

The 06/07 Annual Report reflects the theme "Achieving service excellence through improved technology". This embodies our commitment to ongoing improvement in weather forecasting and risk management services through investing in technological capability and capacity.

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Message from the Minister of Environmental Affairs and Tourism Marthinus van Schalkwyk, MP

International studies have estimated that investment in national weather services yields a 2000% return for the national economy. Therefore, for every rand that South Africa invests in our weather services, the economy gains R20 in value. In light of our national priority to alleviate poverty through sustained economic growth, the South African Weather Service (SAWS) has a vital role to play. Accurate and timely weather forecasts and warnings help South Africa to avoid loss of life, infrastructure damage and disruptions to trade through severe weather events.

In this context, the Recapitalisation Programme to modernise SAWS infrastructure has been perfectly timed. This forward-looking investment, the largest in the organisation's history, will have positive impacts for the Accelerated and Shared Growth Initiative for South Africa (ASGI-SA), as well as our hosting of the 2010 Soccer World Cup. The tournament will take place during June and July, a period with high historical incidence of severe weather events. SAWS forecasts, boosted by the latest cutting-edge technology, will be essential to host a successful tournament.

SAWS' commitment to improved service delivery through technology also has positive spin-offs for the country's international profile. South Africa was the first country in the Southern Hemisphere to acquire the NinJo forecasting workstation, developed in Germany. The imminent addition of state of the art S-band Doppler radars and other new equipment positions South Africa at the forefront of technology adoption, and puts our weather scientists in direct engagement with the world's leading weather experts and product developers.

The South African Weather Service is held in high regard internationally, as reflected by the establishment of the Cape Point Global Atmosphere Watch (GAW) station. This is one of just two dozen such stations around the world, tasked with monitoring the development of climate change. Our national contribution to international research projects, such as the verification studies on satellite-derived rainfall, is evidence that SAWS experts work together with their international peers as scientific equals.

Through its commercial services, SAWS also adds value to key industry sectors like energy, aviation, agriculture and shipping trade. However, it is through its public good services – warning and protecting against potentially harmful weather events that SAWS adds tangible value to the lives of each and every South African. It is an ongoing commitment to the national goal of a better life for all, and SAWS must be commended for its efforts during 2006/7.

A handwritten signature in black ink, reading "Marthinus van Schalkwyk".

Marthinus van Schalkwyk, MP
Minister of Environmental Affairs and Tourism



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Message from the Deputy Minister of Environmental Affairs and Tourism Rejoice Mabudafhasi

President Thabo Mbeki has called this 'the era of hope' for South Africa. Unfortunately, devastation from severe weather events like floods or tropical cyclones can turn hope into despair within hours. Severe weather invariably affects those who are least equipped to deal with it. Marginalised communities are estimated to be 500 times more vulnerable to the effects of such events.

The forecasting and early warning systems of the South African Weather Service are the frontline of our national obligation to protect poorer communities from weather-related disasters. During the past year, it has been gratifying to witness SAWS' efforts to reach out to marginalised rural communities, to help them understand the implications of weather, and to benefit fully from forecasts and warnings. This campaign also involved partnerships with the media, to promote weather education and forecasts tailored to the needs and understanding of poorer rural communities. The World Meteorological Day event held in conjunction with Ramano College, the media workshop held at the same time and the SABC collaboration project in Limpopo all served to create an increased relevant and accessible service for South Africa's people.

Women and children are the most vulnerable in marginalised communities. It was especially gratifying to see the high turnout of school learners not just at these events, but also at the range of science exhibitions and events at which SAWS exhibited. South Africa suffers from a shortage of weather scientists. The keen interest shown by learners at these exhibitions and their involvement in our campaigns gives hope that a new generation of skilled meteorologists will alleviate the shortage of weather scientists in the near future. While South Africa has its own meteorological challenges and priorities, we are also mindful of our role in the wider Southern African Development Community (SADC) region. The past year has been another outstanding period in which SAWS extended expertise and assistance to our Southern African neighbours.

The Severe Weather Forecasting Demonstration Project (in which SAWS provided Severe Weather guidance forecasts to Botswana, Tanzania, Zimbabwe, Mozambique and Madagascar), Meteosat training provided to the SADC forecasters, Automatic Weather Station equipment supplied to Swaziland and Namibia, and continued radar coverage cooperation with Mozambique were some of the highlights. The ongoing Recapitalisation Programme has resulted in more accurate forecasts and warnings to the benefit of the SADC region. During the past year, SAWS has strengthened its role of regional cooperation and leadership, which was another positive step to ensure that South Africa's 'era of hope' is extended to the whole SADC region.

Rejoice Mabudafhasi

Deputy Minister of Environmental Affairs and Tourism

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Foreword by the Chairperson of the South African Weather Service Board Sizeka Rensburg

The 2006/7 financial year has been a challenging yet exciting time of change for the South African Weather Service (SAWS). A key achievement, and one which will introduce a renewed era of stability, has been the appointment of our new Chief Executive Officer, Dr L Makuleni, who will commence duty on 2 April 2007. We welcome Dr Makuleni in her new role and we are confident that her scientific expertise, experience and SAWS insight will be valuable assets, enabling us to enhance our status as a world-class organisation. I would also like to thank Mr B Tashe and Dr J Mphepya for their sterling work in fulfilling the Chief Executive Officer functions during this reporting period.

Our Recapitalisation Programme, now in its second year, involves upgrading and modernising SAWS infrastructure to improve service levels to all clients and stakeholders, including government, industry and the general public. This capital investment in infrastructure and related personnel training has allowed us to establish systems for the development of enhanced products and services to achieve improved returns on investment. The programme has made significant progress and has already resulted in improvements in the quality and accuracy of forecasting. We are grateful for timely additional funding received from National Treasury which will accelerate the programme. When the Capex investment is concluded in 2010, our role as the leading regional and continental provider of world-class meteorological and climatological products and services will have been considerably strengthened.

In order to comply with legislative and regulatory requirements, it is incumbent on us to maintain strict internal controls on all our activities and transactions. During the reporting period, controls were strictly monitored and we are proud to have received favourable and unqualified audit reports from both internal and external auditors. The historic aviation debt was settled during the year thanks to successful negotiations with the Airline Association of South Africa (AASA) and we are now able to move forward on a more solid financial foundation and a constructive relationship with our clients, focussing on their future needs.

We have been disappointed with the lack of progress in growing our commercial income which remained at approximately 30% of the total budget. We have undertaken considerable research in the international weather service community and the difficulty of increasing commercial income by meteorological institutions is shared by most countries. However, good progress has been made in the development of strategies in this area and during next year we will expressly focus on strategy implementation which should see a significant improvement in revenue generation.

On the international front, SAWS has continued to play an active role in the international meteorological community, mainly through the World Meteorological Organization (WMO). SAWS is implementing a WMO funded Severe Weather Forecast Demonstration Project (SWFDP) designed to develop and provide forecasting guidelines to Southern African Development Community (SADC) countries, thereby improving lead time in their severe weather warning. This project has enhanced the

cooperation among SADC countries and has already contributed significantly to improved warning systems about severe weather in the region. During the year we also hosted a SADC meeting of National Weather Services to form the Meteorological Association of Southern Africa (MASA). MASA will promote regional collaboration amongst SADC National Weather Services in order to enhance socio-economic applications of weather and climate information.

In closing, I would like to express my gratitude to the Board members, management and staff of SAWS for their tireless support, professionalism and dedication during the past year.

The Annual Report of the South African Weather Service, established in terms of Act No. 8 of 2001, is hereby submitted to the Minister of Environmental Affairs and Tourism for tabling in Parliament.



Sizeka Rensburg

Chairperson: South African Weather Service Board

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*Overview by the Acting Chief Executive Officer
Dr Jonas Mphepya*

The scientific findings contained in the recent Fourth Assessment report of the Intergovernmental Panel on Climate Change (IPCC) projected an increase in the frequency and magnitude of extreme weather events over the southern parts of the African continent.

These events will have significant impacts on socio-economic development, especially in key sectors such as health, agriculture, food security, water resource management, electricity production, tourism and urban settlement. SAWS will contribute to the mitigation and adaptation strategies by providing relevant meteorological information to policy makers and by focusing on research in relevant fields.

Having assumed the role of Acting Chief Executive Officer (CEO) from 1 January to 31 March 2007, I hereby present the Annual Report of the South African Weather Service for the 2006/7 period. This report represents the recent activities, achievements and performance of SAWS. I would like to acknowledge the enormous contributions that the previous Interim CEO, Mr B Tashe, made to SAWS during the nine month period of his stewardship. 2006/7 has been a period with many challenges, significant changes and a year in which SAWS has achieved the following milestones:

- Upgraded 168 weather observation stations through automation;
- Installed the improved Unified Model;
- Acquired the NinJo forecasting workstation and the TriVis media software; and
- Continued modernising the infrastructure and increased weather observations in order to enhance the quality of products and services.

These developments have all served to render a faster and improved service to clients and stakeholders, not only in South Africa but also in Southern African Development Community (SADC) countries. The challenges continued to be faced by SAWS in 2006/7 include:

- Retention of staff and employment of staff in core business; and
- Limited growth in commercial revenue.

SAWS will continue to provide high quality public good and commercial services. The outlook for 2007/8 will include:

- Implementation of the Total Quality Management (TQM) system;

- Implementation of the modernisation plan; and
- Investigation of methods to build capacity of scientific personnel.

I would like to take this opportunity to acknowledge the valuable input which SAWS received from the Board over the past year. I would also like to thank the backbone of the organisation, SAWS staff, for their dedicated efforts throughout the 2006/7 period. They continue to provide South African citizens with a broad range of public and commercial good services which have distinct socio-economic benefits. Finally, I would like to welcome Dr L Makuleni, who will be commencing as Chief Executive Officer of SAWS as from April 2007.



Dr Jonas Mphepya
Acting Chief Executive Officer

Board Members

From left to right:

(Back row) Mr V P Maluleke, Dr L Makuleni, Mr I W Robinson, Prof G B Brundrit,
Ms S M Rensburg, Rev L W Mbete

(Front row) Mr R G Nicholls, Ms M M Mokuena, Ms J R Yawitch, Ms N P Maqubela,
Mr T W Msomi



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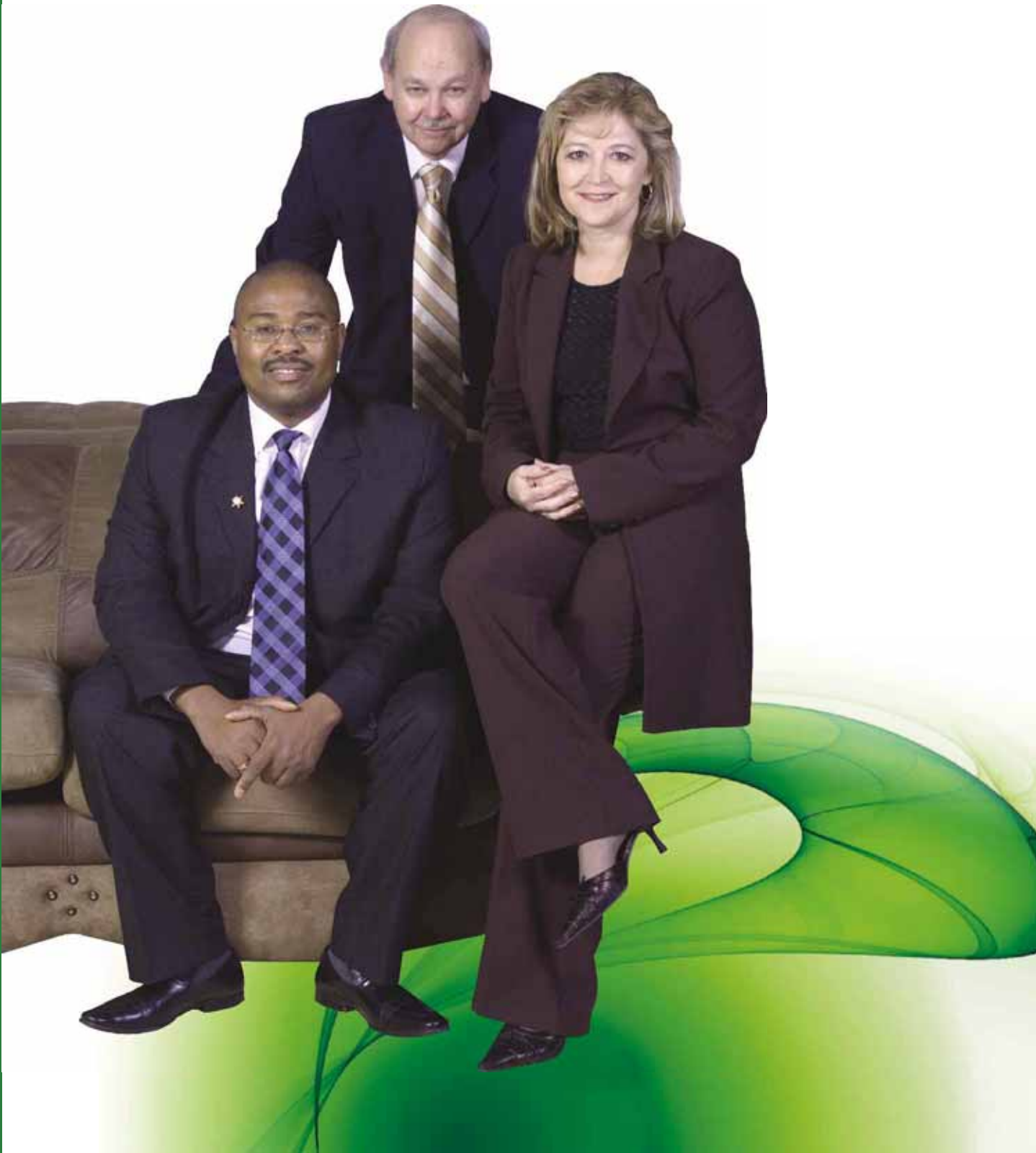
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Executive Management

