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South African
Weather Service

ISO 9001 Certified Organisation



The Socio Economic Benefits of Weather,
Climate and Related Services

ANNUAL REPORT 2013/14

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1.2 LIST OF ACRONYMS

ABC	Activity-based Costing	GAW	Global Atmospheric Watch
ACAMS	Advisory Committee for Aeronautical Meteorological Services	GDPFS	Global Data-processing and Forecasting System
ACMAD	African Centre of Meteorological Applications for Development	GLOBE	Global Learning and Observation to Benefit the Environment
ACSA	Airports Company of South Africa	GPC	Global Producing Centre
AFS	Annual Financial Statements	GRAP	Generally Recognised Accounting Practices
AG	Auditor-General	HE	Hydro Estimator
AGM	Annual General Meeting	HPAAQMN	Highveld Priority Area Air Quality Monitoring Network
AMC	Airport Management Centre	HPC	High Performance Computer
AMP	African Model Project	IBCS	Intergovernmental Board on Climate Services
AMDAR	Aircraft Meteorological Data Relay	ICAO	International Civil Aviation Organization
AMS-BGS	American Meteorological Society – Board of Global Strategies	ICT	Information Communication Technology
APP	Annual Performance Plan	ICVM	ICAO Coordinated Validation Mission
AQMS	Air Quality Management System	IGRAP	Interpretations of the Standards of the Generally Recognised Accounting Practices
ASBU	Aviation System Block Upgrade	IMO	International Maritime Organisation
ASAP	Automated Shipboard Aerological Programme	IOC	Intergovernmental Oceanographic Commission
ASMED	African Monitoring of Environment for Sustainable Development	IoDSA	Institute of Directors for Southern Africa
ATNS	Air Traffic and Navigation Services	IP	Intellectual Property
AWC	Aviation Weather Centre	IPCC	International Panel on Climate Change
AWS	Automatic Weather Station	ISO	International Standards Organization
BCP	Business Continuity Plan	IT	Information Technology
CAP	Common Alert Protocol	IUAPPA	International Union of Air Pollution Prevention and Environmental Protection Associations
CAPEX	Capital Expenditure	JCOMM	Joint Commission for Oceanography and Marine Meteorology
CBS	Commission for Basic Systems	JWG	Joint Working Group
CCTV	Closed Circuit Television	KRISS	Korea Research Institute of Standard Science
CEO	Chief Executive Officer	KZN	KwaZulu-Natal
CFO	Chief Financial Officer	LAN	Local Area Network
CSI	Corporate Social Investment	LDN	Lightning Detection Network
CSIR	Council for Scientific and Industrial Research	LOCJOC	Local Joint Operations Centre
CSIRO	Commonwealth Scientific and Industrial Research Organisation	LRF	Long-range Forecasting
DEA	Department of Environmental Affairs	LTI	Lightning Threat Index
DBCP	Data Buoy Cooperation Panel	LTAS	Long-term Adaptation Scenarios
DIRCO	Department of International Relations and Cooperation	MASA	Meteorological Association of Southern Africa
DMCs	Disaster Management Centres	MANCO	Management Committee
DST	Department of Science and Technology	MET	Meteorology/ Meteorological
DWA	Department of Water Affairs	MMS	MultiModel System
ECMWF	European Centre for Mid-range Weather Forecasting	MoU	Memorandum of Understanding
ERM	Enterprise-wide Risk Management	MSG	METEOSAT Second Generation Satellite
EXCO	Executive Committee	NAEIS	National Atmospheric Emissions Inventory System
EUMETSAT	European Organisation for the Exploitation of Meteorological Satellites	NASA	National Aeronautics and Space Administration
GAAP	Generally Accepted Accounting Practices	NAAQMN	National Ambient Air Quality Monitoring Network
		NATJOC/ NATJOINT	National Joint Operation Centre
		NDMC	National Disaster Management Centre

NEM-AQA	National Environmental Management Air Quality Act	TAF	The Aerodrome Forecast
NEPAD	New Partnership for Africa's Development	TLP	Total Lightning Processor
NERSA	National Energy Regulator of South Africa	TREND	Landing Forecast
NFC	National Forecasting Centre	UAE	United Arab Emirates
NMS	National Meteorological Service	UK	United Kingdom
NMISA	National Metrology Institute of South Africa	UM	Unified Model
NOAA	National Oceanic and Atmospheric Administration – United States of America	UNISA	University of South Africa
NPRP	National Precipitation Research Programme	UNISDR	United Nations Office for Disaster Risk Reduction
NWP	Numerical Weather Prediction	USA	United States of America
OAGCM	Ocean-Atmosphere General Circulation Model	UPS	Uninterrupted Power Supply
OHS	Occupational Health and Safety	VFS	Visual Flight Rules
OPMET	Operational Meteorological Data	VOC	Venue Operations Centre
ORT	Oliver Tambo International Airport	VOS	Voluntary Observation Ships
QMS	Quality Management System	VPN	Virtual Private Network
RFQ	Request for Quote	VTAPAAMM	Vaal Triangle Air Shed Priority Area Air Quality Management Network
RTC	Regional Training Centre	WAN	Wide Area Network
PDMC	Provincial Disaster Management Centre	WDCGG	World Data Centre for Greenhouse Gases
PFMA	Public Finance Management Act	WG II	Working Group II
PMP	Preventative Maintenance Plan	WMO	World Meteorological Organization
PMS	Performance Management System	WRC	Water Research Commission
PUMA	Prepare the Use of METEOSAT Second Generation Satellites in Africa		
RADAR	Radio Detection and Ranging		
RSMC	Regional Specialised Meteorological Centre		
SAAQIS	South African Air Quality System		
SACAA	South African Civil Aviation Authority		
SADC	Southern African Development Community		
SARFFG	South African Regional Flash Flood Guidance		
SAI-CON	South African Integrated Carbon Observing Network		
SARPs	Standards and Recommended Practices (ICAO)		
SASAS	South African Society for Atmospheric Sciences		
SAWS	South African Weather Service		
SC	Steering Committee		
SHADOZ	Southern Hemisphere Additional Ozonesondes		
SIGMET	Significant Meteorological Information		
SIGWX	Significant Weather Chart (ICAO)		
SLA	Service Level Agreement		
SOLAS	United Nations Convention for the Safety of Life at Sea		
SOOP	Ships of Opportunity Programme		
SOT	National Ship Observations Team		
STASAPP	Station Application		
SUMO	Software for the Utilisation of METEOSAT in Outlook Activities		
SWFDP	Severe Weather Forecasting Project		

1.3 STRATEGIC OVERVIEW

Vision, Mission and Shared Values

VISION

In delivering on its mandate, SAWS has set itself the following vision:

“A weather and climate centre of excellence providing innovative solutions to ensure a weather-ready region, sustainable development and economic growth.”

MISSION

SAWS will realise the above-mentioned vision through excelling in the following areas:

- Thought leadership in meteorological, climatological and other related sciences.
- The development of relevant and innovative applications and products, utilising cutting-edge technology.
- Establishing and leveraging collaborative partnerships.

VALUES

Based on the requirements of the mandate, the aspiration in the vision and the mission, SAWS is guided by, and committed to, the following set of values:

Thought Leadership: A commitment to exemplary leadership that inspires a shared vision, behaviour that is aligned to best business practices and excellence and innovation.

Professionalism: Self-control and behaviour that are aligned to best business practices, and display a high standard of excellence in the job.

Integrity: A consistent sense of honesty, truthfulness and trust in one's own actions while valuing others' opinions and beliefs.

Caring: A commitment to create a supportive environment that promotes compassion and understanding, both internally and externally.

Accountability: A commitment to take responsibility for things expected from the position and/or role occupied - responsible for own actions.

Recognition of Excellence: A willingness to identify, recognise and acknowledge individuals and teams who demonstrate outstanding performance.

Teamwork: A willingness to work together towards achieving a common goal by making use of and/or appreciating individuals' diverse strengths and abilities.

Quality Policy Statement

The South African Weather Service (SAWS) is a provider of useful and innovative weather, climate and related products and services. In line with the organisation's philosophy and ethos, SAWS has implemented a Total Quality Management System in accordance with the requirements of ISO 9001:2008. It seeks to ensure that both its products and services meet stakeholder requirements and are fit for use.

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

In pursuit of organisational excellence, we commit ourselves to the maintenance and improvement of the SAWS Total Quality Management System.

This will be achieved through the following:

- Setting of Quality Objectives and reviewing them periodically in order to improve operational efficiency, the quality of products and services and maintaining good corporate governance.
- Development of products and services that meet and, where possible, exceed client expectations.
- Adequate planning and the provision of resources needed for operations, implementing and supporting continuous improvement initiatives.
- Communication of this Quality Policy Statement to all employees and stakeholders.
- Reviewing our Quality Management Policy and our Quality Policy Statement to ensure their ongoing suitability.

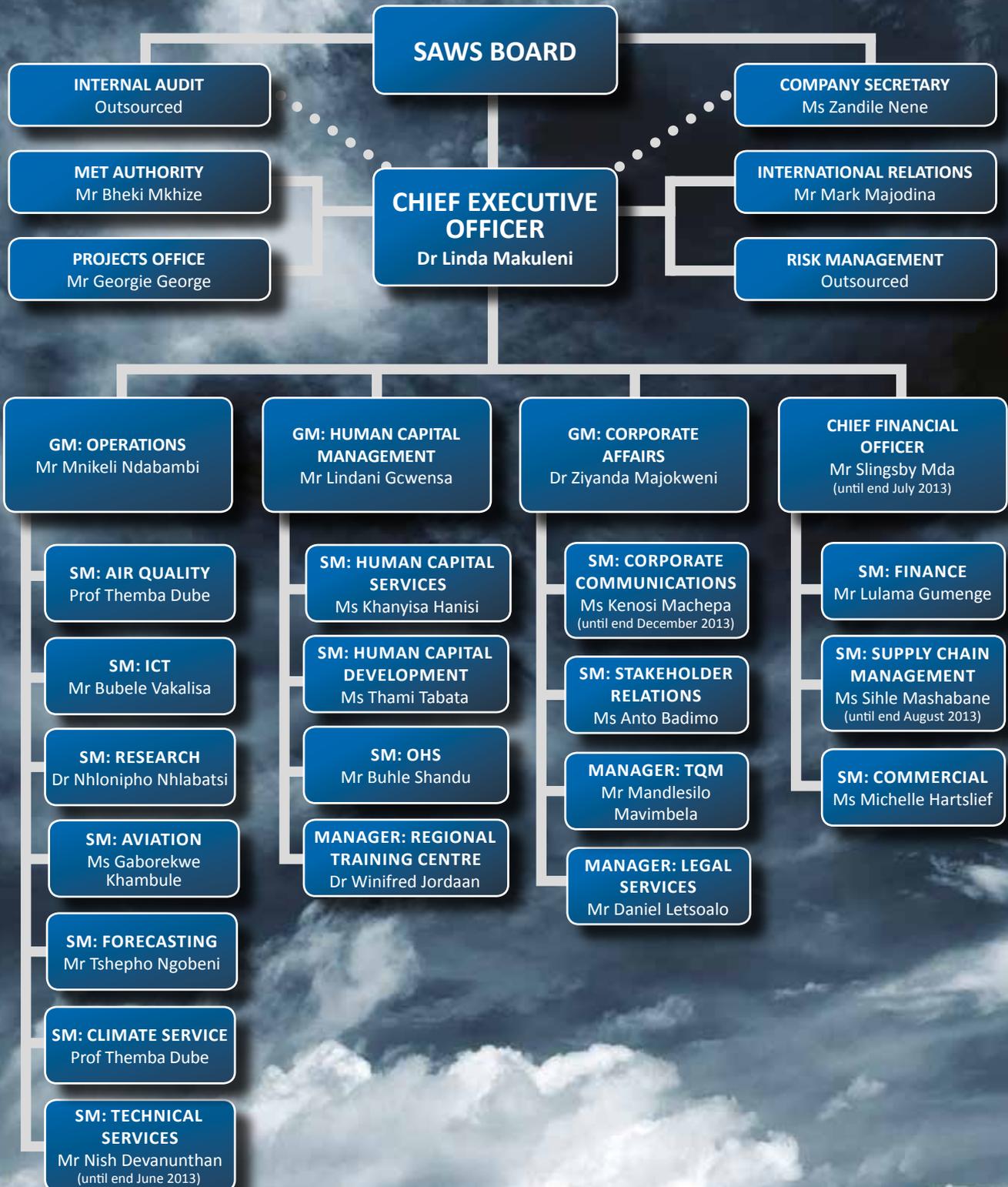
"We are committed to Quality, and Quality is the commitment we give to all our clients and stakeholders."

1.4. LEGISLATIVE AND OTHER MANDATES

The South African Weather Service is a Schedule 3A entity, in terms of the Public Finance Management Act (PFMA), 1999 (Act No. 1 of 1999) and relevant Treasury Regulations and derives its mandate from the South African Weather Service Act, 2001 (Act No. 8 of 2001) as amended by the South African Weather Service Amendment Act, 2013 (Act No. 48 of 2013). The objectives of SAWS are to:

- a) maintain, extend and improve the quality of meteorological services for the benefit of all South Africans;
- b) provide public good services and commercial services to all South Africans;
- c) ensure the ongoing collection of meteorological data over South Africa and surrounding southern oceans for use by current and future generations;
- d) be the long-term custodian of a reliable national climatological record;
- e) as the national meteorological service of the Republic of South Africa, to fulfil the international obligations of government under the Convention of the World Meteorological Organization;
- f) as the Aviation Meteorological Authority, to fulfil the international obligations of government under the Convention of the International Civil Aviation Organization;
- g) provide services that are sensitive to the demographic realities of the country;
- h) fulfil such other weather-related international obligations as the Minister may direct; and
- i) include, among others, provisions relating to the South African Air Quality Information System (SAAQIS) and the National Ambient Air Quality Monitoring Network (NAAQMN).

1.5. ORGANISATIONAL STRUCTURE



MESSAGE FROM THE MINISTER OF ENVIRONMENTAL AFFAIRS



I am both pleased and proud that, during the period under review, SAWS once again distinguished itself as an organisation where integrity, innovative ideas and commitment to quality ruled.

SAWS is internationally recognised for its quality research, services and products. The organisation's achievements and contribution to the South African economy and society, and on a regional and international stage, speak for themselves.

As we celebrate 20 years of democracy, I therefore find it fitting to reflect on some of the highlights in SAWS' performance record over the period under review.

SAWS remains the authoritative voice for weather and climate warnings in South Africa. The organisation maintains high quality standards in the execution of its mandate and has been ISO 9001-certified for the delivery of weather and climate services and products since 2011.

In 1995, when South Africa was a fledgling democracy, the

Cape Point Global Atmospheric Watch Station (GAW) was officially recognised as part of the Global Atmospheric Watch Network, managed by the World Meteorological Organization (WMO). It therefore became part of the 29 stations that continue to play an active role in the WMO's GAW network world-wide.

In the era of global warming, these stations play a crucial role in monitoring the chemical composition of the atmosphere on a long-term basis, so as to improve our understanding of man's impact on the environment.

Even more reason to celebrate, is the fact that the Cape Point GAW station was the first global station erected on the African continent and one of a few in the southern hemisphere. It boasts the longest continuous measurement of carbon dioxide – 36 years to be precise – in the southern hemisphere.

The Cape Point station is well recognised by the international GAW community for its high-quality work, a testament to the organisation's ongoing commitments to excellence.

Going back even further in history, 1990 was the year in which SAWS established an ozone observation initiative at the Irene weather station and, five years later in 1995, this initiative was expanded to the Springbok weather office, which resulted in the capturing of a valuable set of data on ozone observations. The data includes the total ozone observation from the Dobson spectrophotometers, which constitutes a sustained systematic monitoring process.

In 2000, SAWS took another step forward by becoming a participant in a global network to monitor ozone levels, namely the international Southern Hemisphere Additional Ozonesondes (SHADOZ) Programme, by successfully conducting routine observations. The jewel in this star-studded crown is the achievement by a team of SAWS scientists who won the National Aeronautics and Space Administration (NASA) SHADOZ Group Award for excellent scientific achievement in 2004.

Five years on and yet another achievement was reached when the South African National Precipitation Research Programme (NPRP) yielded such sterling work that SAWS was recognised for its contribution to advancing

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the science of weather modification. The reward for the hard work and utmost dedication by, inter alia, SAWS staff members, was the WMO/UAE Prize for Excellence in Weather Modification that was awarded to SAWS in 2005.

Under the auspices of the NPRP, which comprised SAWS, the Water Research Commission (WRC), CloudQuest and the University of South Africa (UNISA), a number of new technologies were developed to enhance the chances of rain in this somewhat arid land of ours.

In recognition of its contribution and outstanding achievements, SAWS received the Prepare the Use of METEOSAT Second Generation Satellites (MSG) in Africa (PUMA) Prize for outstanding achievement at the EUMETSAT African Users Forum in 2008. As far back as 2001, SAWS played a leading role in the implementation of the METEOSAT Second Generation Satellite (MSG), when it was introduced to the African Meteorological Services. SAWS-ICT collaborated in the Meteorological Transition in Africa Project, known as PUMA, by developing an image processing and display software system, called SUMO, which is the acronym for the Software for the Utilisation of METEOSAT in Outlook Activities.

During July 2013, at the first session of the Inter-governmental Board on Climate Services (IBCS-1) in Geneva, Switzerland, SAWS CEO, Dr Linda Makuleni, was designated Principal Member of the WMO’s IBCS, and she was also elected Co-Vice-Chair of the IBCS Management Committee. I would like to offer my congratulations to Dr Makuleni on this well-deserved achievement.

The South African Weather Service Act, 2001 (Act No. 8 of 2001), was amended in November 2013, extending the organisation’s mandate to include responsibilities in terms of air quality monitoring.

In closing, I would like to congratulate the SAWS Board for its sterling leadership during the period under review. I would like to thank the SAWS management and employees for the immense role they played in contributing to a sustainable South African economy and the safety of lives and property by providing reliable weather and climate information.

I wish to acknowledge the outgoing Deputy Minister, Mrs Rejoice Mabudafuhasi for her contribution to the sector during her tenure and wish her well in her new portfolio. I also wish to acknowledge the Parliamentary Portfolio Committee on Water and Environmental Affairs for their oversight role. I would like to welcome our new Deputy Minister, Ms Barbara Thomson and wish her well in ensuring that we honour our mandate.



Mrs BEE Molewa, MP
Minister of Environmental Affairs

MESSAGE FROM THE DEPUTY MINISTER OF ENVIRONMENTAL AFFAIRS



South Africa is a country of contrasts and extremes, which is also an excellent description of local weather conditions and I am extremely proud of the fact that SAWS has remained an authoritative voice for weather and climate forecasting in South Africa. No country can afford to be without an effective and efficient meteorological service that is able to provide reliable climate information, as well as weather forecasts and warning services and SAWS is committed to adhering to its quest of bringing the science of weather to all South Africans.

Indeed, without the daily advice of meteorological experts we, as South Africans, would struggle to combat the onslaughts of nature in the form of heavy rains and floods, scorching droughts, severe wind storms and disastrous hail storms.

By keeping South Africans informed about impending weather conditions, SAWS forms an important link in the country's food and economic chain. Weather forecasts

benefit every South African, every business undertaking and every event in the country.

SAWS provides weather warnings and forecasting services to the second largest marine area in the world and has become the first country in the world to develop a storm surge model for warnings along the country's coastal regions.

Since 2009, SAWS has been recognised as a WMO-accredited Global Producing Centre (GPC) for long-range forecasts, after adhering to all the criteria set by the WMO's Commission for Basic Systems (CBS). This made SAWS one of only three centres in the southern hemisphere to boast this status – the other two being in Australia and Brazil respectively.

SAWS continued to develop in information technology, as it commissioned the new NEC SX-8 supercomputer in 2006. The commissioning of the SX-8 coincided with the implementation of the UK MET Office's Unified Model (UM) as the new operational SAWS numerical weather prediction model.

South Africa is blessed with abundant sunshine and, in 2012, the Department of Science and Technology (DST) awarded SAWS a solar radiation project, aimed at enhancing the measurement of solar radiation in the country. This project is currently progressing well with three new solar resource measurement stations that were installed and operationalised in Upington, Irene and Nelspruit respectively. Additional stations have been earmarked for Mthatha, De Aar and Mahikeng.

SAWS secured additional funding for the project from DST to procure at least five more solar resource measurement stations. The organisation is currently investigating historical solar radiation data for availability and quality, so as to determine its potential in compiling a solar radiation atlas. SAWS is also in the process of establishing a website for the project, which is currently semi-operational.

In 2013, SAWS became the only institution in Africa to develop and administer a coupled Ocean-Atmosphere General Circulation Model (OAGCM), aimed at

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operational seasonal to inter-annual climate predictions. Once again SAWS is at the forefront of cutting-edge technology, as coupled climate models are regarded as the highest hierarchy in the science of numerical seasonal climate modelling in terms of complexity.

As far back as 2009, SAWS launched a R240 million RADAR infrastructure re-capitalisation project that plays a role in enhancing adaptation tools and products, such as the Severe Weather Forecast Project and the Flash Flood Guidance System, which minimise loss of life and damage to property in the event of severe weather conditions – this is of utmost importance for South Africa, taking into consideration the turbulent weather conditions of the recent past.

Approximately 90% of global natural disasters are related to severe weather and climatic events – as we have witnessed over the past few years. With regard to South Africa, the adverse weather conditions that wreaked havoc over large parts of the country during the first two weeks of March 2014, once again constituted a reminder of the valuable and indispensable role that SAWS plays in the country as a whole. SAWS consistently provided reliable weather and other risk mitigation information which assisted in limiting the loss of life and property.

SAWS plays a leadership role in the development of applications for the Severe Weather Forecasting System, which was adopted by all WMO members and which has also been successfully implemented in the SADC region.

With regard to training and development, SAWS runs an accredited WMO regional training centre. Over the past 20 years, a large number of meteorologists from South Africa, the Southern African Development Community (SADC) and the remainder of the African continent were trained at the centre. SAWS has now entered the international landscape of training

with the recent successful training of technicians and meteorologists from the Oman Directorate of Meteorology in the operation and maintenance of the new S-Band radar systems.

On 5 November 2013, SAWS took a major step forward with the opening of its new weather office in George in the Southern Cape. The location of the region’s previous weather office posed several observation restrictions and the new office is aimed at addressing challenges that impacted negatively on weather observations in the past.

It is indeed an honour and a privilege for me to form part of the circle of excellence that SAWS constitutes and I therefore wish to extend my congratulations to the SAWS Board for their outstanding leadership, as well as to the SAWS management and employees for their unfailing commitment to excellence in everything that they do.

Lastly, I cannot neglect to mention the unwavering dedication to SAWS of our Minister, Mrs BEE Molewa.



Ms B Thomson, MP

Deputy Minister of Environmental Affairs

FOREWORD BY THE BOARD CHAIRPERSON

On the 5th of December 2013, we lost former President Nelson Mandela. A poignant time for South Africa, spent both mourning the death and celebrating the life of a hero who never wavered in his beliefs and devotion to the struggle for equality and the realisation of a truly democratic society in our country. He remains an inspiration to us all. May his soul rest in eternal peace. We remember him as we celebrate our 20 years of democracy with renewed inspiration.



The period under review saw South Africans having to survive an onslaught of bad weather phenomena – heavy rains, flooding, hail storms and droughts with significant socio-economic impact. SAWS anticipated these events; informed and alerted the relevant authorities; and provided invaluable information that assisted in the mitigation of loss of life and property. Although the socio-economic impact was devastating, I have no doubt the severity was mitigated by the information generated by SAWS. The socio-economic benefits of weather, climate and related services, cannot be ignored and I am indeed privileged to form part of a team that is dedicated to seeking solutions in curbing the effects of severe weather phenomena.

On 16 January 2014, the South African Weather Service Amendment Act, 2013 (Act No. 48 of 2013) was published in the *Government Gazette*.

In terms of the amendments to the Act, SAWS will now implement, and act as custodian of the South African Air Quality Information System (SAAQIS), as well as manage, operate, maintain and develop the National Ambient Air Quality Monitoring Network (NAAQMN). SAWS may also now issue ambient air quality forecasts and warnings.

In addition, the Act provides for the management of hoax weather messages that threaten the lives and safety of the South African public.

SAWS continues to partner with disaster management structures in the prevention of loss of life and damage to property as a result of severe weather events. During the period under review, the hazard criteria for the Severe Weather Warning System were redesigned in collaboration with Disaster Management Centres (DMCs) around the country and tested in a pilot project country-wide. This enhancement is aimed at streamlining the warning system, in line with current international trends.

At the same time, a new Warning Generator software system was implemented at all SAWS forecasting offices, allowing for the quick issuing of warnings, in a standardised format, to local municipalities. Various dissemination channels are used, including the new Common Alert Protocol (CAP) that is internationally recognised. SAWS plays a significant role in the international meteorological arena, as South Africa was one of first developing countries to introduce CAP, which constitutes a major improvement in the Severe Weather Warning System.

During the period under review, SAWS developed a hybrid automatic weather station, which monitors weather conditions and uses a camera to view the surrounding area. The system was successfully used during the late President Nelson Mandela's funeral for monitoring both weather conditions and traffic-flow.

SAWS is committed to bringing the science of weather to all South Africans and it is internationally recognised for its quality research, services and products, professionalism, accountability and transparency, as well as for its visionary

“SAWS is committed to bringing the science of weather to all South Africans and it is internationally recognised for its quality research, services and products, professionalism, accountability and transparency, as well as for its visionary leadership, which contributes to sustainable development in South Africa, as well as in the remainder of the African continent.”

leadership, which contributes to sustainable development in South Africa, as well as in the remainder of the African continent. In addition, SAWS continues to play a strategic role internationally, having lobbied both nationally and internationally for the retention of Deputy Secretary-General, Mr Jerry Lengoasa, in the WMO Secretary-General position, which is to be decided in 2015.

Integrated, sustainable reporting by organisations is the key to good corporate governance and strong relationships with stakeholders. I would like to take this opportunity to thank Minister and Deputy Minister of the Department of Water and Environmental Affairs for their continued support during the period under review. My appreciation also goes to the members of the Board for their unwavering support since I have taken up this position. It is indeed an honour and a privilege to lead such a team of esteemed individuals – each an expert in their chosen field. I am grateful for their selfless dedication and enthusiasm.

Last but not least, I wish to extend my appreciation to the SAWS Management and employees for their commitment to the organisation and for keeping our vision of being the foremost service provider of weather-related services on the African continent, alive.



Prof. Lindisizwe Magi
Chairperson: SAWS Board

CHIEF EXECUTIVE OFFICER'S OVERVIEW

The period under review has indeed been eventful and bitter-sweet. The loss of our all-time weather hero, Tat'u Madiba, Nelson Rolihlahla Mandela, was felt throughout the world. He will be missed and remembered forever for his unwavering commitment to the cause and plight of the disenfranchised.

This year, South Africa celebrates 20 years of democracy – marking a significant milestone for our fledgling democracy. Through government's continued support, the South African Weather Service (SAWS) remains the authoritative voice for weather and climate forecasting in South Africa.

As SAWS matures into a premier meteorological institution, the socio-economic benefits of weather, climate and related services as well as the important role that SAWS plays in the national and regional economy are becoming more apparent.

Reliable climate data and information are utilised in the planning, management and mitigation of weather-induced risks and losses. I am proud of the manner in which the information and knowledge generated by SAWS continues to benefit various sectors of our economy.

Construction companies use information on flood levels (e.g. the 50-year flood line) to devise plans and strategies for future construction. Weather-related events are a major cause of building failures, so there is good reason for using climate services to define building standards and performance and to integrate climate statistics into national building codes.

The Mopani District Municipality in Limpopo, recently benefited and demonstrated the value of climate information provided by SAWS in the development of its risk assessment report.

Insurance companies derive substantial value from SAWS' lightning information when verifying insurance claims. At SAWS we run a sophisticated lightning detection network, which records information on lightning strokes every five minutes, with the additional bonus of a very high accuracy rate.

The agricultural industry benefits from using climate information, as the climate of an area determines the most suitable crops or animals for that region. Using climate information results in informed decisions, practices and technologies that could reduce this sector's long-term vulnerability to seasonal climate differences.

During the period under review, SAWS conducted a feasibility study, which highlighted the need to provide agricultural and hydrological services to the country. We have since established an Application Development Unit to address application development in the agricultural, hydrological and the renewable energy sectors.

The energy sector also benefits from climate information. Energy is at the heart of economic and social development and the correct use of historical climate data could assist in locating and designing a suitable energy infrastructure.

I am proud of the fact that we provide specialised forecasts to enable alternative energy companies to predict the amount of energy that they would be able to produce up to seven days in advance.

In terms of the health sector, many human and animal diseases could be mitigated by a collaboration strategy between the health sector and weather/climate experts. The timely provision of weather and climate information, with several months' lead-time, could be combined with a well-developed national and regional response strategy, which allocates resources for public outreach programmes, as well as for the distribution of medication and insecticides for diseases, such as malaria, well in advance.

SAWS is the custodian of the South African Air Quality Information System (SAAQIS) and manages, operates, maintains and develops the National Ambient Air Quality



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Monitoring Network (NAAQMN). The development of the National Atmospheric Emissions Inventory System (NAEIS) was completed during the period under review. NAEIS is an online and user-friendly system that enables industrial, as well as non-industrial sources to report on their emissions into the atmosphere.

Tourism is an important contributor to the South African economy. South Africa is a favourite tourist destination, owing to its pleasant climate, beautiful scenery, wild-life and cultural heritage. As tourists want to avoid exposure to severe weather conditions and high discomfort levels, reliable climate information influences their destination decisions, and I am proud to report that SAWS plays an indispensable role in this regard.

In respect of the transportation sector, in spite of technological developments in maritime, aviation and land transportation systems, infrastructure failure could have very negative implications for this sector: The potentially devastating impact of wind, waves, stormy seas, ice and storm surges on all aspects of marine operations dominates the design and operation of ships, port facilities and coastal hydraulics.

In the development and building of road and railway structures, engineers introduced innovative ways of addressing the negative effects of potential weather hazards and, in their planning analysis scenarios, the use of weather information and historical climate data constitutes an important factor.

Climate information assists city planners to identify risks in advance and take timely action. We continued to disseminate information to disaster management centres.

Reflecting on the period under review, which was accompanied by turbulent weather conditions in South Africa, SAWS continued to contribute to sustainable economic development by providing timely and reliable weather forecasts. I am proud to share some of these highlights and contributions with you.

Contributing to Safe African Skies

The South African aviation industry plays a major role in

South Africa’s economy, and aviation safety is regarded as essential in creating a weather-ready nation.

Enhancing aviation safety, regularity and efficiency remains a crucial initiative which, in effect, places SAWS at the helm of airport operations. During the period under review, we fulfilled our obligation to provide a world-class service to the industry, and continued to engage with key stakeholders, such as the South African Civil Aviation Authority, regarding the successful ICAO audit, as well as the SACAA Pilot Training Division on curriculum development issues.

Improving the Accuracy of Marine and Terrestrial Forecasts

Spatial verification products, in the form of categorical and verification maps, were developed for Severe Weather Forecasting Demonstration Project (SWFDP) products – i.e. severe weather guidance products – for the SADC region. The new system gives an indication of the accuracy of weather forecasts and is the first of its kind globally.

SAWS researchers also developed a coupled ocean atmosphere general circulation model, which forms part of the Multi-Model Seasonal Forecasting System. This coupled model became operational at the beginning of 2014 and is another first for both South Africa and the African continent. It also represents the start of the Earth System Modelling concept in South Africa.

Developing Climate Mitigation Strategies

SAWS, in partnership with the Department of Environmental Affairs and the World Meteorological Organization, successfully hosted a national climate services workshop, which resulted in the development of A Road Map for Climate Services in South Africa.

We also participated in DEA-led workshops on Long-term Adaptation Scenarios (LTAS), proving that SAWS has a contribution to make as a weather and climate science organisation, and ensuring that the vision of a transition to a lower carbon economy and a climate-resilient society will be realised.

Investing in Infrastructure

As part of the Infrastructure Recapitalisation Plan, seven projects of particular importance were initiated during the period under review. These were in line with the

organisation's Information Technology Master Systems Plan as well as the Infrastructure Modernisation Initiative.

Investing in People

The SAWS Training Centre is a WMO-recognised regional training centre, that is regarded as a centre of excellence, which continues to offer in-house satellite training.

An Education Plan for all sciences related to Meteorology, which will guide capacity development as part of the Global Framework for Climate Services (GFCS), was developed with the assistance of the University of Pretoria. I am really proud of the significant role that we play in the global arena.

We are committed to creating a culture of rewards and recognition in the organisation. On 8 November 2013, we had the fifth Employee Recognition Awards. The awards are, inter alia, aimed at recognising and rewarding employees who produce outcomes in the form of increased productivity; demonstrate a positive attitude in the workplace; and make a significant contribution towards cohesiveness in their departments.

Fitness and wellness are vital for employees and improve quality of life. SAWS organised and participated in two wellness activities during the period under review. About 70 employees participated in the Discovery 702 Walk the Talk 2013. On 11 October 2013, some 120 employees participated in the corporate sports day.

