitive to the demographic realities of the country, to enter into agreements with State Departments for the delivery of services considered to be within the capacity of SAWS. These agreements are not deemed part of the public goods services.

The mandate and objectives of the entity remain relevant and, as expressed in the strategic plan, without any updates for this financial year.

PART A

2. UPDATES ON THE INSTITUTIONAL PRIORITIES, POLICIES AND STRATEGIES

The SAWS remains committed to contributing towards the National Development Plan (NDP) vision 2023, through execution of programmes that will contribute towards the envisaged outcomes. Furthermore, the entity will consider the commitments of the Administration for 2024 and align its implementation plans with the plans of government. The key drivers for such alignment are the objects and provisions of the South African Weather Services Act (Act No.8 of 2001) as amended, as well as the limited financial resources available to it.

The entity will continue to make its contribution towards the NDP outcomes in relation to:

- Education, skills and health, through improvement of the functionality of the National Ambient Air Quality Monitoring Network through the implementation of the Vaal, Waterberg Bojanala and Highveld Priority Areas Air Quality Management Plans and monitoring of air pollution in these areas. This encompasses the execution of network recapitalisation plans for the Priority Areas to ensure that authorities are enabled to monitor the effectiveness of emission control measures and programmes for the reduction of air pollution levels in these priority areas. Reduction of pollution levels will have a positive effect on health and quality of life for persons in the surrounding communities.

  Through the management of the South African Air Quality Information System (SAAQIS) as entrusted to the SAWS, air quality data and information is accessible to academic institutions and researchers, government and the public for the benefit of education and the increases in skills for the industry.

- Building safer communities through accurate and timely impact-based weather messaging inclusive of severe weather warnings. Weather information, inclusive of severe weather warnings, will continue to be disseminated via different channels such as radio, television and social media platforms among others. Likewise, climate-related information will be made available to critical economic sectors such as the agricultural sector, as well as to rural communities, for adaptation and preparedness for extreme climate events.

Beyond the immediate contribution towards the advancement of NDP outcomes, the SAWS provides weather and climate information which holds immense significance for decision-makers across social, economic, and environmental sectors. These sectors are key pillars in the pursuit of sustainability, a fundamental goal outlined by the United Nations (UN) in its ambitious agenda for “people, the planet and prosperity” with the aim of achieving global sustainability by 2030. The UN roadmap to sustainability comprises 17 Sustainable Development Goals (SGDs), each with a distinct set of targets, totalling 169, whose achievement is impacted by, among other things, weather and climate change. Weather and climate information serves as a linchpin, impacting all aspects of the SDGs and proving invaluable context for decision-making. By enhancing the quality of decision-making processes, weather and climate information contributes to the realisation of sustainable development objectives.

Assessments derived from SDG reports underscore South Africa's progress in specific indicators such as the commendable reductions in malnourishment and neonatal mortality rates. However, it is evident that significant efforts are still required to address other critical indicators, such as reducing poverty and the expansion of access

to electricity for the population as highlighted in Sachs et al., 2022. In these pursuits, weather and climate information emerge as a pivotal catalyst for progress. The World Meteorological Organization (WMO) emphasised the indispensable role of weather and climate information as far back as 2004. This information not only propels South Africa towards its developmental goals, but also assists in constructing a society resilient to climate challenges and fostering a robust and productive economy. As such, the integration of weather and climate information into decision-making processes stands as a cornerstone in the journey towards a sustainable, prosperous, and climate-resilient future for South Africa and the broader global community.

The SAWS as a National Meteorological Services organisation, has a primary mission which is to provide meteorological solutions of the highest quality for improved quality of life for all in South Africa. This provision of quality meteorological solutions is in pursuit of the SAWS' vision as the "Authoritative voice on weather-related services". Individuals and groups make decisions based on weather and the SAWS provides weather and climate forecasts to meet this need. Weather and climate information inform the planning and decision-making across several sectors that facilitate the achievement of SDGs. The provision of quality and timeous weather and climate information can protect socioecological systems from risks posed by weather elements.

Apart from risks posed by weather and climate change, South Africa is also faced with the triple challenge of poverty, inequality and unemployment which make some members of the society disproportionately vulnerable to extreme weather events. Key sectors such as energy, water, agriculture, health and human settlements are vulnerable to current and projected changes in weather and climate which impact different SDGs, hence there is an increased need for concerted efforts to develop products and services to build the resilience of citizens now and in the future. The SAWS, through the provision of various products and services, continues to support society to gain more traction in protecting and advancing the achievement of the NDP as well as the SDGs.

The below summary presents the various SAWS products and projects that contribute to the SDGs.

PRODUCT OR PROJECT NAME	CONTRIBUTION TO SDG
Numerical Weather Prediction	**SDG3**: Good Health and Well-being; **SDG11**: Sustainable Cities and Communities; **SDG15**: Life on Land.
Climate Research	**SDG3**: Good Health and Well-being; **SDG13:** Climate Action
Trends in Extreme Climate	**SDG3**: Good Health and Well-being; **SDG13**: Climate Action
Annual State of the Climate Report	**SDG13**: Climate Action; **SDG3**: Good Health and Well-being
Product Enhancement (Update of SAWS Climate Change Atlas)	**SDG13**: Climate Action
Climate Change and Water Security: Developmental Perspectives for Water Linked Sectors in a Future Climate for Africa Project	**SDG1**: No poverty; **SDG2**: Zero hunger; **SDG3**: Good health and wellbeing **SDG5**: Gender equality; **SDG6** : Clean water and Sanitation; **SDG7**: Affordable and clean energy; **SDG10**: Reduced inequalities; **SDG11**: Sustainable Cities and Communities; **SDG13**: Climate Action; **SDG15**: Life on land; and **SDG17**: Partnerships for the goals

PRODUCT OR PROJECT NAME	CONTRIBUTION TO SDG
Smoke Management Tool (SMT: PM-VS System)	**SDG13**: Climate Action; **SDG3**: Good Health and Well-being; **SDG11**: Sustainable Cities and Communities
Ambient Air Pollution Contribution to the National Burden of Disease	**SDG3**: Good Health and Well-being; **SDG11**: Sustainable Cities and Communities; **SDG13**: Climate Action
COVID-19 Vulnerability Risk Indicator Tool	**SDG3**: Good Health and Well-being; **SDG11**: Sustainable Cities and Communities
Atmospheric Composition (Air Quality) Scenario Tool	**SDG3**: Good Health and Well-being; **SDG11**: Sustainable Cities and Communities; **SDG13**: Climate Action
Heat Stress Impacts on Humans	**SDG3**: Good Health and Well-being, **SDG11**: Sustainable Cities and Communities
Discomfort Index Forecast Product	**SDG3**: Good Health and Well-being
Malaria Prediction System	**SDG3**: Good Health and Well-being
Heat Stress Index for Livestock	**SDG1**: No Poverty; **SDG13**: Climate Action
Soil Moisture and Soil Saturation Index	**SDG1**: No Poverty; **SDG13**: Climate Action
Drought Monitoring and Climate Change Projection	**SDG6**: Clean Water and Sanitation; **SDG12**: Responsible Consumption and Production, and **SDG13**: Climate Action
Weather and Climate Science for Service Partnership Project	**SDG1**: No Poverty; **SDG11**: Sustainable Cities and Communities; **SDG13**: Climate Action and **SDG17**: Partnerships to achieve the Goal
Solar radiation forecasting	**SDG7**: Affordable and Clean Energy, **SDG13**: Climate Action, **SDG3**: Good Health and Well-being, and **SDG11**: Sustainable Cities and Communities
Wind Atlas Project	**SDG3**: Good Health and Well-being; **SDG7**: Affordable and Clean Energy; **SDG11**: Sustainable Cities and Communities; **SDG13**: Climate Action
Solar Irradiance monitoring products	**SDG3**: Good Health and Well-being; **SDG7**: Affordable and Clean Energy; **SDG13**: Climate Action; **SDG11**: Sustainable Cities and Communities
Lightning Climatology	**SDG3**: Good Health and Well-being; **SDG9**: Industry, Innovation and Infrastructure; **SDG13**: Climate Action

Table 1: SAWS products and projects contributing to SDGs

2.1 Institutional policies and strategies

Long-term Financing Strategy and Regulatory Considerations

The SAWS remains heavily reliant on the support from government in the form of a government grant allocation from the Department of Forestry, Fisheries and the Environment. This reliance is against the backdrop of an increasingly constrained national fiscus, resulting in a steady decline in grant allocations.

The sluggish growth of the economy and decreasing formal employment in the country have an impact on the SAWS' ability to generate revenue that goes a long way to ensure its long-term sustainability. Clients who are consumers of meteorological solutions are grappling with a choice between remaining sustainable and improving efficiencies, or procuring weather and climate solutions inclusive of data. This impacts the SAWS' non-regulated commercial revenue generation.

The SAWS' commercial drive was impacted by the Covid-19 pandemic and continues to be impacted by the effects of the pandemic being felt as global economies are only now recovering. A strategy for the commercialisation of certain SAWS products and services as well as other commercial ideas were developed for implementation through the Revenue Turnaround Strategy. While the SAWS continues to practically implement its Revenue Turnaround Strategy, its clients are confronted with the effects of the economic challenges the country faces. Successful implementation of this Revenue Turnaround Strategy is dependent on the appreciation of SAWS' innovative products, its ability to produce reliable and consistent data, which is dependent on contemporary, fit-for-purpose meteorological observations infrastructure and supporting technologies, as well as market conditions.