From left to right:
Dr J Mphepya, Mr G Schulze, Ms H Grobler



Performance Against Targets - Year Ended 2007

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STRATEGIC OBJECTIVE 1: Ensure financial viability and sustainability																				
KPA	KPI	Key Target/ Milestones	Key Activities/ Projects	Achievements																
Manage operational costs	Ensure spending against budget	R1.5 million variance of actual operating expenses to budgeted amounts	Control operating expense variance against budget before depreciation, bad debts provisions, gains on fair value adjustments and stock adjustment	<p>Not Achieved</p> <p>Variance of R8.2 million under spent for defined operating expenses against budget amounts:</p> <table border="0"> <tr> <td></td> <td style="text-align: right;">R m</td> </tr> <tr> <td>Consultancy</td> <td style="text-align: right;">2.8</td> </tr> <tr> <td>Employee costs</td> <td style="text-align: right;">3.3</td> </tr> <tr> <td>Legal fees</td> <td style="text-align: right;">0.4</td> </tr> <tr> <td>Computer and Communication</td> <td style="text-align: right;">1.1</td> </tr> <tr> <td>Board fees</td> <td style="text-align: right;">0.3</td> </tr> <tr> <td>Entertainment</td> <td style="text-align: right;"><u>0.3</u></td> </tr> <tr> <td></td> <td style="text-align: right;">8.2</td> </tr> </table> <p>Employee cost relate to vacant positions not filled, computer and communications costs relate to the late implementation of the WAN, consulting fees relate to projects implemented internally and some small projects in HCM transferred to the new financial year.</p>		R m	Consultancy	2.8	Employee costs	3.3	Legal fees	0.4	Computer and Communication	1.1	Board fees	0.3	Entertainment	<u>0.3</u>		8.2
		R m																		
Consultancy	2.8																			
Employee costs	3.3																			
Legal fees	0.4																			
Computer and Communication	1.1																			
Board fees	0.3																			
Entertainment	<u>0.3</u>																			
	8.2																			
Reduction in identified operational costs	R1 million reduction in identified operational costs	Reduce cost of electricity, entertainment, stationery, courier costs through economical uses	Partially Achieved	<p>Achieved 66% of set target. The budgets were found to be accurate and no further savings could be made. However, in the new year electricity costs will have a focused saving approach through economical use.</p>																
Increase revenue base	Increased revenue from cost recovery services	2% revenue growth from baseline R47.5 million (2006)	Achieve an Aviation income target of R48.4 million (2007) before adjustments for present value calculations	<p>Not Achieved</p> <p>Commercial income remained at same level as 2006</p> <p>Did not achieve target due to challenges in developing</p>																

Performance Against Targets - Year Ended 2007 (Continued)

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STRATEGIC OBJECTIVE 1: Ensure financial viability and sustainability

KPA	KPI	Key Target/ Milestones	Key Activities/ Projects	Achievements
				market ready products to sell, especially to the media industry. Will be addressed in new financial year.
	Increased revenue from Commercial Services	17% revenue growth from baseline R6.3 million (2006)	Achieve a commercial revenue target of R7.3 million (2007) consisting of information income, lightning detection sales, other income and letting of aircraft	Not Achieved Commercial income remained at same level as 2006. Did not achieve target due to challenges experienced in this regard in terms of the development of market ready products to sell, especially to the media industry which will be addressed in the new financial year.
	Increase innovation funds and alternate research funds	Increase additional donor funds for research to R500 000	Obtain fund raising for SAWS Priority Research projects	Achieved Achieved 140% of set target
	Formalise partnerships with revenue generation potential	One cumulative partnership agreement/ contract to be concluded	Conclude one new contract	Achieved Achieved 200% of set target, two contracts concluded
Infrastructure modernisation	Maintain and grow Capex in accordance with the Recapitalisation Plan	To spend R26.1 million on capital expenditure	Implementation of current year Recapitalisation Plan	Partially Achieved Achieved 94.2% of set target due to rollover of projects to next financial year

STRATEGIC OBJECTIVE 2: Ensure corporate governance and strategic leadership

KPA	KPI	Key Target/ Milestones	Key Activities/ Projects	Achievements
Develop and implement a Corporate Communication Strategy and Plan	Internal Communication Strategy	100% developed Communication Plan	Develop an Internal Communication Plan with the assistance of a service provider	Not Achieved This target has been transferred to the next financial period

STRATEGIC OBJECTIVE 2:

Ensure corporate governance and strategic leadership

KPA	KPI	Key Target/ Milestones	Key Activities/ Projects	Achievements
				to be finalised in the second quarter after the appointment of the General Manager Corporate Affairs
	External Communication Strategy	100% developed Communication Plan	Appointment of service providers to assist in the development of Corporate Communications Strategy	Not Achieved This target has been transferred to the next financial period to be finalised in the second quarter after the appointment of the General Manager Corporate Affairs
	Media Relations Strategy	100% developed Media Relations Plan	Development of Media Relations Strategy	Partially Achieved Draft strategy has been completed
Review and consolidate organisational policies and procedures	Ensure development and approval of SAWS policies	97% of policies approved	Review, development and approval of all outstanding policies	Achieved
	Annual review of all policies	100% of policies and procedures reviewed	Review of policies	Partially Achieved During the year all the outstanding policies have been approved and the process has commenced to review approved policies
	Enforce compliance with all policies	Ensure 80% compliance	Submit DEAT quarterly compliance reports on time Submit all the financials, budgets and reports required by the Public Finance Management Act on time Internal and external audits conducted during the financial year and audit findings reduced	Achieved Achieved Achieved
Transformation Strategies	Develop transformation strategy	100% developed plan	Compilation of Employment Equity (EE) Report	Achieved

Performance Against Targets - Year Ended 2007 (Continued)

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STRATEGIC OBJECTIVE 2: Ensure corporate governance and strategic leadership

KPA	KPI	Key Target/ Milestones	Key Activities/ Projects	Achievements
	Develop EE Strategy and plan	100% developed plan	Submit EE Report to Department of Labour Develop a capacity building plan for the development of black scientists	Achieved Partially Achieved Discussion with the University of Pretoria has started on the review of the meteorological courses and South African Qualifications Authority (SAQA) accreditation of courses near completion
Delegation of authority	Draft, and obtain approval and implement	100% reviewed and refined Delegations document	Review and amend Delegations of Authority document	Achieved

STRATEGIC OBJECTIVE 3: Ensure SAWS becomes a learning organisation

KPA	KPI	Key Target/ Milestones	Key Activities/ Projects	Achievements
Pursue scientific and business excellence	Draft and implement Staff Development Strategy	100% developed strategy	Conduct focused training and development	Achieved 32 managers and supervisors attended training in managing discipline in the organisation 31 employees attended Personal Finance training 15 passed Management Advancement Programme Three staff members have been selected for a SCM learnership from TETA SETA Excel and Basic Bookkeeping training was provided to finance staff

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STRATEGIC OBJECTIVE 3: Ensure SAWS becomes a learning organisation				
KPA	KPI	Key Target/ Milestones	Key Activities/ Projects	Achievements
				15 bursaries were awarded
	Review, streamline and implement Skills Development Programmes	100% review and streamlining of Skills Development Plan	Conclude performance assessments and employees' personal development plans for the year	Achieved 100% of target set
	Developing a continuous cadre/pool of relevant skills at all levels	A total of seven students absorbed into SAWS	Provide SAWS Bursary Scheme to targeted students and absorb at least seven successful students in SAWS	Achieved Achieved 100% of set target
	Develop strategy to get schools to participate in weather-related sciences	100% developed strategy	Development of strategy Conduct school visits, initiatives and programmes	Not Achieved Challenges were experienced in this department during the year. The strategy will be developed by the new General Manager Human Capital Management during quarter two of 2008 financial year. Achieved Posters were supplied in January 2007 to the Wildlife & Environmental Society of SA, Western Cape Region for 80 schools Publications were developed and distributed via major newspapers SAWS participated in the annual Science, Technology and Engineering (SciFest) from 21-27 March 2007. SAWS won an award for its workshops.

Performance Against Targets - Year Ended 2007 (Continued)

STRATEGIC OBJECTIVE 3: Ensure SAWS becomes a learning organisation				
KPA	KPI	Key Target/ Milestones	Key Activities/ Projects	Achievements
				The World Meteorological Day poster was designed, printed and distributed. The poster was also placed in the March edition of "The Teacher".
	Investigate the possibility of developing a Regional Atmospheric Science Training Centre	Feasibility Study 100% completed in Year one	Development of Feasibility Plan	Not achieved The Feasibility Study has been transferred to the new financial year, the new GM HCM will commence with the process in quarter two of 2008 financial year
	Develop, implement and review an effective Recruitment and Selection Strategy	Recruitment Strategy 100% developed and implemented	Recruitment in line with EE Plan	Achieved Appointed eight black Divisional Senior Managers of which one is a black woman during the year
	Develop, implement and review an effective Retention Strategy for scarce skills	Strategy 100% developed	Development of a Retention Strategy	Not achieved The development of a formal Retention Strategy will commence in the new year A submission was made to National Treasury to obtain approval to implement a broad banding remuneration system. All jobs have been profiled and evaluated as well as benchmarked to determine market related salaries. This will form part of the Retention Strategy.