Providing Relevant Commercial Services

In December 2013, SAWS rolled out a severe hazardous weather monitoring system for Telesure, which is a holding company for various insurance brands. This system enables us to monitor the roads and, should there be a severe storm approaching a specific area, we send out an alert to Telesure, which is then distributed to various users. This is a clear example of the role that the socio-economic benefits of weather, climate and related services play in the country's economic landscape.

Building a Weather-resilient Nation

SAWS celebrated World Meteorological Day in Itsoeng, North West, with the cooperation of the Ditsobotla Municipality and the North West Department of Education, with a specially tailored programme for learners, educators, relevant community members and disaster management staff in the area. The event was attended by 370 guests from 16 schools, as well as representatives from the local and district municipality, the North West



Developing climate mitigation strategies: Workshop on the Global Framework for Climate Services



Investing in infrastructure: Opening of the George Weather Office on 5 November 2013



Investing in people: Annual Employment Awards

Department of Education and the private sector.

SAWS visited a further eight schools in Limpopo, in conjunction with the Department of Basic Education, where more than 1 600 Grade 10 to 12 learners were exposed to, and empowered, with knowledge on a career in atmospheric sciences.

Other Highlights

On 18 July 2013, we joined other South Africans in acknowledging and celebrating International Nelson Mandela Day. As part of dedicating 67 minutes to charity, Head Office employees made blankets, which were distributed to the homeless in the area.

The outcome of the ICAO Coordinated Validation Mission (ICVM) audit, conducted in July 2013, indicated that SAWS had fully implemented all the ICAO requirements with a 100% compliance rate. This is confirmation of SAWS' commitment to the promotion of compliance with ICAO standards and its mission to foster a global civil aviation system that operates at peak efficiency at all times – providing optimum safety, security and sustainability in the field of aviation. I am especially proud of this achievement.

In consultation with DEA and DIRCO, SAWS ensured South Africa's representation on the WMO Intergovernmental Board for Climate Services, overseeing the implementation of the Global Framework for Client Services.

SAWS was instrumental in providing technical inputs for the agreement to extend the Gough Island SAWS weather station contract for another 20 years until 2032. Observations made at this weather station are crucial for the monitoring and forecasting of weather systems in both the Southern Ocean and in the southern part of the country, while providing vital inputs to global forecasting models.

To fulfil its regional responsibilities, SAWS continued its role as Secretariat of MASA and coordinated the MASA AGM-VII in Lilongwe, Malawi, during July 2013. The Secretariat obtained approval for the 2013/14 MASA budget to make provision for key capacity-building projects, such as the regional SWFDP, as well as an Aviation Quality Management System.

SAWS also hosted the WMO's regional technical implementation team of the Severe Weather Forecast Demonstration Project for Southern Africa meeting, in order to develop a plan for, and monitor progress of, severe weather forecasting in Southern Africa. The

meeting was followed by the annual training of Southern African senior forecasters in severe weather forecasting. The training session was also attended by representatives from public weather focal points in all the SADC states.

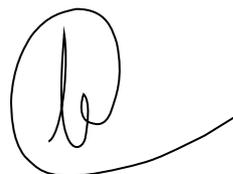
Training and regional cooperation in severe weather forecasting proved to be highly effective in the enhancement of regional early warning systems. This initiative is of utmost importance in light of the increasing frequency and magnitude of severe weather events associated with climate change. It also emphasises the socio-economic benefits of weather, climate and related services for individuals, businesses, public institutions, such as schools and hospitals, as well as for the agricultural sector – to name but a few.

I am often reminded of a quote by three economists from the FAO's Agricultural Development Economic Division in Rome, stating:

“The effects of gradual climate changes and extreme weather events in the recent past have undermined progress in the alleviation of poverty and food insecurity, while also having a negative effect on overall development efforts. Economic sectors that largely depend on weather conditions – either directly or indirectly – most notably agriculture and fisheries, are increasingly subject to the impact of climate change.”

Reflecting upon an eventful 2013/2014, the many challenges that SAWS faced and the innovative ways in which these challenges were often turned into opportunities, I would like to express my sincere appreciation to SAWS employees and management for their great performance during the past year. Any organisation is only as good as the people working for it and SAWS definitely boasts the cream of the crop.

I also wish to thank the Shareholders and the Board for their unwavering support during a year of turbulent weather conditions. Let us continue the dedication and work excellence in future to ensure that each and every individual in South Africa shares in the socio-economic benefits of weather, climate and related services.



Dr Linda Makuleni
Chief Executive Officer

BOARD MEMBERS

From left to right

01 Prof Lindisizwe Magi
Chairperson

02 Dr Nolulamo Gwagwa
Deputy Chair

03 Mr Siyabonga Makhaye

04 Mr Andile Mvinjelwa

05 Mr Jonty Tshipa

06 Prof Elizabeth Mokotong

07 Mr Rowan Nicholls



08 Dr Shadrack Moephuli

09 Ms Ntsoaki Mngomezulu

10 Mr Zola Fihlani

11 Ms Judy Beaumont
DEA Representative

12 Dr Linda Makuleni
CEO

13 Mr Slingsby Mda
CFO



EXECUTIVE MANAGEMENT

From left to right

01 Mr Lindani Gwensa
General Manager: Human Capital Development

02 Dr Ziyanda Majokweni
General Manager: Corporate Affairs

03 Mr Mnikeli Ndabambi
General Manager: Operations

04 Dr Linda Makuleni
Chief Executive Officer

05 Mr Lulama Gumenge
Acting Chief Financial Officer

06 Mr Slingsby Mda
CFO until 31 July 2013





SENIOR MANAGEMENT

From left to right

01 **Anto Badimo**
Senior Manager :
Stakeholder Relations

02 **Zandile Nene**
Company Secretary

03 **Gaborekwe Khambule**
Senior Manager :
Aviation

04 **Khanyisa Hanisi**
Senior Manager :
Human Capital Services

05 **Buhle Shandu**
Senior Manager :
Occupational Health
and Safety

06 **Nhlonipho Nhlabatsi**
Senior Manager :
Research

07 **Nish Devanunthan**
Senior Manager :
Technical Services

08 **Kama Chetty**
Senior Manager :
Air Quality



09 **Lawrence Dube**
Senior Manager :
Climate Services

10 **Michelle Hartsliet**
Senior Manager :
Commercial

11 **Mark Majodina**
Senior Manager :
International
Relations

12 **Tshepho Ngobeni**
Senior Manager :
Forecasting

13 **Sihle Mashabane**
Senior Manager :
Supply Chain
Management

14 **Lulama Gumenge**
Senior Manager :
Finance

15 **Bubele Vakalisa**
Senior Manager :
ICT

16 **Kenosi Machepe**
Senior Manager :
Corporate
Communications

17 **Nomathamsanqa Tabata**
Senior Manager :
Human Capital
Development





PART B

Performance Information



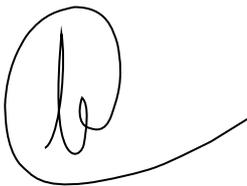
2.1 STATEMENT OF RESPONSIBILITY FOR PERFORMANCE INFORMATION

The Chief Executive Officer is responsible for the preparation of the public entity's performance information and for the judgements made in this information.

The Chief Executive Officer is responsible for establishing and implementing a system of internal controls designed to provide reasonable assurance as to the integrity and reliability of performance information.

The performance information fairly reflects the actual achievements against planned objectives, indicators and targets as per the Strategic and Annual Performance Plan of the public entity for the financial year ended 31 March 2014.

The performance information of the entity, as attached hereto, was approved by the Board at its meeting held on 29 May 2014.



Dr L Makuleni
Chief Executive Officer



2.2 OVERVIEW OF THE SAWS' PERFORMANCE

Service Delivery Environment

The South African Weather Service (SAWS), an ISO 9001:2008 certified provider of meteorological services, is the national provider of weather and climate-related information in South Africa and custodian of the South African climate databank. It is the only organisation mandated by law to issue severe weather warnings in South Africa and therefore plays an important role in assisting the South African government to minimise the impact of weather-related natural disasters and improve the well-being of its people.

As a member of the World Meteorological Organization (WMO), SAWS complies with international meteorological standards. Being the designated Aviation Meteorological Authority, SAWS provides weather services to the aviation industry, thereby fulfilling government's international obligations under the Convention of the International Civil Aviation Organization (ICAO). SAWS also provides maritime weather forecasting services for the vast oceans around Southern Africa, extending to Antarctica.

The South African Weather Service is committed to reducing the impact of weather and climate disasters by investing in the latest and most technologically advanced equipment that aids us in the monitoring and prediction of weather patterns and the collection of related climate data.

Key Policy Developments and Legislative Changes

The South African Weather Service Amendment Act, 2013 (Act No. 48 of 2013), was published in the *Government Gazette* on 16 January 2014.

The overall purpose of the South African Weather Service Act, 2001 (Act No. 8 of 2001), was to establish the Weather Service; to determine its objectives, functions and method of work; to prescribe the manner in which it was to be managed and governed; and to regulate its staff and financial matters.

The overall purpose of the amended Act is to:

- substitute and insert certain definitions;
- provide the Minister with policy determination and supervisory powers;
- extend the powers, functions and objectives of SAWS and legally mandate it to provide ambient air quality services and to act as custodian of SAAQIS;

- provide for the appointment and removal of the Chief Executive Officer and align the Act with the Public Finance Management Act, 1999 (Act No. 1 of 1999), by providing for the Board to be the accounting authority for SAWS;
- delete certain transitional provisions;
- provide for the limitation of liability of SAWS;
- provide for offences and penalties;
- amend the Schedules to the Act; and
- provide for matters connected therewith.

The amendments were necessary to ensure compliance with, as well as the sustainability of the SAAQIS and NAAQMN systems and ensure that SAWS was provided with the necessary mandate and powers to implement these systems efficiently and effectively.

Strategic Outcomes-orientated Goals

Based on the foregoing outline of SAWS' mandate, vision, mission and strategic drivers, the strategic goals outlined here were formulated as the basis for taking SAWS towards maturity and sustainability in delivering on its mandate and achieving its vision. The strategic goals are also formulated in a manner that mitigates identified challenges and risks, as necessary. Largely based on the formulation of the strategy, the strategic goals should also be viewed as representing a consolidation of the current strategic position of SAWS. The five goals are:

1. To ensure the continued relevance of the organisation in delivering meteorological and related products and services in compliance with all applicable regulatory frameworks.
2. To ensure the effective management of stakeholder, partner and key client relations.
3. To address the short-term viability and long-term sustainability of SAWS revenue and ensure continued fiscal discipline.
4. To ensure continuous organisational effectiveness and efficiency.
5. To ensure the availability of strategy-driven human capital capacity for SAWS performance.

2.3 PERFORMANCE AGAINST STRATEGIC OBJECTIVES

SAWS' performance information for the 2013/2014 financial year is aligned with the performance indicators and targets in the SAWS Annual Performance Plan 2013 – 2014. The organisation achieved in all the objectives.

SAWS' performance against strategic indicators is tabulated below:

Strategic Goal 1: To ensure the continued relevance of the organisation in delivering meteorological and related products and services in compliance with all applicable regulatory frameworks.				
Strategic Objective	Objective Statement	Performance Indicator	Targets - 2013/14	Result
1.1 Organisation-wide compliance with all applicable national and international regulatory frameworks	Strengthen and manage internal controls	Unqualified audit with no matters	Unqualified audit with no matters	Achieved Financially unqualified with no emphasis of matter with findings on predetermined objectives and compliance with laws and regulations
	Annually review Framework of Accountability			
	Ensure a fully functional MET Authority	MET Authority Annual Report	MET Annual Report produced in compliance with ICAO	Partially achieved One inspection done due to budget constraints
	Enhancement of marine services	Integrated marine business case developed, approved and implemented	Approval and implementation of business case	Achieved Workshop held with marine stakeholders/role-players to ensure integration before Marine Strategy was developed
	Maintain Regional Telecommunications Hub (RTH)	Quarterly RTH data availability report	Quarterly RTH data availability report	Achieved Quarterly RTH data availability report
	Custodian of national climate data	Quarterly data availability reports on national climate data bank	Quarterly data availability reports on national climate data bank	Achieved
1.2 Develop, implement and improve programmes and applications for weather and climate variability, climate change adaptation and mitigation	Develop and operationalise weather-related disaster risk applications	Number of disaster risk reduction applications implemented	One application developed & implemented for Southern Africa	Achieved The SARFFG application software was transferred to SAWS computers in February, running operationally. A regional training workshop was conducted end of February 2014, following which the SARFFG is operational within SADC, accessible from the RSMC web-page from end of March 2014
		Improved Disaster Management User Survey from 85% to 86% by enhancing early warning capabilities	Reviewed Severe Weather Warning System by developing one additional application for South Africa	Achieved Warning Web Page Application was developed and now operational
	Dissemination of Tsunami warnings to Disaster Management	Operational Tsunami early warning system for South Africa	Refine Tsunami early warning system for South Africa by testing recipient of warning messages by Disaster Management Centre, Council for GeoScience and other stakeholders	Achieved Tsunami Early Warning System for South Africa is operational

Strategic Goal 1: To ensure the continued relevance of the organisation in delivering meteorological and related products and services in compliance with all applicable regulatory frameworks. (continued)

Strategic Objective	Objective Statement	Performance Indicator	Targets - 2013/14	Result
1.2 Develop, implement and improve programmes and applications for weather and climate variability, climate change adaptation and mitigation (continued)	Air quality information service operationalised	Highveld priority area air quality station transferred to SAWS as per project plan (SAAQIS Phase I) and monitored through the SAAQIS website	5 Highveld priority air quality stations operated, managed and maintained by SAWS and monitored through SAAQIS website	Achieved
		SAAQIS Phase II fully developed, implemented, tested, maintained and enhanced	SAAQIS Phase II NAEI tested and rolled out nationally	Achieved
	Trace Gas, including Green House Gas monitoring and submission of reports according to International Standards. (Global Atmospheric Watch)	Continuous monitoring and provision of Trace Gas data reports	Report on availability of Trace Gas data in the World Data Centres	Achieved
			Quarterly MINMEC and biannual Cabinet reports submitted	Achieved
1.3 Develop and deliver products and services	Enhance the Forecasting and Warning Service offering	Improved accuracy of maximum temperature and 24 hour forecasts	72% accuracy for maximum temperature and 24 hour forecast within 2 degrees	Achieved: 80% The adoption of the SAWS Total Quality Management processes and the improvement in the competence and skill of forecasters led to over-achievement in this area
		Percentage forecast availability as per schedule	Forecast availability as per schedule at 99%	Achieved: 99.7%
		Percentage SOLAS (Safety of Life at Sea) forecast availability	98% SOLAS (Safety of Life at Sea) forecast availability	Achieved: 98.6%
	Establish hydrometeorology and agrometeorology application expertise within SAWS	Report on operationalised hydro and agrometeorological function in SAWS	Develop an implementation plan based on feasibility study	Achieved
		Number of hydro and agrometeorological applications developed	Identify a partner to develop hydro and agrometeorological application	Achieved Partner identified to develop agrometeorology applications Two new applications developed: <ul style="list-style-type: none"> • Temperature Humidity Index (THI) • Growing Degree Days (GDD)
	Deliver and enhance the Climate Information service	Percentage success rate in publishing Public Good Products according to agreed timeframes	97% success rate of publishing according to timeframes	Not achieved Annual average = 94.56% Factors contributing to the under-achievement mostly occurred in January 2014. These are data not coming in through the normal communication system, as well as the GIS server not operational. ICT was engaged in this respect. Furthermore, reports were published late or not at all by the Meteorological Technician(s) in NFC on the public holiday and first Saturday of January 2014. In future, special reminders will be sent in to all Met Technicians in NFC before every public holiday

Strategic Goal 1: To ensure the continued relevance of the organisation in delivering meteorological and related products and services in compliance with all applicable regulatory frameworks. (continued)

Strategic Objective	Objective Statement	Performance Indicator	Targets - 2013/14	Result
1.3 Develop and deliver products and services (continued)	Deliver and enhance the regulated Aviation Service	Percentage improvement in the accuracy of TAF	90% accuracy for TAF	Achieved: 91.3%
		List of deficiencies in SIGMETs	Deficiency rate of less than 5% per annum	Achieved: 2.85% Based on a set formula inclusive of the region
	Report on SIGMET availability	Availability of SIGMETs/ AIRMETs in the databank as verified by MET Authority Report	Monthly availability rate of 90%	Achieved: 100% Due to improved efficiencies

Strategic Goal 2: To ensure the effective management of stakeholder, partner and key client relations.

Strategic Objective	Objective Statement	Performance Indicator	Targets - 2013/14	Result
2.1 Maintain and enhance beneficial relationships with key stakeholders and improve programmes that ensure effective communication	Implementation of the Stakeholder Relations Programme with key strategic stakeholders	Results of perception survey maintained or enhanced	External customer satisfaction of at least 85%	Achieved Overall customer satisfaction at 85%
		Overall external customer satisfaction		
		Results of perception survey maintained or enhanced	Internal customer satisfaction of at least 75%	Not achieved Internal customer satisfaction at 72%
		Overall internal customer satisfaction		
		Score on overall corporate image	Overall corporate image to score of 85%	Not achieved Overall corporate image at 84%
		Score on quality of services / products	The quality of services/ products to score of 85%	Achieved The quality of services /products at 86%
	Evaluate the impact of interventions implemented from the stakeholder relations framework	SWOT analysis of the framework interventions to ascertain the benefits to SAWS	Draft version of a Stakeholder Relations Management Maturity Model	Achieved Draft Stakeholder Relations Framework developed
Implementation of programmes which ensure effective internal and external communication	Revised Communication Strategy	Review and implement Communication Strategy	Partially achieved Draft document developed. Due to financial constraints management took a decision not to finalise this in the financial year under review	
2.2 Maintain and promote International Relations and Co-operation	Identify areas of international influence and participation	Report on the impact of SAWS international participation	Improved meteorological infrastructure, products and services in the region	Achieved SAWS is the WMO Regional Telecommunications Hub (RTH), Hosts WMO Accredited Regional Training Centre (RTC) and Global Producing Centre (GPC). Holding strategic leadership positions in ICAO/WMO committees, American Meteorological Society-Board of Global Strategies (AMS-BGS); SAWS Experts in Joint Commission on Oceanography and Marine Meteorology (JCOMM), Data Buoy Cooperation Panel (DBCP), Aviation and many other expert team committees to advance meteorological operations. Author in the Intergovernmental Panel on Climate Change (IPCC)

Strategic Goal 2: To ensure the effective management of stakeholder, partner and key client relations. (continued)				
Strategic Objective	Objective Statement	Performance Indicator	Targets - 2013/14	Result
2.2 Maintain and promote International Relations and Co-operation (continued)	Provide support through the MASA Secretariat	Funding for the implementation of the MASA strategy	Develop project proposals to secure development partners / aid for regional meteorological infrastructure development	Achieved Received funding through the China/Africa Project of USD20M for the region
	Maintain and enhance MoU's with the identified major national Met Services (NMS)	Cooperation in new prediction tools, capacity-building and meteorological applications	Enhance SAWS technical capability through cooperation with NMS's (US,UK, Germany & Australia)	Partially achieved UK's UK Meteorological Office (UKMO) and US's National Ocean & Atmospheric Administration (NOAA) Collaboration with the German's DWD established - Collaboration on improvement of Climate Database and Trace Gas Monitoring planned. Collaboration with Australian Bureau of Meteorology (BOM) partially achieved in Precipitation Research

Strategic Goal 3: To address the short-term viability and long-term sustainability of SAWS revenue and ensure continued fiscal discipline.				
Strategic Objective	Objective Statement	Performance Indicator	Targets - 2013/14	Result
3.1 Grow optimised public good revenue	Engage Treasury, DEA regarding the funding model, based on ABC model	Percentage growth	6% (R143 m) 6% increase year-on-year (R143 m)	Achieved 8% increase year on year excluding SAAQIS
3.2 Grow and optimise commercial revenue streams	Generation of non-regulated commercial revenue	Growth in Rand Value of alternative commercial revenue	R26 m alternative commercial revenue. (Target reduced to R19 million as per board resolution – BM 2013-04-04)	Not achieved R16.2 m – this is a relatively new area and the market is being developed
	Generation of aviation revenue according to approved tariffs	Growth in Rand Value of aviation revenue	R87 m revenue generated	Not achieved R82 m – income is on a cost-recovery basis in this area and the tariff was set lower than required by the RCMS

Strategic Goal 4: To ensure continuous organisational effectiveness and efficiency.				
Strategic Objective	Objective Statement	Performance Indicator	Targets - 2013/14	Result
4.1 An optimal organisational design which supports the organisational strategy	Development and implementation of Business Optimisation and Re-alignment Programme Develop and implement business systems	Waterkloof Land Development Project Master Plan Implementation	Secure funding model approval through National Treasury and/or relevant government departments	Not achieved The process to appoint a transaction advisor was delayed due to poor responses from the market. The strategy to relook at the development is being reconsidered
		Approved Enterprise Risk Management Strategy	Develop and implement Risk Management Strategy	Not achieved The development of the Strategy was deferred to the 1 st quarter of 2014/15; and a Risk Management Plan developed and implemented instead in 2013/14
		Retention of ISO 9001:2008 certificate	Maintain ISO 9001:2008 certification	Achieved Certification maintained subject to the resolution of deviations identified

Strategic Goal 4: To ensure continuous organisational effectiveness and efficiency. (continued)				
Strategic Objective	Objective Statement	Performance Indicator	Targets - 2013/14	Result
4.2 An optimal observation network, processing and dissemination platforms	Implementation of an integrated organisation-wide asset management and maintenance programme	Percentage implemented as per agreed milestones	Development and implementation of MSP& Technical Preventative Maintenance Plan	Achieved Implementation of Technical Preventative Maintenance Plan, Excel-based maintenance schedule also in place and serviced. That's what could be afforded within the available resources

Strategic Goal 5: To create a strategy-driven human capital capacity for SAWS performance.					
Strategic Objective	Objective Statement	Performance Indicator	Targets - 2013/14	Result	
5.1 Ensure the availability of strategy-driven human capital capacity for SAWS performance	Develop and Implement an Annual Human Resources Development Strategy	Percentage availability of requisite skills within employee budget	80% of requisite skills and competencies available	Not achieved The organisation, however, has the Attraction and Retention initiatives in place	
	Develop and maintain optimal availability of specialised and core competencies	Annually reviewed Skills Development Plan	80% throughput (pass-rate / completion of training / courses)	Achieved 95 % throughput (pass rate / completion) of training courses	
	Implementation of a succession plan	Percentage of trained employees in line with SDP	SAWS Skills Development Plan in line with determined skills requirements	Achieved	
		Readiness of identified successors	50% readiness of identified successors to take over positions	Achieved	
	Ensure the availability of specialised and core competencies to enhance delivery of high-quality projects	Staff turnover percentage on critical and scarce skills	6% staff turnover on critical and scarce skills	Achieved The staff turnover rate was 5.74%	
	To identify and support potential skills in the scientific and technological fields	Number of bursaries granted	42 approved bursaries granted	Not achieved The organisation managed to achieve 95% of the target	
		Percentage of bursars absorbed by SAWS in critical strategic areas	At least 62% uptake of graduates in critical scientific and technological areas	Achieved 93% of the graduates for critical scientific and technological areas were absorbed	
		Percentage of bursary beneficiaries from previously disadvantaged backgrounds	75% or more of bursary beneficiaries from previously disadvantaged backgrounds	Achieved 89% of bursaries were granted to beneficiaries from previously disadvantaged backgrounds	
	5.2 Institute, maintain and enhance an enterprise performance management capability	Develop future leaders	Organisational leadership programme implemented	Implementation plan	Not achieved Training and leadership development interventions ongoing. Under-performance due to financial constraints
		Develop and maintain a WMO recognised regional meteorological training centre	Develop RTC Strategy	Approved RTC Strategy	Achieved Approved RTC strategy in place

2.4 PROGRAMMES: HIGHLIGHTS

Weather, climate, water and related phenomena have an impact on every member of society and every sector of the economy. Meteorological and hydrological influences and events profoundly affect the patterns of human settlement, the routine of daily life, the health of national economies and the quality of the natural environment.

Nations aim to reduce and mitigate natural disasters, improve and sustain citizens' health and standard of living, adapt to climate change, improve the management of energy and water resources, manage and protect ecosystems and develop a sustainable agriculture. They also seek to reduce the risks that affect finance, recreation and tourism, transport, as well as other sectors of society. No social or economic sector is immune to the impact of weather, climate and water-related events. The role of SAWS is to provide the information and services that would enable government and other stakeholders to minimise the cost of natural disasters; to protect and strengthen weather, climate and water-sensitive sectors of the economy; and to contribute to the health, welfare and quality of life of the South African population.

SAWS is a leading scientific and technological force in the Southern African region. It is well-respected by the international meteorological community and many South African scientists are highly regarded for their international publications and contributions to weather and climate research. In this way, as authors and co-authors of scientific articles, the scientists at SAWS contribute significantly to some chapters of the IPCC reports. The IPCC's Working Group II (WG II), in turn, applies most of the information produced by the WG II to assess the impact of climate change and reduce the vulnerability of man and animals to climate change, while evaluating adaptation options.

During the period under review, SAWS continued to excel in the execution of its mandate. To this end, the organisation devised programmes, targeted at various high-impact initiatives, either by positioning the organisation to best support national imperatives or by contributing to the sustainability of meteorological competence in support of the South African economy.

These programmes are discussed below.

Climate Change and Variability

Supporting National Climate Change Adaptation and Mitigation Initiatives for a Weather Resilient Nation

This programme supports the core of SAWS' activities and is the programme through which Outcome 10 outputs are realised. Specific reference is made to the SAAQIS initiative as well as the Research and Development programme, which largely supports climate change and adaptation activities.

The National Climatological Database

SAWS is the custodian of the National Climatological Database. It archives and does quality assurance and control of all data recorded from its surface observation network, the upper-air programme and the marine observing network of ships and marine platforms.

The organisation assumes custodial responsibility for most of the climate data generated since 1839. The number of records and weather parameters measured has increased to where SAWS now collects data every five minutes from 215 stations across the country, while also collecting daily rainfall figures from 1 400 stations. SAWS also collects weather data from Marion Island, Gough Island and from Antarctica.

Global Framework for Climate Services (GFCS)

SAWS, in partnership with the Department of Environmental Affairs (DEA) and the World Meteorological Organization (WMO), successfully hosted a national climate services workshop in Pretoria during August 2013. The workshop brought together key stakeholders, who assessed the current provision of climate services, assessed future needs, cooperated and planned for the enhancement of all climate services. A Road Map for Climate Services in South Africa resulted from the workshop.

The GFCS was established due to the fact that society will need information tools to adapt, as the climate will continue to be variable, notwithstanding steps taken to reduce emissions of greenhouse gases. It is an important step towards strengthening the application of climate science in local, regional, national and international decision-making.

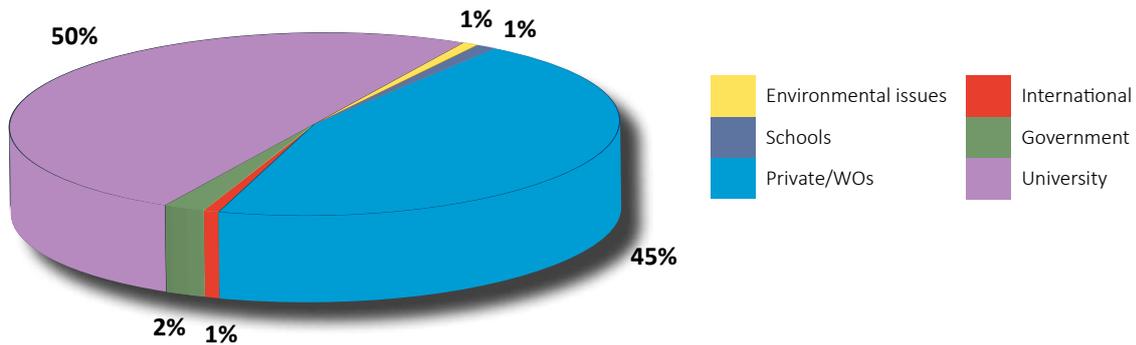
A key issue in the landscape mapping will be to address the value-user-interface chain. Particular emphasis will be placed on the tailoring of climate services for specific target groups. These include vulnerable, marginalised and resource-poor communities. The Road Map also regards it as important that, in the short term, governance and unity of effort are fully addressed, ensuring that there is only one voice for the GFCS at national level. This will facilitate integration of effort.

DEA and SAWS were tasked by the GFCS stakeholder workshop to provide secretariat support for the establishment of a Steering Committee (SC) for the

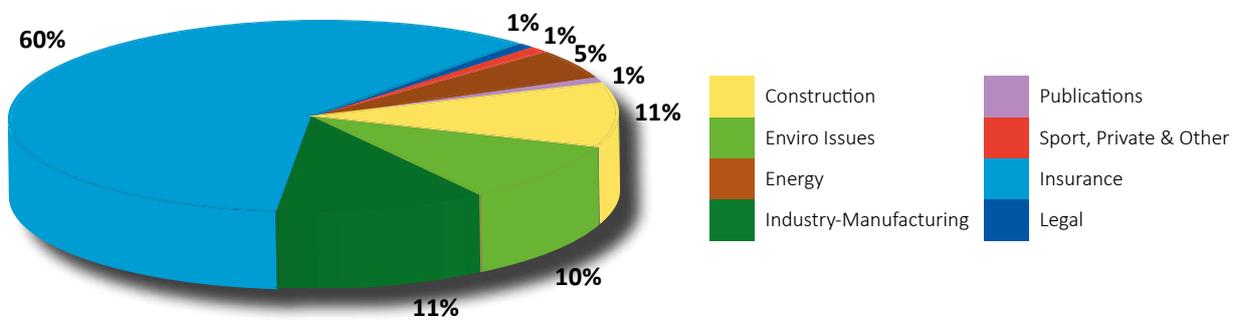
development of the GFCS Implementation Plan.

Climate Information Service

Reliable weather and climate information is an essential component in limiting future weather-induced losses as well as generating knowledge on various weather and climate-related issues. SAWS regularly interacts with users of such information. A number of sectors and users from the general public benefit greatly from weather and climate information provided by SAWS. Graphs 1 and 2 above, are an indication of such interaction during the period under review.



Graph 1: Percentage Public Good Enquiries 2013/14



Graph 2: Commercial Sectors - Percentage of Enquiries 2013/14

Long-term Adaptation Scenarios

Against the background of global warming, SAWS developed regional climate change scenarios for South Africa as a whole, as well as for each of the nine provinces. The results indicate that the interior of the country will warm more rapidly than the coastal regions. This warming, which takes place during all seasons – i.e. right throughout the year – is expected to amplify as a function of time.

SAWS also participated in DEA-led workshops on Long-term Adaptation Scenarios (LTAS). It has a valuable contribution to make as a weather and climate science organisation, in ensuring that the vision of transition to a lower carbon economy and a climate-resilient society is realised. Input on the four derived scenarios was provided at the planning workshop. DEA regards SAWS as one of the key role-players in LTAS Phase II product generation and, more in particular, those products related to early warning systems and supporting disaster risk reduction and modelling.

Severe Weather Forecasting Demonstration Project (SWFDP) Products

Spatial verification products in the form of categorical and verification maps were developed for SWFDP products – i.e. severe weather guidance products – for the SADC region. Problems in the scripts running these products were addressed, resulting in the output being smooth without any false indication of severe weather in the region.

The new system was developed in order to verify weather forecasts for correctness. It gives an indication of the accuracy of weather forecasts. It is the first time that such a system has been developed in the world. This means that other SWFDP systems in other countries could adopt the South African system for the verification of their forecasts, which is a clear example of the socio-economic benefits of weather, climate and related services – stretching even beyond South Africa's borders.

South African Regional Flash Flood Guidance (SARFFG) System

Topographical factors are major contributors to flash flooding events in South Africa. Heavy downpours frequently lead to small rivers changing rapidly into

violent water masses with disastrous results to the communities living close to them. The short lead-time of flash floods therefore limits the effectiveness of typical hydrological run-off models and requires that the necessary hydrological information for each relevant quaternary river basin is pre-calculated to determine the likelihood of flash flooding in all river basins, and the amount of rain needed over the basin that will lead to overflowing of riverbanks.

The South African Regional Flash Flood Guidance (SARFFG) application software was transferred to SAWS computers in February 2014, running operationally. A regional training workshop was conducted end of February 2014, following which the SARFFG is operational within SADC, accessible from the RSMC web-page from end of March 2014.

Global Atmospheric Watch

The Global Atmospheric Watch Group continues to conduct research and perform routine observations of UVB and trace gasses (CO, CO₂, CH₄ and O₃) and submits quality-checked data to the World Data Centre for Greenhouse Gases (WDCGG), as well as to SAAQIS on an annual basis.

Following the upgrade of the latest trace gas database, updated trends and growth rates were prepared and yielded interesting results for 2013. The CO₂ updated time series plot was generated. The CO₂ background mixing ratio has been growing unabatedly at a rate in excess of 2 ppm/yr since 2010. This trend is also observed at other global sites within the world-wide GAW network. It is anticipated that, at the current growth rate, the 400 ppm CO₂ ceiling (a value used in many IPCC future projection scenarios) will be breached around 2017.