The possible regulation of the provision of meteorological services to the marine industry is still under investigation and may become a positive influence on the SAWS' revenue generation should the outcome be favourable. The Regulating Committee for Meteorological Services (RCMS) completed a feasibility analysis whose outcome will be made available in due course.

The entity is further seeking ways to improve its revenue generation through the possibility of establishing a separate commercial entity that can drive the commercial endeavours of the SAWS. This requires a thorough review of the SAWS' business model to ascertain whether the entity's commercial wing should reside within the SAWS, be set-up separately from it, or for the entity to focus on public good service provision. The discussions and investigation are ongoing and remain a strategic agenda item for the SAWS' management and Board alike.

Notwithstanding the above, the SAWS is actively improving its mobilisation of funds from external funders. This will enable the entity to perform research in various weather and climate fields for the benefit of not only itself, but other interested parties, inclusive of the public at large.

As a WMO-affiliated organisation, the SAWS is required to align itself with the objectives of the WMO. Likewise, as an entity of government, the SAWS must align itself to the priorities of government whilst discharging its mandate, which is dependent on adequate budget availability and capacity.

3. UPDATES ON RELEVANT COURT RULINGS

None.

PART B

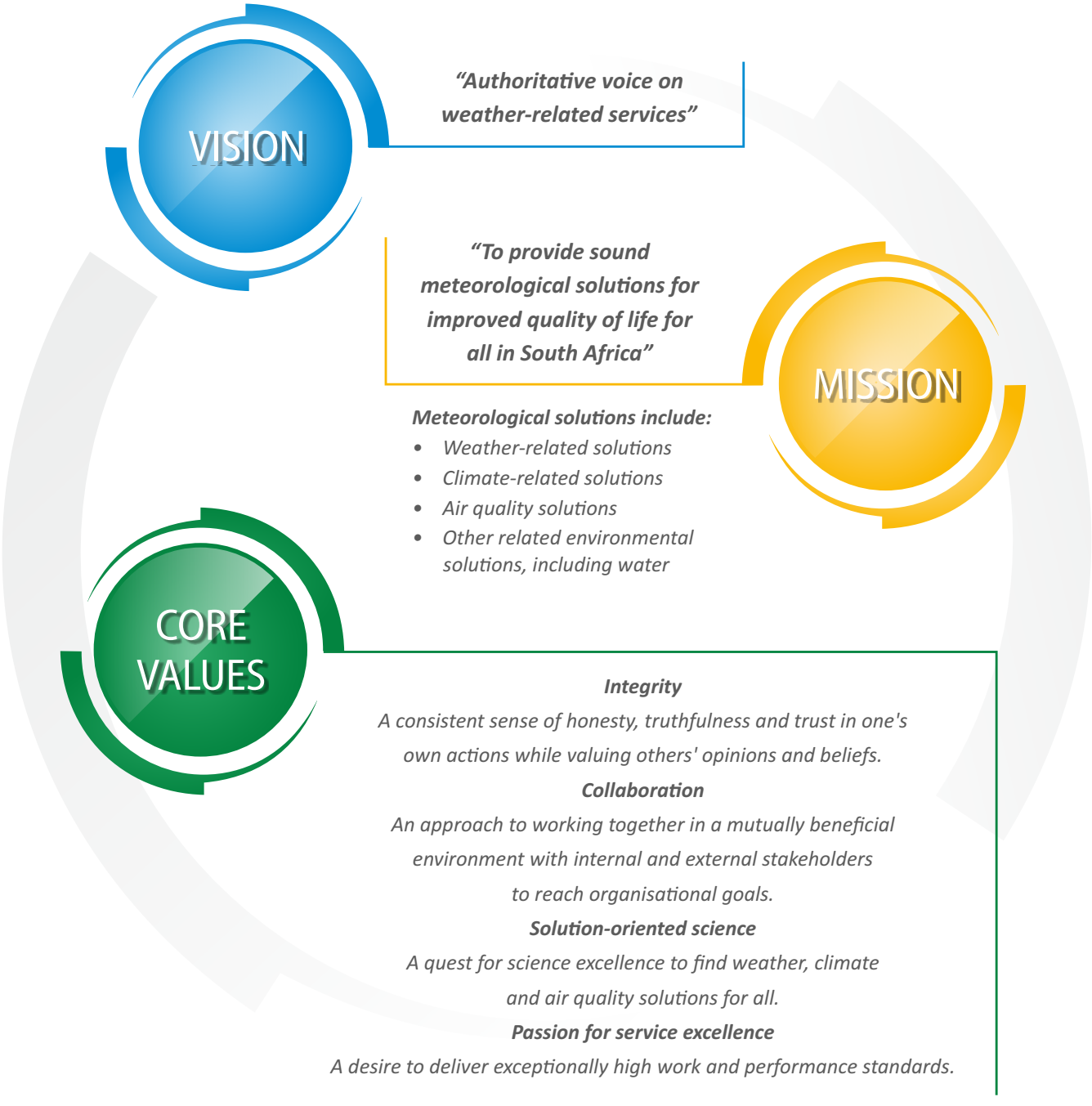
OUR STRATEGIC FOCUS

PART B

OUR STRATEGIC FOCUS

4. THE SAWS VISION, MISSION AND CORE VALUES

The Management and staff of SAWS are committed to the Vision, Mission and Core Values of the organisation and actively contribute to, and support all initiatives aimed at achieving organisational goals and objectives.



PART B

5. UPDATED INSTITUTIONAL ANALISYS

The Republic of South Africa, African continent and the world at large are confronted with weather, climate and water-related challenges. The South African Weather Service (SAWS) is a member of the World Meteorological Organization (WMO), an agency of the United Nations that is dedicated to international cooperation and coordination pertaining to the state and behaviour of earth's atmosphere, its interaction with the land and oceans, the weather and climate it produces, and the resulting distribution of water resources. As a key member of the WMO, the SAWS is designated several responsibilities through WMO designations such as the Global Information System Centre (GISC),), Regional Specialised Meteorological Centre (RSMC - Pretoria), Global Producing Centres for long-range prediction (GPC), Regional Training Centre (RTC) as well as Regional Telecommuni-cations Hub (RTH) among others.

South Africa, like many countries, faces a multitude of risks in the years ahead. These risks range from economic and political instability to social and environmental challenges as articulated in the **Institute of Risk Management South Africa (IRMSA) Risk Report 2023/24**. As also alluded to in this Risk Report, is the fact that South Africa must also confront the environmental risks associated with climate change and biodiversity loss. The country is particularly vulnerable to the impacts of climate change, including increased droughts, flooding and a rise in temperature, which will have significant economic, social and environmental consequences.

Figure 1: Top Risks for South Africa (Source: IRMS Risk Report 2023/24)

The effects of global warming continue to bring about increased extreme weather events with undesirable and devastating effects on amongst others, food and water security. Climate and environmental risks are highlighted in the **Global Risk Report 2023** as being the core focus of global risk perceptions over the next decade, and are the risks for which the world is seen to be the least prepared for. The report further highlights that the lack of deep, concerted progress on climate targets has exposed the divergence between what is scientifically necessary to achieve net zero and what is politically feasible. With the growing demands on public- and private-sector resources from other crises, it is expected that these will reduce the speed and scale of mitigation efforts over the next two years, alongside insufficient progress towards the adaptation support required for those communities and countries increasingly affected by the impacts of climate change. The SAWS will continue to play its role in the provision of early warnings and climate information for the benefit of vulnerable communities and economic sectors of South Africa to allow them to adapt to the effects of climate change.

PART B

Figure 2 : Global risks landscape: an interconnections map (Source: World Economic Forum, Global Risks Perception Survey 2022-2023)

The SAWS has since implementation of its 2020/21 to 2024/25 strategic plan, embarked on executing actions aimed at addressing its weaknesses, taking advantage of opportunities, whilst striving to mitigate against potential and imminent threats to the SAWS.

Insufficient funding for the entity's long-term sustainability remains a challenge which the SAWS is confronting head on. The effects of Covid-19 on the country's fiscus continue to be felt as budgetary constraints are felt across the public and private sectors. The SAWS has however gained much needed injection of capital investment that will be utilised for the stabilisation, upgrade and expansion of its critical meteorological infrastructure such as RADARs as well as upgrade of its information and communications technology infrastructure such the high-performance computer. With the utilisation of this capital investment into critical infrastructure, the SAWS will be able to regain its competitiveness and improve its effectiveness in discharging its mandate for the safety of lives and safeguarding of property against meteorological-related risks.

