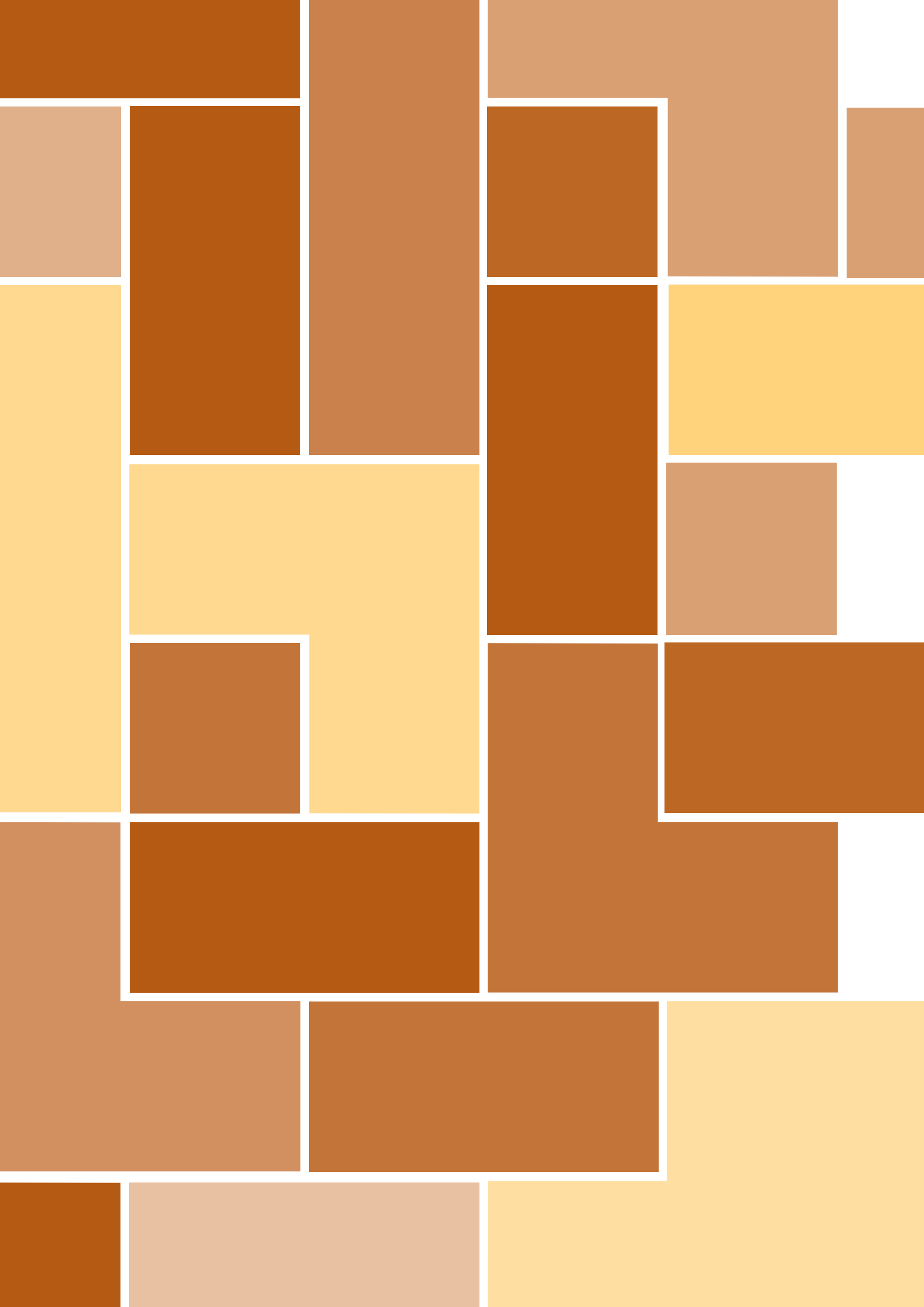


# Annual Report 2011-2012



South African  
Weather Service

ISO 9001:2008 certified





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# Part 1

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# MESSAGE

## From the Minister of Water and Environmental Affairs



The South African Weather Service (SAWS) is one of Government's essential scientific institutions, providing information and services that have a direct impact on the lives of citizens and their properties and contributing greatly to sustainable development in South Africa. The recently acquired ISO 9001:2008 certification is a confirmation that SAWS, as a provider of weather and climate services, is characterised by quality.

South Africa is a semi-arid country; we are therefore continuously challenged with demands on water resources. Water – the lack or overabundance thereof – plays a central role in the daily lives of South Africans. South Africa experiences droughts and floods regularly, and with increased weather variability, South Africa finds itself in a position where it must not only adapt to more severe weather and climate conditions, but also be prepared in terms of potential weather disasters.

The year under review was, unfortunately, another good example of the havoc that could be caused by severe weather conditions. After heavy snow and cold during winter 2011, the onset of the summer season was characterised by severe thunderstorms and tornadoes, while, during the latter part of the summer season, South Africa experienced the

destructive forces of two cyclonic events, causing large scale flooding, damage to property, loss of lives, economic loss and overall misery in the eastern parts of the country (Mpumalanga and the north-eastern parts of KwaZulu-Natal). In all of the above, SAWS continued its service to the public by timeously providing weather forecasts and warnings and ensuring information dissemination via the media, disaster management structures and other platforms.

Having mentioned the climate change phenomenon, I was pleased with the support and contributions of SAWS during November and December 2011, when South Africa successfully hosted the United Nations Framework Convention on Climate Change (COP-17) Conference in Durban. SAWS effectively displayed the relevance of its information and services, in general, but also in relation to the climate change

phenomenon. It confirmed its expertise as a reliable source of weather and climate information, with research and technical abilities supporting and enhancing South Africa's mitigation and adaptation strategies.

Following the proclamation of the South African Weather Service Act, No 8 of 2001, SAWS celebrated ten years as a government entity in July 2011. The past ten years allowed for the identification of additional responsibilities, which, in turn, necessitated the review of the SAWS Act. The revision process is at an advanced stage and the Bill addresses, amongst others, corporate governance issues, the deletion of obsolete clauses, the extension of the Air Quality Information and the National Ambient Air Quality Monitoring Network (NAAQM), the amendment of the regulations, as well as strengthening the clauses related to the dissemination of severe weather warnings.

In anticipation of the amendment of the SAWS Act, the organisation continued to make commendable progress in terms of implementing Phase II of the South African Air Quality Information System (SAAQIS) programme, where the number of Air Quality Stations reporting to SAAQIS increased from 42 to 150. This exceeded the set target of 55 stations as per the Outcome 10 Sector Programme and contributed to information on the National Emissions Inventory, which monitors South Africa's targeted reduction of greenhouse gas emissions.

Internationally, collaborations with the World Meteorological Organisation (WMO) and other

international organisations on the issues of weather, climate and water continued.

I want to congratulate SAWS for its re-election to the WMO Executive Council and many committees of the WMO, its role and leadership in regional meteorology in terms of the Meteorological Association of Southern Africa (MASA) and its enhanced role as a reputable meteorological trainer, as acknowledged by WMO. SAWS delivers services of the highest standard to South Africans. It plays an important role in regional and global capacity building, as well as challenges related to climate change, specifically in terms of strengthening of the Severe Weather Warning System, which also assists in flood prediction and warnings to the public.

I would like to extend a word of gratitude and appreciation to my colleague, Deputy Minister Rejoice Mabudafhasi, for her support, commitment and dedication in ensuring that we deliver on our mandate. I would also like to acknowledge the Parliamentary Portfolio Committee on Water and Environmental Affairs for their oversight role; the SAWS Board for its sterling leadership; and SAWS Management and staff for their efforts and a job well done.



Mrs B E E Molewa, MP  
Minister of Water and Environmental Affairs

# MESSAGE

## From the Deputy Minister of Water and Environmental Affairs



I am delighted to report on the tremendous achievements the South African Weather Service (SAWS) has realised in this financial year, in particular its initiatives in the “weather-ready nation” campaign in various communities in the country. We are aware that the most disturbing weather hazards in South Africa are lightning, floods and drought, the impact of which can be reduced if communities know precautionary measures.