**STRATEGIC OBJECTIVE 3:
Ensure SAWS becomes a learning organisation**

KPA	KPI	Key Target/ Milestones	Key Activities/ Projects	Achievements
Knowledge Management Strategy (KMS)	Develop and implement a Knowledge Management Strategy and plan	Scoping Document 100% developed Year one	Formation of project team	Not Achieved The project team will be formed in the new year together with the appointment of the new GM HCM
	Develop and implement a Mentorship and Coaching Strategy	Strategy and documentation of current processes 100% completed	Development of a strategy document Conduct informal coaching and mentorship	Not Achieved The formal strategy will be developed in the new year Achieved Appointments were made with BSc students who require support in order to finalise their studies

**STRATEGIC OBJECTIVE 4:
Create a client centric organisation**

KPA	KPI	Key Target/ Milestones	Key Activities/ Projects	Achievements
External Customer Relationship Management	Perform Annual Market Survey	Annual Market Survey 100% commissioned	Conduct a Market Segmentation study Perform Annual Market Survey	Achieved Not Achieved A formal Annual Market Survey will be conducted during the new financial year after the development of the new commercial products
	Assess customer satisfaction through Customer Satisfaction Surveys	Annual Customer Satisfaction Survey	Perform a Customer Satisfaction Survey	Not Achieved The annual Customer Satisfaction Survey will be conducted in the new year due to the delay in the Market Survey
	Execute a customer awareness campaign	Increased customer awareness	Present and participate at air shows, exhibitions, and stakeholder meetings	Achieved SAWS exhibited in Aeronautical Aviation and Defense Show held in Ysterplaat

Performance Against Targets - Year Ended 2007 (Continued)

STRATEGIC OBJECTIVE 4: Create a client centric organisation				
KPA	KPI	Key Target/ Milestones	Key Activities/ Projects	Achievements
				<p>A two-hour talk for amateur radio operators was held</p> <p>A voice-over promotion for the lightning detection system was taped</p> <p>Increased customer relation and interaction through SAWS Golf Day</p> <p>Advisory Committee for Aeronautical Meteorological Services (ACAMS) meetings were held</p> <p>The "Aviation Weather" newsletters produced</p> <p>SAWS also participated and offered technical weather information at World Gliding competition in Bloemfontein</p>
	Launch and implement a Marketing Strategy which will result in growth of high revenue yielding customers	Three new commercial customers or customer groups that yield more than R100 000 per month	Conclude three new contracts	<p>Partially Achieved</p> <p>Two contracts concluded for the supply of lightning detection service due to a shortage of supply</p>
	Develop and implement a new comprehensive competitive Pricing Strategy for non-regulated business	100% developed Pricing Strategy document	Develop an updated pricing model for climate data	Achieved
Technology that supports customer needs	Create a customer database using CRM software	100% implemented Customer Database	Procurement of Customer Relations software	<p>Not Achieved</p> <p>Implementation was postponed to next year after the implementation of the</p>

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**STRATEGIC OBJECTIVE 4:
Create a client centric organisation**

KPA	KPI	Key Target/ Milestones	Key Activities/ Projects	Achievements
				JD Edwards upgrade as a possibility exists to use the JD Edwards system module for a customer database. This can however only be investigated after the upgrade is complete in quarter one of 2008 financial year.
	Enhance dissemination of products by using emerging technology	Four new Information, Communications and Technology platforms used to disseminate SAWS products/ services	<ol style="list-style-type: none"> 1. Establish satellite dissemination of lightning data 2. Concluded climate web inventories 3. Optimise access to the web 4. Upgrade the Wide Area Network 	<p>Achieved</p> <p>Achieved</p> <p>Achieved</p> <p>Achieved</p> <p>Implementation started in January 2007</p>

**STRATEGIC OBJECTIVE 5:
Improve internal business processes**

KPA	KPI	Key Target/ Milestones	Key Activities/ Projects	Achievements
Quality Management	Develop and document a Quality Policy and Quality Manual	Approved High Level Quality Policy and Manual	<p>Perform ISO 9000 Gap Analysis</p> <p>Draft Policy and Manual</p>	<p>Achieved</p> <p>Achieved</p>
Modernisation Plan	Commissioning of new observation platforms and technology enablement	166 cumulative number of Automatic Weather Stations in operation	Supply and install additional Automatic Weather Stations to replace first order stations	<p>Achieved</p> <p>168 Automatic Weather Stations are currently in operation</p>
		100 Automatic Rain Stations in operation	Supply of 100 Automatic Rain Stations to replace manual stations	Achieved
		12 cumulative number of radars in operation	Deployment of new radar at Skukuza	<p>Partially Achieved</p> <p>Deployment of Skukuza radar is 90% completed. Due to the delay in the environmental impact study,</p>

Performance Against Targets - Year Ended 2007 (Continued)

STRATEGIC OBJECTIVE 5: Improve internal business processes					
KPA	KPI	Key Target/ Milestones	Key Activities/ Projects	Achievements	
				the radar implementation will be finalised in quarter one of 2008 financial year.	
		35 cumulative number of weather buoys deployed per annum	Deployment of 35 buoys	Partially Achieved 32 buoys were deployed	
		6 415 upper-air soundings per year	Ensure that 6 415 upper-air ascents are made per annum	Achieved 6 662 ascents were done	
		100% implementation of Unified Model and model verification statistics	Implement the Unified Model (Numerical Weather Prediction model)	Achieved	
		100% implementation of the new forecasting workstation	Install the NinJo forecasting workstation	Achieved	
				Install the TriVis media software package	Achieved
		Three cumulative panview cam-cameras in operation	Install Outeniqua, Richards Bay and Kruger-Mpumalanga cameras	Partially Achieved Only two cam-cameras have been purchased due to a delay in supply received from the provider	
		Formalise Aircraft Meteorological Data Relay (AMDAR) programme with South African Airways	Finalise contract	Achieved	
		Conduct focused research and development	Four cumulative value added applications and improved techniques implemented for operational use	1. Install new Radar Data Acquisition Systems in six weather radar systems (improving the data coming from the radars)	Achieved
				2. Conduct research on the General Purpose Interface	Achieved

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STRATEGIC OBJECTIVE 5: Improve internal business processes				
KPA	KPI	Key Target/ Milestones	Key Activities/ Projects	Achievements
			Business Calibration (to improve real-time maintenance of the radars) 3. Install new TITAN computers in the National Weather Radar Network (NWRN) 4. Development of General Packet Radio Service (GPRS) communication on Automatic Rain Stations and Automatic Weather Stations 5. Conduct Meteosat Second Generation (MSG) research 6. Maintaining and enhancing atmospheric trace gas, ozone and solar radiation monitoring activities 7. Improving and developing technologies to improve monthly and seasonal predictions	Achieved Not Achieved A service provider needs to be appointed to help in the development of the GPRS due to the lack of specialised resources in SAWS Achieved Achieved Achieved
		Five peer-reviewed publications submitted	Five research papers submitted	Achieved Eight research papers were submitted
Client safety and wellbeing	Development and implementation of a weather verification system	100% implementation of temperature and rainfall verification system	Develop temperature and rainfall verification system	Achieved
	Provide information on forecasts as per schedule	98% of forecasts issued on time as per schedule	Issue 98% of forecasts, warnings and advisory services on time	Achieved

DART 2

Corporate Governance

Introduction

The South African Weather Service's approach to corporate governance goes beyond complying with the letter of relevant governance codes, because the organisation believes that good governance is an essential part of outstanding performance.

The statutory duties and responsibilities imposed on the Board of the South African Weather Service by the SAWS Act No. 8 of 2001 are augmented by those contained in the Public Finance Management Act No. 1 of 1999 (PFMA), as amended. SAWS is also guided by the King Report on Corporate Governance for South Africa 2002 (King II Report), as well as the Protocol on Corporate Governance for Public Entities.

In line with its statutory mandate, SAWS provides two services which are:

Public Good Services

The gathering of meteorological, climatological and atmospheric observational data over South Africa and surrounding oceans to enable the provision of weather and climate forecasting and warning services. These are intended for the general public through various public sector and non-public sector intermediaries. The public good service is funded by the Government.

Commercial Services

The provision of specialised weather forecasting and climate information services to regulated and non-regulated commercial sectors. The commercial service is funded through revenue generated from various commercial clients.

Shareholding

The South African Government is the sole shareholder of the South African Weather Service. The shareholder is represented by the Minister of Environmental Affairs and Tourism (DEAT).

Governing Structures

The Board of the South African Weather Service

Chapter 3 of the SAWS Act No. 8 of 2001 provides that there shall be at least 10 (ten) members and no more than 12 (twelve) members comprising:

- Ten non-executive members, one of whom shall be the Chairperson, appointed by the Minister in accordance with Section 5 (3) of SAWS Act No. 8 of 2001;
- The Chief Executive Officer by virtue of his/her office; and
- A senior official of DEAT designated by the Director-General with the approval of the Minister.

During the reporting year, the Board was made up as follows:

Ms S M Rensburg (Chairperson); Mr V P Maluleke (Deputy Chairperson); Mr B Tashe (Interim CEO); Prof G B Brundrit; Dr L Makuleni; Ms N P Maqubela; Rev L W Mbete; Dr J Mphepya (Acting CEO); Mr T W Msomi; Mr R G Nicholls; Mr I W Robinson; Ms L Sangweni-Siddo; and Ms J R Yawitch (DEAT).

The following members resigned and retired during the reporting year:

Ms L Sangweni-Siddo; and Dr L Makuleni.

The following member was appointed during the reporting year:

Ms M M Mokuena

Mr B Tashe, by virtue of his position as Interim CEO, was a Board member for the period 1 April 2006 to 31 December 2006. Dr J Mphepya took over as Acting CEO from 1 January 2007 to 31 March 2007.

Functions of the Board

The Board is responsible for:

- Strategic leadership;
- Monitoring operational performance of management;
- The protection of SAWS' financial position;
- Ensuring that SAWS adheres to high standards of ethics and corporate behaviour;
- Reviewing and adopting the appropriate risk management and regulatory compliance policies;
- Ensuring an efficient, cost effective and high quality SAWS;
- Setting policy, standards and objectives within the framework issued by the Minister and ensuring that executive management implements these policies, standards and objectives; and
- Ensuring that the majority of the South African population benefit from the public good services of SAWS.

The Board met four times during the year.

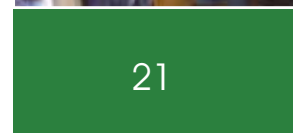
MEMBERS	NO. OF MEETINGS ATTENDED
Ms S M Rensburg (Chairperson)	4
Mr V P Maluleke (Deputy Chairperson)	4
Mr B Tashe/Dr J Mphepya	4
Ms L Sangweni-Siddo (Resigned Dec 2006)	0
Ms N P Maqubela	4
Mr I W Robinson	3
Prof G B Brundrit (Co-opted)	2
Ms J R Yawitch/Mr P J Lukey (Shareholder Representative)	4
Dr L Makuleni (Resigned Dec 2006)	2
Rev L W Mbete	2
Mr T W Msomi	3
Mr R G Nicholls	3
Ms M M Mokuena (Appointed 1 Dec 2006)	1

The Board approved the following policies and documents during the year:

- Organisational structure (Amendment)
- Delegation of Authority (Amendment)
- Recapitalisation Plan
- Disaster Recovery Plan
- Intellectual Property Rights Policy
- Travel Policy (Amendment)
- Cell Phone Policy
- Acting Allowance Policy
- Sexual Harassment Policy
- Memorandum of Understanding Framework
- Implementation of ISO 9000 process
- Corporate Strategic Plan

Board Committees

The Board has constituted the following Board Committees that assist in ensuring that the Board executes its mandate effectively:



Corporate Governance (Continued)

Audit Committee

The objective of the Audit Committee is to monitor the identification and evaluation of actual and potential risk areas as they pertain to SAWS as a total entity, and to review a process of either termination, transfer, acceptance (tolerance) or mitigation of each risk.

The committee also monitors compliance with relevant legislation and ensures that an appropriate system of internal control is maintained to protect SAWS' interests and assets. It also reviews the accuracy, reliability and credibility of financial reporting and recommends the Annual Financial Statements as presented by management, for approval by the Board.

This committee consists of the following members:

Mr V P Maluleke (Chairperson); Mr I W Robinson; Mr R G Nicholls; and Mr B Tashe (Interim CEO).

The Audit Committee met three times during the year.

MEMBERS	NO. OF MEETINGS ATTENDED
Mr V P Maluleke	3
Mr I W Robinson	2
Mr R G Nicholls	3
Mr B Tashe (Resigned Jan 2007)	3

Human Resources and Remuneration Committee

The objective of the Human Resources and Remuneration Committee is to compile and propose human resources policies and strategies, and monitor compliance with the Basic Conditions of Employment Act, the Employment Equity Act, the Labour Relations Act and the Skills Development Act. It also recommends and advises the Board on the design of the performance bonus to executive management and the criteria to be used.

This committee consists of the following members:

Ms L Sangweni-Siddo (Chairperson); Dr L Makuleni; Ms N P Maqubela; Rev L W Mbete; Ms M M Mokuena; Mr B Tashe (Interim CEO) and Dr J Mphepya (Acting CEO).

The Human Resources and Remuneration Committee met four times during the year.

MEMBERS	NO. OF MEETINGS ATTENDED
Ms L Sangweni-Siddo	2
Dr L Makuleni	2
Ms N P Maqubela	4
Rev L W Mbete	2
Ms M M Mokuena	1
Mr B Tashe/Dr J Mphepya	4

During the year important initiatives by the committee included the recruitment of critical positions such as the Chief Executive Officer, General Manager: Human Capital Management, Legal Advisor and various senior managers; the recruitment of young black scientists to build capacity and effect transformation in the institution's core business; as well as the approval of the organisational structure and the Staff Migration Process.



Commercial Committee

The objective of the Commercial Committee is to ensure that SAWS succeeds in executing its commercial mandate and complies with all its obligations towards the Regulating Committee in respect of regulated tariffs both for the marine and aviation sectors.