PART B

STRENGHTS	WEAKNESSES (Areas to be improved)	OPPORTUNITIES (Prioritised)	THREATS (Prioritised)
Enhanced meteorological body of knowledge • Generate meteorological intelligence • Custodian of meteorological data **Business management / leadership** • Corporate governance • Corporate communication / corporate branding • Quality management • Stakeholder relations management • Geographic footprint **Resource management** • Human capital management • Financial management • Asset management • Information management	**Enhanced meteorological body of knowledge** • Develop user-specific solutions **Meteorological solutions provided to meet user needs** • Promote / marketing of solutions • Deliver solutions to various user segments • Generate revenue **Optimal core technological capability** • Manage lifecycle of technology/infrastructure • Develop / maintain systems • Ensure quality data for dissemination **Business management / leadership** • Fit-for-purpose leadership • Business performance management • Project management • Business positioning • Organisation culture development	• Need for real-time user-friendly solutions • Future technologies (artificial intelligence, cloud-based, internet of things, BIG data, digitisation) • Increased use of social media • Increased impact-based forecasting and sector specific solutions (air quality, Early Warnings for All, energy, water, agrometeorology, etc.) • Climate change and variability • Leveraging strategic technology partnerships	• High levels of crime / vandalism • Increased competition for meteorological-related service provision across the value chain • National electricity grid failure • Fraud / corruption • Failing public infrastructure • Inadequate government funding for public good services • Decreasing economic growth • High levels of cybercrime • High data cost in South Africa • Staff attrition / loss of skills

Table 2: SWOT analysis

5.1 External Environment Analysis

After the South African economy contracted by a revised 1,1% in the fourth quarter of 2022, real gross domestic product (GDP) edged higher in the first quarter of 2023 (January - March), expanding by an estimated 0,4%. GDP expanded by a further 0.6% in the second quarter (April - June) but contracted again by 0.2% in the third quarter (July - September) of 2023. On the production (supply) side of the economy five of the ten industries tracked by Statistics South Africa (Stats SA) recorded weaker results, with agriculture, manufacturing and construction being the biggest drags on growth.

The agriculture industry declined by 9.6%, encountering several headwinds in the third quarter, including the outbreak of avian flu and the floods in the Western Cape. The outbreak of avian flu also had a negative impact on the manufacturing production of chicken-related products. Weaker activity from agriculture and manufacturing had a knock-on effect on wholesale trade, contributing to a 0,2% decline in the trade, catering and accommodation industry. On the upside, finance, real estate and business services, personal services and transport, storage and communication were the largest positive contributors to GDP growth. After five consecutive quarters of decline, the electricity, gas and water supply industry grew by 0.2%. This was on the back of increased electricity generation and less intense load shedding, racking up only 20 days of stage 5 and stage 6 load shedding, as opposed to 46 days recorded in the second quarter.

On the expenditure side of the GDP, investments in machinery and equipment shrank by 3.2% in the third quarter, contributing negatively to gross fixed capital formation. This follows a sharp rise in investments in imported machinery and equipment in the second quarter, which included products related to renewable energy. The pull-back in demand for machinery and equipment contributed to the 8.6% decline in imports. The country exported slightly more in the third quarter, largely influenced by increased trade in vehicles and transport equipment, pearls, precious and semi-precious stones, precious metals, and vegetable products. On the household front, strained consumers cut back on consumption expenditure for a second consecutive quarter, reducing their spending on items such as transport, recreation and housing utilities. The decline in real, i.e., inflation-adjusted salaries and wages, is slowing, as consumer price inflation continues to trend lower.

The National Treasury (NT) communicated cost containment measures to assist national departments, public entities and provinces to close the fiscal gap. Cabinet, in its meeting of 15 August 2023, noted that the economic growth outlook had worsened relative to expectations outlined in the 2023 Budget, given the impact of more intense load shedding as well as freight and port logistical constraints, among others. The NT outlined how low economic growth resulted in declining revenue collection and funding conditions since the 2023 Budget was tabled. Solutions to the budgetary challenges to restore public finances to a sustainable path for the 2024/25 medium-term expenditure framework (MTEF) are required. Cost containment measures are expected to continue in the 2024/25 financial year and the SAWS is obliged to maneuver through this difficult period without compromising on its mandated service provision.

5.2 Internal Environment Analysis

The SAWS is cognisant of challenges that hinder its ability to achieve and deliver on its objectives. As such, management reviewed its internal environment to identify the key areas where intervention is required to achieve successes for the 2024/25 period and over the medium-term. Loadshedding, combined with limited human resources capacity and budget constraints, remain an on-going challenge. Connectivity interruptions due to loadshedding negatively impact the ability of meteorological and air quality monitoring instruments to collect data optimally and often results in data loss in certain sites. The SAWS will, in this regard, continue to implement its Meteorological Infrastructure Sustainability Plan and Air Quality projects to improve the functionality of the various observations and air quality networks.

The effective operation of the observations and air quality infrastructure is envisaged to have a positive impact on the SAWS' products and services for public good or commercial activities. The SAWS developed strategic priorities for each output area considering the results of the internal and external analysis.

PART B

STRATEGIC OUTPUTS	STRATEGIC PRIORITIES
Enhanced meteorological body of knowledge	• Develop precise and reliable real-time, value-adding, user-friendly meteorological solutions enabling service provision • Comply with national and international obligations • Leverage on national, regional, and international opportunities and responsibilities
Meteorological solutions provided to meet user needs	• Improve our promotion / marketing of meteorological solutions • Increase non-regulated revenue generation from meteorological solutions • Leverage technological advancement for improved solutions and competitiveness
Optimal core technological capability	• Improve life cycle management of technology / infrastructure • Research, innovation, and development into infrastructure to improve the SAWS' technological capability • Improve dissemination platforms / channels • Leverage on Public Private Partnerships to acquire or improve infrastructure
Excellence achieved within the organisation • Business management / leadership	• Improve performance management practices within the organisation (business and individual) • Ensure an enabling working environment • Leverage unique capability of strategic partners • Improve our corporate communication / corporate branding • Instil a conducive corporate culture • Strengthen SAWS business positioning
• Human capital management	• Prioritise acquisition, development, and retention of key skills
• Financial management	• Improve supply chain management practices within the organisation • Improve profitability of projects / solutions
• Asset management	• Improve non-core assets management within the organisation (record keeping, Waterkloof land development)
• Information / knowledge management	• Improve knowledge management practices within the organisation • Digitise internal processes

Table 3: Strategic priorities for each output area

While the rate of overall attrition and loss of key skills is of concern to the management of the SAWS, much is being done to attract the appropriate talent and retain expertise. The entity's structure remains poised to propel the SAWS towards is strategic goals and objectives.

PART B

Capacity to deliver the SAWS mandate - High-Level Organisational Structure

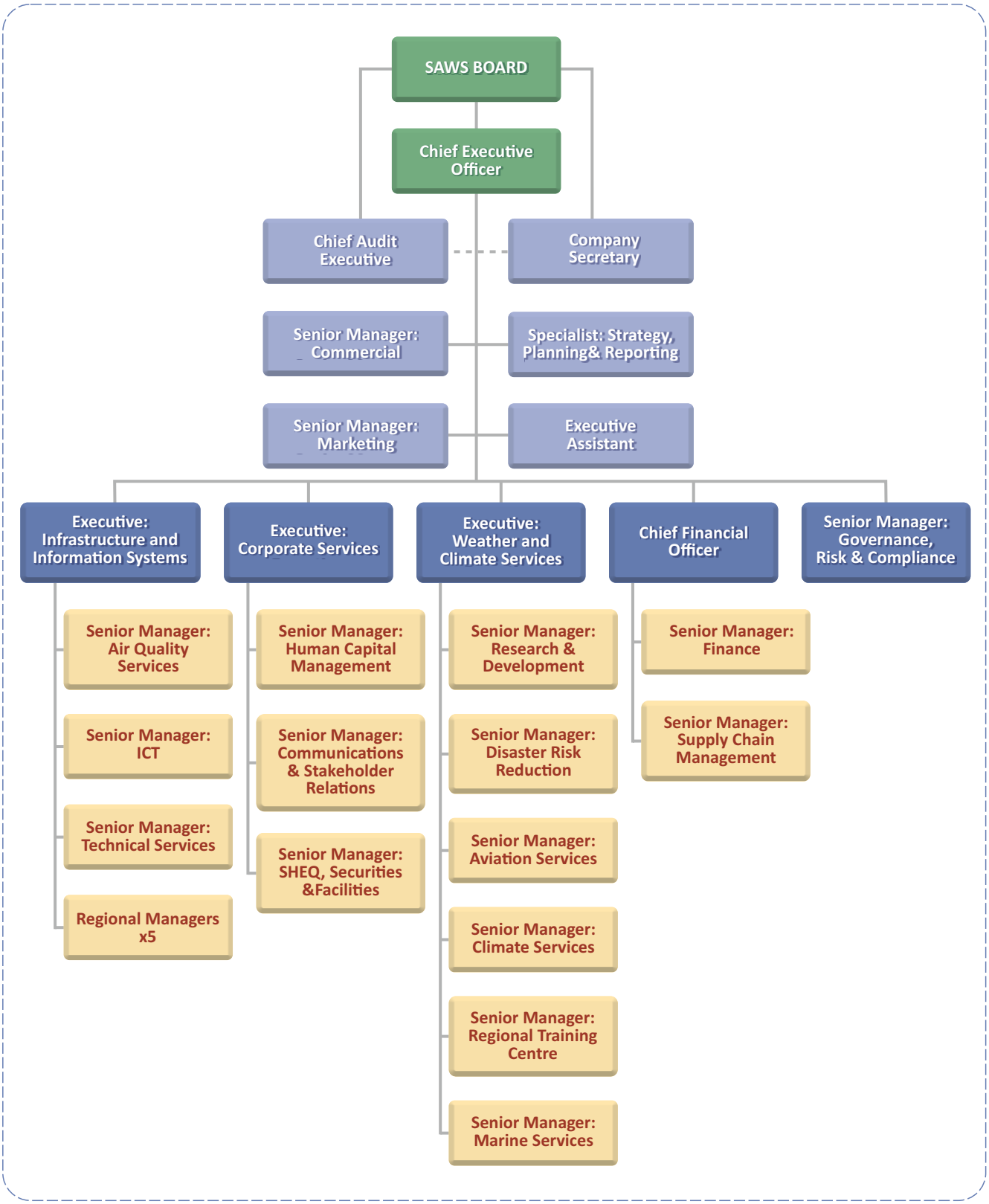


Figure 3 : SAWS Organisational Structure

PART C

MEASURING OUR PERFORMANCE

PART C

MEASURING OUR PERFORMANCE

6. PROGRAMME PERFORMANCE INFORMATION

The SAWS Strategic Framework continues to strive for impact with the intention to obtain an ***Improved quality of life for all in South Africa***. The impact will be realised through the attainment of outcomes related to: Lives and property protected against meteorological-related risks, as well as Organisational Sustainability.