The roadshows embarked upon by SAWS are welcomed and encouraged in the future. It is important to ensure that the South African population is ready to respond to severe weather and the impact thereof, which would in turn minimise the loss of life and property.

In support of the country’s social development programmes, SAWS has progressed well with its Corporate Social Investment initiatives. The second phase of the construction of the school for the Highbury community in Mthatha is nearing completion. The Fognet water harvesting project in Limpopo was maintained and is gaining popularity. The project will be expanded to the Mpumalanga region during the next financial year. The SAWS Alumni programme was also launched during the celebration of the World

Meteorological Day on 23 March 2012. The alumni forum will create an opportunity for networking both at personal and professional levels by former and current SAWS personnel as well as the entire scientist community. The objective of the Alumni is to create a platform where scientists can share ideas, enhance professional development, realise new business ventures and new social ventures with like-minded individuals.

SAWS strives to ensure that, by using dissemination methods, timeous weather warnings are sent to relevant communities in order for communities to respond in time to these kinds of events. The timeous communication and response mechanisms were observed during tropical cyclone Irina early in 2012. The year under review was marked by a significant



number of severe and extreme weather events. COP-17 provided SAWS with an opportunity to display its relevance and importance on the issues of climate change. The organisation has done tremendously well in communicating that value. I want to extend my appreciation to the South African community for taking time in understanding the role that the organisation plays with regard to climate change mitigation and adaptation.

I would like to extend my gratitude to the SAWS Board for its leadership, as well as to the SAWS Management and staff for ensuring that the organisation continues to render services characterised by excellence. Lastly, I acknowledge with appreciation the support given to SAWS by my colleague, Minister Edna Molewa.



Ms Rejoice Mabudafhasi, MP  
Deputy Minister: Water and Environmental Affairs

## Severe Weather Awareness Roadshows

Feb/Mar 2012



Deputy Minister Rejoice Mabudafhasi (second from right) is joined by Dr Makuleni (right), Mr Mththuzeli Siboza (third left) and other representatives from Ekurhuleni



Duduza community members



Emfuleni learners are addressed by Mr Mnikeli Ndamambi



Learners of Emfuleni Municipality



Mr Chris Combrink, Evaton Fire Station, Emfuleni

# REVIEW

## By the Chairperson of the South African Weather Service Board



It is always exciting to be part of the South African Weather Service's (SAWS) achievements. Once again let me applaud the management and staff for inroads made in the excellent implementation of the business plan.

In the reporting year, SAWS complied with the applicable regulatory frameworks, locally and internationally. This was achieved, among others, through the submission of all required weather and climate data to various sectors and industries in the country, to the Safety of Life At Sea (SOLAS) Convention, to the World Meteorological Organisation (WMO) and to the International Civil Aviation Organisation (ICAO). Provision of severe weather warnings to the aviation and marine industries and the Disaster Management Centres complied with the WMO and International Maritime Organisation (IMO) regulations as well as the Disaster Management Framework and the Veld Fire Act.

The involvement of SAWS and its meaningful contribution during COP-17 is well documented. Wide media coverage placed SAWS at the centre of the

issues of climate change adaptation and mitigation. The two side events on the "Early Warning Systems in Southern Africa" and the "Signing Ceremony of the WMO-SAWS Regional Training Centre (RTC) Agreement" highlighted the importance of weather risk reduction through mitigation and adaptation strategies in the country. Capacity building in the meteorological field is equally important for both the country and the region.

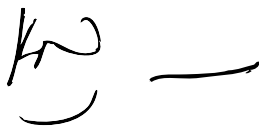
SAWS's leadership role in the SADC region continued well with programmes such as the Regional Specialised Meteorological Centre (RSMC) in Pretoria and the WMO Severe Weather Forecasting Demonstration Project (SWFDP), which was broadened with the inclusion of the flash-flood warning system, called the Southern African Regional Flash Flood Guidance System (SARFFG) for the benefit of the region.

From a corporate governance perspective, SAWS did very well in ensuring compliance with the provisions of the relevant prescripts. All strategic goals and objectives were excellently implemented and are further enhanced by the unqualified audit report presented by the Auditor-General.

I want to congratulate SAWS's CEO, Dr Linda Makuleni for winning the TopCo individual award as "Top Woman in the Public Sector" in September 2011. The support and dedication of SAWS's management and staff to make this award possible, is also recognised.

I take this opportunity to thank the Shareholder for its continued support throughout the year, and members of the Board for their leadership and ensuring a culture of corporate governance is continuously instilled in the organisation. I also want to extend appreciation to management and staff for both their commitment to, and collective efforts in realising the SAWS vision, for becoming the foremost provider of relevant services in respect of weather, climate and related products, which contribute to sustainable development in South Africa and the African continent.

As the new Board takes over the baton in the 2012/13 financial year, I wish them well in taking the organisation forward and trust that they will appreciate the groundwork done and the foundation laid by the exiting Board.



**Ms Khungeka Njobe**  
 Chairperson: SAWS Board  
 Retired: 31 May 2012



Dr Agnes Kijazi, Director-General, Tanzanian MET Agency, Deputy Minister of Water and Environmental Affairs, Mrs Rejoice Mabudafhasi and Mr Michel Jarraud, Secretary-General of WMO



Dr Linda Makuleni



Mr Mnikeli Ndabambi; Mr Lesetja Mathiba (NDMC); Ms Kenosi Machepe; Ms Modjadji Makoela



Mr Eugene Poolman (SAWS) replies to questions about the Southern African Early Warning System

# OVERVIEW

## By the new Board Chairperson



It is an honour for me to assume the position of Chairperson of the Board of the South African Weather Service (SAWS). On behalf of the newly appointed Board, I wish to extend my gratitude to the exiting Board and its Chairperson, Ms Khungeka Njobe, as well as management and staff for the work done during the period under review.

After having served a number of years as a member of the previous Board, I am humbled by this appointment and glad to welcome all new members, as well as two members who have previously served as members of the Board, Mr Siyabonga Makhaye and Mr Rowan Nicholls.

The term of the new Board commences in the year when SAWS celebrates its 11th anniversary as a public entity. As the Board assumes its leadership role in the governance of SAWS, members will uphold the good work done by their predecessors and continue to steer the organisation in the right direction.

Since the work undertaken by SAWS is important, evolving, requires innovation and is also challenging, it is anticipated that the new Board will continually put its collective shoulder to the wheel and produce novel ideas to tasks at hand. Some of the activities SAWS needs to pay attention to, include liaising with the International Geographical Union (IGU) which adheres to the International Council for Science (ICSU), which in turn collaborates with the World Meteorological Organisation (WMO).

30 March 2012

In the spirit of these scientific organisations, SAWS should join them in seeking to 'strengthen international science for the benefit of society.' In this regard, I would like to pay homage to the new Board for availing its expertise to serve the South Africa society.

I would also like to thank the Department of Environmental Affairs and the Ministry of Water and Environmental Affairs for their continued support.

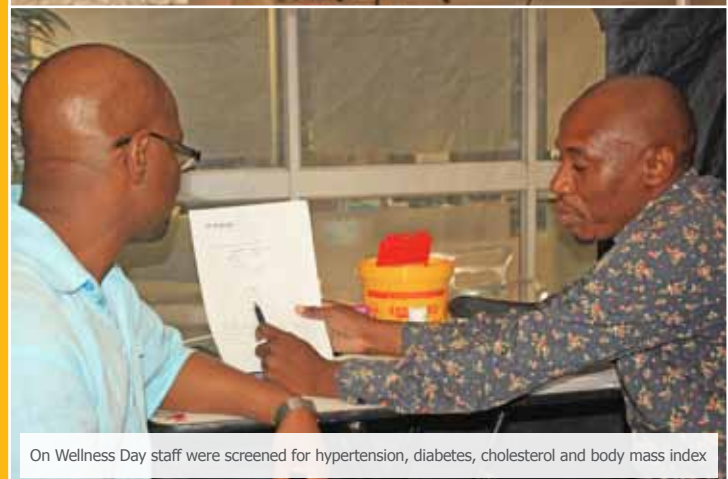


Prof Lindisizwe Magi  
Chairperson: SAWS Board  
Effective: 1 June 2012

## Members of the new South African Weather Service Board:

(effective 1 June 2012)

- Prof Lindisizwe Magi (Chairperson)
- Dr Nolulamo Gwagwa (Deputy Chairperson)
- Mr Siyabonga Makhaye
- Mr Andile Mvinjelwa
- Mr Jonty Tshipa
- Prof Elizabeth Mokotong
- Mr Rowan Nicholls
- Ms Ntsoaki Mngomezulu
- Dr Shadrack Moephuli
- Mr Zola Fihlani
- Ms Judy Beaumont (DEA Representative)
- Dr Linda Makuleni (CEO)
- Mr Slingsby Mda (CFO)
- Ms Zandile Nene (Company Secretary)



On Wellness Day staff were screened for hypertension, diabetes, cholesterol and body mass index

# REPORT

## By the Chief Executive Officer



The year 2011 was a significant milestone in the history of the South African Weather Service. We celebrated ten years as a government entity in terms of the South African Weather Service Act, No 8 of 2001 in July 2011. This celebration followed short on the heels of our celebration of 150 Years of Meteorology in South Africa in 2010, where we recalled the small beginnings of meteorology in October 1860, our custodianship of the national climate database, (extending to more than 152 years) and the phenomenal technological progress made over a 150-year period.