It consists of the following members:

Mr T W Msomi (Chairperson); Mr V P Maluleke; Dr L Makuleni; and Mr B Tashe (Interim CEO).

The Commercial Committee met four times during the year.

MEMBERS	NO. OF MEETINGS ATTENDED
Mr T W Msomi	4
Mr V P Maluleke	2
Dr L Makuleni	1
Mr B Tashe	4

Finance Committee

The objective of the Finance Committee is to monitor the financial management and to ensure that all revenue, expenditure and assets of SAWS are managed effectively and efficiently .

This committee consists of the following members:

Mr R G Nicholls (Chairperson); Mr I W Robinson; Mr B Tashe (Interim CEO); and Dr J Mphepya (Acting CEO).

The Finance Committee met four times during the year.

MEMBERS	NO. OF MEETINGS ATTENDED
Mr R G Nicholls	4
Mr I W Robinson	2
Mr B Tashe/Dr J Mphepya	3

The aviation debt dispute was an area monitored very closely by the committee during the year until the dispute was settled by negotiation. It consistently ensured that doubtful debt was adequately provided for and that long outstanding debt was correctly reported in management reports. The committee kept the Board updated on this situation as it progressed.

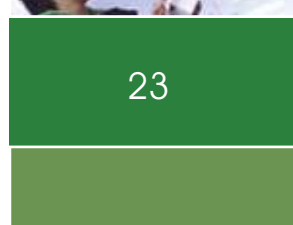
Programmes Committee

The objective of the Programmes Committee is to monitor the scientific programmes in the organisation to ensure that all research, developmental activities and opportunities of SAWS are managed effectively and efficiently.

This committee consists of the following members:

Ms N P Maqubela; Prof G B Brundrit; Dr L Makuleni; Ms J R Yawitch; Mr B Tashe (Interim CEO); and Dr J Mphepya (Acting CEO).

The Programmes Committee met three times during the year.



Corporate Governance (Continued)

MEMBERS	NO. OF MEETINGS ATTENDED
Ms N P Maqubela	3
Prof G B Brundrit	2
Dr L Makuleni	1
Ms J R Yawitch (Represented by Ms P Kganyago)	1
Mr B Tashe/Dr J Mphepya	3

Executive/Corporate Governance Committee (EXCO)

The objective of the Executive/Corporate Governance Committee is to ensure accountable and ethical management of the Board of SAWS so that it fulfils the duties and mandate placed on it by the Executive Authority with utmost integrity.

This committee consists of the following members:

Ms S M Rensburg (Chairperson); Mr V P Maluleke (Deputy Chairperson); Mr B Tashe (Interim CEO); Ms N P Maqubela; Mr I W Robinson; Dr L Makuleni; Rev L W Mbete; Mr T W Msomi; and Mr R G Nicholls.

EXCO met twice during the year.

MEMBERS	NO. OF MEETINGS ATTENDED
Ms S M Rensburg (Chairperson)	2
Mr V P Maluleke (Deputy Chairperson)	2
Mr B Tashe (Interim CEO contract expired 31 Jan 2007)	2
Ms N P Maqubela	2
Mr I W Robinson	1
Dr L Makuleni (Resigned Dec 2006)	0
Rev L W Mbete	1
Mr T W Msomi	2
Mr R G Nicholls	2

Management Committee

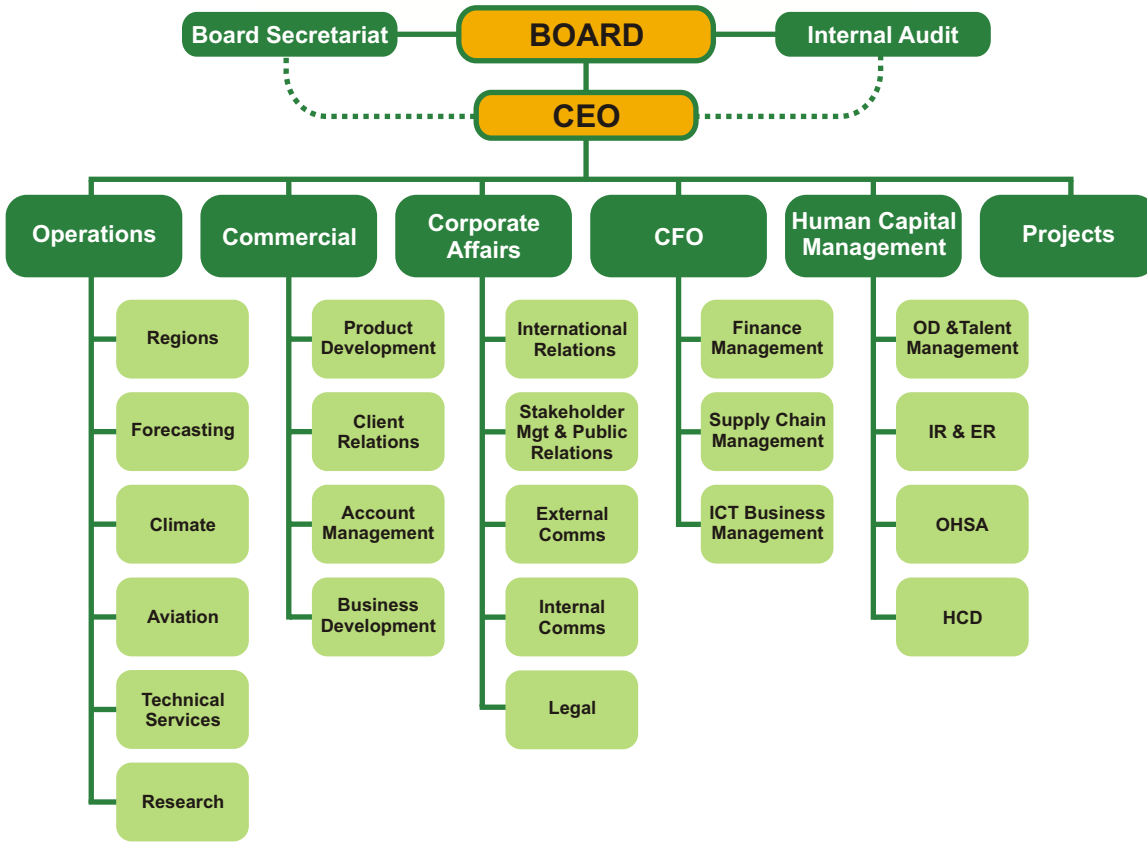
Executive Management Committee (EMC)

The EMC, under the leadership of the CEO, consists of the General Managers. The business of SAWS is driven in this forum. It is responsible for ensuring the effective management of the day-to-day operations of the business. The EMC is responsible for the implementation and success of the Corporate and Business Plan of SAWS. The EMC meets on a monthly basis to track progress made against targets, discuss cross function issues, implement decisions made by the Board and approve decisions necessary for the operations of SAWS.

As an extension of the EMC, the Extended Executive Management Committee (EEMC) has been formed during the year. This forum consists of senior management and General Managers, and is used to communicate resolutions taken by the EMC to management.



Organisational Structure





The Operations department undertakes the core business of the South African Weather Service (SAWS), which is categorised into three broad areas:

- Collecting weather and climate related data;
- Processing this data into information, weather forecasts and warnings; and
- Packaging and distributing these climate products, forecasts and warnings.

These three broad areas of Operations are constantly improved through targeted research, development and working towards the systematic implementation of a Total Quality Management System (TQM). TQM in SAWS environment requires an integration of ISO 9004:2000, ISO 14001 and ISO 18001 with the aim to introduce a formal quality improvement loop:

- Preparing and planning;
- Producing the products and services;
- Evaluating the results with particular regard for client satisfaction; and
- Final reaction to evaluated results to improve further actions.

During the reporting period the following was achieved:

- Defining and agreeing on the scope of the project;
- Appointing a cross-cutting Steering Committee;
- Establishing high-level quality objectives and how these fit into Operations; and
- Conducting a high level gap analysis of the organisation to the ISO 9001:2000 and ISO 18001 standards.

This process will continue in the new reporting year and will bring real benefits to SAWS and its clients. SAWS finds itself in an exciting position; one in which weather, water and climate related issues have become essential to sustainable development in South Africa, the region and the world. New technologies have become available and SAWS is at the forefront of employing these to improve its services. **“Achieving service excellence through improved technology”** is an apt theme for this year's Annual Report.

1. Collecting Weather and Climate Related Data

Prompt and accurate weather, climate and water related forecasts and warnings rely on both the quantity and quality of weather data that is gathered. The ideal situation is to have as many weather observation stations as is feasible, to have each station collecting accurate data, and to make that data available to forecasters as quickly as possible using up-to-date communication technology. The archiving of the weather and climate data in a climate data bank is a statutory obligation for SAWS. Longer-term records of climate parameters are essential for general planning and to monitor and study climate change. During the previous reporting period, SAWS embarked on the most extensive and ambitious meteorological infrastructure upgrade in the organisation's (and the country's) history.

Lightning Detection

The first year of this four-year project (2005/6) entailed installing the National Lightning Detection Network (NLDN), a system of 19 sensors spread evenly throughout the country to gather data on lightning strike location (accurate to 500 metres), frequency and severity. A full year of data collection has confirmed that lightning is a serious threat to South Africa's infrastructure and population. This network not only enables better planning but allows SAWS to issue improved warnings and guidance.

Surface Observations

A major recapitalisation project for the current year was upgrading some of the older manual mechanical weather stations of the national network of First Order Stations to semi-automatic electronic stations. The advantage of these semi-automatic stations is faster, more frequent and more accurate data collection together with visual observation by humans of some

parameters (like cloud type and cover). In this manner SAWS employs the latest technology while ensuring that jobs are not lost.

Significant progress has been made towards equipping all Automatic Weather Stations with General Packet Radio Service (GPRS) communication. This wireless technology (used more commonly in cell phones) will facilitate easier and faster weather data transfer between stations and forecasters. Once the GPRS communication protocol is fully operational, it will also facilitate the real-time data transfer from new Automatic Rain Stations (ARS) that are being deployed to more accurately determine the national rainfall distribution and support improved services and warnings. Accurate rainfall measurement is also an essential input to water resource and flood management.

Upper-Air Observations

Data collected from ground-level stations is however not enough and must be supplemented by data from upper-air stations. The upper-air stations determine the vertical profile of developing weather systems in the atmosphere through the release of radiosondes attached to ascending balloons. Since September 2006, SAWS leased two additional upper-air stations from Internet Africa for evaluation. The outcome is positive. This technology is well suited to increase upper-air observations over the entire country, improving the quality of forecasting in a cost efficient manner. Five new hydrogen generators were also purchased, to modernise and ensure the sustainability of the weather balloon inflation facilities.

Even with the upper-air stations, more data above ground level is needed for accurate vertical profiling. An innovative and cost effective way to achieve this is to take readings from commercial aircraft and transfer this data to weather forecasters and into the Numerical Weather Prediction models via the Aircraft Meteorological Data Relay (AMDAR) software installed on the aircraft. In 2004, SAWS concluded an arrangement with South African Airways (SAA) to install AMDAR software on 28 SAA aircraft, to transmit meteorological data during flight. AMDAR has been installed on 15 domestic and regional aircraft, as well as 13 long-haul airliners. This agreement has resulted in a dramatic increase of data available to the Numerical Weather Prediction models and forecasters. During the reporting period, SAWS signed contracts with SAA and the European consortium of AMDAR data producers (E-AMDAR) for the provision of AMDAR data and also renewed and extended the contracts to cover the period 2007/8, ensuring the sustainability of this valuable data service. Currently, more than 3 000 observations per day are obtained over Southern Africa and adjacent oceans.

Weather Radar

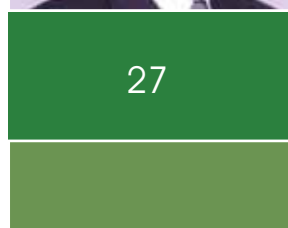
Weather radar stations are also used to observe and track storms and rainfall systems in real-time. Weather radar is a critical tool for forecasters to issue short-term warnings of severe weather. These services are classified as Nowcasts. The South African National Weather Radar Network (NWRN) consists of 11 radar stations. The commissioning of the twelfth weather radar at Skukuza, which was done in close cooperation with South African National Parks (SANParks), was well advanced at the end of the reporting period. The new Skukuza radar station will not only fill a gap over the Lowveld in the national weather radar coverage, it will also be invaluable to neighbouring countries like Swaziland and Mozambique.