Air Quality

Supporting a Healthier Nation

Air pollution constitutes a change in the composition of the air, caused by smoke, soot, dust, cinders, solid particles of any kind, gases, fumes, aerosols and odorous substances. This is in terms of the National Environmental Management Air Quality Act, 2004 (Act No. 39 of 2004). The effects of air pollutants on human health are dependent on both the duration of exposure and the concentration of the pollutant. The elderly and people

with pre-existing lung and cardiovascular diseases are especially sensitive to air pollution. Furthermore, children are more severely affected by polluted air because their respiratory systems are still developing; they breathe more air per kilogram of body weight than adults do; and they are more likely to be active outdoors. Pregnant women, athletes and those who play, work and exercise outdoors are even more susceptible to the effects of air pollution because they inhale pollutants deeper into their lungs, which could increase their chances of developing negative health effects. Infants and foetuses are the most at risk.

SAWS continues to play a significant part in identifying and combating air pollution through a number of initiatives, some conducted in conjunction with the DEA:

SA Air Quality Information System (SAAQIS) and National Ambient Air Quality Monitoring Network (NAAQMN)

SAAQIS Ambient Air Quality Module

A total of 107 automatic ambient air quality monitoring stations currently report to SAAQIS, of which 83 are government-owned and 24 privately-owned. Graph 3 below provides an overview of the ownership of the stations and the provincial distribution of these stations as at 31 March 2014 respectively. A further 78 dust fallout monitoring stations from an industrial dust monitoring network (DRD-DFN) are also providing data used by SAAQIS.

SAAQIS National Atmospheric Emissions Inventory System (NAEIS)

The development of the National Atmospheric Emissions Inventory System (NAEIS) was completed during the period under review. NAEIS is an online and user-friendly

system that enables industrial, as well as non-industrial sources to report on their emissions into the atmosphere. SAWS developed a number of supporting documents, such as user manuals and procedure manuals, as well as a tutorial video. These were made available via the SAAQIS and NAEIS websites.

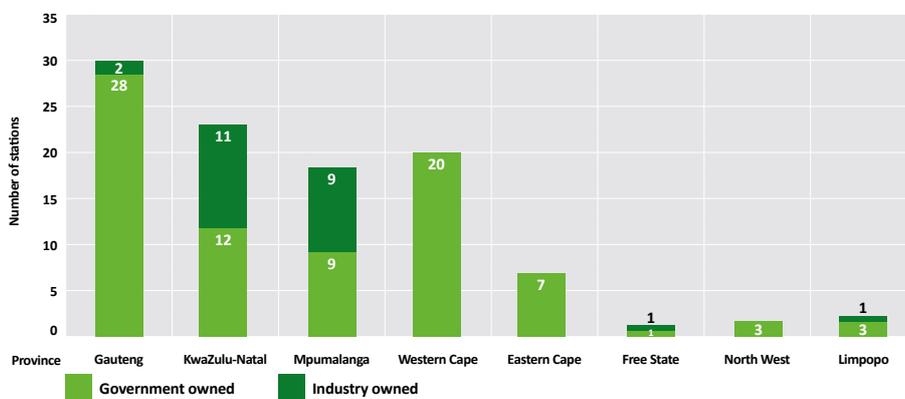
This proactive initiative by SAWS could contribute significantly to solutions for the country’s air pollution problems. The information can be used to decrease the country’s carbon footprint and, in so doing, cleaner air and a healthier living environment would be created for all South Africans.

Pilot user training sessions were held during June 2013. NAEIS training for provincial and municipal officials was conducted in Limpopo, the Northern Cape, the Eastern Cape and KwaZulu-Natal. Positive and favourable responses were received from both industry and municipality representatives who attended the training sessions.

NAEIS went live on 16 January 2014. More than 800 facilities are currently registered on NAEIS. The system was primarily designed to be used by municipalities to manage all the emission sources under their jurisdiction. However, its value in other applications has become increasingly apparent, e.g. the calculation of carbon tax, resulting in wide-spread interest from, inter alia, the Department of Energy and the National Treasury. Once again there could be a healthy spinoff for South Africans in any initiatives, resulting from NAEIS, in the form of lower degrees of air pollution and a more human-friendly living environment.

The National Ambient Air Quality Monitoring Network

The National Environmental Management: Air Quality Act, 2004 (Act No. 39 of 2004) (NEM:AQA), recognises the fact that air pollution carries a high social, economic and environmental cost that is seldom borne by the polluter.



Graph 3: Total Number of Continuous Ambient Air Quality Monitoring Stations Reporting to SAAQIS as at 31 March 2014

Atmospheric emissions of ozone-depleting substances, greenhouse gases and other substances have deleterious effects on the environment, both locally and globally. NEM:AQA therefore seeks to ensure that citizens are exposed to acceptable ambient air quality that does not infringe on their right to an environment that is conducive to their health and wellbeing.

Data recovery during the period under review was satisfactory, with an average valid data availability of 86% for the Vaal Triangle Priority Area Air Quality Monitoring Network (VTPAAQMN) and 71% for the Highveld Priority Area Air Quality Monitoring Network (HPAAQMN), since the takeover by SAWS in September 2013.

There were 161 requests for air quality monitoring data during the period under review.

VTAPAAMN

The Vaal Triangle Air Shed Priority Area Air Quality Management Network (VTAPAAMN) is a key network by virtue of it being established to meet the recommendations of the Vaal Triangle Air Shed Priority Area Air Quality Management Plan (AQMP). It plays a major role in the implementation of this plan, as well as in the management and reduction of air pollution in this area. The efficient maintenance of this network ensures data availability for research purposes, as well as the management of air quality by the regulatory authority. It will allow the authorities to monitor the effectiveness of emission control measures and programmes, which will ultimately contribute towards the reduction of air pollution levels in the Vaal Triangle Air Shed Priority Area, as well as to a better quality of life for the surrounding communities.

Conducting Relevant Research, Enhancing Meteorological Knowledge

During the period under review, SAWS managed a number of research initiatives aimed at developing new knowledge as well as enhancing existing tools. The projects are indicated below.

Lightning Threat Index Project

The Lightning Threat Index (LTI) was adapted to be calculated at a 0.11 degree resolution (UM resolution-12

km) instead of at the old 0.5 degree (50 km) resolution. Selected case studies are currently being tested, utilising the new procedure. It enables forecasters to make a prediction in the morning for areas that would be affected that same afternoon, so that communities could take the necessary precautionary measures to reduce lightning induced fatalities.

Research into the National Climate Database

Wind Atlas Project of South Africa (Phase 1)

Work package 5: Extreme winds

Accurate extreme wind statistics are important in the design of a safe and economic built-up environment. The recent revision of the South African Wind Loading Code for engineers (SANS 10160-3:2011) also includes a reassessment of design wind speed statistics.

Wind farms are planned for areas with relatively strong and sustained winds, with wind turbines classified according to their suitability for different wind conditions. The regional extreme wind climate statistics are used during the construction and design phase to make assumptions about the strength of the local wind climate that wind turbines will be exposed to, with the local environment and topography providing additional input. The correct turbine class, according to the relevant ISO Standards, could then be selected for the wind farm site.

The research combined the application of newly developed modelling approaches and the estimation of extreme wind statistics from measured data, where the environment and appropriate statistical methods, inter alia, had to be considered.

While it could be argued that, with the optimal analysis of measured data, more accurate results could be obtained, many regions across the world are hampered by inadequate weather observation networks. The synthesis of re-analysis and model data provides an opportunity to overcome this challenge to a large degree. However, the reliability of the results ultimately depends on the accuracy of the data and, to an even larger extent, on the prevailing strong wind climate. At shorter time-scales, where mesoscale systems sometimes dominate, results from measured data should be deemed to be the more accurate.

It was found that the results from re-analysis and model data conformed to a large extent with those from the measured data.

Meteorological Services

Supporting a Thriving Economy

Products and Services

Forecasting Services

When it comes to weather conditions, South Africa is indeed a country of contrasts and extremes. Hail, drought, flooding, stormy weather – all of these natural phenomena impact on the lives of South Africans, especially the poorest of the poor.

During the period under review, a number of significant severe weather systems occurred. SAWS issued a large number of warnings through daily media releases and by its active engagement at ground level, with disaster management services playing a major role. The organisation got actively involved at all levels – national, provincial, district and even at municipality level.

Often, these events lead to damage to roads, infrastructure, businesses, buildings, homes and vehicles. The damage goes far beyond the monetary losses people have suffered. Human lives are lost, entire communities uprooted and thousands left homeless.

This, in turn, has a severe damaging effect on the country's food supply and the economy as a whole. It is during such adverse weather conditions that the importance of SAWS comes to the fore. To be forewarned is to be forearmed – and SAWS plays a major role in preparing communities for the onslaught of the torrential rains and floods and other severe weather events.

SAWS continues to receive excellent feedback from disaster management services due to its positive

contributions to their activities. Below are some of the highlights from reports and warnings issued in mitigation of severe weather events in the period under review.

On 16 April 2013 a cold front, accompanied by a sharp upper-air trough low pressure system, caused heavy rains and strong winds over the Cape Metro and surrounding areas. This weather system intensified as it moved into the central parts of the country on the 17th and 18th, when widespread thundershowers and heavy rains caused flooding in several areas in Gauteng, the eastern Free State, Mpumalanga and KwaZulu-Natal. Table 1 below shows some of the highest rainfall records during the period 19-21 April 2013.

On 1 June 2013 a cold front, accompanied by an intense upper-air trough, led to heavy rains and flooding in places over the Cape Metro, mainly in the informal settlements. Heavy falls of snow occurred over the high-lying areas over the south-western parts of the Western Cape and Northern Cape, while extreme cold conditions were experienced over the interior of the Western and Northern Cape. Table 2 on page 41 indicates the lowest maximum temperatures recorded during this period.

From 26 – 28 August 2013, severe weather affected the Western Cape, which included runaway fires over the interior, spreading to the north-eastern provinces by 29 August 2013; gale force winds along the coast; strong winds over the interior; and heavy rain and flooding over the Cape Metropole, Overberg and south-western parts of the Cape Winelands districts. Very cold conditions and the possibility of disruptive snowfalls were forecast for the Western Cape and southern high-ground of the Northern Cape.

Table 1: Highest Rainfall Figures for the Period 19-21 April 2013

STATION	RAINFALL (MM)	DATE
Bethlehem Weather Office	54.5	19 April
Frankfort (Free State)	78.2	19 April
Grand Central Airport	51.8	19 April
OR Tambo Int. Airport	63.0	19 April
Ladysmith (KwaZulu-Natal)	51.6	19 April
Vereeniging	83.0	19 April
Dohne (Eastern Cape)	55.0	19 April
Nahoon Dam (Eastern Cape)	87.6	20 April
Petrus Steyn (Free State)	80.0	21 April
Tweeling (Free State)	70.0	21 April

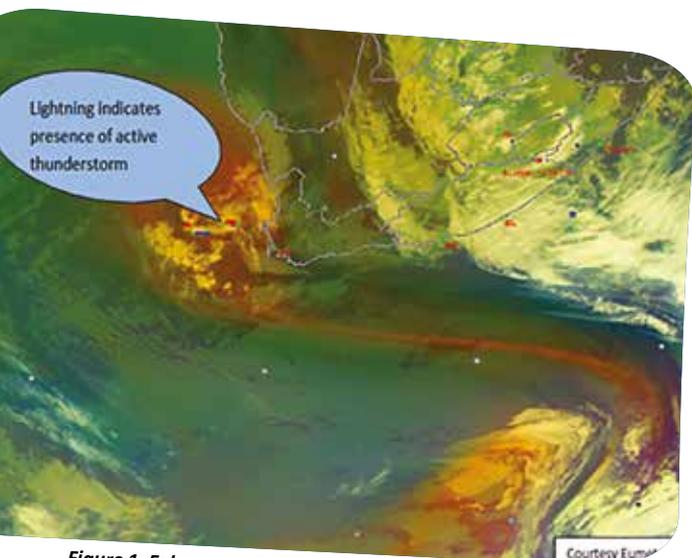


Figure 1: False colour RGB image at 08h30 SAST 15 November 2013, indicating a cut-off low to the west of the Western Cape



Heavy rains frequently lead to flooding



Lightning is a spectacular, but a dangerous phenomenon

During mid-November 2013, a significant weather system affected the southern provinces of South Africa. The system was caused by a well-developed upper-air cut-off low pressure system, (see figure 1) which affected the southern provinces of South Africa.

The public was warned about expected rain over the Western Cape on 15 November 2013, as well as the risk for localised flooding and flash flooding, especially the Overberg region, where Numerical Weather Prediction (NWP) models predicted 24-hour rainfall in excess of 100mm. By 16 November 2013, secondary roads (R43) between Struisbaai and Stanford were flooded and closed to traffic. Access to Helderstroum Prison, situated between Genadendal and Villiersdorp, was compromised and serious flooding was experienced at Vergelegen Mediclinic in Somerset West, prompting partial evacuation of the facility. Areas most affected were Somerset West, Strand, Sir Lowry's Village, Hout Bay and Muizenberg. Chapman's Peak was closed for some time due to rockfalls and mudslides. Mudslides were also reported in Bains Kloof, Franschoek, as well as in the Du Toits Kloof pass. About 44 informal settlements and 4 631 informal settlement dwellings were affected and 18 220 residents were affected in some way by the rain and associated flooding.

Numerous outbreaks of severe thunderstorms also occurred during this period, prompting many severe thunderstorm SMS messages to be disseminated to stakeholders and emergency management services. The eastern half of the country was particularly prone to severe thunderstorms, especially during the months of October and November, which are historically notorious for occurrences of large hailstones, strong damaging winds and instances of urban road flooding.

A significant weather system affected the central and eastern parts of the country during the first two weeks of March 2014, leading to loss of life and property. Two upper-air trough systems (extension of low pressure) caused an influx and convergence of tropically-sourced moist air into the eastern half of the country. The result was extended periods of wide-spread rains (at times flooding) over Gauteng, Limpopo, Mpumalanga, the Free State, as well as the eastern parts of North West, with the Waterberg District in Limpopo being the hardest hit.

Due to substantial amounts of rain in the previous month, the ground was already near saturation point, causing various rivers and dams to burst their banks and walls. This resulted in damage to roads,

Table 2: Lowest Maximum Temperatures Recorded during the Period 01-02 June 2013

STATION	MAX TEMP (DEG C)	DATE
Springbok	8.1	01 June
Sutherland	7.6	01 June
Springbok	6.8	02 June
Pofadder	9.9	02 June
Calvinia	6.1	02 June
Sutherland	1.3	02 June
Stellenbosch	8.8	02 June
Excelsior	4.5	02 June
Worcester	9.4	02 June
Laingsburg	8.8	02 June

bridges, buildings, as well as other forms of infrastructure. Many families also lost their homes and property due to the floods and there was an unfortunate loss of 34 lives (which could actually be more) country-wide, which was mostly due to drowning.

On 5 March 2014, the Kruger National Park was forced to close various roads as the Crocodile River burst its banks. On 6 March, 11 people were rescued by helicopter in Lephalale, Limpopo, as a safari vehicle was swept down the river. A further 70 people were rescued from a hill in the Lephalale area on 13 March, when the Magol River burst its banks. Bela-Bela in Limpopo was also severely affected with a dam bursting its banks at the Klein-Kariba Resort on 7 March, resulting in two deaths. A second dam burst its banks in the Bela-Bela area on 13 March, flooding the entire town.

In addition to this, a severe storm hit the Bergville area in KwaZulu-Natal on 17 March 2014, leaving many houses roofless – including the local hospital. There was one fatality reported, caused by lightning.

This event was well anticipated by SAWS, with the first media release issued on 28 February 2014, followed by four updates. In addition, Disaster Management was alerted and regularly updated on the heavy rains and flooding over the affected areas, with the first alert being issued on 1 March. Meetings were also held with the National Joint Operation Centre (NATJOC) to update staff members on expected weather conditions.

Long-range forecasting

The final report of the WRC-funded project on *Modelled Sea-Surface Temperature Scenario Considerations and*

Southern African Seasonal Rainfall and Temperature Predictability was printed and became available during the middle of 2013.

The outcome of this project was an improvement on the operational Multi-Model System.

In this operational context, the seasonal Multi-Model System for the SADC region and the Extended-Range Multi-Model System for South Africa were improved and activated to run operationally.

During the period under review, SAWS developed a coupled ocean atmosphere general circulation model, which forms part of the Multi-Model Seasonal Forecasting System. This coupled model is a first for South Africa and for Africa and forms the start of the Earth System Modelling concept in South Africa. This is a major breakthrough for South Africa.

Agricultural Application Development

During the period under review, a feasibility study was conducted with a view to SAWS providing agricultural and hydrological services. This study highlighted the fact that SAWS can provide crucial input to these services, in collaboration with other institutions.

SAWS then established an Application Development Unit within its structures to address application development in the agricultural, hydrological and renewable energy sectors. This development once again highlights the socio-economic benefits of weather, climate and related services.



Aviation meteorological services ensure safe skies

Marine Services

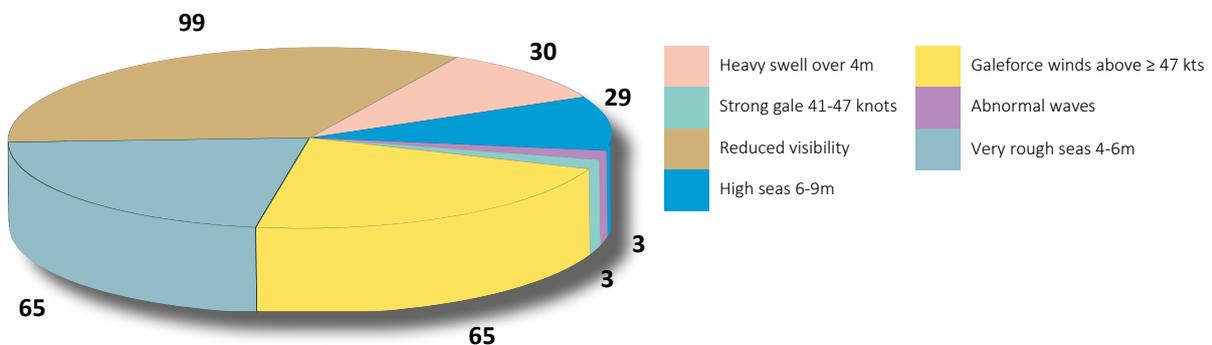
SAWS is responsible for the second largest maritime forecasting area in the world, governed by the Convention on the Safety of Life at Sea (SOLAS). During the period under review, SOLAS forecasts were issued for the coastal areas surrounding the country, as well as for MetArea VII, for which SAWS is responsible. Marine warnings are evaluated along the same principles as general forecast warnings, using selected marine observational points, such as the Mosgas Platform and data from other sources, such as Gough Island and Marion Island.

Out of 288 marine warnings issued during the period under review, 65 of these were for galeforce winds, which dominated marine conditions during this period (see graph 4 below).

Aviation Services

The South African aviation industry plays a major role in South Africa’s economy and aviation safety is regarded as essential in creating a weather-ready nation. The socio-economic benefits of weather, climate and related services are reflected in the fact that SAWS enables the efficient and safe operation of the industry in providing aerodrome forecasts, significant weather warnings and en-route forecasts.

SAWS, as an aviation service provider, is key to the implementation of the International Civil Aviation Organization (ICAO) Annex 3 and it plays a key role in the decisions of ICAO subgroup meetings, where aviation standards are monitored, evaluated and reviewed. As Chairperson, SAWS continued to contribute to the ICAO



Graph 4: Marine Warning Categories

Satellite Distribution System (SADIS) for the dissemination of significant weather charts in support of international air navigation. In compliance with regulated cost-recovery requirements for aviation, services were provided as per recommended standards and practices as detailed in ICAO Annex 3. The provision of services takes place with the requirements of aviation stakeholders in mind.

Furthermore, a substantial contribution was made to the Meteorological Subgroup for Significant Meteorological Information (SIGMET) towards the improvement of aviation forecasts on severe weather conditions with regard to international flights, as well as to AIRMET at a national level. As a result, ICAO requested SAWS to conduct SIGMET trials and tests for the African continent in particular. Aviation Services also made an immense contribution to international aviation, via the management and upkeep of the Operational Meteorological Data (OPMET) database, which is responsible for information that supports all levels of flight from take-off, in-flight and descent to landing.

All aviation services and information, such as aerodrome forecasts, significant weather warnings and en-route forecasts in support of safety, efficiency and regularity were made available on the SAWS aviation website. Aviation fulfilled its obligation to provide a world-class service by issuing flight documentation in support of national, regional and international aviation.

Further service delivery enhancements included engaging with the Airport Management Centres (AMCs) with regard to the installation of a weather link for briefing purposes. The provision of weather information to AMC is to ensure that aviation groups have access to information for regularity and efficiency of operations, to reduce loss of life and damage to property, as well as to minimise disruptions to economic and social activities during inclement weather conditions.

SAWS is the designated Meteorological Authority for South Africa under the Convention for International Civil Aviation 1947 (the Chicago Convention). The Meteorological Authority ensures that aeronautical meteorological services are provided in accordance with international and national standards, as set out in ICAO Annex 3 to the Chicago Convention on International Civil

Aviation. SAWS meteorological services play a supporting role in international air navigation regulations, as well as with regard to the South African Civil Aviation Authority (SACAA) Regulations.

During July 2013, ICAO conducted an audit in South Africa, referred to as an ICAO Coordinated Validation Mission (ICVM). The audit was conducted within the framework of the ICAO Universal Safety Oversight Audit Programme (USOAP) which, inter alia, determines the standards for the state's oversight function, as well as the effectiveness of the implementation of ICAO Standards and Recommended Practices (SARPs).

The outcome of the audit indicated that SAWS had fully implemented all the ICAO requirements with a 100% compliance rate. In terms of the socio-economic benefits of weather, climate and related services, this audit confirmed that, in South Africa, meteorological services provided to international air navigation meet the high standards set by ICAO. It is also a further confirmation of SAWS' commitment to the promotion of compliance with ICAO standards and its mission to foster a global civil aviation system that operates at peak efficiency at all times – providing optimum safety, security and sustainability in the field of aviation.

The Memorandum of Agreement (MoA) between SAWS and SACAA enables the Meteorological Authority to conduct inspections and certify meteorological instrumentation at licensed aerodromes across South Africa, with the main objective of ensuring the safety and efficiency of air navigation.

The Meteorological Authority inspectors conducted scheduled inspections at various licensed international and domestic aerodromes across South Africa. The aim was to promote safety and compliance with international and national requirements. This process was coupled with competency assessments of staff members providing services to the aviation industry. This was done as part of the effort to ensure that SAWS complied with the November 2013 deadline for the implementation of ICAO competency requirements.



The importance of the new George Weather Office is explained



Monitoring of air quality



Entertainment at the opening of the George Weather Office



Weather forecasting explained



The Mayor of George, Alderman Standers, officially opened the George Weather Office



Learners want to know more about the weather

Commercialisation

Creating a Sustainable Meteorological Competence

SAWS' Commercialisation Programme constitutes a clear example of the role that the socio-economic benefits of weather, climate and related services plays in the country's economic landscape.

The commercial revenue comprises regulated aviation revenue, as well as non-regulated commercial income. Regulated aviation revenue is based on a regulated tariff that allows SAWS to recover its costs, while providing a value-added service to all commercial airlines within the aviation industry. This tariff is dependent on the number of flights flown and the total load of the aircraft.

With the downturn in the global economy, aviation revenue decreased from R81,7 million during 2011/2012 to R73,8 million in 2012/2013. The period under review – i.e. 2013/2014, showed an increase to R82,0 million compared to that of 2011/2012, due to the decline in revenue experienced in 2012/2013.

As at the end of March 2014, non-regulated revenue streams included the rental and maintenance of instruments; selling instruments; climate data sales; lightning verification sales; publications; mobile sales; forecast sales; LDN sales; the contribution by a commercial partner; Weather Intelligence Systems; RETCH training income; advisory and consulting fees; and advertising on the web.

The non-regulated commercial budget for the 2013/2014 financial year was R19 million and stood at R15,6 million (actual income) at 10 April 2014, with the books still waiting to be closed. This figure, however, is 13% up on the previous period under review, when the actual figure came to R13,9 million. These figures indicate that SAWS actually did very well under the present economic circumstances.

Infrastructure Modernisation Programme

Expanding and Sustaining the Observation Network in Support of a Diverse Economy

The New George Weather Office

On 5 November 2013, SAWS opened the doors of its new weather office in George in the Southern Cape.

SAWS provides aviation meteorological services to all national airports in the country and operates in terms of the requirements of ICAO. One of the requirements is that no restrictions to daily weather observations should be present. The location of the previous weather office posed several observation restrictions and the new office is aimed at addressing challenges that impacted on weather observations in the past.

The opening of the new George Weather Office constitutes a landmark for SAWS and attests to excellent cooperation between SAWS and the Airports Company of South Africa.

Infrastructure Recapitalisation Plan

As part of the ICT Infrastructure Recapitalisation Plan, as well as continual organisational enablement, seven projects of particular importance were initiated during the period under review. These were in line with the Master System Plan (MSP) recommendations and infrastructure modernisation and are discussed below.

Computer Infrastructure Upgrade

This project involves the consolidation of the server infrastructure at forecasting offices through the use of virtualisation technologies (contributing to green IT), the deployment of additional servers and extra storage space for hardware at Head Office, as well as an organisation-wide replacement of outdated workstations and laptops. The entire server infrastructure was installed and is now operational. The rollout of workstations and laptops for SAWS regional offices was completed during October 2013. The project was completed in its entirety during January 2014.



High Performance Computer (HPC) Upgrade

The MSP recognised the need to source a new HPC to replace the old one that had reached the end of its lifespan. Information was gathered from other meteorological organisations and, more specifically, from the European Centre for Mid-range Weather Forecasting (ECMWF), as part of benchmarking. This project has reached the final tender evaluation and order stage and is on track for installation during the second half of 2014.

Network Upgrade

The Network Upgrade project forms part of Network Management as per MSP recommendation. The scope of the network upgrade enhances the data communications interconnection network between SAWS offices, called the Wide Area Network (WAN).

The Wide Area Network upgrade project is well underway, with the linking of regional offices to the new Virtual Private Network (VPN). The project encountered delays and a number of sites are still not completed.

Website Development

The website development project emanated from the website management recommendations in the MSP. According to the project plan, the first deliverable, comprising the enhancement of the current SAWS website, was delivered in October 2013, with the setting up of the www.weathersa.co.za site. Test servers are now up and running at SAWS Head Office.

PABX and Bolepi (SAWS Head Office) LAN Upgrade with VC Support

The Bolepi LAN phase of this project was finalised and the project is now in the PABX rollout phase. Regional roll-outs have also started.

Total Lightning Processor (TLP) Software for SA Lightning Detection Network (SALDN)

This new system replaced the old one in order to improve the location and detection accuracy required by users.

Business Optimisation and Re-alignment

For an Effective and Efficient Meteorological Institution

Total Quality Management

SAWS remains committed to maintaining the high standards required of the organisation in terms of the quality of its service offering, by ensuring continuous compliance with ISO 9001 standard requirements.

The ISO 9001 surveillance assessment was conducted in August 2013 and SAWS was commended for its exceptional service levels – both to the public and to corporate clients, as well as its commitment to customer service, as indicated by the Customer Perception Survey. SAWS retained its ISO 9001 certification.

Policy Reviews

SAWS is governed and guided by various policies. As part of compliance monitoring, SAWS reviewed its policies during the period under review. These policies are at different stages of approval.

Promotion of Access to Information Compliance

The provision of access to information within SAWS is regulated in terms of the approved SAWS Access to Information Manual. During the period under review, there were no requests for access to information in terms of the provisions of the Promotion of Access to Information Act, 2000 (Act No. 2 of 2000).

SAWS Litigation

There was no ruling against SAWS in a litigation matter during the period under review and neither was the organisation involved in any major litigation with third parties.

Human Capital Programme

Initiatives associated with this programme are discussed in Section D: Human Capital Management.

Effective Stakeholder Relationship Management

Supporting a Relevant and Stakeholder-conscious Meteorological Service

Stakeholder relations management continued to play a strategic role in SAWS' corporate governance and communications programmes, so as to ensure the organisation's continued relevance and sustainability. SAWS takes its corporate social responsibility seriously and ensures that it continues to manage and mitigate any operational-related risks.

Stakeholder relations are also an integral part of the implementation of initiatives in line with SAWS' strategic objectives.

Stakeholder Engagement

In developing the relevant SAWS Strategy and Annual Performance Plan (APP), SAWS identified and engaged key stakeholders crucial to the success of the SAWS 2013/14 APP. In addition to this, SAWS continued to interact with stakeholders that are beneficiaries of the SAWS mandate. The interactions recorded below indicate highlights from such interactions:

Shareholder

The Board and SAWS at large appreciate the ongoing support from, and engagements with the Shareholder. The Minister held a fruitful meeting with the Board on 25 July 2013, in which a number of issues of a strategic and governance nature were addressed. At an operational level, the CEO and her Executive Committee continuously have bilateral engagements with the Director-General of DEA and her Executive Management team to address matters of mutual interest.

Aviation Industry

SAWS regularly attends scheduled meetings with the aviation industry where various topics are addressed, including information that promotes safety for airport operations.

The KwaZulu-Natal Winter Air Show has evolved over the past few years and now takes place at many smaller airfields in Kwazulu-Natal. SAWS participated in all the air shows, reaching a number of stakeholders, including

schools. SAWS also participated in CAA Part 91, doing presentations at eight flying schools in Gauteng and Mpumalanga respectively. The theme was 'Hello Summer,' with the main aim of educating pilots on regional summer weather and its associated hazards.

ACSA approved and funded a project for building weather offices, following many years of negotiations between ACSA and SAWS. The project was imperative for aviation safety, due to erratic weather conditions in George and the Outeniqua Mountains. The new bright, airy offices, with a perfect 360-degree panoramic view, situated at the south end of the runway, were officially opened by the Executive Mayor of George on 5 November 2013.

The South African National Defence Force (SANDF) invited SAWS to be part of a team that did a presentation during Aviation Awareness week held at the Bloemfontein Air Force Base during December 2013. Another request was for SAWS to assist with the facilitation of the Aviation Meteorology Module. The main objective of the Young Falcon Introductory and Advanced Programme Camp (Aviation Awareness) Module was to motivate learners who are studying Mathematics and Science to consider careers in aviation service-orientated companies.

School Outreach Programmes and Exhibitions

SAWS participated in a number of career exhibitions and public awareness campaigns during the period under review. School outreach visits were conducted by all regional offices, in order to raise awareness about severe weather conditions and to enlighten learners and generate interest in careers in meteorology and related sciences.

SAWS participated in the SASOL TECHNOX and its theme for the exhibition was 'Journey through the Storm'. The exhibition was aimed at providing communities with a simulated experience of an actual thunderstorm. SAWS was awarded a certificate as the second best presenter.

The annual Grahamstown National Science Festival saw the SAWS team featuring an exhibition replicating a tropical cyclone, with the theme, 'Into the Eye of the Storm'. SAWS received an award for second place under Best Exhibition.

The Disaster Management Institute of Southern Africa (DMISA) held its annual congress during September 2013. SAWS delivered two papers at the congress, namely *'Watching the weather to protect life and property and The severe weather warning service of South Africa: Developments to improve services to disaster*

management. In addition to the presentations, SAWS also exhibited to showcase its role in supporting the theme of 'Building Resilience: Communities: Getting Ready'. With this exhibition, SAWS scooped the award for best exhibitor.

The South African Agency for Science and Technology Advancement (SAASTA), together with the Department of Science and Technology, hosted a space science open day in Kimberley on 5 October 2013, as part of World Space Week 2013. SAWS participated as an exhibitor and also did presentations on the way that SAWS utilises satellite technology in conducting its day-to-day business.

Disaster Management

International Day on Disaster Reduction (IDDR 2013)

SAWS participated in the International Day on Disaster Reduction (IDDR 2013), under the auspices of the United Nations International Strategy for Disaster Reduction (UNISDR) during October 2013. The event took place at the Ntoampe Sporting Centre in the Greater Tubatse Municipality in Limpopo.

IDDR was aimed at raising awareness about the importance of disaster risk reduction, particularly with regard to the disabled, as well as to encourage every citizen and government to take part in building more disaster resilient communities and nations.

The benefit of SAWS' involvement was that community members were made aware of the various ways in which the SAWS Early Warning Systems assist in the preparation of disaster management activities.

Tshwane Festive Season Campaign

The City of Tshwane invited various stakeholders, including SAWS, National Disaster Management, the Red Cross Society, SASSA, IEC and the Metro Police to an awareness campaign held in the Marokolong Township in Hammanskraal on 22 November 2013.

The aim of the campaign was to go to the people who are most affected by disasters, particularly during the festive season, because it is during this time that South Africa is in its summer season and experiences severe weather conditions, which sometimes result in disasters.

The benefit of SAWS' involvement in the campaign was to engage and share with community members the various severe weather conditions and events that they should

be aware of – particularly over the festive period – such as lightning, flooding, thunderstorms and veld fires.