During the year under review SAWS was awarded the ISO 9001:2008 certification in recognition of the quality of our weather and climate services. We were also, once again, overall winners of the prestigious "Best Exhibition 2012" at the Annual Grahamstown Science Festival in March 2012.

SAWS adhered to both national and international obligations by complying with requirements associated with financial management, labour relations, the International Civil Aviation Organisation (ICAO) and the World Meteorological Organisation (WMO).

SAWS continued to provide relevant meteorological products and climate services to our stakeholders, clients and the South African community:

- Our observations network grew, as we piloted our new Automatic Rainfall Station (ARS) network,

expanded our lightning detection network from 19 to 24 country-wide sensors and completed construction of all work on our S-Band radars.

- As mandated by the Shareholder, SAWS, in partnership with the Department of Environmental Affairs (DEA), continued the development of the South African Air Quality Information System (SAAQIS) Phase II, and the National Atmospheric Emission Inventory (NAEI). The overall objective of the SAAQIS Phase II Project is to provide all stakeholders with easy access to all relevant information about air quality in South Africa and useful on-line applications to support effective and efficient management of the air quality. SAWS also took over the management, operation, calibration and data management of the Vaal Triangle Ambient Air Quality Monitoring Network

(VTAAQMN) from the DEA in February 2011. Since then, measures have been put in place to revive the network to achieve an acceptable level of data recovery.

- Research on the most recent trends in historical climate data, particularly surface temperature and precipitation, revealed that warm extremes increased and cold extremes decreased for all weather stations investigated, but varied in magnitude and statistical significance on a regional basis. The analyses of longer time series indicated that it was highly likely that warming in South Africa has accelerated since the mid- 1960s.
- Our Global Atmosphere Watch (GAW) focal point continued its research and provided long-term trends of atmospheric species and detection of the atmosphere for climate change. I need to mention my satisfaction with the reinstating of UV-B measurements at our De Aar station and look forward to a similar result with the SAWS solar radiation network, in co-operation with the Department of Science and Technology, during the new financial year.
- As custodian of national climate data, the increase of the average availability of our data supported our quest for information quality, service delivery and customer service.
- Our research expertise was further enhanced with the utilisation of our advanced observational infrastructure and real-time observation networks in support of operational meteorology, short and medium range forecasting research and long range forecasting. I am excited about work done in terms of hail forecasting and look forward to the qualitative effect this will have on our future service delivery.
- SAWS's forecasting and warning services continued to deliver a 24-hour service to the South African public. Severe weather warnings included, amongst others, information about very cold conditions, severe thunderstorms, cyclones, and the probability of veld fires, strong winds and extreme heat.

- Aviation weather forecasts and aerodrome warnings were provided daily at an accuracy of 98,8%, and included forecasts from our newly established Lanseria office. The general satisfaction with our aviation services by the aeronautical industry is worth mentioning, as it reflects on the reliability and quality of services provided by SAWS.
- Our marine weather services continued to deliver highly-valued services to the second largest ocean area of responsibility in the world (METAREA VII) and provided coastal and deep sea forecasts and warnings at an accuracy of 96,5%. The development of a National Storm Surge Early Warning System, to be implemented in the new financial year, is commended as it will enhance national marine activities, planning, public safety and the protection of property along the South African coastlines.

For South Africa, 2011 was a very important year, as it hosted the Conference of the Parties (COP-17) to the Framework Convention on Climate Change in Durban. SAWS, as an essential partner in matters relating to climate, weather, weather variability and climate change, participated in pre-COP-17 activities in various provinces around the country. Presentations on the SAWS perspective on climate change were given mainly on severe weather events which have hit South Africa recently, climate trends and climate change debate. Our COP-17 participation extended to the conference itself, where we demonstrated the role and relevance of SAWS in terms of weather and climate matters, in general, but also specifically with regards to climate change.

Collaboration with the National Disaster Management Centre (NDMC) and Council for Geosciences on the development of Guidelines for Tsunami Warnings, as part of the country's Multi-Hazard Early Warning System, in which SAWS has an important dissemination role, was crucial for the country's response on climate change mitigation and adaptation strategies. We already felt the impact of the frequency and intensity of severe weather events that happened throughout the year.

With regard to Disaster Risk Reduction, good progress was made with the Water Research Commission (WRC) project on improvement of the flood warning system. SAWS also co-hosted with WMO, a side-event on the development of the Early Warning System in Southern Africa during COP-17 on 7 December 2011 in Durban. The emphasis was on the Severe Weather Forecast Demonstration Project (SWFDP) and the Southern African Regional Flash Flood Guidance System (SARFFG).

To promote beneficial and enduring relationships with key stakeholders, SAWS implemented recommendations from its previous stakeholder perception survey. A framework to engage stakeholders as well as a programme to address various sectors' information needs were implemented. A stakeholder perception survey for the financial year 2011/12 was also conducted. In the past three years, our customers rated us at an overall of 84% for our excellent service and 83% for the quality of our product offerings. We moved from being just a weather and climate information provider to an organisation that values its clients and customers by providing value-added services and products. With this year's results, external stakeholders' (including the general public) perception came to 89%. The overall satisfaction, which included both external and internal stakeholders, came to 78%. The rating of the quality of products was maintained at 83%.

Media relations and engagement were enhanced, yielding positive coverage in all media channels, especially during COP-17. In February and March 2012, SAWS engaged with affected South African communities through weather awareness roadshows, which included our "Early Warning System", so as to create a weather-ready nation in response to the effect of climate change and weather variability. Collaborations with the Department of Rural Development and Land Affairs, the National Disaster Management Centre and some District and Local municipalities were very encouraging and much appreciated.

In support of its mission as well as its objective for the promotion of international relations and co-operation, SAWS was accredited as WMO Regional

Meteorological Centre in order to assist in building capacity of meteorological personnel in the SADC region and beyond. SAWS retained its Executive Council seat during the WMO congress in May and June 2011.

SAWS, as a leader in the SADC region through the Meteorological Association of Southern Africa (MASA), contributed towards infrastructure development and capacity building related to meteorology and climate. SAWS handed over the chairpersonship to Mozambique as per the MASA constitution, but still hosts the Secretariat.

SAWS continued to provide severe weather warnings, including the Southern African flash floods warnings and maintained our role as Regional Telecommunications Hub. We continued to be the Global Producing Centre for Long-Range Forecasts as well as the Regional Specialised Meteorological Centre. All these responsibilities positioned us as a regional leader in providing meteorological services both in our country and the SADC.

In addressing Human Capital Management programmes, we have managed to maintain a turnover of critical and scarce skills at an average of 2,2% in the year under review. The Southern African region, in its attempt to improve meteorological services, is faced with the challenge of a lack of training facilities for its technical personnel. SAWS, together with partner tertiary institutions in South Africa, continued to provide training assistance to personnel from neighbouring countries. I would like to take this opportunity and thank the tertiary institutions such as the University of Pretoria, with whom we have a relationship extending more than forty years, in providing training for meteorologists. Other institutions are the Universities of Zululand and of Witwatersrand which provide learning areas in atmospheric sciences and air quality respectively.