The entire radar network is due for an upgrade from 2007/8 onwards, funded by a Treasury allocation of R180 million secured by SAWS and DEAT during 2006. The funds will be used to upgrade the NWRN to state-of-the-art S-band Doppler radars. This will bring South Africa in line with the best radar systems in the world, and give further emphasis to SAWS' commitment to service excellence driven by the latest technological advances. The aviation sector will also benefit from investment in modern weather radars as customised X-band Doppler radars will improve aviation safety over the major South African airports. The interface between the radar stations and weather scientists was also upgraded during the year. Aging computers in the NWRN were replaced by new and more powerful processing and display computers, and this upgrade will continue during the next reporting period.

Satellite Technology

Satellites are yet another means of collecting weather data, and Africa is serviced by geostationary satellites operated by the European Organization for the Exploitation of Meteorological Satellites (EUMETSAT). SAWS has been at the forefront of using the data captured by the latest Meteosat Second Generation (MSG) satellite. This satellite has an update cycle of 15 minutes and captures information of the earth's surface and weather phenomena in twelve frequency channels.

In previous years, SAWS had been a key role player in the Preparation for the Use of Meteosat Second



Operations (Continued)

Generation (MSG) in Africa (PUMA) project to build infrastructure and capacity across Africa, allowing the whole continent to benefit from the MSG satellite data. After this project finished in 2005, SAWS secured European Union funding to develop the SUMO software package, which is custom-designed to help African forecasters to analyse and manipulate MSG data. SAWS launched the SUMO software package and User's Guide at the EUMETSAT Users Forum held in Maputo during October 2006. During the coming year SAWS also plans to have the SUMO User's Guide translated into French and Portuguese, to broaden the potential user base in Africa. The SUMO software can also be downloaded from the internet at no cost.

While SAWS' activities around the MSG satellites are geared towards Nowcasting and the development needs of Africa, the organisation is also involved in research projects with other international partners in the field of satellite technology. During the reporting period, SAWS continued its collaboration with fellow International Precipitation Working Group (IPWG) scientists from Australia, the United States and Europe, to investigate and verify satellites as an effective means to measure rainfall. This project has put SAWS personnel in direct contact with the world's top specialists in the field, and also established SAWS as a global verification site on precipitation. Following on from the 2005 award presented to SAWS for its pioneering work on rain cloud seeding, the satellite-derived precipitation project has established South Africa as a global player in the precipitation field - the only developing nation among the project's partner countries.

Further developments include a proposal for a regional Southern African Development Community (SADC) project to monitor rainfall in the Limpopo river basin, and possible involvement in the European FP7 programme (WATERSAT) that conducts research on the various inputs into rainfall processes. Thanks to the data delivered by the Lightning Detection Network, SAWS is also conducting ongoing research into the relationship between lightning density and precipitation.

Long-Term Monitoring

Much of SAWS' infrastructure and data collection is geared towards the daily business of producing and distributing daily weather forecasts. However, data is also collected to make longer-term measurements and predictions. The most high-profile of these is climate change. The Global Atmosphere Watch (GAW) station at Cape Point is one of only 24 such stations around the world, tasked with gathering trace gas data to monitor climate change and inform the global response to it. The GAW station was upgraded during the year, to include the chemical measurement of atmospheric aerosol. Aerosols (small atmospheric particles) play a fundamental role in the atmosphere's heat exchange and precipitation processes.

The GAW station introduced a new gas chromatograph to enhance the continuous methane measurements. Long-term records of such greenhouse gases are of vital importance to validate climate change detection and the human-induced influence on our environment. During September 2006, Cape Town International Convention Centre played host to the International Global Atmospheric Chemistry (IGAC) conference. As part of the formal proceedings, the Cape Point GAW Station was visited by more than four hundred international scientists. An unprecedented world interest in our Cape Point GAW activities was noted, with many future collaboration efforts being envisaged.

The GAW station was the venue for a media briefing on 14 March 2007, at which the Minister of Environmental Affairs and Tourism (DEAT), Marthinus van Schalkwyk and Sir Nicholas Stern (head of the United Kingdom government economic service, and advisor on the economics of climate change and development) spelled out South Africa's "Climate Change Roadmap" for 2007 and beyond. About 40 journalists from both local and international media attended the briefing. Since SAWS GAW laboratory is the only GAW station on the African continent where carbon dioxide (and other Greenhouse Gases) is measured accurately on a continuous basis, the venue chosen by DEAT for this occasion was most appropriate. Hosting the briefing at the GAW station also served as recognition for the important national and international role played by the station and its staff in monitoring climatically vital trace gas species so crucial to the whole climate change debate. The station's importance was also aptly conveyed by the popular SABC television programme 50/50, which included a brief summary of the Stern Review and images of the laboratory and its instruments. The 50/50 programme again emphasised the scientific relevance of the Cape Point GAW laboratory to South Africa and the international scientific and policy-making community.



Climate Database

As the custodian of the National Climate Database, SAWS maintains an extensive archive of data collected. This is a dynamic environment in which provision is made to include data from new sensors and sources. This will become a single national repository for all weather and climate data, and thus an invaluable resource for researchers and other stakeholders. The challenge is that SAWS is not the only organisation that collects data. Other stakeholders, like the Agricultural Research Council and the Department of Water Affairs and Forestry, have their own data which is often in different formats from SAWS data. Compiling the database entails translating all data into a common format and applying quality control throughout. This is a huge task which could not be completed during the year. However, progress was made towards identifying the best system for the database. SAWS is investigating the QualiMet system, which was designed for the German Weather Service and has also been adopted by other European countries. The system is being translated into English, and will potentially provide a suitable platform for the National Climate Database. Work on this project will continue in the next reporting period.

One of the most exciting developments in the past year was the initiation of a joint DEAT-SAWS task team to facilitate the expansion of SAWS database to also include the South African Air Quality Information System (SAAQIS). Once in place, this system will become an essential part of the Government's obligation in terms of the National Environment Management: Air Quality Act. Towards the end of the reporting period, SAWS was already investigating the feasibility of using information captured by SAAQIS, expanding SAWS services to include air quality forecasts.

2. Processing this Data into Information, Weather Forecasts and Warnings

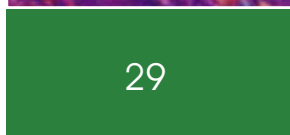
Numerical Weather Prediction

Numerical Weather Prediction (NWP) models form an essential and integral part of any modern weather service. These complex computer models are based on the mathematical description of the physics of the atmosphere and how they evolve in time. They are also data intensive and use the present state of the atmosphere to predict atmospheric conditions into the future, allowing forecasters to interpret the information and issue weather and climate forecasts.

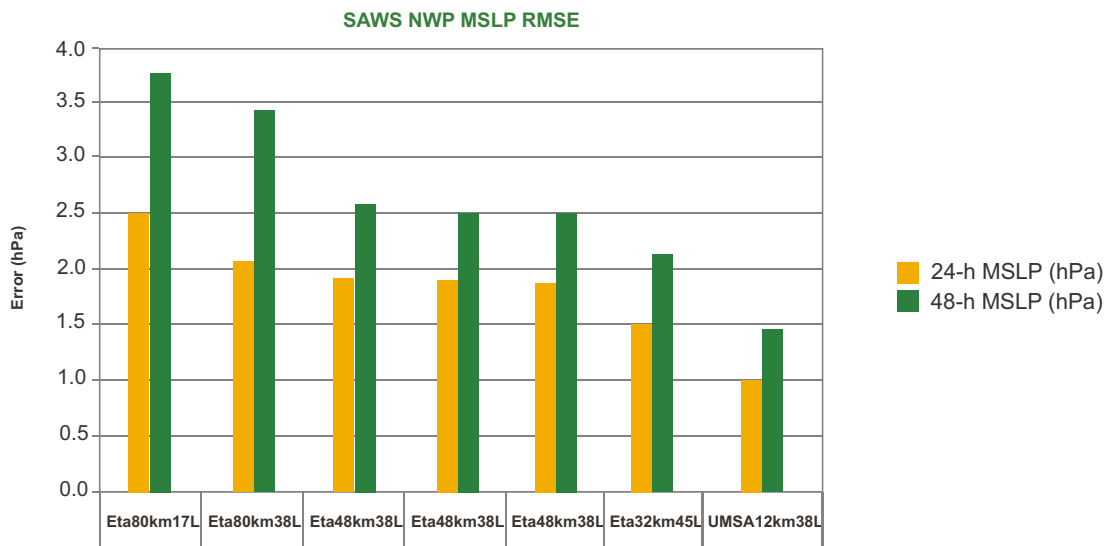
Previously, SAWS used the Eta NWP model, which offers two-day forecasts and is used by many countries around the world. However, the Unified Model developed by the United Kingdom Meteorological Office offers even better advance forecasting accuracy. The Unified Model is recognised as one of the best forecasting models available, and is also well suited to Southern African conditions. SAWS implemented the Unified Model during the reporting period, and also conducted a research project which verified that the better results offered by the Unified Model were not just an empty promise. Installing the Unified Model was a mammoth task, as the system contains tens of thousands of lines of programming code, scripts and data transfer utilities.

The number-crunching requirements of the Unified Model also necessitated a hardware upgrade, so SAWS purchased a new supercomputer to handle the task. At a cost of around R5 million, the supercomputer boasts eight Central Processing Units (CPUs), 128 Gigabytes of main memory, and processing capacity of 140.8 Gflops - around 14 times as powerful as a Pentium 4 processor.

The figure on the next page illustrates the improvement in SAWS NWP forecast accuracy over the past few years as a result of continued upgrades of the Eta Model, and the latest improvement as a result of introducing the Unified Model.



Operations (Continued)



NinJo Forecasting Workstation

The implementation of the Unified Model goes hand in hand with the integration of all meteorological data applications into a single display and analysis system. The NinJo meteorological software system was initiated by the German Meteorological Service and the German military in 2000. It has since become a community project also involving the Danish, Canadian and Swiss meteorological services. Written in Java, NinJo is an open architecture project that allows adaptation to various hardware platforms and different local software structures. The technical goals are performance, stability and portability.

The convenience and accessibility of having all relevant data from different platforms (including Lightning Detection Network, radar, satellite, NWP, in-situ observations) on one system will ease the workload of SAWS forecasters. The NinJo system was implemented during February/March 2007, and included training courses for Information, Communications and Technology (ICT) staff and forecasters. SAWS is the first National Meteorological Service in the Southern Hemisphere to install the NinJo system. This represents another cutting-edge technological first which presents exciting product development and research opportunities for SAWS scientists.

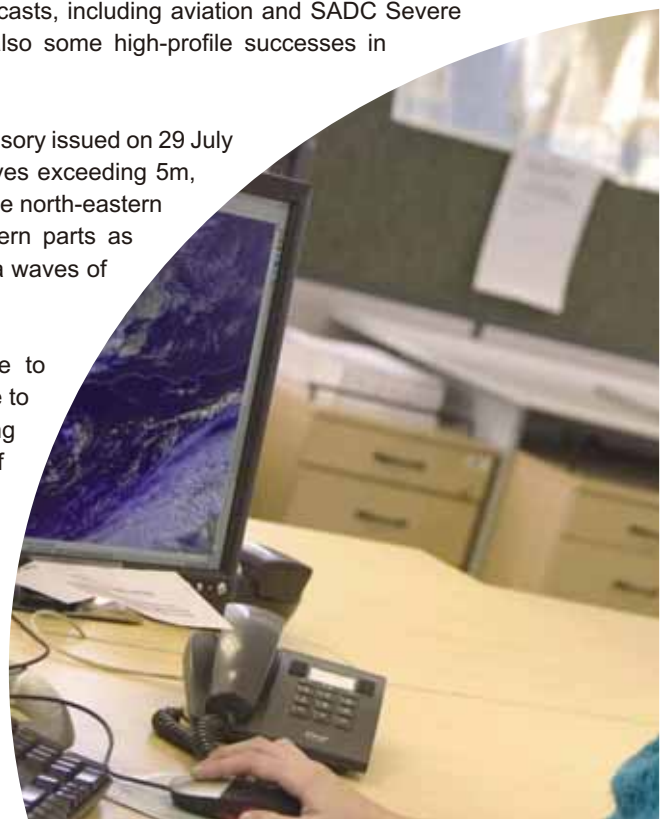
Forecasting

The ability to interpret the collected data into timely and accurate forecasts and warnings is the vital second phase of the Operations process. All scheduled and mandatory weather forecasts, including aviation and SADC Severe Weather forecasts, were issued 100% on time. There were also some high-profile successes in forecasting accuracy.