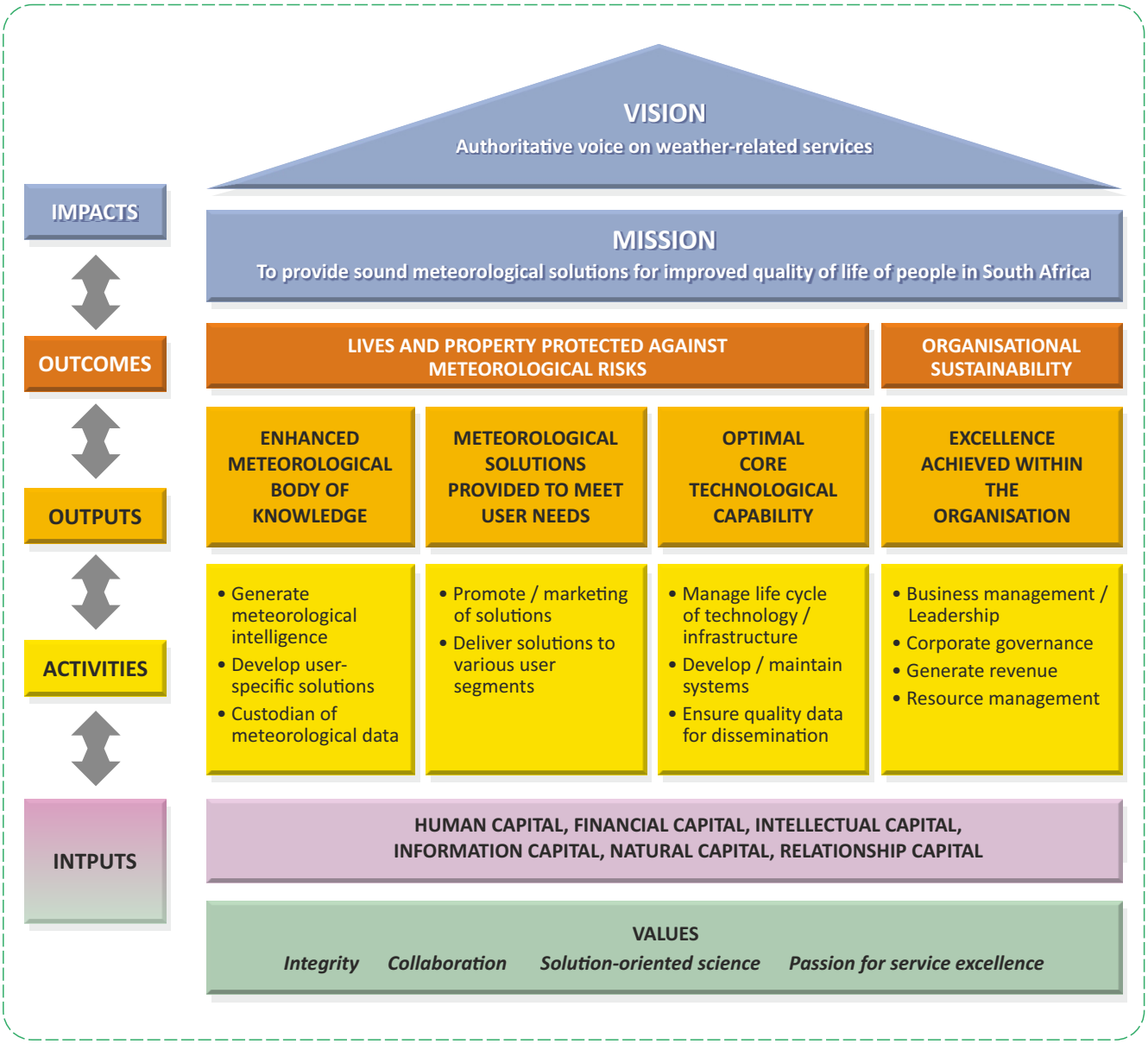


Figure 4 : The SAWS Strategic Framework

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In the application of the Results-Based approach to ensure that all factors contributing to the achievement of the intended results are taken into consideration, the entity's Strategic Framework identifies four (4) Output Areas to which the SAWS will strive to achieve in this APP. These Output Areas include:

(i) ENHANCED METEOROLOGICAL-RELATED BODY OF KNOWLEDGE
(ii) METEOROLOGICAL-RELATED SOLUTIONS PROVIDED TO MEET USER NEEDS
(iii) OPTIMAL CORE TECHNOLOGICAL CAPABILITY
(iv) INTERNAL EXCELLENCE ACHIEVED WITHIN THE ORGANISATION

6.1 Outcomes, Outputs, Performance Indicators and Targets

6.1.1 PROGRAMME 1: WEATHER AND CLIMATE SERVICES

PURPOSE: TO SAFEGUARD LIFE AND PROPERTY AND PROVIDE METEOROLOGICAL SOLUTIONS TO ALL SOUTH AFRICANS.

SUB-PROGRAMME 1.1: WARNINGS, ALERTS AND ADVISORIES.

PURPOSE: TO PROVIDE TIMEOUS AND ACCURATE IMPACT-BASED EARLY WARNINGS, ALERTS AND ADVISORIES TO SAFEGUARD LIFE AND PROPERTY AGAINST THE IMPACT OF SEVERE WEATHER ON LAND, OCEANS AND IN THE AIR.

OUTCOME	OUTPUTS	OUTPUT INDICATORS	AUDITED/ACTUAL PERFORMANCE			ESTIMATED PERFORMANCE	MEDIUM-TERM TARGETS		
			2020/21	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27
Lives and property protected against meteorological-related risks	Meteorological-related solutions provided to meet user needs	Percentage availability of national weather forecast (FPZA41)	99%	98,77%	97,95%	98%	97%	97%	97%
		Percentage accuracy of aerodrome warnings	98,8%	98,73%	98,56%	98%	98%	98%	98%
		Percentage accuracy of Terminal Aerodrome Forecast (TAF)	93,8%	94,14%	96,71%	94%	93%	94%	94%
		Percentage availability of marine products (SOLAS)	98%	98,97%	98,76%	98%	97%	97%	97%

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6.1.2 PROGRAMME 2: RESEARCH AND INNOVATION

PURPOSE: TO DEVELOP METEOROLOGICAL SOLUTIONS TO INFORM WISE SOCIO-ECONOMIC CHOICES.

SUB-PROGRAMME 2.1: SOLUTION DEVELOPMENT

PURPOSE: THE PROVISION OF INNOVATIVE METEOROLOGICAL AND RELATED PRODUCTS AND SERVICES THROUGH THE DEVELOPMENT AND IMPLEMENTATION OF COMMUNITY WEATHER-SMART PRODUCTS AND SERVICES.

OUTCOME	OUTPUTS	OUTPUT INDICATORS	AUDITED/ACTUAL PERFORMANCE			ESTIMATED PERFORMANCE	MEDIUM-TERM TARGETS		
			2020/21	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27
Lives and property protected against meteorological-related risks	Enhanced meteorological-related body of knowledge	Number of new or enhanced climate- and non-climate-specific solutions signed-off	6	4	4	4	4	4	4

6.1.3 PROGRAMME 3: INFRASTRUCTURE AND INFORMATION SYSTEMS

PURPOSE: TO UPGRADE, EXPAND AND OPTIMISE INFRASTRUCTURE.

SUB-PROGRAMME 3.1: OPTIMAL MANAGEMENT OF INFRASTRUCTURE

PURPOSE: TO ENSURE OPTIMAL INFRASTRUCTURE AND SYSTEMS UPTIME OF OBSERVATIONS, INFORMATION DISSEMINATION AND EXCHANGE THAT ENABLES SAWS TO ACHIEVE ITS MANDATE.

OUTCOME	OUTPUTS	OUTPUT INDICATORS	AUDITED/ACTUAL PERFORMANCE			ESTIMATED PERFORMANCE	MEDIUM-TERM TARGETS		
			2020/21	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27
Lives and property protected against meteorological-related risks	Optimal core technological capability	Percentage of greenhouse gasses data availability	83%	81,58%	78,11%	80%	80%	80%	80%
		Percentage of Tier 1 RADAR data available for users	73%[1]	73,83%[1]	52,23%[1]	42,4%	75%	75%	75%

[1] Based on all commissioned RADARs

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SUB-PROGRAMME 3.2: QUALITY DATA

PURPOSE: TO PROVIDE QUALITY DATA MEETING MINIMUM DATA REQUIREMENTS.