Lastly, let me relate our steady improvements in growing our revenue year-on-year as articulated in the financial statements, as well as sustaining our relations with industries that contribute to our financial sustainability in exchange for products and services we offer to them. We have realised R80,4 million in



regulated income and R15,5 million in non-regulated income. Our utilisation of the government grant is within the regulatory framework. Our total expenses are within 10% of total budget (3% above budget) and employee costs are at 59% of our total expenses. We have achieved 56% of our BEE procurement. We have yet again obtained an unqualified audit, which is attributed to our sound corporate governance.

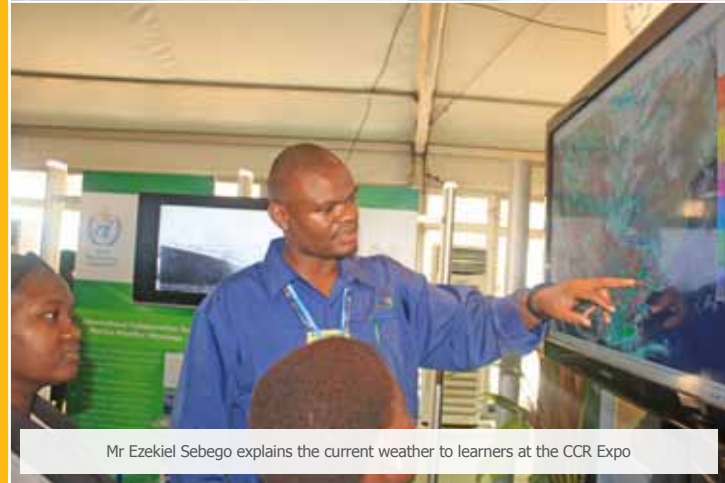
I would like to conclude by expressing my appreciation towards the SAWS staff and management for the excellent work done during the year. The support from the Shareholder and the Board is highly recognised. Let us continue to “power our future with weather, climate and water”.



Dr Linda Makuleni  
Chief Executive Officer



Mr Michel Jarraud, Secretary-General of WMO; Dr Agnes Kijazi, Director-General of the Tanzanian MET Agency and Heads of African Meteorological Services visit the SAWS stand at the CCR Expo, Durban



Mr Ezekiel Sebege explains the current weather to learners at the CCR Expo



SAWS presents eight themes and an interactive climate display at the CCR Expo



SAWS staff gathers with Miss Earth, Kim Rivalland at the SAWS exhibition

# Vision

In delivering on its mandate and statement of purpose, SAWS sets for itself the following vision:

“To be the foremost provider of relevant services in respect of weather, climate and related products, which contribute to sustainable development in South Africa and the African Continent”.

# Mission

In achieving the above vision, SAWS sets itself the following statement of mission:

We, in line with our quality policy statement, provide useful and innovative weather, climate and related products and services for all South Africans and the African Continent, through:

- Enhancing observational data and communication networks;
  - Effectively developing and managing talent;
  - Enhancing collaborative partnerships and effectively disseminating weather products to users;
  - Utilising cutting-edge technology to convert data into meaningful products and services for risk mitigation;
  - Advancing the science of meteorology, research and relevant applications;
  - Enhancing fiscal discipline and optimal resource mobilisation to ensure sustainability;
- in order to inform decision-making and contribute to the safeguarding of life and property.

# Shared Values

SAWS is guided by and committed to a set of internal values, set out in the values statement below:

- **Professionalism:** Self-control and behaviour that is aligned to best business practices, and displays a high standard of excellence in the job.
- **Integrity:** A consistent sense of honesty, truthfulness and trust in one’s own actions while valuing others’ opinions and beliefs.
- **Caring:** A commitment to create a supportive environment that promotes compassion and understanding, both internally and externally.
- **Accountability:** A commitment to take responsibility for things expected from the position and/or role occupied - responsible for own actions.
- **Recognition of Excellence:** A willingness to identify, recognise and acknowledge individuals and teams who demonstrate outstanding performance.
- **Teamwork:** A willingness to work together towards achieving a common goal by making use of and/or appreciating individuals’ diverse strengths and abilities.

# Quality Policy Statement

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

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

In pursuing the achievement of meeting and exceeding client requirements and expectations, we commit ourselves to the establishment and maintenance of a Quality Management System that will be our guarantee to all our clients, by:

- Setting Quality Objectives and reviewing them periodically in order to improve processes that yield quality products and services;

- Improving our existing products and services;
- Improving our operational efficiency and effectiveness through careful planning and documentation of all our processes;
- Recognising and responding to operational and client requirements;
- Providing resources needed for implementing and supporting continuous improvement;
- Communicating this Quality Policy Statement to all employees and stakeholders; and
- Reviewing our Quality Management Policy and our Quality Policy Statement regularly to ensure their ongoing suitability.

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

I hereby confirm that the Quality Policy Statement, as stated above, reflects the commitment of the South African Weather Service (SAWS) to the development, implementation and the continuous improvement of its Quality Management System. This Quality Policy Statement also provides the management of SAWS, together with all members of staff, the strategic intent and overall guidance upon which all aspects of its Quality Management System will be based as well as the business orientation of SAWS in relation to its customers and suppliers.



Dr Linda Makuleni  
Chief Executive Officer

# Board Members



**Back row (from left to right): Mr Slingsby Mda (CFO),  
Mr Welcome Msomi, Mr Peter Lukey (DEA Representative),  
Prof Lindisizwe Magi, Mr Siyabonga Makhaye**



**Front row (from left to right): Ms Medi Mokuena,  
Dr Linda Makuleni (CEO),  
Ms Khungeka Njobe (Chairperson), Dr Thembakazi Mali**

**Left: Mr Lance Williams, Prof Harald Winkler**

**Rev Lulamile Mbete (right) passed away on 08-01-2012.  
We respect and admire his contribution to the SAWS team.**



# Executive Management



**Back row (from left to right): Mr Lindani Gcwensa, General Manager: Human Capital Development; Mr Mnikeli Ndabambi, General Manager: Operations; Mr Slingsby Mda, Chief Financial Officer**

**Front row (from left to right): Ms Modjadji Makoela, General Manager: Corporate Affairs; Dr Linda Makuleni, Chief Executive Officer**

# Senior Management



**Back row (from left to right): Mr Nish Devanunthan, Senior Manager: Technical Service; Ms Gaborekwe Khambule, Senior Manager: Aviation; Mr Tshepho Ngobeni, Senior Manager: Forecasting; Ms Michelle Hartslief, Senior Manager: Commercial; Prof Themba Dube, Senior Manager: Cimate Service; Ms Nomathamsanqa Tabata, Senior Manager: Human Capital Development**

**Front row (from left to right): Ms Anto Badimo, Senior Manager: Stakeholder Relations Management; Ms Zandile Nene, Company Secretary**



**Back row (from left to right): Dr Nhlonipho Nhlabatsi, Senior Manager: Research;  
Mr Mbuyiselo Xhamvu, Senior Manager: Occupational Health and Safety; Mr Lulama Gumenge,  
Senior Manager: Finance; Ms Kenosi Machepe, Senior Manager: Corporate Communications;  
Mr Olusegun Ajigini, Senior Manager: Information and Communication Technology;  
Mr Mark Majodina, Senior Manager: International Relations**

**Front row (from left to right): Ms Dumazile Ngcobo, Senior Manager: Human Capital Services;  
Ms Sihle Mashabane, Senior Manager: Supply Chain Management**