Government

The 10 Days of Mourning

The former President of South Africa, Nelson Rolihlahla Mandela, passed away on the evening of 5 December 2013. From early morning on Friday 6 December 2013, a group of key support staff members, many of them forecasters, manned field sites, such as the PDMC Provincial Joint Operations Centres (JOCs), Venue Operations Centres (VOC), as well as a site at the Union Buildings. The range of services provided by SAWS during the 10 days included the following:

- Daily updates of seven-day forecasts for Pretoria, Port Elizabeth, Mthatha and Qunu, disseminated via mail and as SMSs.
- Senior forecasting staff members maintained a presence at the Union Buildings while the former President's body was lying in state.
- SAWS was well represented at the Eastern Cape, the Mthatha and the OR Tambo JOCs. SAWS facilitated the setting up of a CCTV/Automatic Weather Station Hybrid System, which was installed on the Water Tower in Fort Gale to monitor real-time weather in Mthatha, Qunu and neighbouring areas. The CCTV was controlled from the OR Tambo JOC and assisted in monitoring movement along the N2 Highway, entering and leaving Mthatha from the Qunu side.
- Regular weather-related SAWS media releases were issued on 6, 9, 10, 11 and 12 December.
- Meetings were held between SAWS and ACSA regarding aviation arrangements.
- Daily weather briefings were presented at NATJOC/NATJOINT, where the day-to-day operations and logistics were controlled and nationally monitored.

Overall, the scale of the contribution by SAWS was well received and appreciated by stakeholders, with updates issued at crucial times during the ten-day period. Weather forecasts, on a short time-scale, as well as longer time-scales (exceeding a week), were generally considered to be accurate and useful. Such information facilitated early awareness and planning on the part of role-players, such as the South African Police Service, Disaster Management, Emergency Services, the South African National Defence Force and the South African Air Force.

In order to fulfil its regional leading role, SAWS hosted the PR of Namibia with the WMO for both strategic and operational discussions, with a view to improving service delivery at the Namibian Meteorological Service (NMS) and cooperation between the two national weather services. In addition, SAWS continued to play its Secretariat role in the region.

SAWS hosted one of the UK Met Office (UKMO) executives, sharing information on GFCS implementation, SWFDP and climate data. Following this visit, one of SAWS' leading scientists on short and medium range forecasting, visited UKMO on an exchange programme, for further training on numerical weather prediction, so as to enhance SAWS' modelling and forecasting capacity.

SAWS was represented at, and participated in the World Area Forecast Operations Group 8 (WAFSOPSG/8) meeting, which was held in Bangkok. The meeting reviewed some of the provisions of the WAFS that would form part of Amendment 77 of Annex 3. The meeting was also crucial for the development of a Meteorological Road map for the Aviation System Block Upgrade (ASBU) for consideration by the Met Divisional Conjoint meeting.

Two of the three technical coordinators of JCOMMOPS (WMO/IOC Joint Technical Commission for Oceanography and Marine Meteorology in situ Observing Platform Support) visited South Africa in August 2013. The objective was to introduce themselves to members of the marine meteorology and oceanography communities. The visit included visits to the SA Agulhas II, the RV Lady Amber and the Sophumelela Secondary School in Samora Machel, Cape Town. These visits also included members of the press to raise awareness about the importance of oceanographic and meteorological data amongst all members of the public.

A SAWS employee did a presentation at the Europe-Africa Conference on Wind Engineering at Cambridge in the UK during July 2013. Three co-authored presentations were delivered at the conference, namely:

- Directional Analysis of Extreme Winds under Mixed Climate Conditions (**A. C. Kruger**, A. M. Goliger and J. V. Retief).
- Representivity of wind measurements for design wind speed estimations (**A. C. Kruger**, A. M. Goliger and J. V. Retief).
- Extreme wind atlases of South Africa from global reanalysis data (X. G. Larsén, **A. C. Kruger**, J. Badger and H. E. Jorgensen).

These research papers provided an example of the way that the estimation of extreme wind statistics for the built environment could be conducted in a comprehensive manner.

SAWS convened a meeting with the Mozambican National Meteorological Service (INAM) in Maputo to review progress with the existing MoU and also to market its products and services. Similar engagements took place with the Swaziland Met Service, with the objective of generating income for SAWS. An international agreement was finally signed between the DEA and the UK Foreign and Commonwealth Office on the continued meteorological operations on Gough Island – a UK territory. SAWS was instrumental in the provision of technical inputs for the agreement on the extension of the Gough Island SAWS Weather Station for another 20 years until 2032. The observations from this weather station are crucial for the monitoring and forecasting of weather systems in the Southern Ocean, the southern parts of South Africa and also provided vital inputs with regard to global forecasting models.

Radar Training for OMAN

In 2010, Selex Sistemi Integrati (SELEX) from Germany tendered for a contract in the Sultanate of Oman to supply and install five radar systems. SAWS was asked to submit a proposal to partner with SELEX to train technicians and meteorologists from the Directorate of Meteorology (DGMAN) in Oman in the operation and maintenance of the new S-Band radar systems.

SELEX was awarded the contract to supply and install the radar systems in Oman in March 2013. During the implementation period, SAWS was required to provide training to DGMAN staff members at SAWS facilities.

In total, SAWS trained 27 operational forecasters and radar users, as well as three "super users", who would be responsible for the management of the Oman radar network. The training took place at the SAWS Regional Training Centre (RTC) at Head Office in Pretoria, as well as at the SAWS S-Band radar station in Irene.

In order to support this training initiative, SAWS seconded two dedicated young scientists from the Research Department, who were well versed in radar technology and software, to do the training. The theoretical training was facilitated by lecturers from the North West University's Climate Research Group.

The successful training of the meteorologists took place between December 2013 and April 2014, with nearly 120 man-days spent over an eight-week period. The value of the training workshops not only lay in the skills that SAWS developed in the operational training of radar, but also in the effective promotion of SAWS and South Africa as a technology hub and a source of future technical training for people from Oman and from the Middle East region as a whole.

Socio-economic Benefits Derived from the Meteorological Services International Workshop

In order to develop and strengthen a culture of service delivery at the National Meteorological and Hydrological Services (NMHSs) of member states, the WMO established a Forum on Socio-economic Applications and the Benefits of Weather, Climate and Water Services (SEB-Forum). SAWS, in collaboration with the WMO SEB-Forum, conducted such a workshop in Johannesburg for SADC countries during November 2013. During the workshop, all the SADC countries agreed and expressed their support for a SEB study to be conducted within the region.

SAWS participated in the South West Indian Ocean Regional Climate Outlook Forum (SWIOCOF-2) and contributed to the preparation of an outlook of consensus for the 2013/14 precipitation and cyclone season over the South Western Indian Ocean (SWIO) basin. The event promoted an exchange of experience on communication and forecast products.

SWFDP-SA Regional Training Workshop

The seventh annual SWFDP training workshop for the Southern African region took place in Pretoria during November 2013. The workshop was arranged and hosted by the SAWS Meteorological Training Institute (MTI) in Pretoria. The activities were split into two distinct components, namely the operationally-focused GDPFS workshop, followed immediately by the WMO Public Weather Services (PWS) workshop.

Regional Specialised Meteorological Centre (RSMC) Training Desk

The first session of the RSMC Pretoria Training Desk, funded by the WMO, was conducted over a two-week period during October and November 2013. The scheduled programme for the training desk included hands-on instruction pertaining to the analysis and production process for routine SWFDP products. The two forecaster participants in this pilot event were representatives from Malawi and Mozambique.

Scientific Research Collaboration

- As part of the South Africa Integrated Carbon Observing Network (SAI-CON), interactions with Alecia Nickless (PhD student), as well as Dr Pedro Monteiro, continued. Cylinders were filled and analysed at Cape Point for the southern ocean carbon flux programme, managed by the CSIR.
- Discussions with Dr El Hassan Bencherif (Laboratoire de l'Atmosphère et des Cyclones – University of Reunion -LSCE), who agreed to elucidate on some of the reasons for the decreasing carbon monoxide (CO) trend observed at Cape Point, as well as documenting possible biomass burning signals from the upper troposphere. This initiative culminated in a research paper that was submitted for publication, with SAWS as a co-author.
- SAWS co-authored a paper, Extreme Gust Wind Estimation Using Mesoscale Modelling, to be presented at the European Wind Engineering Association's 2014 conference. The authors were X. Larsen and **A. Kruger**.
- A paper, Identifying biologically meaningful hot-weather events, using threshold temperatures that affect life-history by Susan J. Cunningham, **Andries C. Kruger**, Mthobisi P. Nxumalo and Philip A.R. Hockey, was published in the PLoS One online journal.
- SA Integrated Carbon Observing Network (SAI-CON) interaction with Alecia Nickless (a PhD student and Dr Bob Scholes, CSIR), continued. The GAW team also continued to provide technical support (including the preparation of calibration standards and their analysis) to the Hangklip and Robben Island measuring sites, where CO₂ and CH₄ are being monitored in conjunction with the Cape Point site.
- Two high-quality calibration standards were received from CSIRO. These, together with three other cylinders that are currently at NOAA, Boulder in the USA, formed part of a southern hemisphere inter-comparison project between SAWS-GAW, CSIRO (Cape Grim station) and the CSIR, where each partner contributed to a collective improvement of measurements within the southern oceanic region, collectively known as the Southern Ocean Flux study.
- The GAW flask sampling projects continued with NOAA, LSCE, UEA and RHUL. These comparisons provide an invaluable check on in-situ measurements, in addition to providing supplementary information to international partners.

- A new partnership was formed with the Max Planck Institute, Jena in Germany (through Dr Jost Valentin Lavric and Dr Eric Morgan), pursuing avenues for closer collaboration between the Gobabeb, Namibia and Cape Point GAW. As part of this partnership, Dr Jost Valentin presented a talk at the annual SASAS conference and Dr Eric Morgan spent two months with the GAW staff, leading up to the SASAS conference in September 2013. Dr Valentin also visited the Cape Point station.
- The International Union of Air Pollution Prevention and Environmental Protection Associations (IUAPPA) World Clean Air Congress was held in Cape Town from 29 September to 4 October 2013. A delegation of 40 members visited the Cape Point GAW station, where an overview of the GAW programme was presented.
- Michelle Nerentorp (Göteborg University, Sweden), visited the Cape Point station during October 2013, after having spent several months in the Antarctic region aboard the German research ship, Polarstern, to conduct mercury speciation measurements. She presented her data and agreed to maintain scientific links.
- Cape Point was visited by a delegation comprising Dr James Tsilongo from NMISA and Prof. Jin Seog Kim from Korea in November 2013. Prof. Jin Seog Kim (from the University of Science and Technology in Korea) is the Vice-President of the Korea Research Institute of Standard Science (KRISS) and Chair of the CCQM-GAWG. KRISS, as the NMI of South Korea supports the Korea Meteorological Administration (KMA), which operates the World Calibration Centre for Sulphur Hexafluoride (WCC-SF6), one of the central facilities in the World Meteorological Organization/Global Atmospheric Watch (WMO/GAW) programme in Korea. Negotiations are underway to include CPT in a calibration programme, envisaged for South Africa.
- The radar research team (Erik Becker and Craig Powell), lectured to officials from the Oman Meteorological Service on basic radar meteorology. The course started in December 2013 when the first group of officials from Oman underwent training. Two further courses were conducted in January 2014. Early indications, obtained from attendee feedback, show that the course was a major success.
- SAWS participated in the meeting of the World Meteorological Organization (WMO) Commission for Basic Systems (CBS)/Commission for Climatology (CCI) Expert Team on Operational Predictions from Sub-seasonal to Longer-time Scales (ET-OPSLS), which was held at the Met Office in Exeter in the UK during March 2014. The ET-OPSLS commenced its meeting with a one-day joint session with the World Climate Research Programme (WCRP) Working Group on Seasonal to Inter-annual Prediction (WGSIP). The delegates from the two teams made oral presentations pertaining to developments made in the area of research and operations. The ET also examined the progress made by the task groups on the Extended-Range Timescale and decadal predictions. The ET-OPSLS also revised the outcomes and recommendations of the CBS/CCI workshop on operational Long-range Forecasting: GPCs and RCCs, held in Brasilia, Brazil, in July 2013.
- The African Centre of Meteorological Applications for Development (ACMAD), in collaboration with its partners, organised a planning meeting to identify short and long-term priorities for strengthened cooperation among African institutions, as well as to propose a mechanism for the implementation of an African Model Project (AMP). SAWS participated in the meeting and was leading the task group responsible for facilitating the implementation plan and concept note documents of the AMP. The task group reviewed the existing capacity on the African continent in the area of numerical weather prediction models' deployment for weather and climate predictions, as well as prospects for development. In this process, the team proposed an implementation plan that embraces certain aspects, inter alia, resource mobilisation, mechanisms and capacity-building pillars and their relevance to other programmes such, as GFCS.
- SAWS LRF participated in the British Council Researcher Links Workshop: From Climate Science to Climate Services for Society, in Cape Town, South Africa, during March 2014. At the event oral and poster presentations were presented.
- The LRF group featured in a supplement of the Mail and Guardian newspaper, entitled Climate Change Leaders, under a section on Education and Training as part of the ACCESS research compendium. An article on **Ms Kelebogile Mathole**, a researcher in the LRF group, received prominence.

- During February 2014, team members of the SA Integrated Carbon Observing Network (SAI-CON) at Cape Point assisted Alecia Nickless (a PhD student with Dr Bob Scholes, CSIR) to dismantle the Hangklip and Robben Island sites (end of project) where CO₂ and CH₄ measurements have been taken for the past two years. One of these CSIR instruments has been temporarily installed at Cape Point, where it is taking concurrent measurements of CH₄ and CO₂ (inter-calibration exercise).
- Southern Ocean Flux study: The last three high-quality calibration standards, prepared for SAWS by CSIRO (Dr Marcel van der Schoot) and analysed by NOAA, Boulder in the USA as part of a southern hemisphere inter-comparison project between SAWS GAW, CSIRO-Australia and CSIR-SA, were paid for and are on their way to Cape Town.
- University of Western Cape (UWC) partnership: At the beginning of February 2014, Prof. Dr Michael Coleman and two of his colleagues made final arrangements with the Cape Point GAW staff members for the installation of GC_MS equipment in cottage B at Cape Point. This collaboration is aimed at capacity-building and joint publications.
- On two occasions (Nov 2013; Feb 2014) the Cape Point team members hosted officials from the National Metrology Institute of South Africa (NMISA). First were Dr James Tsilongo and visiting Korean scientist, Prof Jin Seog Kim, Vice-President of KRISS. This was followed by a visit from Dr Wynand Lou, Director of Research and his colleague, Napo Ntsasa of NMISA. The aim was to foster closer ties with NMISA in a similar fashion to GAW's collaboration with the Swiss GAW auditing group, EMPA, as well as to audit the Cape Point laboratory with regard to its trace gas measuring programme. NIMSA is in the process of developing locally developed reference standards and will be testing them, as well as certain CPT instrumentation, at their gas laboratory facility.
- Visits by scientists, as well as educational visits: During February 2014, a group of 12 MSc UCT students, under the mentorship of Prof Frank Shillington, visited the Cape Point laboratory as part of their MSc training course. In March, Prof Wolfgang Fricke (previous Director of the famous Hohenpeissenberg Observatory in Southern Germany) paid a courtesy visit to the Cape Point laboratory.
- N. Mbatha and C. Labuschagne are members of the GDIR French South African project. The project is based on atmospheric chemistry and atmospheric physics and dynamics research. N. Mbatha has two ongoing research projects under the auspices of the GDRI, and is also assisting one student from Reunion Island. More information about the GDRI can be found on the following website: <http://www.southern-africa.aird.fr/science-in-southern-africa/research-projects/atmospheric-research-in-southern-africa-and-indian-ocean-arsaio>.
- Meetings with Robert Stefanski of the WMO: Commission for Basic Systems, Agricultural Meteorology (AgM) and Dr John Qu from the George Mason University in the USA, were held with a view to deploying a soil water monitoring network in South Africa.
- A workshop, co-hosted by DEA and DWA, on Sector Specific Indices for Climate Change Detection, was attended during February. Useful knowledge was gained with regard to the dissemination of information to end-users. In this regard, the Climate Outlook Forum was established, bringing together members from various SAWS departments to discuss the present situation and the latest seasonal outlook, as well as to package the information in a user-friendly way.
- A paper was presented at the Climate Change Conference during the Annual Meeting of the American Meteorological Society, entitled Optimal Application of Climate Data to the Development of Design Wind Speeds, co-authored by **A. C. Kruger**, J. V. Retief, A. M. Goliger and X. Larsen.
- SAWS provided input to the WMO on the Climatology Curriculum, the WMO Climate Information Guidebook, as well as the WMO State of the Climate Report.
- SAWS participated in the Long-term Adaptation Scenarios (LTAS) process, making a contribution as a weather and climate science organisation, in ensuring that the vision of transition to a lower carbon economy and climate-resilient society is realised.

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Corporate Social Investment and Other Events



The Baitshoki Secondary School choir provided entertainment



Learners at the event in Lichtenburg received valuable educational packs



SAWS donated 25 computers to the computer centre of the Baitshoki Secondary School



More than 15 schools from the Lichtenburg area attended the event



SAWS CEO, Dr Linda Makuleni, thanks principal Ms. Matonkonyane for the school's hospitality



A Stevenson Screen is donated to the Baitshoki Secondary School

SAWS' CSI initiatives are aligned to its mandate of providing public good services and are viewed as a vehicle through which a meaningful contribution and investment into the future of Science and Technology can be made. SAWS continued to contribute towards the socio-economic benefits of weather, climate and related sciences by participating in relevant community events and internal engagements.

World Meteorological Day

On 19 March 2014, SAWS celebrated World Meteorological Day in Lichtenburg, North West, with the cooperation of the Ditsobotla Municipality and the North West Department of Education. The choice of venue was influenced by the droughts and flooding that affected North West at the beginning of the year. The photos above illustrate various activities on the day.

The theme for World Meteorological Day 2014, was Weather and Climate: Engaging Youth, and SAWS presented a specially tailored programme for learners,

educators, relevant community members and disaster management staff in the area.

The main event for the day was the adoption of the Baitshoki High School in Itsoseng, where SAWS donated 25 computers, a rain gauge and a Stevenson screen with minimum and maximum thermometers to the school, which will be used to enhance teaching at the school.

A wide-reaching second event, aimed at engaging the youth, was held later during the day in Lichtenburg, with approximately 370 guests attending. Some 160 learners and 40 teachers from 16 schools, as well as representatives from the local and district municipality, the North West Department of Education and the private sector participated in the event.

Expanding the events centered on World Meteorological Day, SAWS visited a further eight schools in Limpopo, in conjunction with the Department of Basic Education, where more than 1 600 Grade 10 to 12 learners were exposed to, and empowered with knowledge on a career in atmospheric sciences.

Client Award Function

The Eastern Cape region hosted a function where SAWS interacted with clients. The evening's presentation highlighted SAWS' available products and services, the future of renewable energy in South Africa, SAWS' monitoring and/or observational systems, as well as the historical climate of the region.



Eastern Cape client award function: February 2014

Charity Golf Day

The SAWS ninth Annual Corporate Charity Golf Day was held at the Bellville Golf Club in April 2013. The proceeds of the day were donated to the South African Medical and Education Foundation, based in the Western Cape.



Winners of the 9th Annual Corporate Charity Golf Day: April 2013

Mandela Day

On 18 July 2013, SAWS celebrated International Nelson Mandela Day. As part of dedicating 67 minutes to charity, Bolepi staff members gathered in the atrium to make blankets for the poor. These were distributed to the homeless in the area.



Blanket-making on international Nelson Mandela Day

Women's Day

In celebration of Women's Day, SAWS brought together SAWS women from around the country to celebrate together. Dr Vuyo Mahlathi, Chairperson of the International Women's Forum in South Africa, delivered the keynote address and SAWS donated blankets to her charity. This event once again emphasised the importance of creating internal networking opportunities for staff members who do not often come into personal contact with each other.



Women's Day was celebrated with a national get-together in Kempton Park

Youth Day

During the period under review, SAWS celebrated Youth Day by giving its group of vibrant interns the opportunity to demonstrate their understanding and appreciation of 16 June 1976 and they delivered a command performance.



A powerful performance was delivered by SAWS' interns on Youth Day 2013

Heritage Day

Heritage Day 2013 was held on 20 September, with staff from Gauteng gathering at Bolepi House to portray the cultural customs of the "coming-of-age" ceremony amongst the different groupings in South Africa. This allowed staff members from various backgrounds to work together and gain an understanding of each other's cultures.



Heritage Day celebrated the customs of various South African cultures

Media and other Communications

During the period under review, SAWS continued to communicate with external stakeholders, so as to increase the visibility of the organisation's operations and create awareness in order to reinforce its effectiveness.

The socio-economic benefits of weather, climate and related services were once again emphasised by the SAWS' external communications drive during the period under review. This needs to continue, as in March 2014, South Africa suffered extreme weather conditions with heavy rains and floods, causing major destruction, as well as the loss of lives in some parts of the country. During this turbulent period, SAWS provided the South African public with regular media releases and information, via a variety of media, such as newspapers, television, radio and the host of electronic media that are accessible via the internet, as well as via the use of cellphones.

Advertising value Equivalent Comparison

According to SAWS media monitoring reports, the organisation was mentioned in 424 articles during the period under review, with an advertising value equivalent (AVE) of R6 101 590. The table below indicates the amount that SAWS would have had to spend on advertorial or advertising space for the same coverage. In terms of broadcasting, the AVE came to R13 145 617. In total, SAWS gained Adspend value of R21 856 956, compared to R572 138 spent on awareness advertising during the year.

Media Coverage

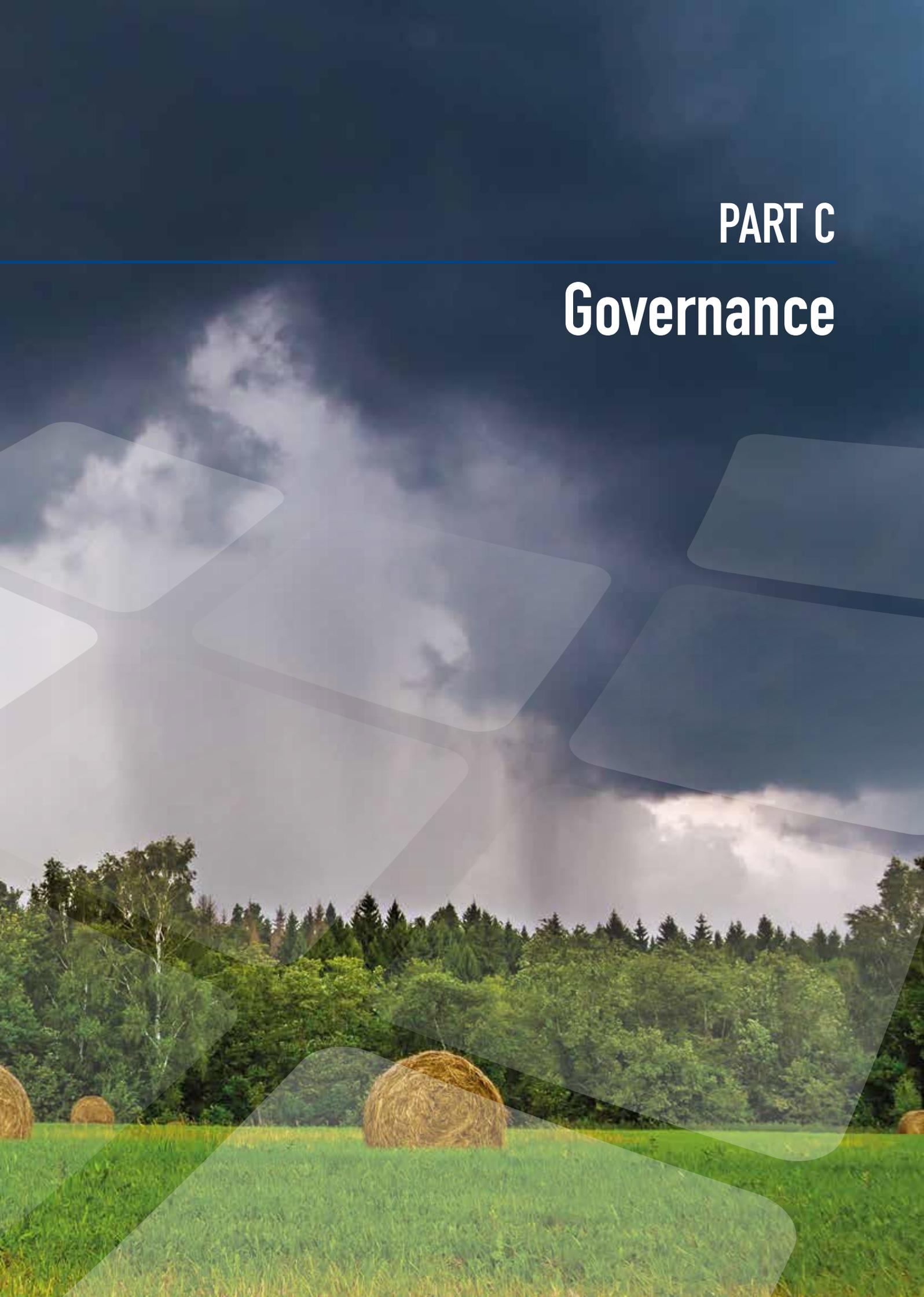
Table 3: Advertising Value Equivalent Comparison

ISSUES	PRINT		BROADCAST		ONLINE		SOCIAL MEDIA
	ARTICLES (NO)	ADSPEND (R)	INSERTS (NO)	ADSPEND (R)	INSERTS (NO)	ADSPEND (R)	INSERTS (NO)
Analysis	23	323 309	54	1 204 650	44	247 683	16
Forecast	103	768 599	227	2 953 614	270	870 554	78
Human resources	-	-	-	-	1	559	90
Legislation	3	9 265	7	196 019	36	68 164	4
Mention	3	11 814	2	233 192	38	59 854	18
Phenomena	240	4 238 103	69	4 413 555	171	555 278	-
Products & services	4	29 139	9	409 114	37	72 055	2
Research	4	71 631	-	-	7	24 012	-
Social responsibility	2	6 446	1	24 000	4	14 667	-
Warning	42	643 283	226	3 711 471	182	696 923	92
Grand Total	424	6 101 590	595	13 145 617	790	2 609 749	300



PART C

Governance



GOVERNANCE

3.1 Introduction

SAWS derives its mandate from the South African Weather Service Act, 2001 (Act No. 8 of 2001) as amended by the South African Weather Service Amendment Act, 2013 (Act No. 48 of 2013). As a schedule 3A public entity, SAWS is also subjected to the relevant provisions of the Public Finance Management Act, 1999 (Act No. 1 of 1999) (PFMA), as amended; as well as other legislative prescripts and governance frameworks applicable to schedule 3A public entities.

During the period under review (1st April 2013 to 31st March 2014), SAWS continued its quest of conducting its business in line with corporate governance principles and best practices. The Board continued to play its leadership role on governance matters including, but not limited to, ensuring that all key governance structures were in place and functional, and that governance matters were effectively managed.

3.2 Portfolio Committee

The Portfolio Committee on Water and Environmental Affairs continued to play its oversight role regarding the affairs of SAWS; and reviewed the SAWS Strategic Plan for 2014-2018 and the Annual Performance Plan and Budget for 2013/14. The Portfolio Committee also reviewed SAWS Annual Report for the 2012/13 financial year.

The Portfolio Committee also paid attention to the review of the SAWS Act; held engagements with SAWS, the Department of Environmental Affairs and the Minister of Water and Environmental Affairs on the SAWS Amendment Bill, 2013, prior to recommending it for Cabinet approval. The SAWS Amendment Bill was later assented by the President and published in the *Government Gazette* on 16 January 2014. The SAWS Amendment Act, No. 48 of 2013, became effective on 16 March 2014.

SAWS' appearance before the Portfolio Committee was done jointly with the Department of Environmental Affairs (DEA), wherein SAWS provided input through DEA and accompanied DEA when meetings were held with the Portfolio Committee.

3.3 Executive Authority

The South African Weather Service Board ("the Board") is appointed by the Minister in terms of the South African Weather Service Act, 2001 (Act No. 8 of 2001) and the South African Weather Service Amendment Act, 2013 (Act No. 48 of 2013). The term of office is for a period of three years. The current Board was appointed effective 1 June 2012 and the term of office will lapse on 31 May 2015; and the Board has the appropriate mix of skills and expertise to guide and steer SAWS in the right direction.

The South African Government, represented by the Minister of Water and Environmental Affairs, is the sole shareholder. In her oversight role pertaining to the affairs of SAWS, the Minister is assisted by the Department of Environmental Affairs, as well as the Board of SAWS, which is appointed by the Minister in terms of the South African Weather Service Act, 2001 (Act No. 8 of 2001) and the South African Weather Service Amendment Act, 2013 (Act No. 48 of 2013).

Some of the key reports and documents submitted to the Executive Authority included, inter alia, the following:

- 1) SAWS Annual Report and audited Annual Financial Statements were reviewed and approved by the Board in July 2013; submitted to the Shareholder, the National Treasury and Parliament within the prescribed time frames.
- 2) SAWS Five-Year Strategy for 2015 to 2019, the Annual Performance Plan and the Budget for 2014/15, were reviewed and submitted to the Shareholder within the prescribed timelines (1st Drafts end August 2013; 2nd Drafts end November 2013; and final versions end January 2014).
- 3) Quarterly Performance Reports against the 2013/14 Annual Performance Plan were compiled by Management, reviewed by the Board and submitted to the Shareholder within 30 days after the end of each quarter as required.

Annual General Meetings are not a requirement for SAWS, as a schedule 3A public entity. However, engagements between the Board and the Shareholder are held as and when required. The Board appreciated the Shareholder's

meeting with the Board held on 25 July 2013, to discuss issues of a strategic and governance nature.

3.4 The Accounting Authority (The Board)

3.4.1 Introduction

The mandate of the Board is derived from the South African Weather Service Act, 2001 (Act No. 8 of 2001), as amended by the South African Weather Service Amendment Act, 2013 (Act No. 48 of 2013), augmented by the relevant provisions of the PFMA; the Treasury Regulations issued in terms of the PFMA; and, to some extent, the King III Report on Corporate Governance for South Africa – amongst others.

3.4.2 The Role of the Board

The main responsibilities of the Board include the following:

- Providing strategic direction and leadership to SAWS, in order to ensure long-term sustainability of the organisation.
- Setting policies and standards and monitoring the execution of the organisational strategy.
- Ensuring that SAWS strikes the right balance between its public good and commercial mandate; and that the pursuit of commercial services does not compromise the public good services.
- Exercising the duty of utmost care to ensure reasonable protection of the assets and records of SAWS.
- Ensuring that SAWS has and maintains effective, efficient and transparent systems of financial and risk management and internal control.
- Compliance with, and ensuring compliance by SAWS, with all applicable provisions of the PFMA and any other legislation applicable to SAWS.
- Taking responsibility for the submission by SAWS, of all reports, returns, notices and other information to Parliament, the Minister, the

National Treasury, or the Auditor-General as may be required by the PFMA.

- The Board may, in writing, delegate any of the powers entrusted or delegated to it in terms of the PFMA to an official of SAWS; or instruct an official to perform any of the duties assigned to the Board in terms of the PFMA.
- Enforcing effective corporate governance, including compliance with the relevant recommendations and principles of the King Code; particularly those related to:
 - ensuring that ethics are managed effectively and integrated into SAWS strategies and operations;
 - the governance of Information Technology (IT).

3.4.3 Board Charter

The functioning of the Board is guided by the Board Charter, which is reviewed annually. The Charter makes provision for the Board to establish committees and delegate some of its functions to the respective committees, in order for the committees to assist the Board in the execution of its mandate.

In compliance with applicable legislative and governance frameworks, the Board ensured that the following matters were, inter alia, attended to:

a) Strategy, Annual Performance Plan and Budget

SAWS' Five-Year Strategy for 2015 to 2019, the Annual Performance Plan and the Budget for 2014/15 were reviewed and submitted to the Shareholder within the prescribed timelines.

b) Performance Monitoring

The implementation of the 2013/14 Annual Performance Plan was monitored accordingly. Quarterly Performance Reports were compiled by Management, reviewed by the Board and submitted to the Shareholder as required. The Board is also responsible for the evaluation of the performance of the Chief Executive Officer and, as such, the CEO's annual performance assessment for 2012/13 was conducted by the Board in July 2013.

c) Review of Policies and Governance Frameworks

Several policies and governance frameworks were reviewed to strengthen internal controls and ensure compliance with governance requirements including, inter alia, the Materiality and Significance Framework; the Delegation of Authority; as well as the Board Charters and the Committees' Terms of Reference.

appointments during the 2013/14 financial year. There was one resignation namely that of the then Chief Financial Officer, Mr Slingsby Mda, whose membership of the Board lapsed at the end of July 2014.

Board meetings were held in accordance with the provisions of the Board Charter and in line with the Board Calendar and Annual Work Plan. Over and above the scheduled Board meetings, the Charter makes provision for the Board to hold special meetings as and when the need arises.

3.4.4 Composition of the Board

The structure and composition of the Board are in compliance with corporate governance best practices. The Board had 13 members, with the majority being non-executive members; and the Chief Executive Officer and Chief Financial Officer as executive members.

During the period under review, the Board had four scheduled meetings, held on 29 May 2013, 30 July 2013, 8 November 2013 and 28 January 2014. The Board also had a meeting with the Shareholder (Minister of Water and Environmental Affairs) on 25 July 2013, and a Strategic Session on 15 August 2013.