OUTCOME	OUTPUTS	OUTPUT INDICATORS	AUDITED/ACTUAL PERFORMANCE			ESTIMATED PERFORMANCE	MEDIUM-TERM TARGETS		
			2020/21	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27
Lives and property protected against meteorological-related risks	Optimal core technological capability	Percentage of Priority Areas Air Quality Stations available on SAAQIS meeting minimum data requirements	67%	69,44%	59,95%	50%	80%	80%	80%
		Percentage of climate data available on National Climate Database meeting minimum data requirements	96,8%	92,9%	90,1%	85%	85%	90%	92%

6.1.4 PROGRAMME 4: ADMINISTRATION (including corporate and regulatory services)

PURPOSE: TO PROVIDE LEADERSHIP, STRATEGIC, CENTRALISED ADMINISTRATION, EXECUTIVE SUPPORT, CORPORATE SERVICES AND FACILITATE EFFECTIVE COOPERATIVE GOVERNANCE, INTERNATIONAL RELATIONS AND ENVIRONMENTAL EDUCATION AND AWARENESS.

SUB-PROGRAMME 4.1: SOUND CORPORATE GOVERNANCE

PURPOSE: TO PROVIDE BUSINESS MANAGEMENT AND LEADERSHIP.

OUTCOME	OUTPUTS	OUTPUT INDICATORS	AUDITED/ACTUAL PERFORMANCE			ESTIMATED PERFORMANCE	MEDIUM-TERM TARGETS		
			2020/21	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27
Organisational sustainability	Internal excellence achieved within the organisation	Level of B-BBEE rating	8	8	6	6	5	5	5
		Unregulated commercial revenue generated	R25,02 mil	R26,8 mil	R26,04 mil	R27 mil	R29,16 mil	R30,618 mil	R32,149 mil

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SUB-PROGRAMME 4.2: BRAND POSITIONING AND STAKEHOLDER NETWORK DEVELOPMENT

PURPOSE: TO DEVELOP AND MAINTAIN VARIOUS PLATFORMS FOR ENGAGEMENT WITH STAKEHOLDERS TO EXTEND THE REACH AND INCREASE AWARENESS OF THE SAWS BRAND. TO PROMOTE ENGAGEMENT OF STAKEHOLDERS FOR MUTUALLY BENEFITIAL RELATIONSHIPS.

OUTCOME	OUTPUTS	OUTPUT INDICATORS	AUDITED/ACTUAL PERFORMANCE			ESTIMATED PERFORMANCE	MEDIUM-TERM TARGETS		
			2020/21	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27
Organisational sustainability	Internal excellence achieved within the organisation	Number of public awareness programmes conducted	N/A	16	39	30	27	30	30

6.2 Indicators, Annual and Quarterly Targets

6.2.1 PROGRAMME 1: WEATHER AND CLIMATE SERVICES

PURPOSE: TO SAFEGUARD LIFE AND PROPERTY AND PROVIDE METEOROLOGICAL SOLUTIONS TO ALL SOUTH AFRICANS.

SUB-PROGRAMME 1.1: WARNINGS, ALERTS AND ADVISORIES.

PURPOSE: TO PROVIDE TIMEOUS AND ACCURATE IMPACT-BASED EARLY WARNINGS, ALERTS AND ADVISORIES TO SAFEGUARD LIFE AND PROPERTY AGAINST THE IMPACT OF SEVERE WEATHER ON LAND, OCEANS AND IN THE AIR.

OUTPUT INDICATORS	ANNUAL TARGET	QUARTER 1	QUARTER 2	QUARTER 3	QUARTER 4
Percentage availability of national weather bulletins (FPZA41)	97% availability of national weather forecast (FPZA41)	97% availability of national weather forecast (FPZA41)	97% availability of national weather forecast (FPZA41)	97% availability of national weather forecast (FPZA41)	97% availability of national weather forecast (FPZA41)
Percentage accuracy of aerodrome warnings	98% accuracy of aerodrome warnings	98% accuracy of aerodrome warnings	98% accuracy of aerodrome warnings	98% accuracy of aerodrome warnings	98% accuracy of aerodrome warnings
Percentage accuracy of Terminal Aerodrome Forecast (TAF)	93% accuracy of Terminal Aero-drome Forecast	93% accuracy of Terminal Aero-drome Forecast	93% accuracy of Terminal Aero-drome Forecast	93% accuracy of Terminal Aero-drome Forecast	93% accuracy of Terminal Aero-drome Forecast
Percentage availability of marine products (SOLAS)	97% availability of marine products (SOLAS)	97% availability of marine products (SOLAS)	97% availability of marine products (SOLAS)	97% availability of marine products (SOLAS)	97% availability of marine products (SOLAS)

6.2.2 PROGRAMME 2: RESEARCH AND INNOVATION

PURPOSE: TO DEVELOP METEOROLOGICAL SOLUTIONS TO INFORM WISE SOCIO-ECONOMIC CHOICES.

SUB-PROGRAMME 2.1: SOLUTION DEVELOPMENT

PURPOSE: THE PROVISION OF INNOVATIVE METEOROLOGICAL AND RELATED PRODUCTS AND SERVICES THROUGH THE DEVELOPMENT AND IMPLEMENTATION OF COMMUNITY WEATHER-SMART PRODUCTS AND SERVICES.

OUTPUT INDICATORS	ANNUAL TARGET	QUARTER 1	QUARTER 2	QUARTER 3	QUARTER 4
Number of new or enhanced climate- and non-climate-specific solutions signed-off	4 new or enhanced climate- and non-climate-specific solutions signed-off	Needs analysis for new or enhanced climate- and non-climate-specific solutions completed	Prototypes of new or enhanced climate- and non-climate-specific solutions developed as per needs analysis	Prototypes of new or enhanced climate- and non-climate-specific solutions translated into solutions	4 new or enhanced climate- and non-climate-specific solutions signed-off

6.2.3 PROGRAMME 3: INFRASTRUCTURE AND INFORMATION SYSTEMS

PURPOSE: TO UPGRADE, EXPAND AND OPTIMISE INFRASTRUCTURE.

SUB-PROGRAMME 3.1: OPTIMAL MANAGEMENT OF INFRASTRUCTURE

PURPOSE: TO ENSURE OPTIMAL INFRASTRUCTURE AND SYSTEMS UPTIME OF OBSERVATIONS, INFORMATION DISSEMINATION AND EXCHANGE THAT ENABLES SAWS TO ACHIEVE ITS MANDATE.

OUTPUT INDICATORS	ANNUAL TARGET	QUARTER 1	QUARTER 2	QUARTER 3	QUARTER 4
Percentage of greenhouse gasses data availability	80% greenhouse gasses data availability	80% greenhouse gasses data availability	80% greenhouse gasses data availability	80% greenhouse gasses data availability	80% greenhouse gasses data availability
Percentage of Tier 1 RADAR data available for users	75% of Tier 1 RADAR data available for users	75% of Tier 1 RADAR data available for users	75% of Tier 1 RADAR data available for users	75% of Tier 1 RADAR data available for users	75% of Tier 1 RADAR data available for users

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SUB-PROGRAMME 3.2: QUALITY DATA

PURPOSE: TO PROVIDE QUALITY DATA MEETING MINIMUM DATA REQUIREMENTS.

OUTPUT INDICATORS	ANNUAL TARGET	QUARTER 1	QUARTER 2	QUARTER 3	QUARTER 4
Percentage of Priority Areas Air Quality Stations available on SAAQIS meeting minimum data requirements	80% of Priority Areas Air Quality Stations available on SAAQIS meeting minimum data requirements	80% of Priority Areas Air Quality Stations available on SAAQIS meeting minimum data requirements	80% of Priority Areas Air Quality Stations available on SAAQIS meeting minimum data requirements	80% of Priority Areas Air Quality Stations available on SAAQIS meeting minimum data requirements	80% of Priority Areas Air Quality Stations available on SAAQIS meeting minimum data requirements
Percentage of climate data available on National Climate Database meeting minimum data	85% of climate data available on National Climate Database meeting minimum data requirements	85% of climate data available on National Climate Database meeting minimum data requirements	85% of climate data available on National Climate Database meeting minimum data requirements	85% of climate data available on National Climate Database meeting minimum data requirements	85% of climate data available on National Climate Database meeting minimum data requirements

6.2.4 PROGRAMME 4: ADMINISTRATION (including corporate and regulatory services)

PURPOSE: TO PROVIDE LEADERSHIP, STRATEGIC, CENTRALISED ADMINISTRATION, EXECUTIVE SUPPORT, CORPORATE SERVICES AND FACILITATE EFFECTIVE COOPERATIVE GOVERNANCE, INTERNATIONAL RELATIONS AND ENVIRONMENTAL EDUCATION AND AWARENESS.

SUB-PROGRAMME 4.1: SOUND CORPORATE GOVERNANCE

PURPOSE: TO PROVIDE BUSINESS MANAGEMENT AND LEADERSHIP.