An example of commendably accurate early warning was the advisory issued on 29 July 2006, warning of very cold weather, snow, rough seas with waves exceeding 5m, heavy rainfalls and later severe thunderstorm possibilities over the north-eastern parts of the country. Snowfalls were recorded over the southern parts as predicted, with 20cm of snow falling in Tiffendil on 2 August. Sea waves of 5,7m were confirmed along the south coast.

On 19 March, an extraordinary storm surge caused damage to property along the KwaZulu-Natal coast, stretching from Margate to Richards Bay. Once again, SAWS gave ample early notice, issuing a warning for high waves and gale force winds 3-4 days ahead of the event. These warnings are a vital service, helping the public to prepare for unexpected and hazardous weather conditions.

Despite the achievements, there is a concerted drive by SAWS to constantly improve the accuracy and quality of weather forecasts further, through leveraging the latest technologies. Several key technological investments made 2006/7 an



outstanding year for SAWS' forecasting success.

SAWS also contributes to communicating other warnings of natural disasters. Since it operates on a 24 hours per day, 365 days a year basis, SAWS plays an important role in ensuring communication of Tsunami warnings to relevant authorities.

Regional Forecasting Guidance

The World Meteorological Organization (WMO) has initiated a THORPEX programme, which aims to improve forecasting of high impact weather 1-14 days in advance. The WMO plans to run THORPEX programmes in both the Southern Hemisphere and in Africa. SAWS scientists have been actively involved in developing Science and Implementation Plans for these projects. Again, there are clear benefits from SAWS collaborating with top international scientists in the field, and being seen to be a leader in meteorological science at regional and continental level.

SAWS used Numerical Weather Prediction models, radar, the Lightning Detection Network and satellite technology to track the development of Tropical Cyclone Favio from its origin on 14 February 2007. Before Favio made landfall between Beira and Maputo in Mozambique on 22 February, SAWS had already advised National Disaster Management, and an emergency multi-departmental meeting was held on 21 February. Mozambique was advised by the Department of Foreign Affairs, and all South African departments had personnel and infrastructure on standby to deal with the effects of Favio. Thanks to this early warning and planning, loss of life was limited to just four victims, although Favio did cause R7 billion damage to buildings and businesses in Mozambique. The emergency meeting was the first one held well in advance of a weather-related disaster affecting the region, and SAWS earned deserved praise for its role in warning all stakeholders.

National Flash Flood Forecasting

SAWS has assumed responsibility for issuing flash flood warnings in urban areas throughout South Africa. The National Disaster Management Centre has committed to donate funds, which SAWS will use to install a flash flood forecasting model. Negotiations were undertaken to enlist the help of the Hydrological Research Centre in the USA, and a scoping workshop will be held later in 2007.

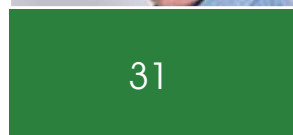
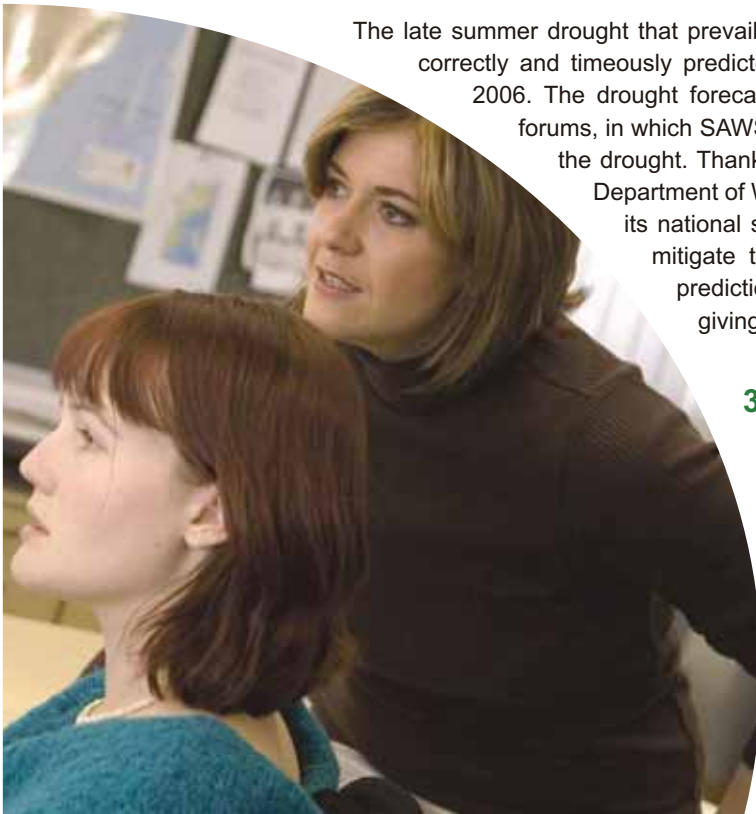
Seasonal Forecasting

In order to produce reliable Extended Range (11-30 days) and Long Range (seasonal) forecasts, SAWS finalised a Sea Surface Temperature forecasting model, which operates on a 1 degree X 1 degree grid system covering the key ocean areas that influence rainfall over Southern Africa. The dated COLA T30 forecasting model was replaced by the newer ECHAM4.5 global climate model, which will result in improved seasonal and long-term forecasting of weather conditions. This will be of particular value to users of long-term forecasting, such as agriculture.

The late summer drought that prevailed in South Africa from January 2007 was correctly and timeously predicted by SAWS seasonal forecast models in 2006. The drought forecast was presented to the media and other forums, in which SAWS also advised about the potential impact of the drought. Thanks to this early and accurate prediction, the Department of Water Affairs and Forestry was able to adapt its national strategy in water resource management, to mitigate the effects of the drought. Such accurate predictions are also a boon to the agricultural sector, giving farmers early warning of rainfall shortages.

3. Packaging and Distributing Climate Products, Forecasts and Warnings

The most comprehensive data and accurate weather forecasts are of limited value if this information fails to reach the people who need it, or if they are not engaged to ensure that the services are



aligned to their requirements. Distributing weather forecasts and warnings, both to the general public and to industry stakeholders, is the critical final phase in SAWS Operations.

Improved Forecast Packaging

News releases about Tropical Cyclones Favio and Gamede, along with other high-impact weather events, were disseminated regularly via SAWS website (<http://www.weathersa.co.za>). The website continues to be an important informational tool, generating an average of more than 16 000 visits per day.

In line with service excellence through the technological advances of the Unified Model and the NinJo forecasting workstation, SAWS also upgraded its packaging of weather forecasts by installing the latest TriVis professional television weather presentation software. TriVis is a reliable and flexible package suitable for interactive or automated presentations of weather data, and is renowned globally as a leading standard. The TriVis media software was installed along with the NinJo forecasting workstation in February/March 2007, and SAWS personnel were trained in its use.

Communication with Aviation Customers

Accurate, timely and reliable weather forecasts are critical and enhance the safety, efficiency and regularity of the aviation industry, both for international and domestic flights. To demonstrate commitment to service delivery, SAWS must ensure service excellence and clear communications with the sector, by constantly engaging with the clients to ensure that user expectations are met. To facilitate common understanding and healthy client relationships, SAWS organised quarterly meetings - the Advisory Committee for Aeronautical Meteorological Services (ACAMS) - with heads of aviation industry. In addition, five regional meetings (Regional ACAMS) were held with local aviation industry role players including pilots in Gauteng, Port Alfred, Port Elizabeth, Bloemfontein and KwaZulu-Natal. These engagements with the client base and pilots ensure that SAWS not only meets aeronautical meteorological requirements, but is able to improve its services by meeting the ever-increasing demands of clients.

A range of communication channels have been initiated to ensure that the aviation sector has easy access to SAWS aviation products. These include the aviation webpage, the Travelphone service, Aviationdirect (GPRS access), the Aviation Weather Display System (AWDS), and telephone based services.

During the year, five local airports (Lanseria, Mpumalanga, Gateway at Polokwane, Upington and Pilanesberg) were declared as international airports. SAWS ensured that meteorological services at these airports were upgraded in line with International Civil Aviation Organization (ICAO) requirements.

To further help pilots, webcam-style cam-cameras offering panoramic real-time views were installed at strategic places to obtain essential information to service small aircraft users. Cam-cameras have been installed in the Outeniqua Mountains and George. Further cam-cameras will be added at Nelspruit and Richards Bay in the next reporting period.

To help recover costs of these services, a SAWS task team has been established to investigate the issue of charging smaller aircraft (less than 2000kg) for aviation products. Expanding the aviation income base to include smaller aircraft will increase SAWS' commercial revenue.

Public Outreach

Poorer communities, those most likely to be affected by extreme weather events, are also the least equipped to benefit from weather forecasts carried in the mass media. SAWS conducts outreach programmes to these communities on an ongoing basis, to ensure that all South Africans benefit from SAWS public good services.

The highlight of the year's outreach calendar was the World Meteorological Day event held at Thohoyandou in Limpopo

province on 23 March, around the theme of promoting weather awareness. The event was organised in conjunction with Ramano College, who helped by inviting more than 1 000 local residents, including traditional leaders and a large number of school learners. 26 media representatives also attended. The highlight of the event was the address by Ms D P Magadzi, MEC for Agriculture: Limpopo province. Her presentation was based on the theme of "Polar meteorology, understanding global impacts".

On the same day, SAWS also hosted a media presentation and workshop at the Thohoyandou Tusk Hotel. 33 media representatives attended, comprising executive producers, producers, radio presenters and print journalists. The workshop was the first of its kind in the country, aimed at training the media for better distribution of weather information, and also promoting the mass media as a means to educate the public on weather issues.

SAWS also collaborated with the South African Broadcasting Corporation on an outreach pilot programme aimed at vulnerable communities in Limpopo. The two-way communications programme benefited SAWS, by allowing communities to state what type of weather information they find most useful in weather reports. The communities benefited, in turn, by SAWS unpacking the information and terminology provided in weather forecasts, to ensure that communities get maximum benefit from forecasting services. The programme's end goal is SABC regional radio weather broadcasts tailored to the needs and understanding of the audience.

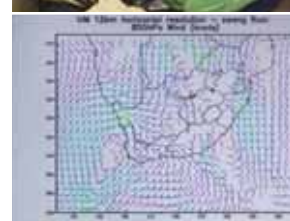
More effective disaster prevention or mitigation was also a main focus, and communities were advised on how to react to severe weather like floods or lightning storms. The outreach programme also provided the opportunity to introduce broader issues (like climate change and ozone depletion) to these communities. Building grassroots understanding of weather issues will help to set all South Africans on a path of informed and sustainable development.

SAWS has identified and commenced research on specific areas of indigenous knowledge. The intention is to investigate how SAWS can effectively include this knowledge in its service delivery.

Research Papers

SAWS scientists also communicate with their peers and other stakeholders through authoring and publishing scientific research papers, thereby stimulating scientific debate which also gains recognition for SAWS as a scientific institution. The highlights for 2006/7 include:

1. G C Schulze, 2007: *Weather Observations and Atmospheric Modelling*. Submitted to SA Journal of Science.
2. C J C Reason, F Engelbrecht, W A Landman, J R E Lutjeharms, S Piketh, C J de W Rautenbach and B C Hewitson, 2006: *A review of South African research in atmospheric science and physical oceanography during 2000-2005*. South African Journal of Science 102.
3. C J C Reason, W Landman, and W Tennant, 2006: *Seasonal to Decadal Prediction of Southern African Climate and its Links with Variability of the Atlantic Ocean*. American Meteorological Society.
4. M E Shongwe, W A Landman and S J Mason, 2006: *Performance of Recalibration Systems for GCM Forecasts for South Africa*. International Journal of Climatology 26: 15671585.
5. E Klopper, C H Vogel and W A Landman, 2006: *Seasonal Climate Forecasts - Potential Agricultural Risk Management Tools?* Climatic Change (2006) 76: 7390.
6. A groundbreaking article with co-authorship by E G Brunke, Cape Point GAW station, is included in the publication by P Bousquet et al: *Contributions of anthropogenic and natural sources to atmospheric methane variability* appeared in the September edition of Nature, which has notoriously stringent acceptance standards.
7. *Trends in cloud cover over South Africa and its relationship to trends in diurnal temperature range and rainy days: 1960-2005*, submitted to Geophysical Research Letters 06 September 2006.
8. W J Tennant, Z Toth, and K J Rae, 2006: *Application of the NCEP Ensemble Prediction System to Medium-Range Forecasting in South Africa: New Products, Benefits and Challenges*, W&F.
9. M M Kgatuke, W A Landman, A Beraki and M P Mbedzi, 2006: *The internal variability of the RegCM3 over South Africa*. International Journal of Climatology (in print).
10. A peer-reviewed publication on *Precipitation (WS47)* by A C Kruger is print-ready and will be published in the new financial year.
11. A C Kruger: April 2006, *Observed trends in daily precipitation indices in South Africa: 1910-2004*.
12. M New, 2006: *Evidence of trends in daily climate extremes over southern and west Africa*. Journal of Geophysical Research, 111, D14102, doi: 10.1029/2005JD006289.