The Board was appointed in June 2013 for a period of three years, ending May 2015. There were no new

Board membership and attendance of meetings are as reflected in the table below:

Table 4: Board Membership and Attendance of Meetings

NAME	DESIGNATION	DATE APPOINTED	QUALIFICATIONS	AREA OF EXPERTISE	BOARD DIRECTORSHIPS	OTHER COMMITTEES	NO. OF MEETINGS ATTENDED
Prof Lindisizwe Magi	Chairperson (Non-exec member)	01/04/ 2008 (re-appointed 01/06/2012)	PhD in Geography (Recreation and Environment); MA in Geography & Environmental Sciences; BA Hons (Urban & Economic Geography) and a BA Degree (Geography & Psychology)	Environmental sciences, geography, tourism and research	African Cycad Guest House; University of Zululand; Foundation of the University of Zululand; SA National Committee of the ICA; SA National Committee of the IGU – GeoParks Commission; Committee for Spatial Information; Mthonjaneni Development Network.CC	Member of HR & Remuneration Committee	6
Dr Nolulamo Gwagwa	Deputy Chairperson (Non-exec member)	01/06/2012	PhD.in Philosophy; Masters in Town and Regional Planning; MSc Specialised in Urbanisation, Gender Planning and Development Theory and Practice; Bachelor of Arts; and Certificate in Gender Planning	Policy Research & Development; Strategy and policy formulation; Town and regional planning	First Rand; Lulu Gwagwa Dev. Consulting; Sipiwo Sethu Family Trust; Lereko Investments; Aurecon; Sun International; Massmart; Tsebo Outsourcing; Cisco Technology and Services (Pty) Ltd	Chairperson of the Human Resources and Remuneration Committee	5
Mr Siyabonga Makhaye	Non-exec member	01/04/ 2008 (re-appointed 01/06/2012)	Masters in Business Leadership International Baccalaureate Diploma; BSc Hons Environmental Management; MSc Environmental Science; and Management Diploma (Executive Education)	Strategic leadership and financial management; Environmental management sciences; and stakeholder management	Broadway Mzansi Trading; Triple-S Logistics; Impala SHEQ Specialist; AVENG GLTA Board	Chairperson of the Audit & Risk Committee	5
Mr Andile Mvinjelwa	Non-exec member	01/06/2012	Master of Business Leadership (MBL); BSc Electrical Engineering (Light Current); BSc (Maths & Applied Maths)	Strategy development and implementation; financial, human resources and risk management; and engineering, technical	Connex Travel (Pty) Ltd Shumi Investment Holdings (Pty) Ltd	Chairperson of the Strategic Programmes Committee	5

Table 4: Board Membership and Attendance of Meetings (continued)

NAME	DESIGNATION	DATE APPOINTED	QUALIFICATIONS	AREA OF EXPERTISE	BOARD DIRECTORSHIPS	OTHER COMMITTEES	NO. OF MEETINGS ATTENDED
Ms Ntsoaki Mngomezulu	Non-exec member	01/06/2012	B.A. (Social Science) Neuro Linguistic Programme (NLP)	Public policy development; capacity building and research; Skills audit gap analysis; and stakeholder management	Ansaset Resources	Member of Human Resources Remuneration Committee	6
Mr Rowan Nicholls	Non-exec member	01/06/2012	B.Comm; CA (SA); CIA and MICS (UK)	Accounting, auditing and financial management	Film & Publications Board -RMTC -CUT ARC	Member of the Audit & Risk and Strategic Programmes Committees	4
Mr Jonty Tshipa	Non-exec member	01/06/2012	Masters Finance & Investment (Cum Laude); MBA; Diploma in Electrical Engineering (Heavy Current); Project Management	Credit Management; Corporate Finance; Financial Statement Analysis; Human Resources Management; Business Development; Consultancy; Strategy; Management of Technology; Project Engineering	None	Member of Audit & Risk; Strategic Programmes; and HR & Remuneration Committees	2
Prof Elizabeth Mokotong	Non-exec member	01/06/2012	B.A. Social Science (Social Work); B.A. (Hons) Social Science; Certificate Course in Adult Education; Diploma in Adult Education	Social and environmental awareness; Sociological research; Community Development	None	Member of the Strategic Programmes Committee	5
Dr Shadrack Moephuli	Non-exec member	01/06/2012	Biochemistry; Scientific research, Environmental health; Strategy and policy formulation and implementation	Biochemistry; strategic leadership; policy and strategy formulation	MZT Lekgotla; NMMU Innovations Pty Ltd; South African Forestry Company Limited (SAFCOL)	Member of the Strategic Programmes Committee	5
Ms Judy Beaumont	Non-exec member	01/06/2012	M. Phil, Environmental Science; B.A. (Hons) African Studies Department; and B.A. (English & Industrial Psychology)	Environmental sciences and sustainable development processes; Policy programmes and formulation and implementation; Research and Process facilitation and mediation	None	Member of the Strategic Programmes Committee	4
Mr Zola Fihlani	Non-exec member	01/06/2012	B. Comm (Accounting); B. Compt (Hons); Certificate in Theory of Accounting (CTA); Higher Diploma in Tax Law and Higher Diploma in International Tax Law; M. Comm (Tax)	Auditing and accounting; Financial management; Asset finance; and Deal structuring and execution	Pelchem SOC Ltd; Richards Bay IDZ SOC Ltd; Gauteng Partnership Fund; EVI Capital Partners LLC; EVI Capital Foundation; and Council for Medical Schemes	Member of the Audit & Risk Committee	1
Dr Linda Makuleni	Exec member (CEO)	01/06/2012	MBA; Bachelor of Veterinary Medicine and Surgery; Management Advancement Programme; and International Executive Advancement Programme	Chief Executive Officer	Unisa Graduate School of Business Leadership	Member of the Strategic Programmes Committee	6
Mr Slingsby Mda*	Exec member (CFO)	01/06/2012	Bachelor of Commerce; B Com to B Compt conversion; Part I Board Exams C.T.A, 2000	Chief Financial Officer	Member of the Audit Committee at: <ul style="list-style-type: none"> National Heritage Council Road Traffic Management Corporation National Arts Council 	Member of the Strategic Programmes Committee	3

* Mr Slingsby Mda retired on 31 July 2013 and Mr Lulama Gumenge assumed the role of the acting CFO

3.4.5 Board Committees

During the period under review, the Board had three committees with clear Terms of Reference namely, the Audit and Risk Committee; the Human Resource and Remuneration Committee; and the Strategic Programmes Committee.

1) Audit and Risk Committee

The Committee's primary responsibility is to assist the Board in discharging its duties relating to the monitoring of SAWS' compliance with applicable laws, regulations and governance frameworks, including the following:

- A review of the financial management processes and the adequacy of internal controls.
- A review of the Annual Financial Statements, the Annual Report and related regulatory filings before these are released, in order to consider the accuracy and completeness of the information.

- The governance of risk and Information Technology (IT).
- Overseeing the internal and external audit functions and audit processes; ensuring that these are guided by a risk-based approach.
- Reviewing SAWS' compliance with the performance management and reporting systems.
- Ensuring that all the disclosures and/or reporting requirements to the Board, the Shareholder, the National Treasury and the Auditor-General are being adhered to.

The Committee held four scheduled meetings during the 2013/14 financial year and no special meetings were held. The membership and attendance of committee meetings are reflected in the table below. The external auditors, internal auditors, the CEO and CFO of SAWS, and the CFO of the Department of Environmental Affairs had standing invitations to all committee meetings. When deemed necessary, the Committee also held separate meetings with the auditors, without Management being present.

Table 5: Audit and Risk Committee Members and Attendance of Meetings

NAME	QUALIFICATIONS	INTERNAL OR EXTERNAL	POSITION IN THE PUBLIC ENTITY	DATE APPOINTED	DATE RESIGNED	NO. OF MEETINGS ATTENDED
Mr Siyabonga Makhaye	International Baccalaureate Diploma; BSc Hons-Environmental Management, MSc Environmental Science; Management Diploma (Executive Education) and Masters in Business Leadership	External	Board Member and Chairperson of the Audit & Risk Committee	01/04/ 2008 (reappointed 01/06/2012)	-	4
Mr Zola Fihlani	B.Comm (Accounting); B.Compt (Hons); Certificate in Theory of Accounting (CTA); Higher Diploma in Tax Law and Higher Diploma in International Tax Law; M.Comm (Tax)	External	Board Member	01/06/2012	-	2
Mr Rowan Nicholls	B.Comm; CA (SA); CIA and MICS (UK)	External	Board Member and Member of the Strategic Programmes Committee	01/06/2012	-	4
Mr Jonty Tshipa	Masters Finance & Investment (Cum Laude); MBA; Diploma in Electrical Engineering (Heavy Current); Project Management	External	Board Member and Member of the Strategic Programmes and HR & Remuneration Committees	01/06/2012	-	2

2) Human Resource and Remuneration Committee

The Committee assists the Board in discharging its duties related to human capital management, ensuring that:

- SAWS has a Human Capital Management Strategy that is aligned to SAWS objectives;
- human capital-related policies, frameworks and systems are in place and in compliance with all applicable legislation and governance frameworks, including those related to performance management, succession planning and employee benefits; and
- ensuring that SAWS ethics are managed effectively.

The Committee held four scheduled meetings and one special meeting during the 2013/14 financial year. The membership and attendance of committee meetings are as reflected in the table below:

Table 6: Human Resource and Remuneration Committee members and attendance of meetings

Member	Designation	No. of meetings held	No. of meetings attended
Dr Nolulamo Gwagwa	Chairperson	4	4
Ms Ntsoaki Mngomezulu	Member	4	4
Prof Lindisizwe Magi	Member	4	4
Mr Jonty Tshipa	Member	4	4

3) Strategic Programmes Committee

The Committee oversees strategic programmes and special projects in the organisation. It also assists the Board in ensuring that appropriate scientific research, as well as technical and commercial programmes are undertaken and managed effectively, including those related to infrastructure recapitalisation. The Committee also oversees matters related to environmental sustainability.

The Committee held four scheduled meetings during the 2013/14 financial year and no special meetings were held. However, some committee members attended a workshop on the review of SAWS' Commercial Strategy, which was held on 9 July 2013. The membership and attendance of committee

meetings are as reflected in the table below:

Table 7: Strategic Programmes Committee Members and Attendance of Meetings

Member	Designation	No. of meetings held	No. of meetings attended
Mr Andile Mvinjelwa	Chairperson	4	4
Dr Shadrack Moephuli	Member	4	1
Prof Elizabeth Mokotong	Member	4	3
Ms Judy Beaumont	Member	4	1
Mr Rowan Nicholls	Member	4	4
Mr Jonty Tshipa	Member	4	2

3.4.6 Board Remuneration

Board members eligible for Board fees were remunerated and reimbursed for other expenses incurred in the course of executing SAWS-related activities. This was done in accordance with the Remuneration Framework, as determined annually by the Shareholder.

Please note: Board members in the employ of the public sector do not receive Board fees, but are only reimbursed for travel expenses (e.g. Dr S Moephuli); and Ms J Beaumont who is the Deputy Director-General in the Department of Environmental Affairs and a Shareholder representative on the Board does not receive Board fees nor is she reimbursed for travel expenses.

For Board fees and other related expenses paid to Board members, please refer to Note 26 of the Annual Financial Statements for the disclosure of Board fees for the 2013/14 financial year.

3.4.7 Board Induction and Development

No new members were appointed during the 2013/14 financial year and therefore no induction took place.

As part of Board members' ongoing development, the Board's membership of the Institute of Directors for Southern Africa (IoDSA) was renewed, as a result of which Board members received regular updates on legislative and governance-related topics. Presentations to the Board on specific scientific and technical topics were made at targeted meetings and some members attended training programmes that were relevant to their identified training needs.

3.4.8 Board Evaluation for 2012/13

In 2013/14, Board performance for the 2012/13 financial year was evaluated and, inter alia, included the following elements:

- Governance structures, accountability and the independence of members.
- Strategic and ethical leadership.
- Key governance elements including, but not limited to, the governance of risk and information technology.
- Internal controls.
- The performance of Board Committees.

The evaluation also included a peer review of the performance of individual Board members. The evaluation for 2013/14 will be done during the second quarter of the 2014/15 financial year, following consideration of the audited Annual Financial Statements and Annual Report for 2013/14 by the Board in July 2014.

3.5 The Governance of Risk and ICT

SAWS adopted an Enterprise-wide Risk Management (ERM) approach to enhance the alignment of strategy, process, people and information technology. The annual ERM review was conducted during the period under review, allowing the organisation to identify, prioritise and effectively manage those risks considered as critical. The review process culminated in the establishment of the Strategic Risk Register, which also formed the basis for the development of an Internal Audit Plan.

The Risk Management Policy was reviewed and the Risk Management Plan developed; integrating the entity's risk management programmes with the inclusion of business continuity management and total quality management elements, in order to enhance the effectiveness of risk management efforts.

The Information and Communication Technology (ICT) Policy and the ICT Governance Framework were also reviewed.

Progress reports on risk management, legal issues and ICT were submitted at all Board meetings, via the Audit and Risk Committee. At an operational level, the Executive Committee, the Risk Management Committee and the ICT Steering Committee played their respective management oversight roles, so as to ensure that all strategic and governance matters were attended to and managed effectively.

3.6 Materiality and Significance Framework

In line with the relevant provisions of the PFMA, the Materiality Framework was reviewed and approved.

3.7 Delegation of Authority

SAWS has a Delegation of Authority Policy in place, with its principles derived mainly from sections 56 and 57 of the PFMA, 1999 (as amended); regarding the assignment of powers and duties by the accounting authorities; and the responsibilities of other officials in a public entity respectively.

3.8 Internal and External Audit

The Internal Audit Plan is aligned to the achievement of the strategic objectives of SAWS. Findings emanating from completed audits are reviewed by management to enhance existing control measures, resulting in an effective and efficient control environment.

During the period under review, the internal audit function was outsourced to an independent firm, PricewaterhouseCoopers, and the external audit function was undertaken by the Auditor-General.

- The internal auditors assisted SAWS in identifying, evaluating and assessing significant organisational risks and they provided both the Board and the Audit and Risk Committee with an assurance pertaining to the effectiveness of internal financial controls and systems, in line with the approved Internal Audit Plan.
- The external auditors are responsible for independently auditing and reporting on the financial statements in accordance with the auditing standards; and in line with the External Audit Strategy.

3.9 Compliance with Laws and Regulations

During the period under review, no non-compliance issues were raised.

3.10 Fraud and Corruption

SAWS has a Fraud Prevention and Response Policy Plan in place, which spells out the roles and responsibilities of the Board and of different categories of staff. The Risk Management Policy also spells out the responsibilities of the Board and of different categories of staff.

Where allegations are reported through the Shareholder, they get submitted to the Board through the Minister's Office and/or the Department of Environmental Affairs.

The Board, through the Audit and Risk Committee, recommended that allegations on fraudulent activities reported through the National Anti-corruption Hotline 0800 701 701 be attended to and monitored by the internal auditors to maintain objectivity. However, SAWS is not aware of any fraudulent activities reported through the Anti-corruption Hotline in 2013/14.

3.11 Minimising Conflict of Interest

Board members and employees are required to complete and sign the declaration of interests at the beginning of each financial year and/or upon appointment. Conflicts of interest are also declared at all Board meetings on matters to be dealt with in terms of the meeting Agenda.

Description of the Processes Implemented to Minimise Conflict of Interest in Supply Chain Management

SAWS has and maintains an appropriate procurement and provisioning system, which is fair, equitable, transparent, competitive and cost-effective, in accordance with the PFMA (Public Finance Management Act, Act 1 of 1999, as amended); Treasury Regulation 16A; and other applicable legislative frameworks.

The Risk of Conflict of Interest in Supply Chain Management is Minimised Through the Following:

- **Training of the supply chain management officials**

The officials implementing SAWS' Supply Chain Management System, are trained and developed in order to stay abreast with the latest developments and best practices.

- **Procurement of Goods and Services**

The procurement of goods and services, either by way of quotations or through a bidding process, is within the threshold values as determined by National Treasury. The Supply Chain Management System provides, in the case of procurement through a bidding process, for –

- (a) the adjudication of bids through a bid adjudication committee;
- (b) the establishment, composition and functioning of bid specification, evaluation and adjudication committees;
- (c) the selection of bid adjudication committee members;
- (d) bidding procedures; and
- (e) the approval of bid evaluation and/or adjudication committee recommendations.

Bid documentation is in accordance with relevant prescripts; appropriate segregation of duties and responsibilities across the SCM processes; declaration of interest registers are circulated at relevant committee meetings; and a legal representative attends SCM meetings for compliance monitoring purposes.

- **Compliance with Ethical Standards**

All officials and other role-players in the Supply Chain Management System must comply with the highest ethical standards in order to promote mutual trust and respect; and an environment where business can be conducted with integrity and in a fair and reasonable manner.

The National Treasury's Code of Conduct for Supply Chain Management Practitioners must be adhered to by all officials and other role-players involved in Supply Chain Management.

A Supply Chain Management official or other role-player –

- (a) must recognise and disclose any conflict of interest that may arise;
- (b) must treat all suppliers and potential suppliers equitably;
- (c) may not use his/her position for private gain or to improperly benefit another person;

- (d) must ensure that he/she does not compromise the credibility or integrity of the Supply Chain Management system through the acceptance of gifts or hospitality or any other act;
- (e) must be scrupulous in their use of public property; and
- (f) must assist the accounting authority in combating corruption and fraud in the Supply Chain Management system.

If a Supply Chain Management official or other role-player, or any close family member, partner or associate of such official or other role-player has any private or business interest in any contract to be awarded, that official or other role-player must –

- (a) disclose that interest; and
- (b) withdraw from participating in any manner whatsoever in the process relating to that contract.

An official in the Supply Chain Management Unit who becomes aware of a breach of, or failure to comply with any aspect of the Supply Chain Management System, must immediately report the breach or failure to the accounting authority or delegated official, in writing.

- **Avoiding abuse of the Supply Chain Management System**

- (a) The accounting authority or delegated officials take all reasonable steps to prevent abuse of the Supply Chain Management System.
- (b) Any allegation against an official or other role-player of corruption, improper conduct or failure to comply with the Supply Chain Management System is investigated, and when justified, the appropriate steps are taken against such an official or other role-player.
- (c) The National Treasury's database is checked prior to awarding any contract to ensure that no recommended bidder, nor any of its directors, is listed as companies or persons prohibited from doing business with the public sector.
- (d) A bid from a supplier who fails to provide written proof from the South African Revenue Service

that such supplier either has no outstanding tax obligations or has made arrangements to meet outstanding tax obligations, will not be considered.

- **Internal Audit**

The Internal Auditors of SAWS audit the internal controls within the entity and report on the effectiveness and efficiency thereof to the Accounting Authority.

3.12 Code of Conduct

The conduct of employees is guided by a number of policies, such as the Disciplinary Policy and the Fraud Prevention Policy and Response Plan. SAWS had a Code of Conduct and Ethics that was reviewed during the last quarter of the 2013/14 financial year for consideration and approval by the Board during the first quarter of 2014/15. The Code of Conduct and Ethics also includes the fraud/ethics hotline that can be used by both SAWS and its stakeholders to report fraudulent activities and unethical behaviour/conduct.

3.13 Health, Safety and Environmental Issues

Occupational Health and Safety (OHS), also commonly referred to as Occupational health, safety and environment (SHE) is an area concerned with protecting the safety, health and welfare of people engaged in work or employment. It is also concerned with the legal and moral responsibility that a business or public entity has towards sustainability of the environment. The goals of occupational health and safety programmes foster safe and healthy work environment programmes. OHS also protects co-workers, family members, employers, customers, the general public and many others who might be affected by the workplace environment.

During the period under review, additional health and safety representatives were appointed around the country where SAWS operations are represented. Training of health and safety representatives, fire-fighters and first-aiders was offered to employees at all regional offices. Between January and March 2014, SAWS issued personal protective equipment (PPE) to all its operational staff countrywide.

3.14 Company Secretary

In accordance with governance best practices, the Board was supported by the Company Secretary, in ensuring the effective functioning of the Board and its committees. The responsibilities of the Company Secretary included:

- 1) Ensuring the Board's compliance with all applicable legislative and governance frameworks.
- 2) Proper coordination of Board/Committee meetings and strategic sessions to ensure effectiveness.
- 3) Acting as a custodian of statutory records.
- 4) Providing guidance to the Board Structures on the procedures for the execution of their duties.
- 5) Acting as a point of contact between SAWS and the Portfolio Committee; SAWS and the Shareholder (Ministry and DEA); and as a point of contact between the Board and Management and staff.
- 6) Managing resources allocated to the Board and Secretariat.
- 7) Coordinating SAWS' risk management processes.

While the Board has unrestricted access to the advice and support of the Company Secretary, the Charter makes provision for the Board to seek independent professional advice at SAWS' expense, should this be deemed necessary.

Note: SAWS is not subjected to the Companies Act, therefore the reports and returns required in terms of the Companies Act are not applicable to SAWS. However, any reports and returns required in terms of the PFMA and other legislation applicable to SAWS, were submitted to the relevant authorities.

3.15 Social Responsibility

SAWS is committed to the socio-economic development of South Africa and the region. It strives to be a good corporate citizen by complying with its regulatory framework, investing in people, conducting business ethically and being environmentally and socially sensitive. SAWS also encourages its employees to participate and invest in social investment programmes and initiatives that impact positively on the environment, consumers, employees, communities, stakeholders and all other members of the public who are considered to be stakeholders of the organisation.

SAWS takes a holistic approach to the empowerment of communities and aligns its Corporate Social Investment

programmes with national priorities, focusing on contributions to education, health, job creation, poverty alleviation and other related initiatives. In its operations, SAWS also provides opportunities for development towards the sustainable economic viability of communities.

During the period under review, SAWS continued with its contribution towards the socio-economic benefits of weather, climate and related sciences by providing severe weather warnings, which were geared towards saving lives and protecting property. Participation in community projects, school outreach programmes and partnerships with disaster management centres and other stakeholders are all contributions that stimulate economic growth in disadvantaged areas.

The SAWS CSI initiatives are aligned to its mandate of providing public good services. CSI within SAWS is also viewed as an investment in the future and a vehicle through which the organisation can make meaningful contributions to the development of the country's SET pipeline.

Related initiatives are discussed in more detail under "Effective Relationship Management" in Part B of this report.

3.16 Audit and Risk Committee Report

The Report of the Audit and Risk Committee is included in the audited Annual Financial Statements for 2013/14.





PART D

Human Capital Management



HUMAN CAPITAL MANAGEMENT

4.1 Introduction

4.1.1 An Overview of the Human Capital Management (HCM) Division

Through strategic partnerships and collaborations, the Human Capital Management (HCM) Division recruits, develops and retains a high-performing and diverse workforce and furthermore fosters a healthy, safe and innovative working environment for employees, in order to maximise individual and organisational potential. This, in turn, will position SAWS as the foremost provider of relevant services in respect of weather, climate and related services.

The overall role of HCM within SAWS is to ensure the availability of strategy-driven human capital capacity, with a view to optimal performance, so as to achieve the organisation's set targets. SAWS requires highly skilled individuals to grow and develop its pool of expertise and knowledge, so that staff members can play an active role in entrenching a culture in the organisation that is linked to the importance of the socio-economic benefits of weather, climate and related services.

4.1.2 HR Priorities During the Period Under Review and the Impact of These Priorities

Four strategic priorities were identified as being supportive of achievements in terms of the vision for HCM. Based upon an analysis of the current state of the organisation, greater emphasis was placed on the following priorities:

- a) The strategic management of human capital by availing the requisite skills required for SAWS' performance.
- b) The implementation of employee attraction and retention programmes, including leadership development.
- c) The monitoring of the retention programme, particularly with regard to scarce and critical skills.
- d) The managing of organisational transformation in the context of the country's needs and population diversity.

SAWS is committed to developing the necessary leadership skills at all levels of the organisation, while creating a pool of successors with regard to critical and key positions, so that SAWS does not run the risk of being paralysed by the movements of key members of staff.

4.1.3 Workforce Planning Framework and Key Strategies to Attract and Recruit a Skilled and Capable Workforce

SAWS, as an organisation, did fairly well within the available means to ensure that the mandate of the organisation was carried out during the period under review. Some 83% of the requisite skills were provided in core and supporting divisions to enable the smooth functioning of the organisation. This achievement must be rated highly, taking into consideration the material constraints that the organisation faced, as clearly detailed in the ICT Master Plan and the SETI reviews – documents that analysed the capacity of the organisation to deliver on this mandate. By studying the content of these documents, it would appear that the organisation was under-resourced. However, there are various mitigating programmes in place, which were implemented to ensure that the SAWS workforce was in the position to enable the organisation to deliver on set targets. These, inter alia, included the Skills Transfer Programme, Dual Career Pathing and Succession Planning.

4.1.4 Employee Performance Management Framework

The Employee Performance Management Framework constitutes the SAWS performance system, the KPIs and the performance targets pertaining to service delivery. The system is intended to continuously monitor the performance of employees in fulfilling the organisation's mandate. These KPIs facilitate the translation of complex targets into quantifiable and measurable outputs.

The Performance Management Process comprises five phases, namely planning, career development, the moderation of scores, reviewing and rewarding. Employee coaching is an ongoing process within the organisation and employees get regular feedback on their performance. The effective implementation of the

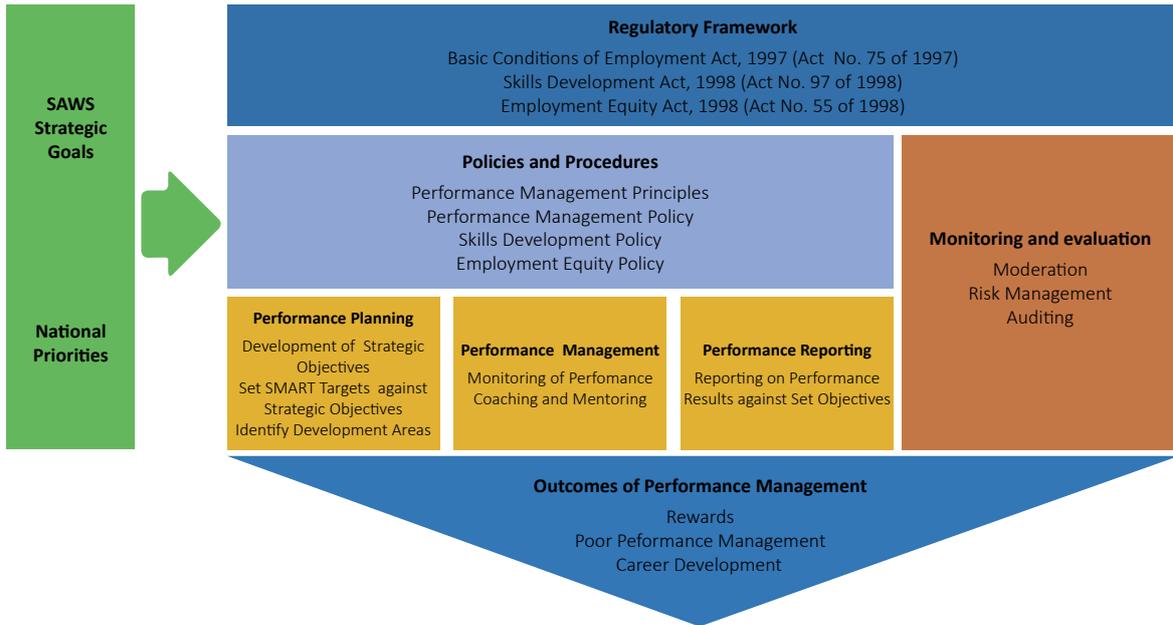


Figure 2: The Performance Management Framework

Performance Management Framework allows SAWS to analyse, audit, reflect and report on performance for the period under review, while taking practical steps to improve performance. This process is illustrated in the diagram above.

Employee performance is scored out of a total of 125. Of that, 100 marks pertain to key performance areas and 25 to the stretch targets set. The overall organisational performance target for the period under review was 86%.

SAWS believes that the principles of an effective Performance Management System are to ensure that performance outputs are Specific, Measurable, Achievable, Realistic and Time-based (SMART), and that these targets are aligned to the organisation’s strategic objectives. Management is committed to the management of poor performance. This applies to employees who show developmental gaps that constitute a hindrance to these employees in performing at a satisfactory level.

4.1.5 Employee wellness programme

To increase the organisation’s positive wellness profile, SAWS adopted key programmes aimed at improving employees’ health and endorsing a culture of wellness within the organisation. With the organisation’s support, employees are able to maintain a healthy way of life, which has a direct influence on absenteeism rates, productivity, performance and staff retention.

a) Employee Assistance Programme (EAP)

The EAP is a counselling benefit, made available to SAWS employees, and has proven to reduce absenteeism, healthcare costs and accidents on the job, while increasing employee morale, job performance, quality of life and a conducive working environment.

Employees are referred on an ad hoc basis to professionals for therapy when necessary. During the period under review, only 0.5% of employees were referred to the EAP and the results were positive.

b) Employee fitness programmes

Some 17% of SAWS employees participated in the Discovery 702 Walk the Talk 2013. Furthermore, the annual Corporate Sports Day took place at the CSIR sporting grounds during October 2013 and 25% of SAWS’ employees participated in the event.

c) Employee Wellness Committee

SAWS encourages and supports employee wellness amongst all its employees, including those in its regional offices across the country. It is for this reason that an Employee Wellness Committee was established, comprising regional office representatives, to plan employee wellness programmes that would benefit regional employees.

d) Wellness Assessment

SAWS organises an annual Wellness Day for employees. The event takes place during November/

December, in order to coincide with World Aids Day, which takes place on 1 December every year. The main objective is to build awareness and support employees in their journey towards total wellness by conducting health assessments and screenings.

e) Employee Safety

In 2013, there was a break-in at the Ottosdal radar site. The security of radar sites will therefore be improved in order to deter criminal elements. The installation of an electrified fence with an alarm system is being envisaged.

4.1.6 Policy Development

All HCM policies were reviewed during 2013/2014 and the Executive Management referred some of the policies back to management for further review. These will now be presented to the Board during the 2014/2015 financial year. A total of 30% of the policies reviewed were approved by the Board during 2013/2014. These were:

- Leave and Absenteeism
- Relocation
- Performance Management
- Occupational Health and Safety
- Smoking Control
- Recruitment and Selection
- Succession Planning

4.1.7 Achievements

SAWS achieved the following strategic objectives during the period under review:

- a) The workforce reflects diversity.
- b) Effective management of the Performance Management Process.
- c) Achieved its target for the retention of key and critical skills.
- d) A competent and healthy workforce.
- e) Approval of the Regional Training Centre Strategy.
- f) The training of forecasters and meteorological technicians who meet the requirements in accordance with international standards.

- g) The training of aviation meteorological observers and forecasters who meet the internationally agreed-upon competencies.
- h) Capacity-building in terms of Agro and Hydro-meteorology.
- i) The absorption of 63% of interns as SAWS employees.

4.1.8 Challenges Faced by the Public Entity

- a) Budget constraints that delayed the filling of positions in support of the organisational structure.
- b) Inadequate capacity with regard to core competencies required by the organisation.
- c) An increase in training fees, resulting in very few training courses being attended.
- d) Competition from international organisations that approached SAWS employees with lucrative benefits.
- e) Budget constraints impeded the growth and capacity of the RTC to cover critical skills relating to meteorology and climate.
- f) SAWS' international competency-based training stretched existing human capacity to critical levels.
- g) The expansion into distance learning activities was hampered by limited time and a limited skill basis.

4.1.9 Future HR Plans/goals

- The implementation of the RTC Strategy.
- To enhance the Educational Plan for Weather and Climate and using it to obtain external funding.
- The implementation of an Employment Equity Plan.
- The development and implementation of a Health and Wellness Strategy.
- The development and implementation of an Employee Engagement Strategy.
- The implementation of the Rewards and Recognition Initiatives.

4.2 Human Resources Oversight Statistics

Table 8: Training Costs

PERSONNEL EXPENDITURE (R0.00)	TRAINING EXPENDITURE (R0.00)	TRAINING EXPENDITURE AS A PERCENTAGE OF PERSONNEL COSTS	NUMBER OF EMPLOYEES TRAINED	AVERAGE TRAINING COST PER EMPLOYEE (R0.00)
160 468 015	895 455	5.3	114	7 855

Table 9: Employment and Vacancies

PROGRAMME	2012/2013: NUMBER OF EMPLOYEES	2013/2014: APPROVED POSTS	2013/2014: NUMBER OF EMPLOYEES	2013/2014: VACANCIES	PERCENTAGE OF VACANCIES
All offices	387	423	389	34	8
Top Management	4	5	4	1	20
Senior Management	19	27	25	2	7
Professionally qualified	86	89	86	3	3
Skilled	136	145	136	9	6
Semi-skilled	67	127	108	19	15
Unskilled	63*	30	30	0	0
TOTAL	387	423	389	34	8

* Includes temporary employees and interns

Table 10: Employment Changes

SALARY BAND	EMPLOYMENT AT BEGINNING OF PERIOD	APPOINTMENTS	TERMINATIONS	EMPLOYMENT AT THE END OF PERIOD
Top Management	4	1	1	4
Senior Management	26	3	4	25
Professionally qualified	86	4	4	86
Skilled	137	7	8	136
Semi-skilled	101	15	8	108
Unskilled	35	10	15	30
TOTAL	389	40	40	389

Table 11: Reasons for Staff Leaving

REASON	NUMBER	PERCENTAGE OF TOTAL NUMBER OF STAFF LEAVING
Death	0	0
Resignation	26	65
Dismissal	0	0
Retirement	4	10
Ill health	1	2.5
Expiry of contract	9	22.5
Other	0	0

During the period under review, SAWS achieved its 94% core skills retention target. Some 35% of the terminations were due to retirement and contract termination and the rest were due to a variety of reasons, ranging from relocation, career advancement abroad and a change in career.