OUTPUT INDICATORS	ANNUAL TARGET	QUARTER 1	QUARTER 2	QUARTER 3	QUARTER 4
Level of B-BBEE rating	Level 5 B-BBEE rating	Level 5 B-BBEE rating	N/A	N/A	N/A
Unregulated commercial revenue generated	R29 160 000 unregulated commercial revenue generated	R7 290 000 unregulated commercial revenue generated	R7 290 000 unregulated commercial revenue generated	R7 290 000 unregulated commercial revenue generated	R7 290 000 unregulated commercial revenue generated

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SUB-PROGRAMME 4.2: BRAND POSITIONING AND STAKEHOLDER NETWORK DEVELOPMENT

PURPOSE: TO DEVELOP AND MAINTAIN VARIOUS PLATFORMS FOR ENGAGEMENT WITH STAKEHOLDERS TO EXTEND THE REACH AND INCREASE AWARENESS OF THE SAWS BRAND. TO PROMOTE ENGAGEMENT OF STAKEHOLDERS FOR MUTUALLY BENEFITIAL RELATIONSHIPS.

OUTPUT INDICATORS	ANNUAL TARGET	QUARTER 1	QUARTER 2	QUARTER 3	QUARTER 4
Number of public awareness programmes conducted	27 public awareness programmes	8 public awareness programmes conducted	7 public awareness programmes conducted	6 public awareness programmes conducted	6 public awareness programmes conducted

6.3 Explanation of Planned Performance Over the Medium- Term Period

6.3.1 PROGRAMME 1: WEATHER AND CLIMATE SERVICES

The South African Weather Service (SAWS) will continue as mandated to provide meteorological-related information, inclusive of early warnings to the public at large, as part of its public good mandate and to support the Early Warnings for ALL (EW4ALL) initiative of the United Nations (UN). The impact-based forecasting initiative continues to be implemented, with the development and improvement of an objective verification system to analyse the accuracy of issued warnings still underway.

The aviation industry operations are reliant on accurate aviation meteorological information which SAWS continues to provide. As such, the SAWS will continue to carry out all its prescribed duties in accordance with International Civil Aviation Organization (ICAO) Annexure 3 and South African Civil Aviation Authority (SACAA) part 174 requirements. The products and services provision to the aviation industry enable efficient, safe and regular flight operations in the Republic and the region.

The Safety of Life at Sea (SOLAS) convention requires amongst other, the maintenance of meteorological services for ships for safe navigation. As prescribed in the SAWS' mandate, the entity will issue the marine industry with timely marine-related products and services inclusive of coastal and deep-sea products for those operating on the shores and those navigating South Africa's surrounding oceans.

6.3.2 PROGRAMME 2: RESEARCH AND INNOVATION

The SAWS is recognised as a scientific research institution which conducts research to enhance weather forecasting models, deepen the understanding of South Africa's climate system, and develop innovative techniques for monitoring and predicting weather phenomena. The SAWS' research contributes to the knowledge base and advancement of meteorological science, playing a crucial role in establishing the scientific foundation for

providing accurate and timely weather information and services to support various sectors and ensure the safety of the South African public. In ensuring overall quality, validity and reliability of scientific findings and insights, the SAWS Researchers utilise the peer-review process. This ensures that knowledge and insight is shared through research publications and is accessible to the public and wider scientific community.

The SAWS remains steadfast in its commitment to empower both citizens and institutions through world-class scientific and technical capabilities that underpin and revolutionise its processes, products and services. This dedication lies in delivering high-quality and reliable weather and climate-related data, aiming to enhance quality of life, fostering resilience against extreme weather events and mitigating the impacts of climate change. This goal is realised through timely provision of relevant, accessible, and user-friendly weather and climate information.

In line with this commitment, the SAWS continues to enhance and co-develop a range of climate-specific solutions and other tools tailored to the needs of various user groups. These initiatives are driven by comprehensive needs analyses, with the primary objective of supporting users in making informed and weather-SMART decisions within their communities and industries, particularly in the face of an increasingly variable and changing climate.

6.3.3 PROGRAMME 3: INFRASTRUCTURE AND INFORMATION SYSTEMS

Loadshedding affected the SAWS' ability to keep key observation network infrastructure operating optimally, affecting the upload of data into products and services and disseminating essential products and services to our partners and key clients. As such, the focus under this programme will be the implementation of the Meteorological Infrastructure Sustainability Plan and systems optimisation initiatives.

Optimal Infrastructure and Information Systems to support weather observations, solar radiation, biometeorological and greenhouse gases (GHG) monitoring, information dissemination and exchange, are fundamental to SAWS' ability to achieve its mandate. The SAWS will continue with the management of meteorological observations infrastructure comprising RADAR infrastructure, a Lightning Detection Network (LDN), automatic weather stations and automatic rainfall stations. The SAWS will also play its part in the management and monitoring of the air quality network for the country's priority areas, which require recapitalisation. Projects to implement electricity stabilisation infrastructure will be implemented to assist with quality data availability that is made available on the South African Air Quality Information System (SAAQIS). It remains an intention to collaborate with provinces and municipalities to assist in improving the National Ambient Air Quality Monitoring Network functionality. A phased-in approach will be implemented for SAWS to manage strategic stations, in particular non-operational stations in areas with sparse monitoring on behalf of provinces and municipalities.

The SAWS infrastructure is important for the generation, transmission and storage of meteorological data for use as climate data. This data is used in several weather products and services and must be of acceptable quality and readily available when needed. The SAWS will continue with the management of the National Climate Database that meets minimum data requirements as it is entrusted to be the long-term custodian of a reliable national climatological record. The development of an Integrated Data Management System is also being pursued by the SAWS.

6.3.4 PROGRAMME 4: ADMINISTRATION (Including Corporate and Regulatory Services)

The SAWS obtained a clean audit for the 2022/23 financial year, and this has set the bar for subsequent years. All efforts towards sound business management, compliance with applicable prescripts and standards, as well as good governance will be rallied in execution of this annual performance plan and the medium-term targets. Likewise, much will be executed as a contribution to the improvement of the SAWS' Broad-Based Black Economic Empowerment (B-BBEE) rating. A favourable B-BBEE rating goes a long way in assisting the SAWS with bidding prospects for projects that will generate the much-needed additional commercial revenue.

In supporting the SAWS' commercial revenue generation endeavours, the promotion of the SAWS' products and services via online and traditional channels will be pursued. The SAWS will adopt overarching approaches of both “push” and “pull” service marketing strategies that rely on developing new products or modifying existing products and subsequently offering these to current and/or new markets through tailor-made product and service packages and tiered pricing tactics. When executed successfully, this can lead to a growth in sales and market share. Through the provision of consistently accurate primary data as well as improved weather products across all economic sectors, SAWS will not only reduce loss of life and damage to infrastructure during extreme weather events, but also diversify the economy by creating new business opportunities, resulting in the development of large revenue streams and consequently increasing tax revenues for government.

As a knowledge-based institution, the SAWS values its Human Resources as an important asset of the organisation for delivery against the mandate. The entity will put effort towards ensuring a diverse workforce, that is representative of the Economically Active Population (EAP) of South Africa at all levels of the organisation. Aligned to the Department of Forestry, Fisheries and Environment's Gender Mainstreaming agenda, the SAWS is committed to prioritise the representation of women in management positions.

The SAWS will be deliberate in positioning its brand through public and stakeholder relations, whilst ensuring that citizens are aware of critical, impact-based weather forecasting information for decision-making. Much will be done to reach more people in rural and vulnerable communities impacted by the changing weather patterns, by balancing the activities with communication, education and brand positioning.

PART C

6.4 Overview of 2023/24 Budget and MTEF: Estimates

6.4.1 Expenditure Estimates

DESCRIPTION	Audited Annual Financial Statements	ENE Allocations over MTEF Period 2023/24 to 2026/27			
	2022/23 R'000	2023/24 R'000	2024/25 R'000	2025/26 R'000	2026/27 R'000
Revenue					
Operational allocation*Conversion of Capital Y1 &Y2	316 740	308 373	322 651	201 275	210 582
Air Quality Information Unit	20 289	20 366	21 282	22 240	23 196
Early Warning Systems	-	8 117	8 482	8 864	9 245
National Fire Danger rating system	-	6 000	-	-	-
Sub-total - Government grant opex	***337 029***	***342 856***	***352 415***	***232 379***	***243 024***
Early Warning System: Additional Allocation	49 252	108 263	113 120	118 179	123 261
Infrastructure Investment: Equipment	-	43 174	45 118	47 148	49 175
Infrastructure additional allocation	-	40 000	30 000	30 000	31 840
Cash Surplus Capex (Prior Year)		38 900	-	-	-
Sub-total - Government grant capex	***49 252***	***230 337***	**188 238**	**195 327**	**204 276**
Budget allocation cut	-	-	**(54 065)**	**(42 770)**	**(44 730)**
Sub-total - Government grant	**386 281**	**573 193**	**486 588**	**384 936**	**402 570**
Commercial Income - non-statutory	26 047	27 000	29 160	30 618	32 149
Statutory - Aviation Income	108 805	129 000	138 000	147 000	157 000
Other income, Interest and Donor Funds	23 046	25 500	28 050	34 210	36 605
Total Revenue	**544 180**	**754 693**	**681 798**	**596 764**	**628 324**
Expenditure					
Employee Costs	(286 521)	(312 493)	(325 942)	(345 499)	(369 684)
Administrative and Operating Costs	(161 077)	(219 563)	(229 004)	(178 330)	(183 120)
Total Expenditure	**(447 598)**	**(532 056)**	**(554 947)**	**(523 829)**	**(552 804)**
Operating (Deficit) / Surplus Before Depreciation and Amortisation	**96 582**	**222 637**	**126 851**	**72 935**	**75 520**
Impairment Loss	(4 763)	-	-	-	-
Bad Debts written-off	(4 437)	-	-	-	-
Gain / (Loss) on disposal of assets	469	-	-	-	-
Depreciation and Amortisation	(32 446)	(42 304)	(45 265)	(48 886)	(52 308)
Surplus / (Deficit) before Valuations	**55 404**	**180 333**	**81 587**	**24 049**	**23 212**
Fair Value Adjustments and Actuarial Valuations	(13 128)	-	-	-	-
Gains /(Loss) from Foreign Exchange	(2 391)	-	-	-	-
Surplus / (Deficit) for the year	**39 885**	**180 333**	**81 587**	**24 049**	**23 212**
Capital Expenditure	**(49 252)**	**(180 333)**	**(81 587)**	**(24 049)**	**(23 212)**
Net Surplus / (Deficit) after CAPEX for the year	**(9 367)**	**0**	**0**	**0**	**0**