# Performance

## against Targets

Strategic Objective	Programme Activity	Performance Indicator	Strategic Objective Targets 2011 / 2012	Means of Verification	What will be achieved by end Q1 i.e. 30 June 2011	What will be achieved by end Q2 i.e. 30 Sept 2011	What will be achieved by end Q3 i.e. 31 Dec 2011	What will be achieved by end Q4 i.e. 31 Mar 2011	Progress report
Strategic Goal 1: To ensure the continued relevance of the organisation in delivering meteorological and related products and services in compliance with all applicable regulatory frameworks									
1.1 Compliance with all applicable national and international regulatory frameworks	Review Framework of Accountability	Unqualified audit	Unqualified audit	Letter of opinion from the Internal Audit Executive Summary reports	Three year rolling internal audit plan approved	Internal audit report reflecting acceptable internal controls	Internal audit report reflecting acceptable internal controls	Internal auditors appointed	Achieved: Internal auditors appointed
	Strengthen and manage internal controls	Unqualified audit	Annual report produced in line with international best practice	Approved risk register (Board Resolution)	Quarterly report on implementation of milestones in risk plan	Achieved milestones according to approved audit plan	Achieved milestones according to approved audit plan	Internal audit report reflecting acceptable internal controls	Received acceptable rating
	A fully functional MET Authority	Annual report produced in line with international best practice	Annual report produced in line with international best practice	MET Authority annual report	Approved Annual Report for Previous Financial Year	Achieved milestones according to approved audit plan	N/A	Acceptable Interim Audit Report from External Auditors	Achieved
Regional Telecom-communications Hub.	Quarterly RTH data availability report	Quarterly RTH data availability report	Quarterly RTH data availability report	Quarterly RTH data availability report	Quarterly RTH data availability report	Approved risk register and plan	Quarterly report on implementation of milestones in risk plan	Quarterly report on implementation of milestones in risk plan	No Interim audit report issued, but the findings raised were of an administrative and housekeeping nature. Audit opinion by 31 July 2012
						Six-monthly Inspection report	N/A	Six-monthly Inspection report	Achieved: All inspections were conducted as planned. The draft annual report was developed and will be circulated to MET Authority inspectors for their input.
						Quarterly RTH data availability report	Quarterly RTH data availability report	Draft annual report	Achieved: ICT: RTH statistics submitted to WMO on 27 July 2011



Strategic Objective	Programme Activity	Performance Indicator	Strategic Objective Targets 2011 / 2012	Means of Verification	What will be achieved by end Q1 i.e. 30 June 2011	What will be achieved by end Q2 i.e. 30 Sept. 2011	What will be achieved by end Q3 i.e. 31 Dec 2011	What will be achieved by end Q4 i.e. 31 Mar 2011	Progress report
Strategic Goal 1: To ensure the continued relevance of the organisation in delivering meteorological and related products and services in compliance with all applicable regulatory frameworks									
1.2 Developed and implemented programmes and applications for shorter-term variability and long-term climate change adaptation	Custodian of national climate data	Quarterly data availability reports on national climate data	Quarterly data availability reports on national climate data	Availability of Climate Data report	Monthly data availability evidenced in Quarterly Data Availability reports on national climate data	Monthly data availability evidenced in Quarterly Data Availability reports on national climate data	Monthly data availability evidenced in Quarterly Data Availability reports on national climate data	Monthly data availability evidenced in Quarterly Data Availability reports on national climate data	Achieved: Rainfall by the 20 <sup>th</sup> = 93% Upper Air = 75% (programme reduced due to equipment availability) ARS = 93% AWS =92% VOS =100%
	Prediction research as per approved Research and Development strategy and implementation plan	Approved and implemented R&D strategy and implementation plan	Progress reports reflecting implementation of milestones in the R&D implementation plan	Exco approved R&D strategy and annual implementation plan Progress report on implementation of milestones in R&D implementation plan	Progress reports reflecting implementation of milestones in the R&D implementation plan	Progress reports reflecting implementation of milestones in the R&D implementation plan	Progress reports reflecting implementation of milestones in the R&D implementation plan	Progress reports reflecting implementation of milestones in the R&D implementation plan	Achieved: The Science and Research Strategy for SAWS was developed and revised during March 2012 Targets as set out in the Strategy document are being applied
	Development and operationalisation of weather-related disaster risk applications	Number of disaster risk reduction applications implemented	Refined operational SAFFG system Operational Severe Weather Guidance System for Southern Africa Operational Severe Weather Warning System for South Africa	Results of Disaster Management User Survey Quarterly WMO Activity Report Results of Disaster Management User Survey	N/A Quarterly WMO Activity Report on Severe Weather Guidance System for Southern Africa N/A	N/A Quarterly WMO Activity Report on Severe Weather Guidance System for Southern Africa N/A	N/A Quarterly WMO Activity Report on Severe Weather Guidance System for Southern Africa N/A	N/A Quarterly WMO Activity Report on Severe Weather Guidance System for Southern Africa N/A	Achieved: Results available Achieved: SWFDP is now in full operational mode Achieved: Results show an overall satisfaction of 76%
Air quality information service operationalised	SAAQJS Phase I (Ambient air quality) fully developed and implemented	Available ambient air quality monitoring, air quality information is accessible through the SAAQJS website	Report on the availability of data on the SAAQJS website Internal Audit Report on SAAQJS Phase II implementation	Report on the availability of data on the SAAQJS website Report on International and Local systems review	Report on the availability of data on the SAAQJS website Report on system architecture and functionality Availability of emission licence database	Report on the availability of data on the SAAQJS website Report on system development and rollout plan	Report on the availability of data on the SAAQJS website Report on implementation of pilot project	Achieved: Stations reporting to the ambient module of the SAAQJS have grown to 150 Data for stations reporting to the SAAQJS was updated In progress: Implementation Plan and pilot project are awaiting finalisation of system architecture and functionality description, a draft of which was completed in Q4 Delivery on Emission License database was shifted to 2013/14 by DEA	

Strategic Objective	Programme Activity	Performance Indicator	Strategic Objective Targets 2011 / 2012	Means of Verification	What will be achieved by end Q1 i.e. 30 June 2011	What will be achieved by end Q2 i.e. 30 Sept 2011	What will be achieved by end Q3 i.e. 31 Dec 2011	What will be achieved by end Q4 i.e. 31 Mar 2011	Progress report
Strategic Goal 1: To ensure the continued relevance of the organisation in delivering meteorological and related products and services in compliance with all applicable regulatory frameworks									
	Trace Gas including Greenhouse Gas monitoring and submission of reports according to international standards (Global Atmospheric Watch)	Continuous monitoring and provision of Trace Gas data reports	Report on availability of Trace Gas data in the World Data Centres	Report on availability of Trace Gas data in the World Data Centres	Archived Trace Gas data	Archived Trace Gas data	Archived Trace Gas data	Archived Trace Gas data	Achieved: The GAW regional activities were maintained throughout the period which included the monitoring of Ozone and Ultra-violet radiation
1.3 A	Enhance the forecasting and warning service offering	Improved accuracy of maximum temperature and 24-hour forecasts	Quarterly MINMEC and bi-annual Cabinet reports submitted	Quarterly MINMEC Cabinet reports submitted	Quarterly report on temperature accuracy	Quarterly report on temperature accuracy	Quarterly report on temperature accuracy	Quarterly report on maximum temperature accuracy reflecting annual target of 72% accuracy and forecast within 2 degrees	Achieved: 72%
		Percentage forecast availability as per schedule	Forecast availability as per schedule at 99%	Quarterly report on forecasting availability	Quarterly report on forecasting availability	Quarterly report on forecasting availability	Quarterly report on forecasting availability	Quarterly report on forecasting availability reflecting annual target of 99%	Achieved: 98,6% = 99%
		Percentage SOLAS (Safety Of Life At Sea) forecast availability and marine warnings provided	99% SOLAS (Safety Of Life At Sea) forecast availability and marine warnings provided	Quarterly report on SOLAS (Safety Of Life At Sea) forecast availability and warnings provided	Quarterly report on SOLAS (Safety Of Life At Sea) forecast availability and warnings provided	Quarterly report on SOLAS (Safety Of Life At Sea) forecast availability and warnings provided	Quarterly report on SOLAS (Safety Of Life At Sea) forecast availability and warnings provided	Quarterly report on SOLAS (Safety Of Life At Sea) forecast availability and warnings provided	Achieved: 98,53 = 99%
	Establish hydro-meteorology and agro-meteorology application expertise within SAWS	Operationalised function in SAWS	Feasibility study on appropriate structure and establishment of hydro- and agro-meteorological application expertise within SAWS	Feasibility study report	N/A	N/A	N/A	Feasibility study on appropriate structure and establishment of hydro- and agro-meteorological application expertise within SAWS	In progress: Feasibility study performed, but structure not established yet Employed only one expert to execute the feasibility study
		Number of hydro-meteorological and agro-meteorological applications developed	-	N/A for 2011/12	N/A for 2011/12	N/A for 2011/12	N/A for 2011/12	N/A for 2011/12	-
	Deliver and enhance the regulated Aviation Service	Percentage improvement in the accuracy of TAF and TREND	87% accuracy for TAF 92% accuracy for TREND	Report on TAF accuracy Report on Trend accuracy	Quarterly report on TAF accuracy	Quarterly report on TAF accuracy	Quarterly report on TAF accuracy	Quarterly report on TAF accuracy reflecting annual target of 87%	Achieved: 99%
				Report on Trend accuracy	Report on Trend accuracy	Report on Trend accuracy	Report on Trend accuracy	Quarterly report on TREND accuracy reflecting annual target of 92%	Achieved: 99%