Commercial

During the reporting period, the target was to grow revenue from commercial services by 17%, to a total of R7 million. Although this target was not achieved, an additional 13 new customers subscribed to weather data feeds from SAWS. Existing customers who renewed their contracts were:

- Sasol Synfuel (Pty) Ltd
- Cointel
- Multichoice Africa
- AfriGis
- Algoa FM
- Global Sense Internet
- Molo Afrika Speech Technologies
- Gauteng Tourism Authority

Long-term revenue sharing deals were also concluded with the business news and information portal I-Net Bridge and the Travelphone fax-on-demand and sms service. These deals entail SAWS sharing the revenue generated by selling weather information to subscribers of both services.

Revenue from commercial products and services is augmented by the sale of meteorological equipment to customers. During 2006/7, 10 Automatic Weather Stations (AWS) were sold to Swaziland, another AWS unit to the Eden Municipality in the Western Cape, and AWS parts were sold to La Mercy airport at the Dube Tradeport north of Durban. AWS equipment was also sold to the Namibian Weather Service, along with contracts to upgrade and repair their current equipment.

Eskom is the largest customer of the National Lightning Detection Network (NLDN). During the year, service delivery to this key client was improved by the development of a Business Plan geared to meeting clients' needs. Flowing from the plan, monthly reports and meetings with Eskom have reinforced SAWS' commitment to service delivery.

During the reporting period, negotiations with Spoornet were conducted to supply them with NLDN data. This is a mutually beneficial business arrangement, generating revenue for SAWS while assisting Spoornet to mitigate damage and disruption from lightning strikes on its rail lines.

In its efforts to attract clients and provide service excellence, SAWS also plans to implement a web-based billing system for commercial clients. Improved electronic billing will reduce the workload on SAWS staff and provide a more efficient service to clients. A service provider has been appointed to implement the billing system in the next reporting period.

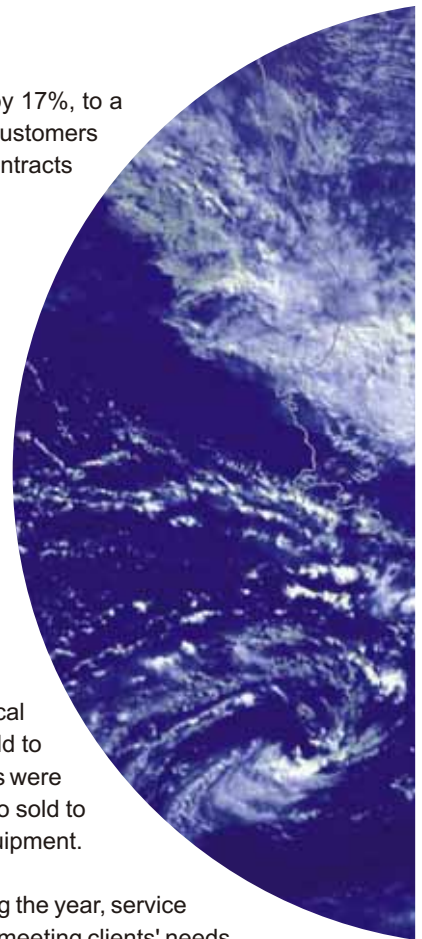
Corporate Affairs

Communications

The main function of the Communications division is to raise awareness of the importance of weather forecasting services offered by SAWS, in order to market the organisation effectively to SAWS customers and the broader South African public. During the reporting period, a number of communications initiatives were concluded successfully.

The aviation industry is a major customer of SAWS. During the year, the organisation participated in eight air shows around the country. Participation included delivering weather services to the organisers. Thousands of aviation stakeholders were reached during air shows in Ermelo, Pretoria, Vereeniging, Virginia, Mafikeng, Margate, Ysterplaat (Cape Town) and Bloemfontein. This highlighted the importance and value of accurate weather forecasting services to the aviation industry, with a consequent boost to SAWS' image.

The agricultural sector is another obvious key customer, as farmers depend on reliable longer-term weather and rainfall forecasts for effective planning of their business operations. After several years of not participating, SAWS resumed its contribution to the annual Nampo Harvest Day exhibition, which was held from 16-19 May at Bothaville in the northern Free State. Seasonal and short-term forecasts were provided for the benefit of more than 66 000 farmers who attended the event.



There is also a need to raise SAWS' profile among the scientific community, and in particular learners who may be motivated to follow a career in either meteorology or climatology. SAWS enjoyed a high profile at the year's major scientific events and expos, participating at Phalaborwa and Evander during National Science Week, at the World Environment Week in Ekurhuleni, two Sasol exhibitions - SasolTechnoX in Sasolburg and the Sasol Scifest in Grahamstown - and finally the World Meteorological Day event at Thohoyandou in Limpopo.

The Bethlehem Weather Office also hosted 240 learners during the local science expo, and the Cape Point Global Atmosphere Watch laboratory in Cape Town is a popular site for scheduled visits by groups of school and university science students.

The communications and awareness drive was also extended beyond the scope of exhibitions during 2006/7. The Cell C "Take a girl child to work" day provided a perfect opportunity for SAWS employees to host girl learners from local schools, and introduce them to the career opportunities available for weather and climate scientists.

The mass media was also used effectively, and SAWS reached out to learners through publishing the World Meteorological Day poster in "The Teacher", as well as the Daily Sun and the Independent newspapers. The print campaign was backed up by the production of educational radio programmes in Zulu, Xhosa, Pedi, Tswana, English, SiSwati, Tshivenda, Tsonga and Ndebele.

Commercial growth was promoted through 'Client Evenings' held at various weather offices in the regions. At these events, clients were introduced to SAWS' range of products and services, resulting in a number of new business contracts. The Eastern, Western and Northern Cape regions grew their commercial revenue from this venture. The lack of client liaison officers in the remaining regions was identified as a challenge. However, the new organisational structure has created posts to build regional capacity and generate revenue.

Another highlight was the popular and successful Western Cape Golf Day. Held on 20 April 2006, the Golf Day provided an opportunity for SAWS to thank its customers for their continued support during the year. During the event, R7 000 was raised for charity.

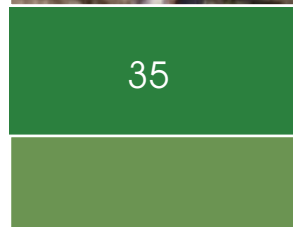
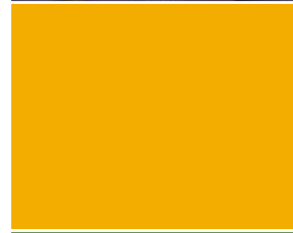
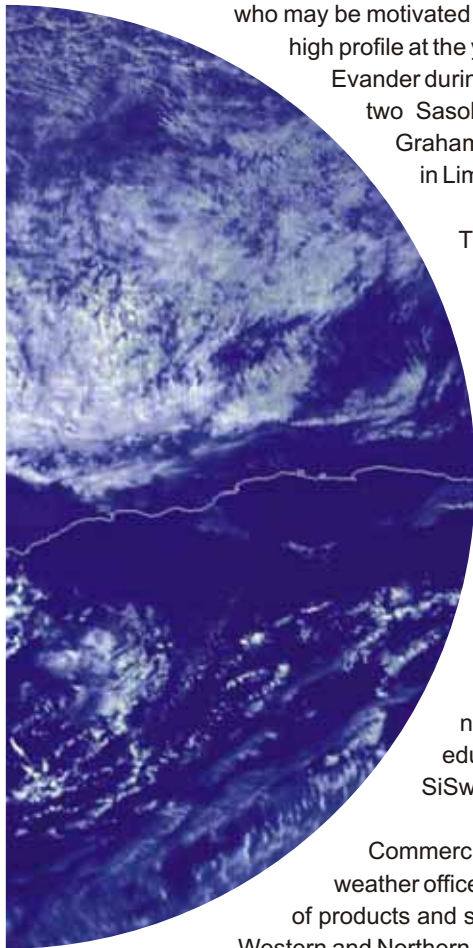
Communications, both internally and externally, have been extended and improved during the reporting period, following the development of Internal, External and Media Relations strategies. Internal stakeholders have already noted significant improvements in the frequency and quality of communications among the various departments and units, and especially between head office and the regions.

International Liaison

Weather systems do not respect artificial human boundaries such as national borders. Additionally, all of humanity faces weather- and climate-related threats like desertification and climate change. So South Africa cannot restrict its meteorological and climatological activities to our national borders. Instead, we must engage in progressive and active partnerships at regional, continental and international level, working with our neighbours and other countries to understand and adapt to the risks and challenges posed by the weather. Developing and nurturing these relationships is the core function of the International Liaison division.

At a regional level, meteorological services in the Southern African Development Community (SADC) received a timely boost via the formation of the Meteorological Association of Southern Africa (MASA) to replace the previous body, the Sub Committee on Meteorology (SCOM). MASA will be more focused on meteorological issues and regional cooperation, promoting weather services excellence throughout the SADC region. SAWS contributed by hosting the March 2007 meeting of 10 MASA National Meteorological Services (NMS) representatives, SADC and the WMO, to finalise the MASA constitution. SAWS also helped to pay travel expenses for those SADC member countries that would otherwise not have been able to attend.

SAWS, in turn, received assistance from the WMO to attend international meetings and events. This offers a valuable opportunity for young black SAWS scientists to network with the world's leading scientists, and to keep



Corporate Affairs (Continued)

up-to-date with the latest techniques and technology in the field.

In addition, South Africa actively participates in eight different WMO Working Groups, mostly as Rapporteurs. Five of these nominated South African participants are from SAWS. These groups meet during intercessional periods and those trips are also funded by WMO. Amongst other matters, these groups review aspects of disseminating early weather warnings to the public in order to save lives and properties, issues of interface between Agriculture, Hydrology and Water Resources which many of the Least Developed Countries (LDCs) depend on for survival, implementation of Climate Information and Prediction Services to the African region and so on.

South Africa also hosted several distinguished international visitors during the year. The first was Dr M Mhita, the former WMO Regional Association 1 (RA1) President. The aim of his September trip was to share African strategic issues before the end of his tenure as the RA1 President.

This was followed up by a visit from the Board Chairperson of the Ghana Meteorological Service, Mr Kofi Adom-Boakye. His aim was to benchmark the operational processes of our meteorological service, and then apply these in Ghana to improve their strategies and processes. Mr Adom-Boakye was grateful for the excellent support received from SAWS experts during his visit.

SAWS not only imparted but also gained knowledge from visitors. Dr P Dexter, a marine specialist from Australia, visited South Africa in November to update SAWS marine forecasters on the latest developments in this field. This is particularly important for South Africa, as the country is responsible for providing marine forecasts covering a vast area stretching from the mid-Atlantic to the mid-Indian Oceans. Only the United States serves a larger marine area.

South Africa attended the WMO Regional Association 1 (RA1) conference held from 14-23 February in Ouagadougou, Burkina Faso. The main aim of this conference was to discuss critical issues affecting the RA1 (the Africa cluster within the WMO), and to come up with the position paper in preparation for the WMO Congress in March. One important resolution of the RA1 conference was full support for SAWS to be the Regional Meteorological Training Centre.