The organisation conducted an employee climate survey and the statistics indicated that the employees were relatively satisfied with their jobs. Through various skills development programmes, SAWS is committed to improving the skills and working conditions of current employees.

Table 12: Labour Relations: Misconduct and Disciplinary Action

NATURE OF DISCIPLINARY ACTION	NUMBER
Verbal warning	3
Written warning	5
Final written warning	2
Dismissal	0

Table 13: Equity Target and Employment Equity Status - Male

LEVELS	MALE							
	AFRICAN		COLOURED		INDIAN		WHITE	
	CURRENT	TARGET	CURRENT	TARGET	CURRENT	TARGET	CURRENT	TARGET
Top Management	2	2	0	0	0	0	0	0
Senior Management	7	7	0	0	1	1	2	2
Professionally qualified	40	40	4	4	2	2	21	21
Skilled	51	51	6	6	4	4	25	25
Semi-skilled	40	40	9	9	0	0	8	8
Unskilled	17	17	3	3	0	0	0	0
TOTAL	157	157	22	22	7	7	56	56

Table 14: Equity Target and Employment Equity Status - Female

LEVELS	FEMALE							
	AFRICAN		COLOURED		INDIAN		WHITE	
	CURRENT	TARGET	CURRENT	TARGET	CURRENT	TARGET	CURRENT	TARGET
Top Management	2	2	0	0	0	0	0	0
Senior Management	5	5	0	0	0	0	3	3
Professionally qualified	17	24	1	1	0	0	8	8
Skilled	26	27	3	3	4	4	17	17
Semi-skilled	37	41	9	9	1	1	4	4
Unskilled	9	9	1	1	0	0	0	0
TOTAL	96	108	14	14	5	5	32	32

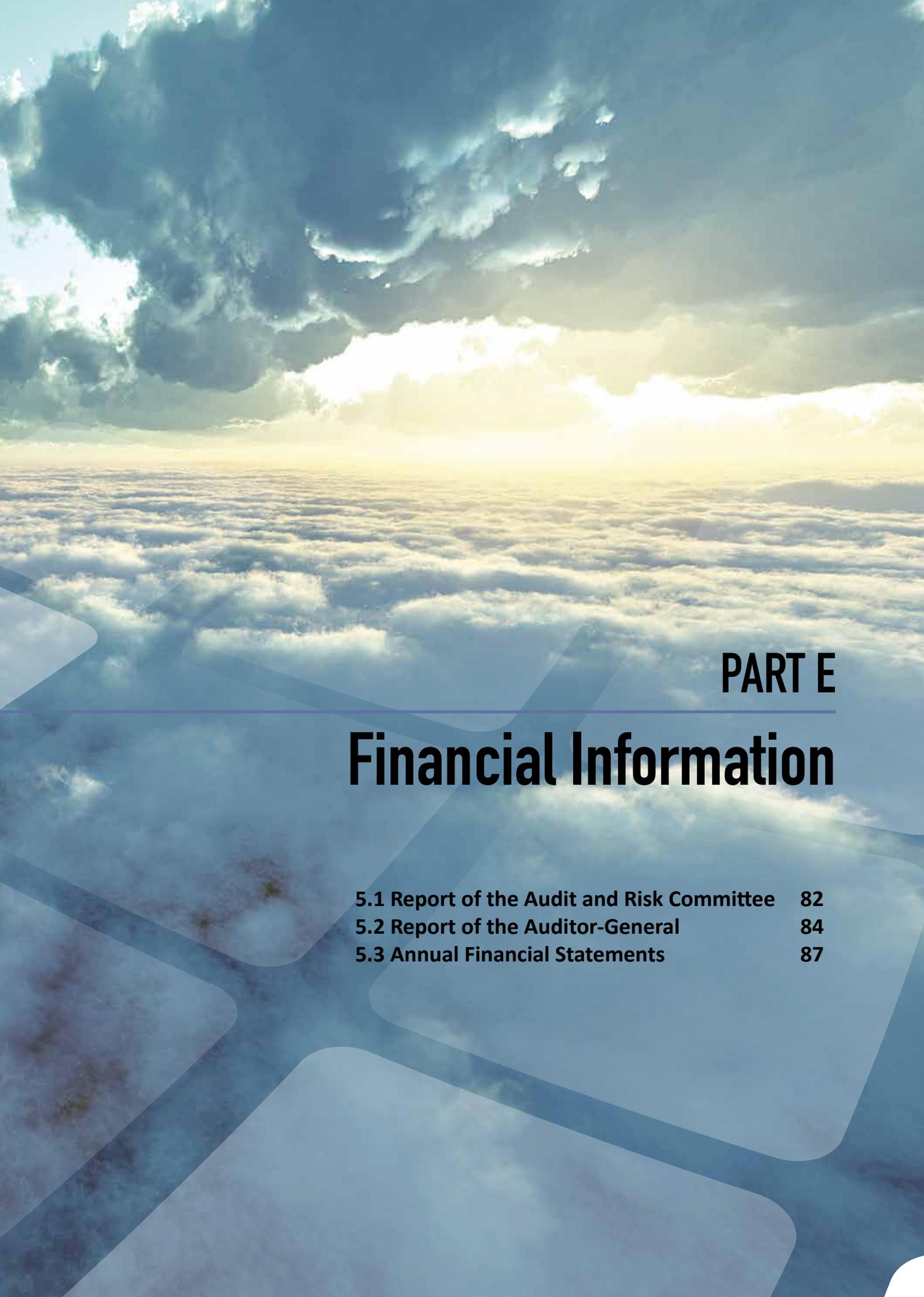
Table 15: Equity Target and Employment Equity Status - Disabled Staff

LEVELS	DISABLED STAFF							
	AFRICAN		COLOURED		INDIAN		WHITE	
	CURRENT	TARGET	CURRENT	TARGET	CURRENT	TARGET	CURRENT	TARGET
Top Management	1	1	0	0	0	0	0	0
Senior Management	0	0	0	0	0	0	1	1
Professionally qualified	0	2	0	0	0	0	1	1
Skilled	0	1	0	0	0	0	2	2
Semi-skilled	0	0	0	0	0	0	2	2
Unskilled	1	1	0	0	0	0	0	0
TOTAL	2	5	0	0	0	0	6	6

The organisation achieved the placement of African females in all management levels, including senior and top management. In comparison with the target though, the organisation achieved 83%, with a shortfall at Middle Management. The middle management population has been stable for the year under review, with no terminations. Due to the shortage of females with the core skills within the market, the organisation did not meet the target to place seven females at middle

management level. However, through various skills development programmes that have been identified, such as the Succession Plan, Management Development Programme etc, Management is committed to increase the number of women at Middle Management level as per the Employment Equity targets. Furthermore, by the end of March 2014, the organisation had at least 3% of the overall population as people with disabilities.





PART E

Financial Information

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5.1 REPORT BY THE AUDIT AND RISK COMMITTEE

For the year ended 31 March 2014, the Audit and Risk Committee complied with its responsibilities, arising from section 38(1)(a) of the Public Finance Management Act (PFMA), 1999 (Act No. 1 of 1999) as amended and Treasury Regulation 3.1.13.

Audit and Risk Committee Membership and Attendance of Meetings

The Committee plays a crucial oversight role in the entity's corporate governance activities. The composition of the Committee and the attendance of meetings during the period under review are listed in paragraph 3.4.5(1) under Part C: Corporate Governance of the Annual Report.

Audit and Risk Committee's Responsibilities

The main responsibilities of the Committee, as outlined in the Committee's Charter include, amongst others:

- a review of the financial management processes and the adequacy of internal controls;
- a review of the Annual Financial Statements, the Annual Report and related regulatory filings before these are released, in order to consider the accuracy and completeness of the information;
- the governance of risk and Information Technology (IT);
- overseeing the internal and external audit functions and audit processes thereof;
- a review of SAWS' compliance with the performance management and reporting systems; and
- ensuring that all the disclosures and/or reporting requirements to the Board, the Shareholder, the National Treasury and the Auditor-General are adhered to.

The Effectiveness of Internal Control

PricewaterhouseCoopers (PwC) was appointed as SAWS' internal auditors on 01 April 2013, for a period

of three years. This is an ongoing process that aims to ensure adherence to and implementation of effective and efficient internal controls and procedures. The Audit and Risk Committee guided the internal auditors in the preparation and implementation of the Annual Audit Plan and ensured that the review of the Internal Audit Plan took SAWS' risk profile into consideration.

The Committee reviewed the reports from both internal and external auditors and is satisfied that overall, the systems of internal control for the period under review were effective.

The Quality of Management and Monthly/Quarterly Reports Submitted in Terms of the PFMA and the Division of Revenue Act, 2014 (Act No. 10 of 2014)

The Audit and Risk Committee is satisfied with the content and quality of the quarterly performance reports prepared and issued by the Chief Financial Officer (CFO) and Chief Executive Officer (CEO) during the year under review. Where required, the Committee made recommendations for enhancements to the reports.

Evaluation of the Audited Annual Financial Statements

The Committee reviewed and discussed the audited Annual Financial Statements to be included in the Annual Report in consultation with the Accounting Officer (the CEO), the internal auditors and the Auditor-General; and noted the Auditor-General's Management Report and Management's response thereto.

Summary of Main Activities undertaken by the Committee during the Financial Year under Review

During the period under review, the Audit and Risk Committee attended to the following matters:

- The quarterly review of SAWS' Management Accounts against the 2013/14 budget.
- The review of governance policies and frameworks, such as the Significance and Materiality Framework;

the Delegation of Authority; the Information and Communication Technology (ICT) Policy; the Risk Management Policy; and the Risk Management Plan.

- A review of the interim financial statements for the period ending 30 September 2013.
- A review of the unaudited Annual Financial Statements for the year ended 31 March 2014.
- Monitoring of the risk management, ICT and legal processes, with reports on these issues submitted as standing items at all committee meetings.
- Reviewed the annual budget for the year ending 31 March 2015 for the Board's consideration and approval.
- Self evaluation of the 2012/13 performance of the Committee and an evaluation of both the internal and external auditors. *Note: the performance of the Committee was also evaluated by the Board.*

Internal Audit

The internal audit is operating effectively and addressed the risks pertinent to SAWS. At the end of the 2013/14 financial year, the internal auditors reported that they had executed all the activities expected of them in terms of the Internal Audit Plan and were overall satisfied with the effectiveness of the internal control environment.

External Audit

The Audit and Risk Committee noted and accepted the Auditor-General's Management Report conclusions on the audited financial statements and is of the opinion

that the Annual Financial Statements should be accepted and read together with the Auditor-General's Final Management Report.

Conclusion

According to various reports from the internal and external auditors on the review of the financial statements, and the Auditor-General's Final Management Report for the year ended 31 March 2014, it was noted that no significant or material non-compliance with the prescribed policies and procedures had been reported. Accordingly, we can report that the systems of internal control for the period under review were effective and efficient.

Date the Audit and Risk Committee recommended AFS be approved

The Committee recommended the approval of the audited Annual Financial Statements at the Board meeting held on 30 July 2014.



Mr Siyabonga Makhaye

Chairperson of the Audit and Risk Committee

Date: 30 July 2014

5.2 REPORT BY THE AUDITOR-GENERAL

REPORT OF THE AUDITOR-GENERAL TO PARLIAMENT ON SOUTH AFRICAN WEATHER SERVICE

REPORT ON THE FINANCIAL STATEMENTS

Introduction

1. I have audited the financial statements of the South African Weather Service set out on pages 87 to 130, which comprise the statement of financial position as at 31 March 2014, the statement of financial performance, statement of changes in net assets, and cash flow statement and the statement of comparison of budget information with actual information for the year then ended, as well as the notes, comprising a summary of significant accounting policies and other explanatory information.

Accounting Authority's Responsibility for the Financial Statements

2. The accounting authority is responsible for the preparation and fair presentation of these financial statements in accordance with South African Standards of Generally Recognised Accounting Practice (SA Standards of GRAP) and the requirements of the Public Finance Management Act of South Africa, 1999 (Act No. 1 of 1999) (PFMA), and for such internal control as the accounting authority determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditor-General's Responsibility

3. My responsibility is to express an opinion on these financial statements based on my audit. I conducted my audit in accordance with the Public Audit Act of South Africa, 2004 (Act No. 25 of 2004) (PAA), the general notice issued in terms thereof and International Standards on Auditing. Those standards require that I comply with ethical requirements, and plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

4. An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgement, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

5. I believe that the audit evidence I have obtained is sufficient and appropriate to provide a basis for my audit opinion.

Opinion

6. In my opinion, the financial statements present fairly, in all material respects, the financial position of the South African Weather Service as at 31 March 2014 and its financial performance and cash flows for the year then ended, in accordance with SA Standards of GRAP and the requirements of the PFMA.

REPORT ON OTHER LEGAL AND REGULATORY REQUIREMENTS

7. In accordance with the PAA and the general notice issued in terms thereof, I report the following findings on the reported performance information against predetermined objectives for selected objectives presented in the annual performance report, non-compliance with legislation as well as

internal control. The objective of my tests was to identify reportable findings as described under each subheading but not to gather evidence to express assurance on these matters. Accordingly, I do not express an opinion or conclusion on these matters.

Predetermined Objectives

8. I performed procedures to obtain evidence about the usefulness and reliability of the reported performance information for the following selected objectives presented in the annual performance report of the public entity for the year ended 31 March 2014:

- Objective 1: To ensure the continued relevance of the organisation in delivering meteorological and related products and services in compliance with all applicable regulatory frameworks on pages 29 to 31.
- Objective 2 : To ensure the effective management of stakeholder, partner and key client relations on pages 31 to 32.
- Objective 3 : To address the short-term viability and long-term sustainability of SAWS revenue and ensure continued fiscal discipline on page 32.

9. I evaluated the reported performance information against the overall criteria of usefulness and reliability.

10. I evaluated the usefulness of the reported performance information to determine whether it was presented in accordance with the National Treasury's annual reporting principles and whether the reported performance was consistent with the planned objectives. I further performed tests to determine whether indicators and targets were well defined, verifiable, specific, measurable, time bound and relevant, as required by the National Treasury's Framework for managing programme performance information (FMPPI).

11. I assessed the reliability of the reported performance

information to determine whether it was valid, accurate and complete.

12. I did not raise any material findings on the usefulness and reliability of the reported performance information for the selected objectives.

Additional Matters

13. Although I raised no material findings on the usefulness and reliability of the reported performance information for the selected objectives, I draw attention to the following matters:

Achievement of Planned Targets

14. Refer to the annual performance report on pages 29 to 33 for information on the achievement of the planned targets for the year.

Adjustment of Material Misstatements

15. I identified material misstatements in the annual performance report submitted for auditing on the reported performance information for the following:

- Objective 1: To ensure the continued relevance of the organisation in delivering meteorological and related products and services in compliance with all applicable regulatory frameworks.
- Objective 2: To ensure the effective management of stakeholder, partner and key client relations.
- Objective 3: To address the short-term viability and long-term sustainability of the SAWS revenue and ensure continued fiscal discipline.

As management subsequently corrected the misstatements, I did not raise any material findings on the usefulness and reliability of the reported performance information.

Compliance with Legislation

16. I performed procedures to obtain evidence that the public entity had complied with applicable legislation regarding financial matters, financial management and other related matters. My findings on material non-compliance with specific matters in key legislation, as set out in the general notice issued in terms of the PAA, are as follows:

- Management did not ensure that an adequate review on the annual performance report was performed prior to submission for audit purposes.
- Management did not adequately update their supply chain management policy to ensure that it is adequately aligned to the PFMA, Treasury Regulations and the Preferential Procurement Regulations. This resulted in non-compliance as management awarded quotations to suppliers who did not submit an SBD4 form for awards between R10 000 – R30 000.

Procurement and Contract Management

17. Quotations were awarded to bidders who did not submit a declaration on whether they are employed by the state or connected to any person employed by the state, which is prescribed in order to comply with Treasury Regulation 16A8.3.

Financial and Performance Management

20. Management did not perform an adequate review on the annual performance report to ensure it met the requirements as per the guidelines issued by National Treasury.

Internal Control

18. I considered internal control relevant to my audit of the financial statements, the annual performance report and compliance with legislation. The matters reported below are limited to the significant internal control deficiencies that resulted in opinion, the findings on the annual performance report and the findings on non-compliance with legislation included in this report.

Auditor-General

Auditor-General

Pretoria

31 July 2014

Leadership

19. The following challenges were experienced that contributed to the weaknesses in the financial and performance environment and the ultimate audit outcome:



AUDITOR - GENERAL
SOUTH AFRICA

Auditing to build public confidence

STATEMENT OF FINANCIAL POSITION

AS AT 31 MARCH 2014

		2014 R	2013 R RESTATED
	NOTE(S)		
ASSETS			
Non-Current Assets		443 788 761	377 137 000
Property, plant and equipment	6	341 352 034	319 069 323
Intangible assets	7	19 252 330	13 537 677
Investment property	8	83 184 397	44 530 000
Current Assets		100 102 807	117 393 763
Inventory	9	3 312 199	4 324 851
Trade and other receivables from exchange transactions	10	17 297 190	13 545 491
Prepayments and advances	11	2 357 255	5 909 111
Cash and cash equivalents	12	77 136 163	93 614 310
TOTAL ASSETS		543 891 568	494 530 763
LIABILITIES			
Non-Current Liabilities		15 094 144	15 449 953
Post retirement medical aid	13	12 945 821	14 500 678
Non-current provisions	14	456 250	449 973
Operating lease liability	15	1 692 073	499 302
Current Liabilities		44 314 570	42 658 419
Short term employee benefits	13	3 140 924	2 995 197
Current provisions	14	11 879 896	11 218 347
Trade and other payables from exchange transactions	16	25 921 269	22 429 215
Revenue received in advance	17	372 452	418 409
Unspent donations received	18	3 000 029	5 597 251
TOTAL LIABILITIES		59 408 714	58 108 372
Net assets		484 482 854	436 422 391
Revaluation reserve		67 234 251	59 337 781
Accumulated surplus		417 248 603	377 084 610
TOTAL NET ASSETS AND LIABILITIES		543 891 568	494 530 763

STATEMENT OF FINANCIAL PERFORMANCE

FOR THE YEAR ENDED 31 MARCH 2014

	NOTE(S)	2014 R	2013 R RESTATED
Revenue			
Revenue from non-exchange transactions		193 529 950	160 150 408
Government grant - opex		162 943 000	143 528 839
Government grant - capex		20 000 000	14 342 870
Contributions and donations		10 586 950	2 278 699
Revenue from exchange transactions		103 713 904	93 480 421
Commercial revenue		98 199 458	87 936 130
Other revenue		5 514 446	5 544 291
Total revenue	19	297 243 854	253 630 829
Expenses			
Administrative expenses	20	(8 392 240)	(12 973 244)
Employee costs	21	(163 427 742)	(148 256 341)
Amortisation	7	(2 690 682)	(2 760 477)
Depreciation	6	(23 414 663)	(21 134 279)
Other operating expenses	22	(97 228 945)	(84 870 113)
Total expenses		(295 154 272)	(269 994 454)
Other gains			
Loss in fair value - property, plant and equipment	6	(300 986)	-
Gains from fair value adjustments - investment property	8	38 654 397	-
Actuarial (loss)/gain - post retirement medical aid	14	(279 000)	22 000
Surplus/(deficit) for the year		40 163 993	(16 341 625)

STATEMENT OF FINANCIAL PERFORMANCE

FOR THE YEAR ENDED 31 MARCH 2014

	NOTE(S)	Revaluation Reserve R	Accumulated Surplus R	Total Net Assets R
Balance at 1 April 2012 as previously reported		57 984 042	382 288 881	440 272 923
Prior year adjustment	33	-	7 132 316	7 132 316
Prior year adjustment - Irene property	33	1 360 000	-	1 360 000
Restated balance at 1 April 2012		59 344 042	389 421 197	448 765 239
Prior year adjustment		-	4 005 035	4 005 035
Deficit for the year - restated		(161 744)	(16 341 622)	(16 503 366)
As previously reported		-	(15 748 008)	(15 748 008)
Prior year adjustment - depreciation		(161 744)	-	(161 744)
Prior year adjustment		-	(593 614)	(593 614)
Revaluation of property		216 250	-	216 250
Revaluation of aircraft		(60 767)	-	(60 767)
Restated balance at 31 March 2013		59 337 781	377 084 610	436 422 391
Land and buildings revaluation increase		7 874 452	-	7 874 452
Aircraft revaluation decrease		22 018	-	22 018
Surplus for the year		-	40 163 993	40 163 993
Balance at 31 March 2014		67 234 251	417 248 603	484 482 854

STATEMENT OF COMPARISON BETWEEN BUDGET AND ACTUAL

FOR THE YEAR ENDED 31 MARCH 2014

	Actual 2014 R	Approved budget 2014 R	Final budget 2014 R	Variance (Actual - Final budget) 2014 R	Variance (Approved budget - Final budget) 2014 R
Revenue					
Revenue from non exchange transactions	193 529 950	150 289 996	163 742 996	29 786 954	(13 453 000)
Government grant - opex	162 943 000	149 489 996	162 942 996	4	(13 453 000)
Government grant - capex	20 000 000	-	-	20 000 000	-
Contributions and donations	10 586 950	800 000	800 000	9 786 950	-
Revenue from exchange transactions	103 713 904	135 346 639	135 346 639	(31 632 735)	-
Commercial revenue	98 199 458	105 053 404	105 053 404	(6 853 946)	-
Other revenue	5 514 446	30 293 235	30 293 235	(24 778 789)	-
Total revenue	297 243 854	285 636 635	299 089 635	(1 845 781)	(13 453 000)
Expenses					
Administrative expenses	(8 392 240)	(10 210 407)	(9 163 370)	771 130	(1 047 037)
Employee costs	(163 427 742)	(163 429 297)	(167 793 241)	4 365 499	4 363 944
Amortisation	(2 690 682)	(3 645 771)	(3 645 771)	955 089	-
Depreciation	(23 414 663)	(20 698 126)	(20 698 122)	(2 716 541)	(4)
Other operating expenses	(97 228 945)	(91 548 495)	(101 684 592)	4 455 647	10 136 097
Total expenses	(295 154 272)	(289 532 096)	(302 985 096)	7 830 824	13 453 000
Other gains/(losses)	38 074 411	3 895 461	3 895 461	(4 475 447)	-
Loss in fair value - property, plant and equipment	(300 986)	7 136 318	7 136 318	(7 437 304)	-
Fair value adjustment - Investment property	38 654 397	-	-	-	-
Actuarial (loss)/gain - post retirement medical aid	(279 000)	(3 240 857)	(3 240 857)	2 961 857	-
(Deficit)/surplus for the period	40 163 993	-	-	1 509 596	-

Refer to note 31 for the variance analysis.

CASH FLOW STATEMENT

FOR THE YEAR ENDED 31 MARCH 2014

	NOTE(S)	2014 R	2013 R RESTATED
CASH FLOWS FROM OPERATING ACTIVITIES			
Receipts		288 541 213	249 569 807
Government grant, donations and other grants		185 027 152	159 843 700
Commercial and other income		98 898 319	84 944 732
Income from investments		4 615 742	4 781 375
Payments		(265 631 542)	(250 963 125)
Employee costs		(163 427 742)	(148 256 341)
Suppliers		(102 203 800)	(102 706 784)
Net cash flows from / (used in) operating activities	23	22 909 671	(1 393 318)
CASH FLOWS FROM INVESTING ACTIVITIES			
Acquisition of property, plant and equipment		(31 412 846)	(19 507 091)
Acquisition of intangible assets		(7 974 972)	(5 284 679)
Net cash flows used in investing activities		(39 387 818)	(24 791 770)
Net decrease in cash and cash equivalents		(16 478 147)	(26 185 088)
Cash and cash equivalents at beginning of period		93 614 310	119 799 398
Cash and cash equivalents at end of period	12	77 136 163	93 614 310

NOTES TO THE ANNUAL FINANCIAL STATEMENTS

1. BASIS OF PREPARATION

1.1 Basis of preparation of the financial statements

The annual financial statements have been prepared in accordance with the effective Standards of Generally Recognised Accounting Practice (GRAP) including any interpretations, guidelines and directives issued by the Accounting Standards Board in accordance with Section 91(1) of the Public Finance Management Act (PFMA) (Act no.1 of 1999).

The annual financial statements were prepared on the accrual basis of accounting and incorporate the historical cost conventions as the basis of measurement, except where specified otherwise.

Assets, liabilities, revenues and expenses were not offset, except where offsetting is either required or permitted by a Standard of GRAP.

The annual financial statements have been prepared on the going concern basis. All accounting policies have been consistently applied to all the periods presented.

1.2 Functional currency

The financial statements are presented in South African Rands since that is the functional currency in which the majority of the South African Weather Service's transactions are denominated.

The amounts in the annual financial statements have been rounded to the nearest rand.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

The preparation of financial statements in conformity with GRAP requires the use of certain critical financial accounting estimates. It also requires management to exercise its judgement in the process of applying the entity's accounting policies.

2.1 Revenue

Revenue is recognised when it is probable that future economic benefits or service potential will flow to the entity and these benefits can be measured reliably. Revenue is measured at fair value of the consideration received or receivable and represents the amounts receivable for services provided in the normal course of business.

Revenue from exchange transactions

An exchange transaction is one in which the entity receives assets or services, or has liabilities extinguished and directly gives approximate equal value primarily in the form of goods, services or use of assets or services to the other party in exchange. Revenue from exchange transactions is comprised of regulated and non-regulated commercial revenue. This is revenue of fees levied for the supply of weather related information to the aviation industry, as well as other users. Revenue from information fees levied is recognised when the information is supplied to the customer.

Interest income is accrued on a time basis, by reference to the principal amount outstanding and at the interest rate applicable. Other income, mainly the letting of aircraft, is recognised when the service is rendered to the customer.

Project income received is recognised together with the respective expenses in the statement of financial performance.

Revenue from non-exchange transactions

Revenue from non-exchange transactions is comprised of government grants. Conditions on transferred assets are stipulations that specify that the future economic benefits or service potential embodied in the asset is required to be consumed by the recipient as specified or future economic benefits or service potential must be returned to the transferor.

Restrictions on transferred assets are stipulations that limit or direct the purposes for which a transferred asset may be used, but do not specify that future economic benefits or service potential is required to be returned to the transferor if not deployed as specified.

Stipulations on transferred assets are terms in laws or regulation, or a binding arrangement, imposed upon the use of a transferred asset by entities external to the reporting entity.

Recognition

An inflow of resources from a non-exchange transaction recognised as an asset is recognised as revenue, except to the extent that a liability is also recognised in respect of the same inflow.

As the entity satisfies a present obligation recognised as a liability in respect of an inflow of resources from a non-exchange transaction recognised as an asset, it reduces the carrying amount of the liability recognised and recognises an amount of revenue equal to that reduction.

Revenue received from conditional grants, donations and funding are recognised as revenue to the extent that the entity has complied with the criteria, conditions or obligations embodied in the agreement. To the extent that the criteria, conditions or obligations have not been met, a liability is recognised.

Measurement

Revenue from a non-exchange transaction is measured at the amount of the increase in net assets recognised by the entity. When, as a result of a non-exchange transaction, the entity recognises an asset, it also recognises revenue equivalent to the amount of the asset measured at its fair value as at the date of acquisition, unless it is also required to recognise a liability. Where a liability is required to be recognised it will be measured as the best estimate of the amount required to settle the obligation at the reporting date, and the amount of the increase in net assets, if any, recognised as revenue. When a liability is subsequently reduced, because the event occurs or a condition is satisfied, the amount of the reduction in the liability is recognised as revenue.

2.2 Leases

A lease is an agreement whereby the lessor conveys to the lessee in return for a payment or series of payments the right to use an asset for an agreed period of time.

Leases in which a significant portion of the risks and rewards of ownership are retained by the lessor are classified as operating leases.

Lease payments under an operating lease are recognised as an expense in the statement of financial performance on a straight-line basis over the lease term unless another systematic basis is more representative of the time pattern of the user's benefit, even if payments are not on that basis. The difference between the amounts recognised as an expense and the contractual payments are recognised as an operating lease asset or liability.

Any contingent operating lease payments are expensed in the period they are incurred.

2.3 Foreign currencies

Foreign currency transactions are recorded, on initial recognition in the functional currency (rands), by applying to the foreign currency amount the spot exchange rate between the functional currency and the foreign currency at the date of transaction.

At each reporting date:

- foreign currency monetary items are translated using the closing rate;
- non-monetary items that are measured in terms of historical cost in a foreign currency are translated using the exchange rate at the date of the transaction; and
- non-monetary items that are measured at fair value in foreign currency are translated using the exchange rate at the date when the fair value was determined.

Exchange differences arising on the settlement of monetary items or on translating monetary items at rates different from those which they were translated on initial recognition during the period or on previous financial statements are recognised in surplus or deficit in the period in which they arise.

SAWS did not enter into forward contracts and options in order to hedge its exposure to foreign exchange risks, during the financial period under review.

2.4 Property, plant and equipment

Measurement and recognition

Property, plant and equipment is initially recognised at cost.

Land and buildings and aircraft are shown at fair value less any subsequent accumulated depreciation and subsequent accumulated impairment losses.

The fair value of the items in the land and buildings; and aircraft categories are both determined from market-based evidence by appraisals undertaken by professionally qualified valuers.

If an asset's carrying amount is increased as a result of revaluation, the increase is credited directly to the revaluation reserve. However, the increase is recognised in the surplus or deficit to the extent that it reverses the revaluation decrease of the same asset previously recognised in the surplus or deficit.

If an asset's carrying amount is decreased as a result of a revaluation, the decrease is recognised in surplus or deficit. However, the decrease is debited directly in net assets to the extent of any credit balance existing in the revaluation reserve in respect of that asset. The decrease recognised directly in net assets reduces the amount accumulated in net assets under the heading revaluation reserve.

The revaluation reserve included in net assets in respect of an item in the land and buildings; and aircraft categories will be transferred directly to accumulated surplus or deficit when the asset is derecognised.

The revaluation reserve is released as the buildings and aircraft are depreciated.

All other items of property, plant and equipment are stated at historical cost less any accumulated depreciation and any accumulated impairment losses.

The depreciation charge for each period is recognised in surplus or deficit unless it is included in the carrying amount of another asset. The depreciable amount of an asset is allocated on a systematic basis using the straight line method over its useful life on the following basis:

	Years
Buildings - Lease improvements	10-15
Fence	10
Property - Buildings	50
Aircraft - Airframes	20
Aircraft - Engines	5400 hrs.
Aircraft - Propellers	5-20
Motor vehicles	5-10
Meteorological equipment - Other	10-15
Meteorological equipment - Radar	25
Meteorological equipment - Air quality	10-15
Office equipment	15-20
Computer equipment	5-10
Computer software and website development	5-10
Library books and equipment	10-20
Furniture and fittings	15-20
Tools and other equipment	10-15

The residual value and the useful life of assets are reviewed at least at each reporting date. If expectations differ from the previous estimates, the change(s) are accounted for as a change in accounting estimate.

Depreciation of an asset begins when the asset is available for use, i.e. when it is in the location and condition necessary for it to be capable of operating in the manner intended by management. Depreciation of an asset ceases when the asset is de-recognised.

De-recognition

The carrying amount of an item of property, plant and equipment is de-recognised on disposal, or when no future economic benefits or service potential are expected from its use or disposal.

The gain or loss arising from the de-recognition of an item of property, plant and equipment is included in surplus or deficit when the item is de-recognised. The gain or loss arising from the de-recognition of an item of property, plant and equipment is determined as the difference between the net disposal proceeds, if any, and the carrying amount of the item.

2.5 Intangible assets

Measurement and recognition

An intangible asset is recognised when:

- it is probable that the expected future economic benefits or service potential that are attributable to the asset will flow to the entity; and
- the cost or fair value of the asset can be measured reliably.

Intangible assets are initially recognised at cost and subsequently at cost less any accumulated amortisation and impairment losses.

The depreciable amount of an asset is allocated on a systematic basis using the straight line method over its useful life on the following basis:

	Years
Computer software	5-10
Servitude	25

The residual value and useful life of intangible assets are reviewed at least at each reporting date. If expectations differ from the previous estimates, the change(s) are accounted for as a change in accounting estimate.

De-recognition

The intangible asset is de-recognised on disposal, or when no future economic benefits or service potential are expected from its use or disposal.

The gain or loss arising from the de-recognition of an intangible asset is determined as the difference between the net disposal proceeds, if any, and the carrying amount of the asset. It is recognised in surplus or deficit when the asset is de-recognised.