Strategic Objective	Programme Activity	Performance Indicator	Strategic Objective Targets 2011/2012	Means of Verification	What will be achieved by end Q1 i.e. 30 June 2011	What will be achieved by end Q2 i.e. 30 Sept 2011	What will be achieved by end Q3 i.e. 31 Dec 2011	What will be achieved by end Q4 i.e. 31 Mar 2011	Progress report
Strategic Goal 2: To ensure the effective management of stakeholder, partner and key client relations									
2.1 Beneficial and enduring relationships with key stakeholders enhanced	Implementation of the Stakeholder Relations Programme with key strategic stakeholders	Results of Perception Survey maintained or enhanced • Customer satisfaction rating • Overall corporate image rating • Quality of service rating	Overall customer satisfaction at score of 84%	Annual Impact Assessment Report	N/A	N/A	Impact Assessment Report on implementation of programmes	Overall customer satisfaction at score of 84%	Regressed: Overall 78%
			Overall corporate image at score of 82%				Overall corporate image at score of 82%	Regressed: Overall 70%	
			The quality of service at score of 83%				The quality of service at score of 83%	Achieved: 83%	
2.2 Implemented programmes which ensure effective internal and external communication	Implement SAWS communication strategy	Progress in implementation of the rolling 3-year communication strategy	Maintaining roll out of three Stakeholder Relations Programmes	Stakeholder Relations Programme Report	Quarterly implementation of three Stakeholder Relations Programmes	Quarterly implementation of three Stakeholder Relations Programmes	Quarterly implementation of three Stakeholder Relations Programmes	Quarterly implementation of three Stakeholder Relations Programmes	Achieved: report available
			Implement phase 1 of the 2011/12 - 2013/14 Communication strategy	Quarterly implementation report	Quarterly implementation report on phase 1 of the 2011/12 - 2013/14 Communication strategy	Quarterly implementation report on phase 1 of the 2011/12 - 2013/14 Communication strategy	Quarterly implementation report on phase 1 of the 2011/12 - 2013/14 Communication strategy	Achieved: Implementation report and Impact assessment available	
2.3 International relations and co-operation promoted	Enhance international positioning of SAWS	Active participation and involvement in governance structures, Boards and Think Tanks, etc	Maintain SAWS international position and leadership role with international bodies (WMO, ICAO, MASA)	Quarterly report on the status of international leadership and positioning	Quarterly report on the status of international leadership and positioning	Quarterly report on the status of international leadership and positioning	Quarterly report on the status of international leadership and positioning	Quarterly report on the status of international leadership and positioning	Achieved: Reports available
			Report reflecting participation in the Implementation of the SADC Regional Meteorological Development Project	Project Implementation Report MASA Minutes	Quarterly report reflecting participation in the SADC Regional Meteorological Development Project	Quarterly report reflecting participation in the SADC Regional Meteorological Development Project	Quarterly report reflecting participation in the SADC Regional Meteorological Development Project	Achieved: Consolidated annual report provided and awaiting project funding from the Finnish Government	

Strategic Objective	Programme Activity	Performance Indicator	Strategic Objective Targets 2011 / 2012	Means of Verification	What will be achieved by end Q1 i.e. 30 June 2011	What will be achieved by end Q2 i.e. 30 Sept 2011	What will be achieved by end Q3 i.e. 31 Dec 2011	What will be achieved by end Q4 i.e. 31 Mar 2011	Progress report
Strategic Goal 3: To address the short-term viability and long-term sustainability of SAWS's revenue and ensure continued fiscal discipline									
3.1 Mobilise financial resources to ensure sustainability	Submission of funding model using ABC results	Agreed funding model and approach	Engage Treasury, DEA around the philosophy and the approach to the funding model, based on ABC model	Minutes of meeting with National Treasury and DEA	First meeting held with NT and DEA based on 2010/11 ABC results	Present to the Board the outcome and any recommendations	Implement Board recommendations	Implement Board recommendations	In progress: 1 <sup>st</sup> meeting held on 10 October 2011, 2 <sup>nd</sup> meeting to be held when draft AFS are ready to combine the discussion with rollover
	Generation of aviation revenue according to approved tariffs	Growth in Rand value of aviation revenue	R80 million revenue generated	Annual Financial Statements	YTD R20 million revenue generated	YTD R40 million revenue generated	YTD R60 million revenue generated	R80 million revenue generated	Achieved: R80,4 million
	Non-regulated commercial revenue generation	Growth in Rand value of alternative commercial revenue	R16,5 million alternative commercial revenue	Annual Financial Statements	YTD R1,5 million alternative commercial revenue	YTD R6,5 million alternative commercial revenue	YTD R9,5 million alternative commercial revenue	YTD R16,5 million alternative commercial revenue	Achieved: 94% of target achieved R15,5 million
3.2 Enhanced fiscal discipline and the effective management of resources to ensure a positive return on investment	Effective Operational Expenditure Management	Variance to total budget	Variance within 10% of total budget	Annual Financial Statements	AFS reflecting variance within 10% of budget	Variance report	Variance report	Variance report	Achieved: Total expenses are 10% below budget
	Reduce debtors' days to acceptable levels	Employee cost as percentage of total expenditure	Maintain employee cost at less than 60% of operational expenditure	AG to perform verification test on numbers reported in AFS	Maintain employee cost less than 60% of operational expenditure	Maintain employee cost less than 60% of operational expenditure	Maintain employee cost less than 60% of operational expenditure	Maintain employee cost less than 60% of operational expenditure	Achieved: Employee costs at 59% to operational expenditure
	Enhance Supply Chain Management	Number of debtors' days	Reduce to 45 days	AG to perform verification test on numbers reported in AFS	AFS reflecting 45 debtors' days	Variance report	Variance report	Variance report	Achieved: Debtors collection = 45 days
		Developed and implemented SCM strategy	Develop and approve	Approval	N/A	N/A	N/A	Developed and implemented SCM strategy	In progress: Strategy presented to EXCO The next step is an implementation process closing all the gaps
	Reduce current ratio of assets to liabilities to acceptable norm of 2:1	Ratio of assets to liabilities	2:1 ratio	Annual Financial Statements	AFS reflecting 2:1 ratio	Variance report	Variance report	Variance report	Achieved: Ratio = 2:4
	BEE Procurement spending (excluding sole supplier or single source)	BEE Procurement spending percentage	BEE Procurement spending at least 60% (excluding sole supplier or single source)	BEE compliance report	BEE compliance report reflecting at least 60% (excluding sole supplier or single source)	Quarterly BEE procurement report	Quarterly BEE procurement report	Quarterly BEE procurement report	Not achieved: 56%