Table 4: Projected Income Statement

6.4.2 Asset and Liability Management

	FY2022/23	FY2023/24	FY2024/25	FY2025/26	FY2026/27
	Audited figures	Budget	Draft		
ASSETS	R'million				
Carrying value of assets	371	551	633	657	680
Inventory	13	3	5	7	7
Receivables and prepayments	31	26	21	23	23
Cash and cash equivalents	135	123	110	35	28
Operating Lease Asset	1	-	-	-	-
Total assets	**552**	**703**	**769**	**722**	**738**
LIABILITIES					
Accumulated surplus/deficit	433	663	719	662	678
Operating Lease	-	3	4	6	6
Trade and other payables	38	22	28	33	33
Provisions	81	15	18	21	21
Total equity and liabilities	**552**	**703**	**769**	**722**	**738**

Table 5: Summarized Statement of Financial Position

6.4.3 Cash Flow Projections

	FY2022/23	FY2023/24	FY2024/25	FY2025/26	FY2026/27
	Audited figures	Budget	Draft		
CASH FLOW DATA	R'million				
Cash flow from operating activities	102	211	214	(2)	69
Cash flow from investing activities	(37)	(223)	(127)	(73)	(76)
Cash flow from financing activities	-	-	-	-	-
Net increase / (decrease) in cash and cash equivalents	65	(12)	(13)	(75)	(6)
Cash and cash equivalents at the beginning of the year	70	135	123	110	35
Estimate of available cash	**135**	**123**	**110**	**35**	**28**

Table 6: Cash Flow Projections

6.4.4 Capital Expenditure Programmes

AQUSITIONS	FY2022/23	FY2023/24	FY2024/25	FY2025/26	FY2026/27
	Audited figures	Budget	Draft		
	R'million				
Air-Quality Equipment	5,31	14,42	8,22	4,72	4,89
Meteorological Equipment	6,41	32,49	18,51	10,64	11,02
Radar Equipment	2,22	75,40	42,96	24,70	25,58
Computer Servers / Equipment and HPC	18,07	0,14	0,08	0,05	0,05
Computer Software	0,80	64,17	36,56	21,02	21,77
Furniture and Fittings	1,72	7,29	4,15	2,39	2,47
Buildings and Leasehold Improvements	0, 17	9, 12	5,19	2,99	3,09
Office Equipment	0,70	0,20	0,11	0,07	0,07
Motor Vehicles	0,27	-	-	-	-
Fences	0,57	1,00	0,57	0,33	0,34
Aircraft-propellers, airframes and engines	0,06	-	-	-	-
Tools and other equipment	0,22	0,02	0,01	0,00	0,01
Repairs and Maintenance	12,75	18,40	10,48	6,03	6,24
TOTAL ACQUISITIONS	**49,25**	**222,64**	**126,85**	**72,93**	**75,52**

Table 7: Capital Expenditure

PART C

7. UPDATED KEY RISKS AND MITIGATION FROM STRATEGIC PLAN

OUTCOME	OUTPUT	KEY RISK	MEASURES TO MITIGATE
Lives and property protected against meteorological-related risks	Optimal Core Technological Capability	Inadequate Infrastructure Performance	1. Implementation of maintenance plans and investment in CAPEX budget; 2. Implementation of the SAWS Meteorological Infrastructure Sustainability Plan. 3. Provide training for the technical team according to the Personal Development Plans. 4. Engage service providers for off-the-shelf products and services in alignment with the Cost Benefit Analysis for the Surface Observation and Commercial Stations (AWS & ARS). 5. To ensure a stable power supply, AVRs, UPSs, Diesel generators and diesel fuel supplies will be addressed through the implementation of the SAWS Meteorological Infrastructure Sustainability Plan. 6. Addressing security concerns at RADAR sites as per the recommendations of the security assessment by SAPS. 7. Engagements with the relevant Mobile Network services providers on continuity of services during power outages.
		Inadequate ICT Capacity	1. Climate Data Management System project funding and gathering of more user requirements. 2. Monitoring of the Costed ICT turnaround implementation plan. 3. Review SLAs between SAWS and service providers - (e.g., BOSCO printed circuit board) - Contract management processes. 4. Develop the SOPs for development of products and services (e.g., ARS/AWS) (in-sourcing/outsourcing). 5. The ICT enterprise architecture committee meetings. 6. Monitoring of the ICT turnaround strategy. 7. Regular upgrading of unified numerical weather prediction model. 8. Implementation of RADAR software upgrade maintenance schedule. 9. Skills enhancement within ICT and training online. 10. Software engineering skills outsourced for implementation of new HPC.
		Failure to deliver on the Air Quality Mandate	1. Support the Department Project Steering Committee. 2. Completion of procurement processes for alternative energy and voltage regulators.

PART C

OUTCOME	OUTPUT	KEY RISK	MEASURES TO MITIGATE
Organisational sustainability	Internal Excellence achieved within the Organisation	Financial Sustainability Risk	1. Implementation of the Financial Sustainability Plan. 2. Explore revenue-generating opportunities that can be used in Marine space. (e.g., learn from the shipping industry for using France) 3. Partner with TNPA, Eskom and WRC on Marine. 4. Develop processes or procedures to cost products quickly and efficiently (e.g., ABC / New system). 5. Grow revenue through Strategic Partnerships to address gaps in coverage. 6. Internal commercial committee meeting to generate ideas. 7. Implementation of cost containment measures. 8. Monitor the implementation of the revenue turnaround strategy.
		Talent attraction and inability to retain skilled personnel	1. Advancement of women in management and leadership positions (Implementation of the Employment Equity Plan). 2. Implementation of succession planning. 3. Implementation of the career ladder (scientists career ladder). 4. EXCO to consider gender-responsive budgeting (Gender equity initiatives across the board). 5. Exchange programmes for capacity development. 6. Analysis and implementation of exit interviews. 7. Reinstate full-time bursaries. 8. Filling of vacant positions within three (3) months of the vacancy.
		Cybersecurity and Data Protection	1. Continuous cybersecurity training and awareness. 2. Implementation of an Incident monitoring and response plan and research into new strategies to stay ahead of the anticipated attacks.

8. INFRASTRUCTURE PROJECTS

Not applicable.

The infrastructure initiatives and capital expenditure are outlined in Section 6.4.4 of this annual performance plan.

9. PUBLIC-PRIVATE PARTNERSHIPS

Not applicable. The South African Weather Service has not entered into any Public-Private Partnership.

PART D

TECHNICAL INDICATOR DESCRIPTIONS

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TECHNICAL INDICATOR DESCRIPTIONS

Indicator Title	Percentage availability of national weather forecast (FPZA41)
Definition	Refers to the availability of National Public Weather bulletins on time over a given period. These are issued twice daily. Set time of submission is no later than 06:00 and 16:00 South African Standard Time.
Source of data	Message Handling System
Method of Calculation / Assessment	Quantitative: ((Forecast produced on time ÷ (number of days that month x 2)) x 100)
Means of verification	• Message Handling System reports • Signed-off monthly reports
Assumptions	None
Disaggregation of Beneficiaries	N/A
Spatial Transformation	N/A
Calculation type	Non-cumulative
Reporting cycle	Quarterly
Desired performance	97% availability of national weather forecast (FPZA41)
Indicator Responsibility	Senior Manager: Disaster Risk Reduction

Indicator Title	Percentage accuracy of aerodrome warnings
Definition	Aerodrome warnings are issued to provide operators, aerodrome services and others with concise information on meteorological conditions that could adversely affect the aerodrome's facilities and services, and aircraft on the ground, including parked aircraft. Warnings are issued for major airports and are disseminated by local arrangements to those immediately concerned. Warnings are issued on an ad hoc basis when the threat is expected to happen within the next 4 hours.
Source of data	OPMET Databank, Aviation website
Method of Calculation / Assessment	Quantitative: ((Forecast and Observed + Not Forecast Not Observed) ÷ (Forecast and Observed + Forecast but Not Observed + Not Forecast but Observed + Not Forecast Not observed) x 100)
Means of verification	Monthly (Mrep) and quarterly reports
Assumptions	None
Disaggregation of Beneficiaries	N/A
Spatial Transformation	N/A
Calculation type	Non-cumulative
Reporting cycle	Quarterly
Desired performance	98% accuracy of aerodrome warnings
Indicator Responsibility	Senior Manager: Aviation Services