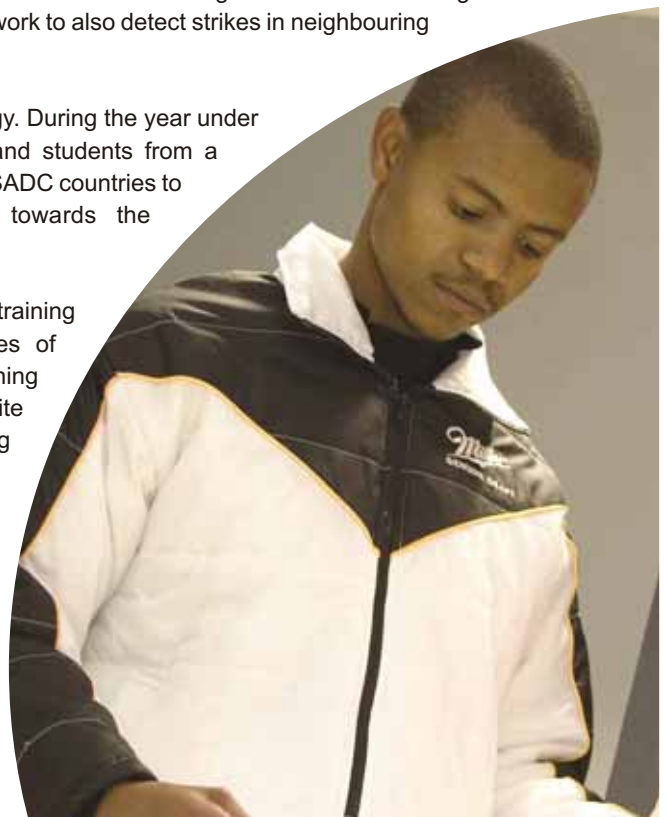
Foreign funding is vital for the upgrading of meteorological services in developing countries. During the reporting period, South Africa was nominated as one of seven countries to receive Finnish government funding. The goal of the funding is to strengthen meteorological services in recipient nations and help them contribute to the sustainable socio-economic development of their countries. South Africa attended a WMO meeting regarding this Finnish project, held in Livingstone, Zambia from 22-24 January 2007. The project was taken further at the WMO International Conference held in Spain from 19-22 March 2007.

In this regard, recent SAWS technological initiatives like the NinJo forecasting workstation, TriVis media software and Lightning Detection Network will benefit not just South Africa, but the whole SADC region. More accurate regional forecasts via NinJo, and the ability of the Lightning Detection Network to also detect strikes in neighbouring countries, hold obvious benefits for these countries as well.

SAWS assistance to SADC does not end with this new technology. During the year under review, SAWS provided specialised training courses to staff and students from a number of African countries. In addition, SAWS has assisted the SADC countries to restore data and communication links, thus contributing towards the maintenance of the regional network.

In October, EUMETSAT experts visited SAWS to conduct training sessions. SAWS experts attended, along with representatives of weather services from other SADC countries. This level of training ensures that the SADC region keeps pace with the latest satellite technologies, and provides a boost to the quality of forecasting throughout the region.

The Unified Model will not only be used for South African forecasts, but also for the wider SADC region. During July/August 2006, SAWS hosted a Severe Weather Forecasting Demonstration Project in conjunction with the WMO and the UK Met Office. Training was also provided on the interpretation of



severe weather warnings, in particular those made available from Numerical Weather Prediction (NWP) systems like the Unified Model.

The goal of the Demonstration Project was to test the usefulness of products currently available from NWP centres and to improve severe weather forecasting services in countries where sophisticated models are not currently used. SADC countries in attendance included Botswana, Tanzania, Madagascar, Zimbabwe and Mozambique. Their reports indicated that SAWS National Forecasting Centre produced high quality and helpful Severe Weather Guidance forecasts for their countries.

Following the demonstration, participating countries requested that this regional forecasting project should become operational once the demonstration phase concludes in November 2007. The success of the project has again raised SAWS' profile, both on the African continent and internationally, as a progressive and high-quality provider of meteorological services.

SAWS also hosted trainees from Botswana, for training in radar, aviation and general forecasting.

The main disappointment was the lack of progress on the WMO Voluntary Cooperation Program (VCP). In January 2007, SAWS was scheduled to host the informal planning meeting of the VCP, which aimed to focus the programme on the plight of NMSs in the developing countries. Unfortunately, due to time constraints and the need to prepare for the RA1 conference, the VCP meeting had to be postponed to the next reporting period.

An important goal for the next reporting period is to prepare for the WMO Congress scheduled for 7-25 May 2007 in Geneva, Switzerland. SAWS will participate in the WMO Congress exhibition and showcase its potential to WMO member countries. This exhibition will market SAWS products and services to the entire world, and lobby for technical support from developed countries.

Human Capital Management

Because SAWS is a scientific service delivery organisation, its success is dependent upon the skills and efforts of its professional staff. Employee wellbeing, continuous learning and personal development, performance management and employment equity are the cornerstones of the organisation's commitment to skilled, productive, motivated and contented employees. This support is provided to SAWS by the Human Capital Management (HCM) department.

Strategic Development

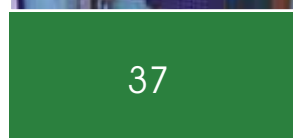
In line with the new Corporate Strategic Plan developed and approved during the period under review, HCM developed its own divisional Human Capital Management Strategy, which emphasises the importance of all clients and stakeholders to the long-term sustainability of the organisation. Also aligned to the Strategic Plan, HCM developed and presented the new organisational structure to the Board for approval.

Policy Development and Review

The development, approval and annual review of all organisational policies and procedures are important components of sound management and corporate governance. The unit achieved its target of having 97% of the required policies approved and implemented by year-end. This included the development of new Cell Phone and Travel policies during the reporting period, and the Recognition agreement approved by the Human Resources and Remuneration Committee.

Occupational Health and Safety

In line with Occupational Health and Safety Act requirements, internal inspections of 15 SAWS facilities were conducted during the year, for hazard identification and risk assessment.



Inspection reports with recommendations for corrective measures have been compiled and sent to all regional managers for action. Steps to address non-conformance are also being implemented.

Recruitment and Selection

The Recruitment and Selection unit within HCM is responsible for talent management, recruitment and employment equity throughout SAWS. The successful recruitment of the new Chief Executive Officer, Dr L Makuleni, was a highlight achievement. However, the recruitment of three General Manager posts (Corporate, Human Capital Management and Corporate Affairs) were rolled over to the next year. These positions were initially advertised in December 2006/January 2007, and were re-advertised in March 2007. In total, 16 positions were filled during the year, with a further seven Information, Communications and Technology (ICT) positions advertised and interviews held with candidates. Target recruitment was used to ensure that it is linked to the Employment Equity Plan. The highlight was the appointment of all the divisional managers, four of the eight appointments were internal promotions and four were external appointments:

- Divisional manager SCM - EE external appointment
- Divisional manager Aviation - EE internal appointment
- Divisional manager Forecasting - EE internal appointment
- Divisional Regional manager - EE internal appointment
- Divisional manager Technical Services - EE internal appointment
- Divisional manager Occupational Health and Safety - EE external appointment
- Divisional manager Employee Relations - EE external appointment
- Divisional manager Organisational Development - EE external appointment

SAWS is dependent on the technical and scientific excellence of its personnel. In its role as the National Meteorological Service, the organisation must operate on an internationally competitive level. However, like most science-based service organisations in South Africa, SAWS is not immune to the effects of a national shortage of skills in the relevant fields. The increased need to maintain and improve current services, fully capitalising on **“Achieving service excellence through improved technology”** to develop new services, implies a very well trained and motivated workforce. A serious effort will be required to attract and retain experts and budding scientists with a passion for this specific branch of science.

Unfortunately, there have been an alarming number of losses to the international and national market, as other organisations target the skills of our personnel. In the next financial year, HCM will develop a Retention Strategy to better retain our staff. During the reporting period, HCM division reviewed job profiles for all personnel functional areas within SAWS, with a view to improving remuneration. Salary negotiations were successfully concluded with organised labour to reach market-related salary adjustments. Performance bonuses for the previous reporting period were paid in May 2006, and the division also made a submission to the Human Resources and Remuneration Committee for a cost of living adjustment for staff.

Employment Equity

SAWS is an equitable employer which aims to reflect South Africa's diverse demographics in its workforce. However, due to the scarcity of meteorological skills, this is viewed as a gradual process in which natural staff turnover and new structure will be complemented by equitable recruitment. The target is to achieve 50% representivity at all levels by 2009. The Workforce Profile and Staff Movements during the reporting period are outlined in the tables on the next page.

Workforce Profile

OCCUPATIONAL CATEGORY	GENDER & RACE								TOTALS
	Black		Coloured		Asian		White		
	M	F	M	F	M	F	M	F	
Legislators, Senior Officials & Managers	7	4	0	0	1	0	4	1	17
Professionals	10	4	2	0	1	0	31	8	56
Technicians & Associate Professionals	13	3	1	1	3	0	17	4	42
Clerks	73	41	18	8	3	4	31	33	211
Plant & Machine Assistants	1	0	1	0	0	0	1	0	3
Elementary Occupations	23	10	3	1	0	0	0	0	37
Totals	127	62	25	10	8	4	84	46	366

Workforce Profile

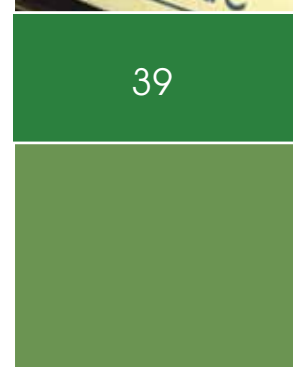
EE Report: Occupational Category (Resignation, Terminations and Retirement)

OCCUPATIONAL CATEGORY	GENDER & RACE								TOTALS
	Black		Coloured		Asian		White		
	M	F	M	F	M	F	M	F	
Legislators, Senior Officials & Managers	3	0	0	1	0	0	0	0	4
Professionals	2	0	0	0	0	0	0	1	3
Technicians & Associate Professionals	3	6	2	0	0	1	3	1	16
Clerks	5	1	0	1	0	1	0	0	8
Plant & Machine Assistants	0	0	0	0	0	0	0	0	0
Elementary Occupations	1	0	2	0	0	0	0	0	3
Totals	14	7	4	2	0	2	3	2	34

Workforce Profile

EE Report: Occupational Category (New Appointments)

OCCUPATIONAL CATEGORY	GENDER & RACE								TOTALS
	Black		Coloured		Asian		White		
	M	F	M	F	M	F	M	F	
Legislators, Senior Officials & Managers	5	1	0	0	0	0	0	0	6
Professionals	0	1	0	0	0	0	1	0	2
Technicians & Associate Professionals	5	4	0	0	0	1	0	2	12
Clerks	3	6	1	4	0	0	0	0	14
Plant & Machine Assistants	0	0	0	0	0	0	0	0	0
Elementary Occupations	3	0	0	0	0	0	0	0	3
Totals	16	12	1	4	0	1	1	2	37



Human Capital Management (Continued)

Employee Relations

SAWS has implemented a Grievance Policy to ensure that staff can raise grievances without fear of victimisation. All grievance and disciplinary procedures are in line with prescribed regulations. The year's Grievance and Disciplinary matters are outlined in the table below.

Employee Relations Statistics

NATURE OF CASES	GENDER & RACE								OUTSTANDING CASES
	Black		Coloured		Asian		White		
	M	F	M	F	M	F	M	F	
CCMA Cases	1	0	1	1	0	0	0	0	1
Grievances	6	1	0	0	0	0	2	3	0
DC Enquiries	4	0	1	1	0	0	1	0	0
Total	11	1	2	2	0	0	3	3	1

Training and Mentorship

In line with its employment equity and personal development policies, SAWS offers training and mentorship opportunities to staff and university students. The goal is to develop the skills of current employees, while building a cadre of young weather scientists for the future. Apart from the project- and technology-specific training initiatives outlined in the Operations section of the Annual Report, training initiatives were concluded as per the table below. A total amount of R893 712 was spent on training for the year, and R2 199 160 on external bursaries.

TRAINING AREA	PARTICIPANTS
Managing discipline	32 managers and supervisors
Personal finance training	31 employees
Excel spreadsheet training	Broad base of employees
Absorbing university students	Eight students absorbed into various SAWS forecasting offices
Enrolment for Honours degrees	15 students enrolled (12 Forecasting, three Physical Meteorology)
Staff bursaries	Two bursaries approved
Observer training	Five students enrolled
Mentorship of BSc students	Three temporary appointments of BSc students who need support to complete their studies
SCM learnerships	Three students enrolled
Basic Bookkeeping	Five students

During the reporting period, progress was made towards registering SAWS' Observer training course with SAQA for accreditation. Discussions were also initiated with the University of Pretoria on the review of meteorological courses offered by the University. This will help to ensure that graduates are equipped with the relevant skills required by SAWS, to promote effective longer-term growth of South Africa's meteorological skills base.