Strategic Objective	Programme Activity	Performance Indicator	Strategic Objective Targets 2011 / 2012	Means of Verification	What will be achieved by end Q1 i.e. 30 June 2011	What will be achieved by end Q2 i.e. 30 Sept 2011	What will be achieved by end Q3 i.e. 31 Dec 2011	What will be achieved by end Q4 i.e. 31 Mar 2011	Progress report
Strategic Goal 4: To ensure continuous organisational effectiveness and efficiency									
4.1 Enhanced business integration and organisational effectiveness programme	Total Quality Management programme implementation	ISO 9001:2008 certification by 2010/11 and then maintained	Maintain ISO 9001:2008 certification	ISO 9001:2008 Compliance Report	N/A	Internal Q eMS Systems Assessment	N/A	QMS Surveillance Audit	Achieved: SAWS is ISO 9001:2008 certified
	Development and implementation of ICT Master Plan	Implementation of ICT Master Plan as per agreed milestones	ICT Master Plan approved and mobilise funds for its implementation Implementation of ICT Master Plan as per agreed milestones	Approved ICT Master Plan (by EXCO) Quarterly Progress Reports on implementation	Approval of ICT Master Plan	Implementation of ICT Master Plan milestones evidenced in Quarterly Progress Reports	Implementation of ICT Master Plan milestones evidenced in Quarterly Progress Reports	Implementation of ICT Master Plan milestones evidenced in Quarterly Progress Reports	Not Achieved
4.2 An optimal observation network and dissemination platform	Implement infrastructure mod reorganisation according to modernisation plan	Implementation of Modernisation Plan as per agreed milestones	Implementation of Modernisation Plan as per agreed milestones	Quarterly Progress Reports on implementation	Implementation of Modernisation Plan milestones evidenced in Quarterly Progress Reports	Implementation of Modernisation Plan milestones evidenced in Quarterly Progress Reports	Implementation of Modernisation Plan milestones evidenced in Quarterly Progress Reports	Implementation of Modernisation Plan milestones evidenced in Quarterly Progress Reports	In progress: New Modernisation Plan has been developed and will run from 2012/13 to 2014/15
	Preventative planned maintenance programme	Percentage of preventative maintenance activities executed according to the schedule - Preventative maintenance records	Preventative maintenance activities executed according to the schedule	Quarterly Progress Reports on implementation	Reports on maintenance as per schedule	Reports on maintenance as per schedule	Reports on maintenance as per schedule	Achievement of annual maintenance schedule Development of Annual Maintenance Schedule for 2012/13	In progress. PMP has been developed and the schedule has been implemented which is on all technologists' performance agreement CMMS bid has been advertised and proposals are still to be evaluated

Strategic Objective	Programme Activity	Performance Indicator	Strategic Objective Targets 2011 / 2012	Means of Verification	What will be achieved by end Q1 i.e. 30 June 2011	What will be achieved by end Q2 i.e. 30 Sept 2011	What will be achieved by end Q3 i.e. 31 Dec 2011	What will be achieved by end Q4 i.e. 31 Mar 2011	Progress report
4.3 An optimal organisational design which supports the organisational strategy	Business Optimisation and Re-alignment Programme developed and implemented	Percentage of re-alignment plan targets implemented	Feasibility study and Business Case for Waterkloof Land developed	Feasibility study and Business Case for Waterkloof Land	N/A	Feasibility study and Business Case for Waterkloof Land developed	N/A	N/A	In progress: The feasibility study is nearing completion  A pre-feasibility study was completed and submitted to National Treasury PPP unit to register the development of the Land as a potential PPP project
			Business Optimisation and Re-alignment Programme finalised	Business optimisation plan	N/A	N/A	N/A	Business Optimisation Plan and Re-alignment Programme finalised	National Treasury requires that the Business Case be developed in consultation with an independent Transaction Advisor  Not achieved

Strategic Goal 4: To ensure continuous organisational effectiveness and efficiency

Strategic Objective	Programme Activity	Performance Indicator	Strategic Objective Targets 2011 / 2012	Means of Verification	What will be achieved by end Q1 i.e. 30 June 2011	What will be achieved by end Q2 i.e. 30 Sept 2011	What will be achieved by end Q3 i.e. 31 Dec 2011	What will be achieved by end Q4 i.e. 31 Mar 2011	Progress report
Strategic Goal 5: To create a strategy-driven human capital capacity for SAWS's performance									
5.1 The availability of specialised and core competencies to ensure delivery of high quality projects	Develop and implement an Annual Human Resources Development Strategy	Percentage availability of requisite skills within employee budget	75% of requisite skills and competencies available	Placement in accordance with composite recruitment plan	Recruitment to be effected as per time lines in composite recruitment plan	Recruitment to be effected as per time lines in composite recruitment plan	Recruitment to be effected as per time lines in composite recruitment plan	Recruitment to be effected as per time lines in composite recruitment plan	In progress Finalising the HRD strategy
		Developed and implemented skills development plan	SAWS Skills Development Plan in line with determined skills requirements	SETA Report	Develop Workplace Skills Plan and submission to SETA	Implement Workplace Skills Plan programme and report to SETA	Implement Workplace Skills Plan programme and report to SETA	Report on Workplace Skills Plan programme and report to SETA	In progress: TETA SETA has granted approval on the appeal of discretionary grant HCD unit will send reports on training in early April for WSP to be approved
		Staff turnover percentage on critical and scarce skills	6% staff turnover on critical and scarce skills	Quarterly HCM report	Report on staff turnover of critical and scarce skills	Report on staff turnover of critical and scarce skills	Report on staff turnover of critical and scarce skills	Annual turnover rate of 6% staff turnover of critical and scarce skills	Achieved: The current scarce and critical skills turnover (March 2012) is at 0.27%
		Readiness of identified successors	30% readiness of identified successors to take over positions	Bi-annual Assessment reports	N/A	Report on readiness of identified successors to take over positions	N/A	Report on 30% readiness of identified successors to take over positions	Achieved: 80% of the Succession Plan Dash Board has been populated
	To identify and support potential skills in the scientific and technological fields	Number of bursaries granted	38 or more approved bursaries granted	Signed contracts	Monitoring of previous allocated bursaries	Monitoring of previous allocated bursaries	Advertise availability of bursaries	38 or more approved bursaries granted	Achieved: 40 bursaries awarded
		Percentage of bursaries absorbed by SAWS in critical strategic areas	At least 62% uptake of graduates in critical scientific and technological areas	Employment contracts of graduates	N/A	Align bursary programme to budget and recruitment needs	N/A	At least 62% of graduates employment contracts signed	Partially achieved: 60% of bursary students recruited from the universities in the 4 <sup>th</sup> quarter
		Percentage of bursary beneficiaries from previously disadvantaged backgrounds	75% or more of bursary beneficiaries from previously disadvantaged backgrounds	Signed bursary contracts	N/A	N/A	Sourcing and advertising of bursaries	75% or more of bursary beneficiaries from previously disadvantaged backgrounds	Achieved: 85% of bursary beneficiaries from previously disadvantaged backgrounds
5.2 A performance culture underpinned by an effective performance management (M&E) system and best practice reward and incentive programme	Implement an organisational performance management (M&E) system	Organisational performance rating percentage	Real year-on-year increase in the organisational performance rating	Organisational performance report	Completion of individual performance assessments	Consolidated organisational performance report finalised	N/A	N/A	In progress: Busy preparing for the second employee performance reviews (October 2011 – March 2012)







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# 1. Corporate Governance

## 1. Introduction

During the period under review, SAWS continued its quest of conducting its business in line with corporate governance best practices, with a view to building trust with its Shareholder as well as other stakeholders. The Board renewed its commitment to the principles of good corporate governance and adherence to the highest levels of ethical standards in the conduct of business.

### 1.1. Shareholding

The South African Government, represented by the Minister of Water and Environmental Affairs, is the sole Shareholder.

### 1.2. Mandate of the Board

The mandate of the Board is derived from the South African Weather Service Act, No. 8, 2001 (as may be amended); augmented by the relevant provisions of the Public Finance Management Act, No. 1 of 1999 (PFMA), as amended, and the Treasury Regulations issued in terms of the PFMA; and to the extent possible, the Code of Corporate Practices and Conduct as contained in the King Report on Corporate Governance for South Africa, among others. With the release of King III, the Board also adopted an approach that it would, to the extent possible, take the relevant recommendations of King III into consideration in the conduct of its business. Over and above adherence to the relevant legislative and governance frameworks, the functioning of the Board is also guided by an approved Board Charter.

During the period under review, the Board ensured, among others, that the following happens:

- SAWS' Strategy was reviewed accordingly and a Five-year Strategy for 2012/13 to 2016/17 was approved by the Board and submitted to the

Shareholder for final approval, in accordance with the new reporting framework;

- The Annual Performance Plan and Budget for 2012/13 were also approved by the Board and submitted to the Shareholder within the prescribed timelines;
- The audited Annual Financial Statements and Annual Report for 2011/12 were approved by the Board and submitted to the relevant authorities within the prescribed timelines;
- Quarterly Reporting to the Shareholder were submitted within the prescribed timelines;
- The Internal Audit Plan and Charter were reviewed and approved, as well as the External Audit Strategy, and the implementation thereof monitored accordingly;
- The Enterprise-wide Risk Management review was undertaken accordingly and the Risk Register established; and
- A number of Policies were also reviewed and approved, to strengthen internal controls and to ensure compliance with corporate governance best practices.