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Indicator Title	Percentage accuracy of Terminal Aerodrome Forecast (TAF)
Definition	Terminal Aerodrome Forecast (TAF) is a concise statement of the expected meteorological conditions at an airport during a specified period, up to 30 hours for an international airport. The forecast is used for planning purposes by airlines, i.e., to give them expected conditions when landing at intended destinations.
Source of data	OPMET Databank, Aviation website
Method of Calculation / Assessment	Quantitative: ((Forecast and Observed + Not Forecast Not Observed) ÷ (Forecast and Observed + Forecast but Not Observed + Not Forecast but Observed + Not Forecast Not observed) x 100)
Means of verification	Aviation Evaluation Reports, Monthly Reports (Mrep), Quarterly reports
Assumptions	None
Disaggregation of Beneficiaries	N/A
Spatial Transformation	N/A
Calculation type	Non-cumulative
Reporting cycle	Quarterly
Desired performance	93% accuracy of Terminal Aerodrome Forecast (TAF)
Indicator Responsibility	Senior Manager: Aviation Services

Indicator Title	Percentage availability of marine products (SOLAS)
Definition	Refers to the percentage availability of SOLAS bulletins (FQZA30 and FQZA31) on time over a given period. The times for FQZA30 are no later than 10:30 and 15:30 South African Standard Time. The times for FQZA31 are no later than 11:00 and 16:00 South African Standard Time.
Source of data	• Message Handling System reports • Signed-off monthly reports
Method of Calculation / Assessment	Quantitative: ((Forecast produced on time ÷ (number of days that month x 2)) x 100) for FQZA30 and FQZA31 respectively; Average for the two (2) products
Means of verification	Monthly Report (Mrep)
Assumptions	None
Disaggregation of Beneficiaries	N/A
Spatial Transformation	N/A
Calculation type	Non-cumulative
Reporting cycle	Quarterly
Desired performance	97% availability of marine products (SOLAS)
Indicator Responsibility	Senior Manager: Disaster Risk Reduction

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Indicator Title	Number of new or enhanced climate- and non-climate-specific solutions signed-off
Definition	Indicator measures the number of new products and services as well as enhancements to existing products and services to provide value-added decision-making services for different economic sectors.
Source of data	• SAWS Observation networks (ARS, AWS, Radar, Lightning, Satellite etc.) • Numerical Weather Prediction model output (UM, ECMWF etc.) • Product specific data • Related and relevant software and or platforms
Method of Calculation / Assessment	Quantitative
Means of verification	• Signed-off quarterly progress on solutions development • Signed-off solutions by Users and Senior Manager: Research and Development at year end and / or Senior Manager: Climate Services
Assumptions	Availability of quality data from observation platforms as well as the reliability of computational systems (HPC, Servers).
Disaggregation of Beneficiaries	N/A
Spatial Transformation	N/A
Calculation type	Non-cumulative
Reporting cycle	Quarterly
Desired performance	4 new or enhanced climate- and non-climate-specific solutions signed-off
Indicator Responsibility	Senior Manager: Research and Development Senior Manager: Climate Services

Indicator Title	Percentage of greenhouse gasses data availability
Definition	One of the WMO obligations for the SAWS is to manage the Global Atmosphere Watch (GAW) station at Cape Point and Regional network. The laboratory program measures various atmospheric components, including greenhouse gases, aerosols, and reactive gases. The regional program collects UV and ozone-related measurements. The indicator measures the percentage data availability of the GAW data over a reporting period.
Source of data	The Global Atmosphere Watch Laboratory Program at Cape Point and Regional network
Method of Calculation / Assessment	Quantitative: (GAW Cape Point average sensor performance + GAW Regional average sensor performance for UV & Total Ozone + GAW Regional average sensor performance for Ozone vertical profile) ÷ 3
Means of verification	Quarterly Global Atmosphere Watch Data Recovery report.
Assumptions	Adequate performance of instrumentation (infrastructure) as well as availability of supporting consumables (gasses)
Disaggregation of Beneficiaries	N/A
Spatial Transformation	N/A
Calculation type	Non-cumulative
Reporting cycle	Quarterly
Desired performance	80% greenhouse gasses data availability
Indicator Responsibility	Senior Manager: Research and Development

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Indicator Title	Percentage of Tier 1 RADAR data available for users
Definition	RADARs are a critical component for short-term forecasting and issuing of weather warnings. It is critical to track average percentage availability of RADAR data over a reporting period. The performance results are system generated TITAN files which are analysed by RADAR specialists. Uptime is measured in 24 hours cycle, monthly average and quarterly average. The data availability is calculated from Tier 1 RADARs which are: Irene, Bloemfontein, Polokwane, Bethlehem, Durban, Ermelo, Ottosdal and Venetia Mine RADARs.
Source of data	RADAR data files generated and stored on TITAN and Rainbow computers (remote desktop applications) dedicated to the RADAR network.
Method of Calculation / Assessment	Quantitative: Quarterly average of RADAR data availability
Means of verification	Quarterly RADAR performance report derived from Rainbow/TITAN files analysis.
Assumptions	Network access to files received in a 24-hour system operation, Ravis uptime
Disaggregation of Beneficiaries	N/A
Spatial Transformation	N/A
Calculation type	Non-cumulative
Reporting cycle	Quarterly
Desired performance	75% of Tier 1 RADAR data available for users
Indicator Responsibility	Senior Manager: Technical Services

Indicator Title	Percentage of Priority Areas Air Quality Stations available on SAAQIS meeting minimum data requirements
Definition	This indicator refers to the percentage (%) of SAWS-operated ambient air quality monitoring stations (AAQMS) within the Priority Areas which are available on SAAQIS that meet minimum (75%) data requirements over a reporting period.
Source of data	SAAQIS report / station monthly reports
Method of Calculation / Assessment	Quantitative: The number of Ambient Air Quality Monitoring Stations (AAQMS) operated by SAWS in the Priority Areas that meet minimum data requirements is computed and then expressed as a percentage of the total number of AAQMS in the Priority Areas.
Means of verification	Monthly Reports of Highveld Priority Area (HPA), Vaal Priority Area (VPA) and Waterberg Bojanala Priority Area (WBPA) stations
Assumptions	Only refers to SAWS-operated ambient air quality monitoring stations in the National Priority Areas (HPA, VPA and WBPA)
Disaggregation of Beneficiaries	N/A
Spatial Transformation	N/A
Calculation type	Non-cumulative
Reporting cycle	Quarterly
Desired performance	80% of Priority Areas Air Quality Stations available on SAAQIS meeting minimum data requirements
Indicator Responsibility	Senior Manager: Air Quality Services

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Indicator Title	Percentage of climate data available on National Climate Database meeting minimum data requirements
Definition	As long-term custodian of a reliable national climate record, reliable and quality data must be available on the national database. Indicator calculates percentage of quality data from automatic weather stations on the national database over a reporting period.
Source of data	Climate Database - five-minute tables
Method of Calculation / Assessment	Quantitative: • ((Received five-minute values ÷ by expected values) x 100) *NB: Expected value is number of open stations x 288 records x number of days in month.*
Means of verification	System generated automatic weather stations climate data availability reports
Assumptions	Adequate spares for automatic weather stations as well as adequate sensor uptime.
Disaggregation of Beneficiaries	N/A
Spatial Transformation	N/A
Calculation type	Non-cumulative
Reporting cycle	Quarterly
Desired performance	90% climate data available on National Climate Database meeting minimum data requirements
Indicator Responsibility	Senior Manager: Climate Services

Indicator Title	Level of B-BBEE rating
Definition	A measure of the B-BBEE level of the organisation
Source of data	B-BBEE verification report generated by SANAS accredited verification agency
Method of Calculation / Assessment	Qualitative: B-BBEE verification report
Means of verification	B-BBEE Certificate
Assumptions	Availability of required documentation for the measurement elements
Disaggregation of Beneficiaries	N/A
Spatial Transformation	N/A
Calculation type	Non-cumulative
Reporting cycle	Annual
Desired performance	Level 5 B-BBEE rating
Indicator Responsibility	Senior Manager: Governance, Risk and Compliance

PART D

Indicator Title	Unregulated commercial revenue generated
Definition	Commercial revenue generated from non-regulated ventures identified in order to contribute to increased Total Revenue.
Source of data	NetSuite, Revenue and Pricing Models
Method of Calculation / Assessment	Quantitative: Non-regulated Revenue from financial reports
Means of verification	Financial Management Reports and Audited Financials
Assumptions	Quality (accuracy and completeness) as well as availability of the data
Disaggregation of Beneficiaries	N/A
Spatial Transformation	N/A
Calculation type	Cumulative - year end
Reporting cycle	Quarterly
Desired performance	R29 160 000 unregulated commercial revenue generated
Indicator Responsibility	Senior Manager: Commercial

Indicator Title	Number of public awareness programmes conducted
Definition	To create and maintain awareness of the SAWS brand, public good products and services in communities and schools.
Source of data	Integrated Communications and Stakeholder Relations Strategy
Method of Calculation / Assessment	Quantitative: Actual number of public awareness programmes conducted
Means of verification	Reports on public awareness programmes implemented per quarter
Assumptions	N/A
Disaggregation of Beneficiaries	Women, Youth, Persons living with disabilities
Spatial Transformation	N/A
Calculation type	Cumulative - year end
Reporting cycle	Quarterly
Desired performance	27 public awareness programmes conducted
Indicator Responsibility	Senior Manager: Communications and Stakeholder Relations

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