2.6 Investment property

Measurement and recognition

Investment property is recognised as an asset when, and only when, it is probable that the future economic benefits and service potential that are associated with the investment property will flow to the entity, and the cost or fair value of the investment property can be measured reliably.

Investment property is measured at fair value. A gain or loss arising from a change in the fair value of investment property is included in surplus or deficit for the period in which it arises. The fair value of investment property reflects market conditions at the reporting date.

De-recognition

Investment property is de-recognised on disposal, or, when the investment property is permanently withdrawn from use and no future economic benefits or service potential are expected from its disposal.

Gains or losses arising from the retirement or disposal of investment property is determined as the difference between the net disposal proceeds and the carrying amount of the asset and is recognised in surplus or deficit in the period of the retirement or disposal.

2.7 Inventories

Inventories are initially measured at cost except when it is acquired at no cost, or for nominal consideration, then the fair value, as at the date of acquisition is recognised.

Inventories are stated at the lower of cost and net realisable value. Inventory consists of consumable goods and goods held for resale.

Cost is determined on the following basis:

Consumable goods are valued using the weighted average cost basis.

When inventories are sold, the carrying amount of those inventories is recognised as an expense in the period in which the related revenue is recognised. If there is no related revenue, the expenses are recognised when the goods are distributed, or related services are rendered. The amount of any write-down of inventories to net realisable value and losses of inventories are recognised as an expense in the period the write-down or loss occurs. The amount of any reversal of any write-down of inventories, arising from an increase in net realisable value, is recognised as a reduction in the amount of inventories recognised as an expense in the period in which the reversal occurs.

Redundant and slow moving inventories are identified and written down or off with regard to their estimated economic or realisable values.

2.8 Impairment of non-cash generating assets

Non-cash generating assets are assets other than cash-generating assets.

Cash-generating assets are those assets held by the entity with the primary objective of generating a commercial return.

An asset generates a commercial return when it is deployed in a manner consistent with that adopted by a profit-oriented entity.

Conversely, an asset may be a non-cash-generating asset even though it may be breaking even or generating a commercial return during a particular reporting period. In certain instances, an asset may generate cash flows although it is primarily held for service delivery purposes.

Identification

When the carrying amount of a non-cash generating asset exceeds its recoverable amount, it is impaired.

The entity assesses at each reporting date whether there is any indication that a non-cash generating asset may be impaired. If any such indication exists, the entity estimates the recoverable amount of the asset.

Irrespective of whether there is any indication of impairment, the entity also tests an intangible asset with an indefinite useful life or an intangible asset not yet available for use for impairment annually by comparing its carrying amount with its recoverable amount. This impairment test is performed at the same time every year. If an intangible asset was initially recognised during the current reporting period, that intangible asset was tested for impairment before the end of the current reporting period.

Value in use

Value in use of a non-cash generating asset is the present value of the asset's remaining service potential.

The present value in use of a non-cash generating asset is determined by the calculation of the depreciated replacement cost of the asset.

The replacement cost of an asset is the cost to replace the asset's gross service potential. The cost is depreciated to reflect the asset in its used condition.

Recognition and measurement (individual asset)

If the recoverable amount of a non-cash generating asset is less than its carrying amount, the carrying amount of the asset is reduced to its recoverable amount. This reduction is an impairment loss.

An impairment loss is recognised in surplus or deficit, unless the asset is carried at a revalued amount. An impairment loss on a revalued amount is recognised directly against any revaluation surplus for the asset to the extent that the impairment loss does not exceed the amount in the revaluation surplus for the same asset.

After the recognition of an impairment loss, the depreciation (amortisation) charge for the asset is adjusted in future periods to allocate the asset's revised carrying amount, less its residual value (if any), on a systematic basis over its remaining useful life.

Reversal of impairment loss

The entity assesses at each reporting date whether there is any indication that an impairment loss recognised in prior periods for a non-cash generating asset may no longer exist or may have decreased. If any such indication exists, the entity estimates the recoverable service amount of that asset.

An impairment loss recognised in prior periods for a non-cash generating asset is reversed if there has been a change in the estimates used to determine the asset's recoverable service amount since the last impairment loss was recognised.

The carrying amount of the asset is increased to its recoverable service amount. The increase is a reversal of an impairment loss.

The increased carrying amount of an asset attributable to a reversal of an impairment loss does not exceed the carrying amount that would have been determined (net of depreciation or amortisation) had no impairment loss been recognised for the asset in prior periods.

A reversal of an impairment loss for a non-cash generating asset is recognised in surplus or deficit, unless the asset is carried at a revalued amount.

A reversal of an impairment loss on a revalued asset is recognised directly against any revaluation surplus for the asset to the extent that the impairment loss does not exceed the amount in the revaluation surplus for the same asset.

After a reversal of an impairment loss is recognised, the depreciation (amortisation) charge for the non-cash generating asset is adjusted in future periods to allocate the non-cash generating asset's revised carrying amount, less its residual value (if any), on a systematic basis over its remaining useful life.

Re-designation

The re-designation of assets from a non-cash-generating asset to a cash-generating asset only occurs when there is clear evidence that such a re-designation is appropriate.

2.9 Financial instruments

Recognition

Financial assets and liabilities are recognised on the entity's statement of financial position when the entity becomes a party to the contractual provisions of the instrument. Regular purchases and sales of financial assets are initially recognised using trade date accounting.

Measurement

Financial instruments are initially measured at fair value. Transaction cost will be included on initial recognition for financial instruments at amortised cost and at cost. Subsequent to initial recognition these instruments are measured as set out below.

Financial assets

The entity's principal financial assets are trade and other receivables; and cash and cash equivalents.

- **Trade and other receivables from exchange transactions**

Trade and other receivables are recognised initially at fair value and subsequently measured at amortised cost providing for the time value of money and impairment of receivables.

Short-term receivables are not discounted to present values if the original credit period granted is in line with the public sector credit period.

Writing off of debts

Prior to writing off of debts, management assesses the recoverability of the debt. If it is determined that the debt is irrecoverable, the debt is written off if management is convinced that the recovery of the debt would be uneconomical or the recovery would cause undue hardship to the debtor or his or her dependants, or it would be to the advantage of the state to effect a settlement of the claim or to waive the claim.

Impairment of receivables

Impairment of receivables is recognised when SAWS assesses the certainty that the outstanding debts are likely to be irrecoverable and have been long overdue.

- **Cash and cash equivalents (financial asset at amortised cost)**

Cash and cash equivalents include cash on hand, deposits held on call with banks and other short-term highly liquid investments. Cash and cash equivalents are initially measured at fair value and subsequently measured at amortised cost.

Financial liabilities

The entity's principal financial liabilities are trade and other payables. Trade and other payables are initially measured at fair value less any directly attributable transaction costs. Subsequent to initial recognition, these financial liabilities are measured at amortised cost, using the effective interest rate method. Interest expenses on these items are recognised in surplus or deficit and they are included in 'finance costs'.

The entity's accrual amount represents goods and services that have been delivered, and an invoice has been received from the supplier but remain unpaid as at year-end.

Short-term payables are not discounted to present values if the original credit period granted is in line with the public sector credit period.

Gains and losses on subsequent measurement

For financial assets and financial liabilities measured at amortised cost or cost, a gain or loss is recognised in surplus or deficit when the financial asset or financial liability is derecognised or impaired, or through the amortisation process.

De-recognition

A financial asset or a portion thereof is de-recognised when the entity realises the contractual rights to the benefits specified in the contract, the rights expire, the entity surrenders those rights or otherwise loses control of the contractual rights that comprise the financial asset. On de-recognition, the difference between the carrying amount of the financial asset and the sum of the proceeds receivable and any prior adjustments to reflect the fair value of the asset that were reported in equity is included in surplus or deficit for the period.

Financial liabilities are derecognised when the obligation is discharged, cancelled or expires.

Fair value considerations

The fair values at which financial instruments are carried at the statement of financial position date were determined using available market values. Where market values were not available, fair values were calculated by discounting expected future cash flows at prevailing interest rates. The fair values were estimated using available market information and appropriate valuation methodologies, but are not necessarily indicative of the amounts that the entity could realise in the normal course of business. The carrying amounts of financial assets and financial liabilities with a maturity of less than one year are assumed to be amortised cost due to the short term trading cycle of these items.

2.10 Provisions, contingent liabilities and contingent assets

Provisions are recognised when:

- the entity has a present obligation as a result of a past event;
- it is probable that an outflow of resources embodying economic benefits or service potential will be required to settle the obligation; and
- a reliable estimate can be made of the obligation.

The amount of a provision is the best estimate of the expenditure expected to be required to settle the present obligation at the reporting date.

Where the effect of time value of money is material, the amount of a provision is the present value of the expenditure expected to be required to settle the obligation. The discount rate is a current market assessment of the time value of money and the risks specific to the liability.

Where some or all of the expenditure required to settle a provision is expected to be reimbursed by another party, the reimbursement is recognised when, and only when, it is virtually certain that reimbursement will be received if the entity settles the obligation. The reimbursement is treated as a separate asset. The amount recognised for the reimbursement does not exceed the amount of the provision.

Provisions are reviewed at each reporting date and adjusted to reflect the current estimate. Provisions are reversed if it is no longer probable that an outflow of resources embodying economic benefits or service potential will be required to settle the obligation.

Where discounting is used, the carrying amount of a provision increases in each period to reflect the passage of time.

This increase is recognised as an interest expense.

Provisions are not recognised for future operating deficits.

If the entity has a contract that is onerous, the present obligation (net of recoveries) under the contract is recognised and measured as a provision.

Contingent liability

A possible obligation that arises from past events and whose existence will be confirmed by the occurrence or non-occurrence of one or more uncertain future events not wholly within the control of the entity.

A present obligation that arises from past events but is not recognised because:

- it is not probable that an outflow of resources embodying economic benefits or service potential will be required to settle the obligation; or
- the amount of the obligation cannot be measured with sufficient reliability.

Contingent asset

A contingent asset is a possible asset that arises from past events and whose existence will be confirmed only by the occurrence or non-occurrence of one or more uncertain future events not wholly in the control of the entity.

Contingent assets and contingent liabilities are not recognised but disclosed in the notes to the annual financial statements.

2.11 Employee benefits

Post retirement medical aid benefit

The entity has a defined benefit obligation in the form of the post retirement medical aid liability. The obligation is generally funded by payments from the entity and employees, taking account of the recommendations of independent

qualified actuaries. For defined benefit obligation the related current service cost, and where applicable the past service cost are determined by using the projected unit credit method.

A defined benefit obligation is an obligation that defines an amount of benefit to be provided, usually as a function of one or more factors such as inflation, discounting and demographic factors both before and after retirement.

Actuarial gains and losses are recognised as surplus or deficit in the statement of financial performance. The entity's contributions to defined benefit obligations are charged to the statement of financial performance in the year to which they relate.

Short-term employee benefits

The cost of all short-term employee benefits is recognised during the period in which the employee renders the related service. Accruals for employee entitlements to salaries, performance incentives and annual leave represent the amounts which the entity has a present obligation to pay as a result of employees services provided at the reporting date. The accruals have been calculated at undiscounted amounts on current salary rates. The expected cost of incentives payments is recognised as an expense when there is a legal or constructive obligation to make such payments as a result of past performance.

2.12 Comparative figures

The annual financial statements are prepared on a comparative basis and where necessary, comparative figures were adjusted to conform to changes in the presentation in the current period.

2.13 Taxation

No provision has been made for taxation, as the entity is exempt from income tax in terms of Section 10 of the Income Tax Act, 1962 (Act No. 58 of 1962).

2.14 Value Added Taxation (VAT)

SAWS is exempt from VAT registration.

2.15 Related parties

All transactions and balances with national departments of Government and state-controlled entities are regarded as related party transactions and are disclosed separately in the notes to the financial statements (refer note 26).

Parties are considered to be related if one party has the ability to control the other party or to exercise significant influence or joint control over the other party in making financial and operational decisions.

A related party transaction is a transfer of resources, services or obligations between related parties, regardless of whether a price is charged.

Management personnel are those persons having authority and responsibility for planning, directing and controlling the activities of the entity directly or indirectly.

Only transactions not within the normal supplier and/or client/recipient relationship on terms and conditions no more or less favourable than those which it is reasonable to expect the entity to have adopted if dealing with that individual entity or person in the same circumstances; and where terms and conditions not within the normal operating parameters established by the reporting entity's legal mandate are disclosed.

2.16 Fruitless, wasteful and unauthorised, irregular expenditure

Fruitless and wasteful expenditure means expenditure incurred in vain and could have been avoided had reasonable care been exercised. Fruitless and wasteful expenditure is accounted for as expenditure in the statement of financial performance and where recovered, it is subsequently accounted for as revenue in the statement of financial performance.

Unauthorised expenditure is an overspending of the budget or expenditure which is not in accordance with the purpose of the budget.

Irregular expenditure means expenditure incurred in contravention of, or not in accordance with a requirement of any applicable legislation, including:

- the Public Finance Management Act (PFMA), Act 1 of 1999 (as amended by Act 29 of 1999);
- the State Tender Board Act, 1968 (Act No.86 of 1968); or any regulation made in terms of the Act.

All unauthorised, irregular, fruitless or wasteful expenditure is charged against surplus or deficit in the period it was incurred.

2.17 Commitments

Commitments represent the orders issued to the suppliers that have been approved, but where no delivery has taken place as at year end.

Commitments are not recognised in the statement of financial position as a liability or assets but are included in the disclosure notes.

2.18 Budget information

The budget has been prepared on an accrual basis in line with the preparation of the annual financial statements. The budget period is from 1 April 2013 to 31 March 2014.

2.19 Prepayments and advances

Prepayments are stated at cost.

2.20 Revenue received in advance

Payments received in advance are stated at the amount received.

3. SIGNIFICANT ACCOUNTING JUDGEMENTS

In preparing the annual financial statements, management is required to make estimates and assumptions that affect the amounts presented in the annual financial statements and related disclosures. Use of available information and the application of judgement is inherent in the formation of estimates. Actual results in the future could differ from these estimates which may or may not be material to the annual financial statements.

3.1 Useful lives of property, plant and equipment

For the financial period under review, management applied judgement in determining the extended useful lives of fixed assets in terms of GRAP 17: Property, Plant and Equipment and the results thereof as disclosed in note 32.

3.2 Impairment of non-cash generating assets

Refer to note 2.8 for the estimates in the determining the fair value less cost to sell and the value in use.

3.3 Impairment of receivables

Trade receivables which are past due are not automatically considered to be impaired. Management's judgement is used to impair amounts that are past due based on being satisfied that all reasonable steps have been taken to recover the debt or that the recovery of the debt would be uneconomical; or recovery would cause undue hardship to the debtor or his or her dependents; or it would be to the advantage of the state to effect a settlement or waive the claim.

3.4 Provisions

Provisions were raised and management determined an estimate based on the information available. Additional disclosures of these estimates of provisions are included in the notes to the annual financial statements.

4. EFFECT OF NEW STANDARDS OF GRAP EFFECTIVE

Newly effective Standards of GRAP

The following Standard of GRAP and Interpretation of the Standard of GRAP became effective on 1 April 2013 and have been adopted by the SAWS for reporting:

GRAP 25: Employee Benefits

The effect of the Standard on the financial statements is reflected in note 13. The transitional provisions in Directive 2 require the retrospective application of the Standard. However, no changes were required for the comparative years as SAWS's previous accounting policies on Employee Benefits were aligned to the requirements of the Standard.

IGRAP 16: Intangible Assets Website costs

The requirements of the Interpretation are applicable to SAWS and therefore the effect on the financial statements is reflected in note 7.

All other improvements to Standards of GRAP effective from 1 April 2013 that are applicable to the SAWS, have been adopted but are not significant to the financial statements.

New Standards of GRAP

The following Standards of GRAP and Interpretations of the Standards of GRAP were approved by the Accounting Standards Board during the financial year, but are not yet effective and the effective date of the Standards has not yet been announced:

GRAP 32: Service Concession Arrangements (Grantor)

It is expected that the requirements of the Standard would not be applicable to SAWS and therefore its effect on the financial statements is not determined.

GRAP 108: Statutory Receivables

It is expected that the requirements of the Standard would be applicable to SAWS. However, the effect on the financial statements is not yet determinable.

IGRAP 17: Service Concession Arrangements Where the Grantor Controls a Significant Residual Interest in an Asset

It is expected that the requirements of the Interpretation would not be applicable to SAWS and therefore its effect on the financial statements is not determined.

5. EFFECT OF NEW STANDARDS OF GRAP NOT YET EFFECTIVE

Other Standards issued but not yet effective up to the date of issuance of SAWS' financial statements are listed below.

Applicable to SAWS

GRAP 20: Related Party Disclosure

SAWS is allowed through Directive 5 to apply the disclosure requirements of the Standard before its effective date is announced and have provided disclosure aligned to the requirements in note 26.

GRAP 18: Segment Reporting

Directive 5 does not allow the application of the Standard at present although it may be applicable to SAWS in future.

GRAP 105: Transfer of Functions Between Entities Under Common Control

It is expected that the requirements of the Standard may be applicable to SAWS in future.

Not applicable to SAWS

The following Standards are not yet effective nor are they applicable to SAWS and therefore the effect on the financial statements is not determined.

GRAP 106: Transfer of Functions Between Entities Not Under Common Control

GRAP 107: Mergers

7. Property, plant and equipment

2014	Total	Land & buildings					Aircraft				Meteorological instruments				Computer servers	Library books & equipment	Furniture & fittings	Tools & other equipment	
		Leasehold improvements	Gars-fortlein property	Inere property	Fence	Houses	Airframes	Engines	Propellers	Motor vehicles	Radars	Other	Air quality	Office equipment					Computer equipment
Cost or revaluation																			
At 1 April 2013	4 10 587 014	2 204 668	12 692 946	3 460 000	1 172 728	1 649 523	2 230 699	3 783 882	304 432	521 480	275 648 335	55 381 807	4 789 481	4 782 007	32 143 277	-	52 309	7 647 557	2 171 663
Additions - at cost	31 760 398	91 844	239 494	-	1 364 439	15 500	-	-	-	354 597	2 009 816	4 121 495	8 358 008	1 565 294	7 471 354	6 058 757	-	63 362	46 438
Additions - at fair value	6 611 018	-	-	-	-	-	-	-	-	-	1 094 734	5 516 284	-	-	-	-	-	-	-
Transfers	(332 955)	-	-	-	-	-	-	-	-	-	-	-	(332 956)	(1 738)	-	-	-	987	752
Disposals	(1 537 543)	(42 413)	-	-	(6 600)	-	-	-	-	(61 725)	-	-	-	(101 305)	(1 089 574)	-	-	(222 855)	(13 071)
Revaluations	7 986 095	-	7 622 657	190 000	-	32 923	763 629	(623 882)	(99 232)	-	-	-	-	-	-	-	-	-	-
At 31 March 2014	4 55 074 027	2 254 099	20 555 097	3 650 000	2 537 167	1 691 346	2 994 528	3 240 000	205 200	814 352	277 658 151	60 598 036	18 330 817	6 215 996	38 523 319	6 058 757	52 309	7 489 051	2 205 802
Accumulated depreciation																			
At 1 April 2013	(81 517 691)	(2 053 225)	-	-	(559 247)	(1 461)	(194 192)	-	-	(195 439)	(30 478 609)	(26 412 289)	(632 691)	(1 652 073)	(24 298 422)	-	(7 390)	(3 847 224)	(1 155 429)
Depreciation	(23 414 664)	734 777	-	-	(162 933)	(36 434)	225 780	-	(60 886)	(86 518)	(11 024 290)	(5 495 428)	(1 532 728)	(401 204)	(4 140 443)	(528 919)	(5 227)	(693 410)	(206 791)
Transfers	243 188	-	-	-	-	-	-	-	-	-	-	-	243 188	-	-	-	-	-	-
Disposals	1 357 785	26 019	-	-	-	2 693	-	-	-	61 725	-	-	-	60 346	1 048 878	-	-	147 945	10 179
Revaluations	(390 611)	-	-	-	-	28 872	(480 369)	-	60 886	-	-	-	-	-	-	-	-	-	-
At 31 March 2014	(113 721 995)	(1 292 429)	-	-	(722 180)	(6 330)	(448 781)	-	(220 232)	(41 502 899)	(31 907 717)	(1 922 241)	(1 992 931)	(27 389 987)	(528 919)	(12 617)	(4 392 689)	(1 382 041)	
Net book value	3 41 352 034	961 670	20 555 097	3 650 000	1 814 987	1 685 016	2 545 747	3 240 000	205 200	594 120	236 155 252	28 690 319	16 408 576	4 223 065	11 133 332	5 529 838	39 692	3 096 362	823 761
2013																			
Cost or revaluation																			
As previously reported	390 213 957	2 204 668	12 000 000	2 100 000	1 172 728	1 426 673	2 317 252	3 625 904	414 828	521 480	275 288 335	46 596 122	1 965 811	4 725 808	26 809 025	-	33 484	7 292 119	1 719 720
Prior year adjustment	6 413 363	-	-	1 360 000	-	6 600	2 000	-	-	-	360 000	269 492	4 064 560	11 458	-	-	-	179 648	159 605
At 1 April 2012 - restated	396 627 320	2 204 668	12 000 000	3 460 000	1 172 728	1 433 273	2 319 252	3 625 904	414 828	521 480	275 648 335	46 865 614	6 030 371	4 737 266	26 809 025	-	33 484	7 471 767	1 879 325
Additions	19 507 091	-	692 946	-	-	-	-	-	-	-	-	8 516 193	4 461 986	14 741	5 334 252	-	18 625	175 790	292 358
Revaluations	155 479	-	-	-	-	216 250	(88 353)	137 978	(110 396)	-	-	-	-	-	-	-	-	-	-
Transfers	(5 702 876)	-	-	-	-	-	-	-	-	-	-	-	(5 702 876)	-	-	-	-	-	-
At 31 March 2013	410 587 014	2 204 668	12 692 946	3 460 000	1 172 728	1 649 523	2 230 699	3 763 882	304 432	521 480	275 648 335	55 381 807	4 789 481	4 752 007	32 143 277	-	52 309	7 647 557	2 171 663
Accumulated depreciation																			
As previously reported	(71 966 987)	(1 834 133)	-	-	(442 011)	33 750	(83 468)	-	-	(99 850)	(20 770 876)	(23 237 254)	-	(1 308 101)	(20 122 730)	-	(3 738)	(3 171 149)	(927 427)
Prior year adjustment	1 583 575	-	-	-	-	(455)	(73)	-	-	-	(54 000)	1 643 156	97 338	(4 191)	-	-	-	(44 160)	(54 040)
At 1 April 2012 - restated	(70 383 412)	(1 834 133)	-	-	(442 011)	33 295	(83 541)	-	-	(99 850)	(20 824 876)	(21 594 098)	97 338	(1 312 292)	(20 122 730)	-	(3 738)	(3 215 309)	(981 467)
Depreciation	(21 134 279)	(219 092)	-	-	(117 236)	(34 756)	(110 651)	-	-	(95 589)	(9 653 733)	(4 818 191)	(730 029)	(339 781)	(4 175 692)	-	(3 652)	(631 915)	(203 962)
At 31 March 2013	(91 517 691)	(2 053 225)	-	-	(569 247)	(1 461)	(194 192)	-	-	(195 439)	(30 478 609)	(26 412 289)	(632 691)	(1 652 073)	(24 298 422)	-	(7 390)	(3 847 224)	(1 185 429)
Net book value	3 19 069 323	151 443	12 692 946	3 460 000	613 481	1 648 062	2 036 707	3 763 882	304 432	326 041	245 169 726	28 969 518	4 166 790	3 099 934	7 844 855	-	44 919	3 800 333	986 254

6. Property, plant and equipment (continued)

Included in the computer equipment additions for the year is an amount of R320 000 for the enhancement of infrastructure for the installation of a high performance computer that is in progress.

	Cost R	Accumulated depreciation R
The following classes included fully depreciated assets that are still in use:		
Meteorological instruments - other	2 458 110	(2 458 110)
Computer equipment	18 833 039	(18 833 039)
	21 291 149	(21 291 149)

Reconciliation of surplus or loss recognised in the revaluation reserve in the statement of changes in net assets:

	2014 R	2013 R
Revaluation of PPE		
Aircraft - revaluation	(22 019)	(60 771)
Aircraft airframes	(584 246)	(88 353)
Aircraft engines	523 882	137 978
Aircraft propellers	38 345	(110 396)
Land and buildings - revaluation	(7 874 452)	216 250
Bethlehem property	(61 795)	216 250
Garsfontein property	(7 622 657)	-
Irene property	(190 000)	-
Total revaluations for the year	(7 896 471)	155 479

Aircraft

The entity's aircrafts were revalued at 31 March 2014 by independent valuers, Skycare Maintenance.

Valuations were made on the basis of open market value. The revaluation deficit was debited to the revaluation reserve in the case where sufficient credits existed to offset the deficit. In cases where no credit exists, the deficit is expensed.

If aircrafts were stated on the historical cost basis, the amounts would be as follows:

Cost	9 811 735	9 811 735
Accumulated depreciation	(9 811 735)	(9 811 735)
Net book value	-	-

6. Property, plant and equipment (continued)

2014
R

2013
R

Bethlehem property

The property was revalued at 31 March 2014 by an independent valuer, Johan Breytenbach an attorney and professional valuer (board registration number 2669) in terms of the provisions of the Property Valuers Profession Act no. 47/2000. Valuations were made on basis of open market value. The revaluation surplus was credited to the non-distributable reserve.

If the property was stated on the historical cost basis, the amounts would be as follows

Cost	600 000	600 000
Accumulated depreciation	(144 000)	(132 000)
Net book value	456 000	468 000

The property includes Erf 1997 and Erf 2064 in the town of Bethlehem in the Free State province.

Erf 1997, also known as 8 Dr Clark Street, Bethlehem has an area of 1997 square meters and includes a house and outside buildings.

Erf 2064, also known as 19 Gordon Dreyer Street, Bethlehem has an area of 1568 square meters and includes a house and outside buildings.

The title deed of the Bethlehem property was not registered in the name of SAWS at financial year end. However, the Minister of Public Works passed all the rights, obligations and liabilities of the property to SAWS on the commencement of the SAWS Act No.8 of 2001.

Commercial property

Commercial property is comprised of the Garsfontein and Irene properties.

Garsfontein property

The entity's Garsfontein property was revalued at 31 March 2014 by Darryl Robert Riley from The Property Partnership East Rand CC a qualified independent professional valuer with B.Com., DipSurv., N.Dip. (Real Estate), MIV (SA), and practice no. 4677/6.

The Garsfontein property is made up of portion 424 of the farm Garsfontein 374 JR measuring 5.9825 ha valued at R20 555 097 and is classified as such in property, plant and equipment. This property is located to the west of the N1 National Freeway and immediately north of Rigel Avenue (South) in the Waterkloof Heights suburb of Pretoria.

Valuations were made on the basis of open market value. The property was brought to book in 2003. The valuation from independent valuers was accepted to reflect the fair value at 31 March 2002 for comparative purposes. If the property was stated on the historical cost basis, the amounts would be as follows:

Historical cost - Garsfontein property	8 960 000
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Irene property

SAWS utilises Portion 110 of the Farm Doornkloof 391 JR for scientific purposes for no consideration, which was valued at R2 412 847 on 31 March 2013. Improvements on the property consist of two interconnected offices, workshop, storage wings and some supporting outbuildings and carports. In accordance with the registration of ownership the property may not be transferred to SAWS.

6. Property, plant and equipment (continued)

The improvements were revalued at 31 March 2014 by Darryl Robert Riley from The Property Partnership East Rand CC a qualified independent professional valuer with B.Com., DipSurv., N.Dip. (Real Estate), MIV (SA), and practice no. 4677/6. Valuations were made on the basis of open market value.

There were no contractual commitments for the acquisition of property, plant and equipment entered into by SAWS at the reporting date.

SAWS does not have assets pledged as security.

Capital commitments have been disclosed in note 28.

7. Intangible assets

Intangible assets comprise computer software (including website costs) and a servitude.

SAWS acquired the right of use of land for its meteorological equipment for an indefinite period from AP Beckely in Bloemfontein. The servitude is amortised over the useful life of the meteorological equipment installed on the land.

2014	TOTAL	COMPUTER SOFTWARE	SERVITUDE
Cost			
At 1 April 2013	28 474 489	28 474 489	-
Additions - at cost	8 307 928	6 807 928	1 500 000
Transfers	332 956	332 956	-
At 31 March 2014	37 115 373	35 615 373	1 500 000
Accumulated amortisation			
At 1 April 2013	(14 936 812)	(14 936 812)	-
Amortisation	(2 690 683)	(2 635 486)	(55 197)
Transfers	(235 548)	(235 548)	-
At 31 March 2014	(17 863 043)	(17 807 846)	(55 197)
Net book value	19 252 330	17 807 527	1 444 803
2013			
Cost			
At 1 April 2012 - restated	16 050 420	16 050 420	-
Additions - at cost	5 284 679	5 284 679	-
Transfers	7 139 390	7 139 390	-
At 31 March 2013	28 474 489	28 474 489	-
Accumulated amortisation			
At 1 April 2012	(12 002 305)	(12 002 305)	-
Amortisation	(2 760 477)	(2 760 477)	-
Transfers	(174 030)	(174 030)	-
At 31 March 2013	(14 936 812)	(14 936 812)	-
Net book value	13 537 677	13 537 677	-

7. Intangible assets (continued)

	Cost R	Accumulated depreciation R
The following class included fully depreciated assets that are still in use:		
Computer software	11 724 875	(11 724 875)

8. Investment property

	2014 R	2013 R
Fair value at beginning of the year	44 530 000	44 530 000
Fair value adjustment	38 654 397	-
Fair value at end of the year	83 184 397	44 530 000

The investment property includes portions 411, portion of portion 412 and portion 423 (which are portions of the remaining extent of portion 407) of the farm Garsfontein 374, Registration Division JR, Gauteng. The property is 37,1116 ha, located to the west of the N1 National Freeway and immediately north of Rigel Avenue (South) in the Waterkloof Heights suburb of Pretoria.

The property was valued at 31 March 2014 by Darryl Robert Riley from The Property Partnership East Rand CC a qualified independent professional valuer with B.Com., DipSurv., N.Dip. (Real Estate), MIV (SA), and practice no. 4677/6. The valuer used the market data valuation approach, whereby similar properties' valuations are used as a motivation to value the property, which is an acceptable method to determine the value of this type of property.

The fair value adjustment for the investment property was realised in surplus. The property was brought to book in 2003. The valuation from independent valuers was accepted to also reflect the fair value at 31 March 2002.

The significant increase in the fair value of the property is mainly due to the approvals granted by the City of Tshwane which gave an indication of a significant development potential on the land as assessed by the valuer. The approvals related mainly to land use planning objectives. The rezoning rights' application has not yet been approved.

Historical cost - Investment property	26 890 000
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9. Inventory

Consumables - Bolepi warehouse	206 398	249 331
Raw materials and finished goods - Irene warehouse	3 105 801	3 406 005
Work-in-progress - Irene warehouse	-	669 515
	3 312 199	4 324 851

An amount of R196 921 (2013: R229 866 written off) was written back to inventory during the period.

SAWS does not have inventories pledged as security for liabilities.

10. Trade and other receivables from exchange transactions	2014	2013
	R	R
Trade receivables	19 264 205	16 711 968
Impairment of receivables	(3 760 901)	(4 754 801)
Recoveries and sundry receivables	1 793 886	1 588 324
	17 297 190	13 545 491

Interest is charged on invoices over 60 days outstanding in the accounts receivable age analysis.

Trade and other receivables are stated at amortised cost using effective interest rate method less impairment of receivables.

Trade receivables amounting to R11 808 830 (2013:R8 203 218) are neither past due nor impaired and are considered to be fully recoverable.

Trade receivables which are past due are not automatically considered to be impaired. Management's judgement is used to impair amounts that are past due. At 31 March 2014 trade receivables of R4 321 103 (2013: R3 753 949) were past due but not impaired.

	Total	31-60 days	61-90 days	91-120 days	Over 120 days
Trade receivables - 2014	4 321 103	3 629 477	655 245	-	36 381
Trade receivables - 2013	3 753 949	3 083 651	621 487	48 811	-

Reconciliation of provision for impairment of trade receivables	2014	2013
	R	R
Opening balance	4 754 801	9 393 649
Provision reduced	(219 552)	4 222 236
Provision utilised	(774 348)	(8 861 084)
Closing balance	3 760 901	4 754 801

The maximum exposure to credit risk at the reporting date is the carrying amount of each class of trade receivables mentioned above. The entity does not hold any collateral as security.

Trade receivables are individually and collectively assessed for impairment, whether significant or not, and are included within the group of trade receivables with similar credit risk characteristics.

SAWS therefore recognises impairment of trade receivables based on individual and collective assessment as follows:

Regulated commercial debtors	Total	Current	31-60 days	61-90 days	91-120 days
Aviation	2 059 381	-	-	-	2 059 381
Non-regulated commercial debtors					
Eskom group	326 836	125	323	3 462	322 926
Insurance clients	860 261	12 139	9 218	16 975	821 929
Contracts	109 134	-	-	-	109 134
Others	405 289	175	268	528	404 318
	1 701 520	12 439	9 809	20 965	1 658 307
Total impairment	3 760 901	12 439	9 809	20 965	3 717 688

11. Prepayments and advances

	2014 R	2013 R
Prepaid expenses	2 357 255	5 909 111

Prepaid expenses comprise of services paid in advance and staff travel advance payments.

12. Cash and cash equivalents

Bank balances and cash on hand	20 758 525	22 504 434
Short-term investments	56 377 638	71 109 876
	77 136 163	93 614 310

SAWS has no restriction on cash balances at year end.

Included in the balance of short term investment is earmarked funding of R20 million received as a government grant for the purchase of the High Performance Computer.

13. Employee benefits

Post Retirement Medical Aid

The entity has a defined benefit plan in the form of the post retirement medical aid liability.

All eligible employees of SAWS, who joined SAWS before 1 November 2008, excluding those that accepted the settlement offer in September 2011, receive a 100% subsidy of medical scheme contributions in retirement, provided that the employee belonged to a registered medical scheme before leaving SAWS on grounds of retirement, including early retirement and retirement due to ill-health and death.

The subsidy is subject to a maximum rand cap. The rand cap amount for 2014 is R2 044, irrespective of the number of dependents. The rand cap is expected to increase with health care cost inflation each year.

During the financial year, the number of employees eligible to receive post employment medical aid subsidies from the entity was as follows:

Category	2014	2013
Current (in service) employees	23	23
Continuation members (pensioners)	36	36
Total	59	59

The actuarial valuation of the liability in respect of the post employment medical aid benefit is performed on balance sheet date as summarised below. The 2014 actuarial valuation has been performed by ZAQEN Actuaries (Pty) Ltd.

Movement in net liability recognised in the statement of financial position:	2014 R	2013 R
Balance as at 1 April	14 500 678	16 202 000
Contributions paid	(3 240 857)	(3 240 857)
Settlement amounts	-	(58 465)
Charge to statement of financial performance	1 686 000	1 598 000
Balance as at 31 March	12 945 821	14 500 678

13. Employee benefits (continued)	2014 R	2013 R
Charge to statement of financial performance:		
Current service cost	301 000	312 000
Net interest cost	1 106 000	1 308 000
Actuarial loss/(gain)	279 000	(22 000)
	1 686 000	1 598 000
Movement in the defined benefit obligation for the year:		
Balance as at 1 April	22 567 535	20 743 000
Current service costs	301 000	312 000
Interest costs	1 727 000	1 728 000
Actuarial (gains)/losses	(104 000)	624 000
Benefits paid	(879 000)	(781 000)
Settlements	-	(58 465)
Balance as at 31 March	23 612 535	22 567 535
Movements in the fair value of the plan assets for the year:		
Balance as at 1 April	8 066 857	4 541 000
Expected return on plan assets	621 000	420 000
Actuarial (losses)/gains	(383 000)	646 000
Employer contributions	3 240 857	3 240 857
Benefits paid	(879 000)	(781 000)
Balance as at 31 March	10 666 714	8 066 857
Net liability recognised in the statement of financial position	12 945 821	14 500 678
Amounts recognised in the statement of financial performance:		
Current service costs	301 000	312 000
Interest costs	1 727 000	1 728 000
Expected return on plan assets	(621 000)	(420 000)
Actuarial loss/(gain)	279 000	(22 000)
Total	1 686 000	1 598 000

The expected return on plan asset is based on market expectations at the beginning of the period, for returns over the entire life of the related obligation.

Two most important variables are the discount and medical aid inflation rates.

SAWS undertook an investment plan with Momentum, Customised With-Profit Annuity portfolio (Plan Asset) in order to transfer the financial risk associated with this post retirement medical liability. This investment plan will also provide SAWS with the ability to share in the benefits with regard to the investment and mortality experience underlying the liability through future contributions due to the policy.

The total amount of the investment is R18.9 million with an upfront payment of R6 million that was paid in 2011 and the balance payable in equal instalments amounts of R3.2 million annually until December 2015.

13. Employee benefits (continued)

Principal actuarial assumptions at statement of financial position date:	2014	2013
Discount rate	8.89%	7.70%
The discount rate was set as the yield of the R209 South African government bond as at the valuation date. The actual yield on the R209 bond was sourced from the RMB Global Markets website on 31 March 2014.		
Consumer price inflation	6.74%	6.80%
Medical aid contribution inflation	8.24%	7.30%
Maximum subsidy increase rate (net effective discount rate)	0.60%	0.37%
Active members expected to continue after retirement	100%	100%
Mortality pre-retirement (years)	85-90	85-90
Mortality post-retirement (years)	90	90
Average retirement age (years)	60	60

The effect of an increase and decrease of 1% point in the assumed medical aid inflation rate which might have a direct effect on the liability of future retirees is as follows:

	-1% Medical aid inflation R	Valuation assumption R	+1% Medical aid inflation R
Total accrued liability	20 608 000	23 613 000	27 292 000
Interest cost	1 803 000	2 073 000	2 404 000
Service cost	249 000	311 000	393 000

The present value of the defined benefit obligation, the fair value of the plan assets and the surplus or deficit in the plan for the current and previous reporting periods is as follows:

	2014 R	2013 R	2012 R	2011 R	2010 R
Present value of funded obligations	23 612 535	22 567 535	20 743 000	30 975 505	27 090 000
Fair value of plan assets	10 666 714	8 066 857	4 541 000	-	-
Net liability	12 945 821	14 500 678	16 202 000	30 975 505	27 090 000

Short term employee benefits	2014 R	2013 R
Leave pay accrual		
Opening balance	2 995 197	3 004 116
Leave raised	938 125	629 662
Leave utilised	(792 398)	(638 581)
Closing balance	3 140 924	2 995 197

14. Provisions

	Opening Balance	Additional Provision	Utilised	Closing Balance
	R	R	R	R
2014				
Non current provisions				
Capped leave provision	449 973	30 214	(23 937)	456 250
Current provisions				
Bonus provision	10 877 816	12 001 984	(10 999 904)	11 879 896
Reward & remuneration provision	340 531	-	(340 531)	-
	11 218 347	12 001 984	(11 340 435)	11 879 896
2013				
Non current provisions				
Capped leave provision	416 942	56 851	(23 820)	449 973
Current provisions				
Bonus provision	10 000 000	11 000 000	(10 122 184)	10 877 816
Reward & remuneration provision	3 800 000	-	(3 459 469)	340 531
	13 800 000	11 000 000	(13 581 653)	11 218 347

Capped leave provision

Capped leave provision is calculated based on the working days due to each employee, as at 15 July 2001 from the payroll system. Adjustments to this provision relate to increases in salary rates, days claimed or paid out through retirement or death or employees resigning. It should be noted that employees resigning forfeit their claim.

Provision for reward and remuneration

This is the estimated cost for the implementation of critical and scarce skills allowance based on the attraction and retention strategy to address the high turnover of employees. The provision amount of R3 420 000 was approved in the 2008 financial. The project was finalised and payment of the salary adjustment portion was effective from July 2012 against the provision on a monthly basis until fully utilised.

Provision for performance bonus

This is a provision for the performance bonus based on the performance management policy of SAWS. The actual utilisation is approved by the Board based on a combination of both the entity's and individual performance.

15. Operating lease liability

Operating leases

The following lease payments are related to operating leases for the rental of premises and motor vehicles.

SAWS leases 26 premises from various lessors. The rental agreements for the premises include escalation clauses of between 8% and 11% per year in rental payments. The duration of the rentals varies between two and ten years.

The major lease contract for Bolepi House expired in April 2013 and was renewed for a further 5 years effective 01 May 2013, with an annual escalation of 9%.

15. Operating lease liability

SAWS has an agreement with Dihlabeng Municipality which stipulates that SAWS will offer free rental to the municipality in exchange for SAWS incurring no levies and electricity costs on the same.

SAWS entered into a contract with Swartland Municipality and Alkantpan where SAWS provides lightning data in exchange for free rental space.

SAWS utilises Portion 110 of the Farm Doornkloof 391 JR for scientific purposes for no consideration, which was valued at R2 412 847 on 31 March 2013. Improvements on the property consist of two interconnected offices, workshop, storage wings and some supporting outbuildings and carports. In accordance with the registration of ownership the property may not be transferred to SAWS.

There was no existing contract for the photocopy machines at the reporting date and SAWS was in the process of acquiring new photocopiers for all the offices, therefore the current arrangement is that the rental continues on a month to month basis.

SAWS entered into an operating lease agreement with Kempston Vehicle Leasing on 28 March 2011. The agreement includes a full maintenance plan. Ownership in and to all or any of the vehicles comprising the fleet shall at all times, during and after termination of the agreement, remain vested in Kempston Vehicle Leasing. This contract expires on 30 June 2014.

2014	Equipment	Premises	Motor Vehicles	Total
	R	R	R	R
Future minimum lease payments				
Not later than 1 year	-	11 124 548	772 869	11 897 417
Later than 1 year and not later than 5 years	-	35 842 276	-	35 842 276
Later than 5 years	-	1 862 428	-	1 862 428
Total commitment	-	48 829 252	772 869	49 602 121

2013				
Future minimum lease payments				
Not later than 1 year	40 063	9 988 040	3 091 477	13 119 580
Later than 1 year and not later than 5 years	4 309	38 372 897	-	38 377 206
Later than 5 years	-	897 243	-	897 243
	44 372	49 258 180	3 091 477	52 394 029

Straight lining effect on operating lease liability:	2014	2013
	R	R
Opening balance	499 302	4 717 891
Deferred rental	1 192 771	(4 218 589)
Closing balance	1 692 073	499 302

16. Trade and other payables from exchange transactions	2014 R	2013 R
Trade payables	20 629 305	17 218 824
Other payables	5 291 964	5 210 391
Accruals	2 433 938	3 544 884
Payroll payables	2 454 123	123 255
Bursary students	9 900	841 856
Debtor: Staff S&T	100 007	350 753
Sundry payables	293 995	349 643
	25 921 269	22 429 215

The trade and other payables are subsequently carried at amortised cost. Unrealised foreign exchange gains and losses are calculated using the spot rate at year-end.

Included in the trade payables are foreign creditors:

	2014 FOREIGN CURRENCY	2013 FOREIGN CURRENCY	2014 R	2013 R
Vaisala USA	USD 332 075	-	3 509 634	-
Hydrological Research Centre	USD 20 700	-	218 774	-
NOAA GMD	USD 6 117	-	64 649	-
Interoute	GBP 8 093	-	142 293	-
EuMetNet	EUR 1 012	-	14 719	-
World Meteorological Organisation	EUR 4 000	CHF 598	58 175	5 809
EUMETSYS	EUR 131 150	EUR 131 150	1 907 406	1 548 501
Ask Innovative	-	EUR 52 680	-	621 994
UK Met Office	-	GBP 138 997	-	1 947 663
Vaisala Inc.	-	USD 85 560	-	789 302
Vaisala Oyj	-	EUR 91 600	-	1 081 530
Swedish Meteorological	-	EUR 935	-	11 034
			5 915 650	6 005 833

Spot rates at period-end	2014	2013
	USD = R10.5688	USD = R9.225
	EUR = R14.5437	EUR = R11.807
	GBP = R17.5831	GBP = R14.012
	CHF = R11.100	CHF = R9.709

	2014 R	2013 R
17. Revenue received in advance		
Advance income	372 452	418 409

18. Unspent donations received		
Unspent donations received	3 000 029	5 597 251

Donor funds consist of funding received from various institutions. Memoranda of Understanding (MoU) are entered into between SAWS and the donors with the aim of utilising the SAWS expertise in meteorology.

19. Revenue		
Revenue from non-exchange transactions		
Revenue from non-exchange transactions - operational expenditure	162 943 000	143 528 839
- Government grant - operational expenditure	149 490 000	138 376 154
- Government grant - SAAQIS project	13 453 000	5 152 685
Revenue from non-exchange transactions - capital expenditure	20 000 000	14 342 870
- Government grant - SAAQIS project capital expenditure	-	7 110 315
- Government grant - capital expenditure	20 000 000	7 232 555
Contributions and donations	10 586 950	2 278 699
- TETA -SETA grant	468 500	665 945
- Donations received	5 520 284	170 047
- Donor funding - research projects	4 598 166	1 442 707
Revenue from non-exchange transactions	193 529 950	160 150 408
Revenue from exchange transactions		
Regulated commercial revenue		
- Aviation	81 952 308	73 771 350
Non regulated commercial revenue	16 247 150	14 164 780
- Aviation Instruments maintenance income	781 004	821 243
- Information fees	9 245 174	8 599 678
- Training - RTC	816 780	253 918
- Lightning detection network sales	2 764 725	2 563 106
- Project/Automatic weather stations income	2 639 467	1 926 835
Total commercial revenue	98 199 458	87 936 130
Other revenue	5 514 446	5 544 291
- Miscellaneous income	774 570	444 590
- Proceeds from disposal of assets	2 810	16 924
- Interest received from receivables	121 324	301 402
- Income from investments	4 615 742	4 781 375
Revenue from exchange transactions	103 713 904	93 480 421
Total revenue	297 243 854	253 630 829

19. Revenue (continued)2014
R2013
R**Donations received**

The donations received mainly consist of bulk transfer of assets for an amount of R5 198 423 that were donated by the DEA for SAAQIS monitoring stations.

Income from investments

The income from investments consists of interest received on cash and cash equivalents from banks.

20. Administrative expenses

Marketing & sales	1 567 670	709 438
Audit fees - Internal	755 456	1 062 193
Administrative fees	712 084	803 732
Impairment adjustment on trade receivables	(219 552)	4 222 236
Provision for credit losses	2 875 552	5 907 365
Reversal of impairment	(3 095 104)	(1 685 129)
Bank charges	234 398	191 830
Board remuneration	642 625	528 014
Conference costs	467 346	947 698
Entertainment costs	478 883	595 655
Foreign exchange loss	1 188 348	410 300
Loss on disposal of assets	112 963	22 071
Legal fees	602 054	2 013 258
Printing & stationery	808 422	748 739
Training	1 041 543	718 080
Total administrative expenditure	8 392 240	12 973 244

21. Employee costs

Salaries and wages	121 088 180	109 803 494
Medical aid contributions	9 102 463	8 072 953
Pension fund contributions	9 337 333	8 126 081
Overtime and shift allowance	9 085 864	9 363 785
Post retirement medical aid	1 407 000	1 620 000
Leave pay and bonus performance	12 790 383	10 991 182
Compensation commissioner	352 111	173 514
Bargaining council & casual labour	264 408	105 332
Total employee costs	163 427 742	148 256 341

22. Other operating expenses

	2014 R	2013 R
Recruitment costs	1 173 432	1 043 111
Aircraft expenses	1 034 664	1 036 935
Audit fees - external	3 103 343	2 543 538
Communication costs	13 707 974	11 013 917
Computer expenses	10 160 385	7 607 264
Electricity & power generator	2 787 616	2 697 037
Consumable spares	5 184 609	6 301 316
Insurance	1 543 634	1 159 596
Key strategic projects	5 786 198	9 697 945
Leases & rentals	17 968 804	14 548 627
Levies & subscriptions	5 060 477	4 264 110
Motor expenses	1 875 461	1 486 318
Social responsibility	2 131 576	1 908 660
Repairs & maintenance	9 736 667	4 424 124
Cleaning & security services	2 350 168	1 949 278
Travel expenses - foreign & local	13 272 630	12 660 910
Professional & research fees	548 229	297 561
Inventory adjustments	(196 922)	229 866
Total other operating expenses	97 228 945	84 870 113
Rental expenses: Buildings		
Actual contractual payments	11 488 687	13 231 354

23. Net cash flows from/(used in) operating activities

Surplus/(Deficit)	40 163 993	(16 341 625)
Non-cash movements		
Depreciation	23 414 664	21 134 279
Amortisation	2 690 683	2 760 477
Non- cash revenue	(8 502 800)	(306 708)
Impairment/Revaluation	300 986	-
Actuarial loss	279 000	(22 000)
Foreign exchange loss	1 188 349	410 300
Inventory Adjustment	(196 921)	229 866
Fair value adjustment - investment property	(38 654 397)	-
Loss on disposal of assets	112 963	22 071
Decrease/(increase) in inventories	1 012 652	230 572
Decrease/(increase) in receivables	(3 751 699)	(268 981)
Decrease/(increase) in prepayments	3 551 856	(3 485 333)
Increase/(decrease) in donor funding	(2 597 222)	5 358 805
Increase/(decrease) in short term employee obligations	145 727	(8 918)
Increase/(decrease) in payables	3 492 054	(3 021 142)
Increase/(decrease) in payments received in advance	(45 957)	415 209
Increase/(decrease) in provisions	667 826	(2 548 623)
Increase/(decrease) in operating lease liability	1 192 771	(4 250 245)
Increase/(decrease) in defined benefit obligation	(1 554 857)	(1 701 322)
Net cash flows from/(used in) operating activities	22 909 671	(1 393 318)

24. Contingent assets and liabilities

	2014 R	2013 R
Contingent assets		
Legal matter pertaining to labour dispute	61 972	-
Contingent liabilities		
Legal matters pertaining to labour disputes	2 346 360	1 967 198

25. Risk management

In the course of the entity's operations it is exposed to interest rate, foreign exchange, credit and liquidity risk. The entity has developed a comprehensive risk strategy in terms of TR 28.1 in order to monitor and control these risks. The risk management process relating to each of these risks is discussed under the headings below.

The entity's overall risk management program focuses on the unpredictability of financial markets and seeks to minimise potential adverse effects on the entity's financial performance. The entity does not use derivative financial instruments to hedge risk exposures. Risk management is performed by management under policies approved by the executive committee. Management identifies, evaluate and mitigates financial risks through the Risk Committee of the Board.

Liquidity risk

The entity's risk to liquidity is a result of the funds available to cover future commitments. The entity manages liquidity risk through an ongoing review of future commitments and credit facilities.

Cash flow forecasts are prepared and adequate utilised borrowing facilities are monitored.

Liquidity risk is the risk that the entity will not be able to meet its financial obligations as they fall due. The entity's approach to managing liquidity is to ensure, as far as possible, that it will always have sufficient liquidity to meet its liabilities when due, under both normal and stressed conditions, without incurring unacceptable losses or risking damage to the entity's reputation. Management monitors monthly performance against budgets (reviewing receipt of government grants, and cash and cash equivalents) on the basis of expected cash flow.

Prudent liquidity risk management implies maintaining sufficient cash and obtaining the continued commitment from the Department of Environmental Affairs for the government grant and the collection of the aviation income from respective airlines.

Due to the nature of the business, management maintains flexibility in funding by maintaining expenses below budget and continuously pursuing additional income via donor funding, information fees and the sale of lightning detection networks.

	Less than 1 year	Between 1 and 2 years	Between 2 and 5 years	Over 5 years
Period end 31 March 2014				
Trade and other payables	21 001 757	-	-	-
Period end 31 March 2013				
Trade and other payables	21 531 760	-	-	-

Interest rate risk

The entity's exposure to market risk (in the form of interest rates risk) arises primarily from the entity's investment in cash and cash equivalents, accounts receivable and payable. The entity manages its interest rate risk by obtaining competitive rates from approved financial institutions on a monthly basis. The entity policy is to manage interest rate risk so that fluctuations in variable rates do not have a material impact on surplus/(deficit). The entity's exposure to interest rate risk and the effective interest rates on financial instruments at the statement of financial position date is as follows:

25. Risk management (continued)

	2014 Effective interest rate	2014 R	2013 R
Assets			
Cash	4.79%	77 136 163	93 614 310
Accounts receivable	8.50%	19 264 205	16 711 968
Total financial assets	6.65%	96 400 368	110 326 278
Total financial assets	4.79%	96 400 368	110 326 278
Total financial liabilities	-	(21 001 758)	(17 637 233)
	4.79%	75 398 610	92 689 045

Credit risk

Financial assets, which potentially subject the entity to the risk of non performance by counter parties and thereby subject to credit concentrations of credit risk, consist mainly of cash and cash equivalents, investments and accounts receivable.

Credit risk consists mainly of cash deposits, cash equivalents and trade receivables. The entity managed to limit its treasury counter-party exposure by only dealing with well-established financial institutions approved by National Treasury in accordance with the investment policy. The entity's exposure is continuously monitored by the Accounting Authority.

The entity does not have any material exposure to any individual or counter-party. The entity's largest concentration of credit risk is limited mainly to the aviation industry. No events occurred in the industry during the financial year that may have an impact on the accounts receivables that have not been adequately provided for. Credit risk with regard to accounts receivable in the aviation industry is limited as the fees are charged in terms of legislation.

Foreign currency risk

The entity does not operate internationally but undertakes certain transactions denominated in foreign currencies, and is exposed to foreign exchange risk arising from fluctuations in foreign currencies. The entity does not hedge against its exposure to foreign exchange risk.

Foreign currency exposure at financial year-end relates to trade payables and is disclosed under note 16.

Summary	2014 Foreign currency	2013 Foreign currency	2014 R	2013 R
Euro payables	EUR 136 162	EUR 276 364	1 980 300	3 263 059
USD payables	USD 358 892	USD 85 560	3 793 058	789 302
GBP payables	GBP 8 093	GBP 138 997	142 293	1 947 663
CHF payables	CHF 0	CHF 598	-	5 809
			5 915 651	6 005 833

Foreign currency sensitivity analysis

The entity is mainly exposed to the Euro, US Dollar, British Pound and Swiss Franc currencies.

The following table details the entity's sensitivity to a 5% increase and decrease in rand against the relevant foreign currencies. The sensitivity analysis includes only outstanding foreign currency denominated monetary items and adjusts their translation at financial year-end for a 5% change in foreign currency rates. A positive number below indicates an increase in surplus where the rand strengthens 5% against the relevant currency. For a 5% weakening of the rand against the relevant currency, there would be an equal and opposite impact on the surplus and the balances below would be negative.

25. Risk management (continued)

	Euro Impact		USD Impact	
	2014 R	2013 R	2014 R	2013 R
Surplus/(deficit)	58 891	27 038	(158 802)	(672)
	GBP Impact		CHF Impact	
	2014 R	2013 R	2014 R	2013 R
Surplus/(deficit)	4 352	(12 914)	-	737

In management opinion, the sensitivity analysis is unrepresentative of the inherent foreign exchange risk as the period end exposure does not reflect the exposure during the period.

26. Related party transactions

Relationships

In preparing the annual financial statements for the period ended 31 March 2014, SAWS has identified the related party relations and made the necessary disclosures in the financial statements.

SAWS is deemed to be under common control with all entities in the national sphere of government and therefore these entities are considered to be related parties.

Background**Entity structure**

SAWS was established in terms of the national legislation as one of the Government's essential scientific institutions, providing information and services that have a direct impact on the lives of citizens and their properties and contributing greatly to the sustainable development in South Africa.

SAWS reports functionally to the Department of Environmental Affairs and therefore the Minister of Environmental Affairs is the executive authority.

SAWS is governed by the Board as appointed by the Minister. The details of the Board members are disclosed below:

SAWS also receives donor funds from the Department of Science and Technology for the financing of some research projects.

Transactions

SAWS provides weather and climate related services to various entities in the national government. This includes provision of services and instruments to public entities.

SAWS further provides aviation services to the national carrier which is controlled by the national government.

These services are provided on a cost recovery basis. The transaction amounts are included either in the statement of financial performance as revenue from exchange transactions and related account balances in the statement of financial position as trade and other receivables from exchange transactions or in the respective notes.

26. Related party transactions (continued)

Apart from transactions listed in the previous paragraph SAWS undertakes the following transactions with other entities in the public sector:

- Basic services such as electricity, water and sanitation by local municipalities.
- Air travel as supplied by the national carrier which is controlled by national government.
- Post retirement benefits to former SAWS employees by government pension fund.
- PAYE, UIF, SDL and other payroll taxes are collected by SAWS and remitted to the revenue authority on a monthly basis.
- The collection of aviation and other related services revenue from entities controlled by national government.
- The transaction amounts for the above services are included either in the statement of financial performance as expenditure and related account balances in the statement of financial position as trade and other payables or the respective notes.

Executive members' remuneration

Executive management 2014

Name	Status	Designation	Salary	Performance bonus	Medical & UIF	Pension	Travel allowance	Cell phone allowance	Lump sum and leave pay	Total
Dr L Makuleni		CEO	2 132 435	496 054	24 345	101 426	120 000	42 607	-	2 916 867
Mr S Mda	Resigned - 31/07/2013	CFO	402 168	-	11 193	2 846	-	12 000	63 678	491 885
Mr L Gcwensa		GM: Human Capital Management	1 056 495	241 808	1 785	22 676	-	36 000	-	1 358 764
Mr M Ndabambi		GM: Operations	971 611	216 961	17 865	93 202	114 000	36 000	-	1 449 639
Dr Z Majokweni	Appointed - 01/08/2013	GM: Corporate Affairs	682 901	-	1 190	32 179	-	24 000	-	740 270
Mr L Gumenge*		Acting CFO	153 410	-	-	-	-	24 000	-	177 410
Ms A Badimo**		Acting GM: Corporate Affairs	37 575	-	-	-	-	8 000	-	45 575
			5 436 595	954 823	56 378	252 329	234 000	182 607	63 678	7 180 410

* Mr L Gumenge was appointed Acting CFO on 1 August 2013, therefore only the acting allowance is disclosed.

Executive management 2013

Name	Status	Designation	Salary	Performance bonus	Medical & UIF	Pension	Travel allowance	Cell phone allowance	Lump sum and leave pay	Total
Dr L Makuleni		CEO	1 864 958	530 451	48 402	187 144	120 000	33 816	-	2 784 772
Mr S Mda		CFO	1 098 557	279 283	65 518	17 073	-	36 000	-	1 496 431
Ms M Makoela	Resigned - 30/06/2012	GM: Corporate Affairs	223 792	-	9 695	9 316	-	9 000	3 358	255 161
Mr L Gcwensa		GM: Human Capital Management	973 908	238 736	3 282	41 807	-	36 000	-	1 293 733
Mr M Ndabambi		GM: Operations	894 749	243 529	35 442	170 609	114 000	36 000	-	1 494 329
Ms A Badimo**		Acting GM: Corporate Affairs	84 544	-	-	-	-	-	-	84 544
			5 140 509	1 291 999	162 339	425 949	234 000	150 816	3 358	7 408 970

** Ms A Badimo was appointed Acting GM: Corporate Affairs on 1 July 2012 until 31 July 2013, therefore only the acting allowance is disclosed.

26. Related party transactions (continued)

Name	Designation	2014		2013	
		Fees R	Travel R	Total R	Total R
Prof L. Magi	Chairperson	115 829	9 065	124 894	82 426
Dr N. Gwagwa	Deputy chairperson	69 483	1 121	70 604	43 896
Mr S. Makhaye	Non-executive member	73 344	3 687	77 031	57 160
Mr A. Mvinjelwa	Non-executive member	51 570	2 445	54 015	59 997
Mr J. Tshipa	Non-executive member	76 650	1 620	78 270	69 094
Prof. E. Mokotong	Non-executive member	56 918	1 069	57 987	53 992
Mr R. Nicholls	Non-executive member	94 545	2 859	97 404	57 474
Ms N. Mngomezulu	Non-executive member	85 568	1 585	87 153	48 276
Dr S. Moephuli	Non-executive member	-	493	493	2 190
Mr Z. Fihlani	Non-executive member	18 718	914	19 632	36 214
		642 625	24 858	667 483	510 719

Previous Board Members

Ms K Njobe	Chairperson	11 229
Ms MM Mokuena	Non-executive member	2 622
Dr TN Mali	Non-executive member	1 011
Mr TW Msomi	Non-executive member	7 504
Mr MC Ntumba	Member	6 132
		28 498

27. Material losses

No material losses through criminal conduct, irregular, unauthorised, fruitless and wasteful expenditure was incurred during the period ended 31 March 2014.

28. Capital commitments

SAWS signed a contract for the rental of photocopy machines for SAWS offices with Itec Business Development (ITECBIZ) on 5 May 2014 for a total amount of R4 337 378 for 3 years effective from the date on which installation and commissioning is completed.

29. Irregular expenditure

During the period under review, management did not detect any irregular expenditure.

30. Events after the reporting period

Management is not aware of any matter or circumstance arising since the end of the financial period.

31. Budget information

Variance analysis of material differences between actual, approved budget and final budget

Variance between approved and final budget

At the time of budget preparation and approval thereof, the SAAQIS project was treated as a conditional grant. At the 2012/13 year end, SAWS requested an accounting opinion on the correct treatment of the SAAQIS grant. The outcome of the opinion was that the grant should be classified as an unconditional grant which resulted in the reclassification of the said grant retrospectively. As a result of this treatment, the SAAQIS budget had to be incorporated into the overall SAWS budget. Therefore an amount of R13 453 000 was added to the SAWS revenue, while administrative expenses, operating expenses and employee costs were proportionally allocated to the respective budgeted expenditure based on the R13 453 000 revenue allocation.

Variance between actual and final budget

Revenue

Total revenue for the period is below the final budget by 0.62%.

Government grant of R182 942 996 received in 2013/14 includes R20 000 000 capital expenditure grant for the acquisition of the High Performance Computer which will be finalised in the 2014/15 financial year. Included under contributions and donations is an amount of R5 520 000 relating to assets that were transferred by DEA to SAWS to assist with the monitoring of the Air Quality Stations in the respective regions and an amount of R4 598 000 relating to revenue from donor funded projects.

Revenue from exchange transactions is below budget by R31 632 735 due to a deficit of R4 101 096 on aviation revenue and R2 752 850 on non-regulated commercial revenue. Included in other income budget is an amount of R24 643 235 which was from approved projects which have not yet been completed.

Expenses

Total expenses for the period are R7 830 824 below the budget of R302 985 097 (actual: R295 154 272). During the financial year management implemented cost saving measures with the aim of ensuring that operating and administrative expenses are within budget. Management also complied with the National Treasury Instruction 1 of 2013/14 on cost containment measures. Below are the savings in total expenses over budget:

	2014 R
• Administrative expenses	771 130
• Other operating expenses	4 455 647
• Employee Costs	4 365 499

Administrative expenses incurred amounted to R8 392 240 and are 8% below the budget of R9 163 370. Savings on administrative expenses are as a result of a R1 411 204 saving on legal fees.

Other operating expenses amounting to R97 228 945 for the year are 4.38% below the budget of R101 684 592 mainly as a result of R1 116 707 on consumable spares related to Radiosondes and Upper Air Balloons whose purchases were deferred to the next financial year.

Employee costs are 2.59% below the budget of R167 793 241 (actual: R163 427 742) and are mainly due to resignations and vacant posts which were not filled.

32. Changes in accounting estimate

Based on experience gained in practice, SAWS reassessed the useful lives of meteorological instruments, furniture and fittings, office equipment and tools and other equipment. The reassessed useful lives is believed to fairly represent the consumption of economic benefits embodied in the assets at the following ranges:

	Years
Meteorological instruments - other	10-15
Office equipment	15-20
Computer equipment	5-10
Computer software	5-10
Furniture and fittings	15-20
Tools and other equipment	10-20

The effect of the change in accounting estimate amounts to R2 469 433 included in the depreciation charge.

33. Prior period adjustments

Property, plant and equipment

Fixed assets received at no cost in the previous years

During the financial year, SAWS continued with the process of allocating cost to assets that were received at no cost from the DEA in 2002. The effect of the adjustment on property, plant and equipment and opening accumulated surplus amounted to R968 980.

Furthermore, SAWS received assets for the SAAQIS project from DEA in 2012 when the SAAQIS project was transferred. There were delays in transfer processes and were finalised in 2014 financial year together with the carrying values of the transferred assets. The effect of this transfer to property, plant and equipment cost and opening accumulated surplus amounted to R5 501 074.

Intangible assets

In 2012 financial, SAWS acquired a project for the development of a website in the form of a transfer from DEA. The website costs were in correctly capitalised as tangible assets under air quality equipment class. The transfer of the website cost had an effect in the opening balances of both property, plant and equipment and intangible assets of an amount of R6 965 360.

Operating lease liability

SAWS undertook a process of reviewing the lease contracts for the rental of offices and the effect of the adjustment amounted to an increase in the operating lease liability of R27 059.

Trade and other receivables

The accrual for the payment of services for the land improvements was not reversed against the sundry accruals on receipt of invoice. The effect of the adjustment in the trade and other receivables and opening accumulated surplus amounted to R121 125.

Donor funding - projects

SAWS undertook a process of clearing the donor funding projects in the prior year which were previously recognised as a liability in the statement of financial position and the process has been finalised in the current financial year. The effect of the adjustment in donor funding - research projects amounted to R922 630 in the statement of financial position and R280 714 in the statement of financial performance. The opening accumulated surplus was understated by R1 203 344.

33. Prior period adjustments (continued)

The cumulative effect of the above had the following impact on the annual financial statements:

	2013 R
Statement of financial position	
Increase in accumulated funds - opening balance	(7 132 316)
Increase revaluation reserve - opening balance	(1 360 000)
Increase in property, plant and equipment - cost	690 663
Increase in intangible assets - cost	7 139 390
Increase in property, plant and equipment - accumulated depreciation	(774 017)
Increase in intangible assets - accumulated amortisation	(174 030)
Increase in operating lease liability	(27 059)
Decrease in trade and other payables	121 125
Decrease in donor funds	922 630
	(593 614)
Statement of financial performance	
Increase in donor funding - research projects	280 714
Increase in depreciation	(648 158)
Increase in operating expenses	(226 170)
	(593 614)

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