### 1.3. Board Governance Structure

During the period under review, the composition of the Board was in compliance with corporate governance best practices, with the majority of members being non-executive members. The Board had three committees namely, the Audit and Risk Committee, the Human Resource and Remuneration Committee, and the Strategic Programmes Committee.

The Board and Committee membership was as reflected in Table 1 below.

Board Members	Board Committees		
	Audit and Risk	HR and Remuneration	Strategic Programmes
Ms Khungeka Njobe (Chairperson)		✓	
Rev Lulamile Mbete (Deputy Chairperson)		Chairperson	
Ms Medi Mokuena	Chairperson	✓	
Mr Welcome Msomi			Chairperson
Dr Thembakazi Mali	✓		✓
Mr Siyabonga Makhaye	✓		✓
Prof Lindisizwe Magi		✓	
Mr Peter Lukey			✓
Mr Lance Williams	✓		✓
Prof Harald Winkler			✓
Dr Linda Makuleni (Chief Executive Officer)		✓	✓
Mr Slingsby Mda (Chief Financial Officer)			
Mr Melusi Ntumba*	✓		

\*An independent member of the Audit and Risk Committee, who is not a member of the Board

### 1.3.1 Secretariat

In accordance with corporate governance best practices, the Board also had the support of the Company Secretary, in ensuring the effective functioning of the Board and its Committees and compliance with applicable corporate governance frameworks. Board members have unrestricted access to the advice and support of the Company Secretary, but may also seek independent professional advice at SAWS' expense, should it be deemed necessary.

### 1.4 Board Meetings

Board meetings were held in accordance with the provisions of the Board Charter and in line with the Board Calendar. Special meetings could also be held as and when the need arose.

Board meetings were held on 27 May 2011, 28 July 2011, 22 November 2011, 13 February 2012 and a special meeting/strategic planning session on 23 August 2011.

The number of meetings held and attended were as reflected in Table 2 below:

Members	Number of Ordinary Meetings		Number of Special Meetings	
	Meetings Held	Meetings Attended	Meetings Held	Meetings Attended
Ms Khungeka Njobe (Chairperson)	4	3	1	-
Rev Lulamile Mbete (Deputy Chairperson)*	4	1	1	1
Ms Medi Mokuena	4	1	1	-
Mr Welcome Msomi	4	4	1	1
Dr Thembakazi Mali	4	2	1	1
Mr Siyabonga Makhaye	4	4	1	1
Prof Lindisizwe Magi	4	4	1	1
Mr Peter Lukey	4	1	1	-
Mr Lance Williams**	4	1	1	-
Prof Harald Winkler**	4	-	1	-
Dr Linda Makuleni (CEO)***	4	3	1	1
Mr Slingsby Mda (CFO)	4	4	1	1

\*deceased 08/01/2012 \*\*retired 31/05/2011 \*\*\* the meeting of 27/05/2011 was attended by Ms Modjadji Makoela in her capacity as the Acting CEO Note: Rev L W Mbete passed away in January 2012. His invaluable contributions to the Board and SAWS at large and his sense of humour will be sorely missed by all who got to know and interact with him. May his soul rest in peace.

### 1.4.1 Delegation of Authority

SAWS has the Delegation of Authority Policy in place, with its principles derived mainly from sections 56 and 57 of the PFMA, 1999 (as amended) regarding the assignment of powers and duties by the Accounting Authorities and the responsibilities of other officials in a public entity, respectively. During the period under review the Policy was accordingly reviewed. The Board Charter also makes provision for the Board to delegate other matters to Board Committees, while reserving specific power to it.

### 1.4.2 Board Committees

In the execution of its mandate, the Board was assisted by three Committees with clear Terms of Reference. However, any such delegation does not absolve the Board from its responsibilities.

Committee meetings are held in accordance with the provisions of the Terms of Reference as well as the Calendar. Special meetings may also be held as and when the need arises.

#### 1.4.2.1 Audit and Risk Committee

The Committee's primary responsibility is to assist the Board in discharging its duties relating to, among others:

- The review of financial management processes, systems and internal controls;
- The governance of risk and Information Technology (IT);
- The review of the audit processes;
- Monitoring compliance with applicable laws, regulations and governance frameworks;
- Overseeing the safeguarding of assets, and the preparation of accurate financial reporting and statements in compliance with all applicable legal requirements and accounting standards.

The external auditors, internal auditors, the CEO and the CFO of SAWS were invited to all Committee meetings. The Committee is also at liberty to hold meetings with the Auditors separately, without Management. An invitation to attend Committee meetings also gets extended to the CFO of the Department of Environmental Affairs.

Committee meetings were held on 16 May 2011, 18 July 2011, 14 November 2011, 6 February 2012 and two special meetings on 28 July 2011 and 22 November 2011. The membership of the Committee, as well as the number of meetings held and attended, were as reflected in Table 3 below.

Members	Number of Ordinary Meetings				Number of Special Meetings	
	Meetings Held		Meetings Attended		Meetings Held	Meetings Attended
	With a Quorum	Without a Quorum	With a Quorum	Without a Quorum		
Ms Medi Mokuena (Chairperson)	3	1	3	-	2	2
Mr Siyabonga Makhaye	3	1	3	-	2	2
Mr Melusi Ntumba*	3	1	2	1	2	-
Dr Thembakazi Mali**	3	1	1	-	2	-
Mr Lance Williams***	3	1	1	-	2	-

\*an independent member of the Committee who is not necessarily a member of the Board \*\*appointed as a member to the Audit and Risk Committee effective 28/07/2011 \*\*\* retired 31/05/2011

#### Note:

- The Committee convened on 6 February 2012. Unfortunately, the required quorum could not be met at the eleventh hour due to unforeseen circumstances. Urgent matters that should have been considered at the said meeting were subsequently considered in a round robin.
- The meeting of 6 February 2012 was also attended by Dr Linda Makuleni (CEO) and Mr Welcome Msomi (Chairperson of the Strategic Programmes Committee) in their capacity as members of the Strategic Programmes Committee.

#### 1.4.2.2 Human Resource and Remuneration Committee

The Committee assists the Board in discharging its duties thereby ensuring that SAWS has adequate human resource-related policies and systems in place, in compliance with all applicable legislation and governance frameworks. The Committee also assists the Board on issues relating to succession planning

and make recommendations to the Board on Executive Management appointments and remuneration.

Committee meetings were held on 12 May 2011, 18 July 2011, 10 November 2011 and 31 January 2012. The membership of the Committee, as well as the number of meetings held and attended, were as reflected in Table 4 below:

Members	Number of Ordinary Meetings		Number of Special Meetings	
	Meetings Held	Meetings Attended	Meetings Held	Meetings Attended
Rev Lulamile Mbete (Chairperson)*	4	3	-	-
Ms Khungeka Njobe	4	2	-	-
Ms Medi Mokuena	4	3	-	-
Prof Lindisizwe Magi** (Chairperson)	4	3	-	-
Dr Linda Makuleni (CEO)	4	4	-	-

\* Chairperson until he passed away on 8 January 2012

\*\*Appointed Chairperson of the Human Resources and Remuneration Committee, effective 19/01/2012.

#### 1.4.2.3 Strategic Programmes Committee

The Committee considers, monitors, and makes recommendations to the Board on all scientific programmes and special projects in SAWS. These include research, developmental and business activities and opportunities (both for the public good and commercial services) and ensuring that these are managed effectively and efficiently.

Committee meetings were held on 13 May 2011, 19 July 2011 and 14 November 2011. The membership of the Committee, as well as the number of meetings held and attended, were as reflected in Table 5 below:

Members	Number of Ordinary Meetings		Number of Special Meetings	
	Meetings Held	Meetings Attended	Meetings Held	Meetings Attended
Mr Welcome Msomi (Chairperson)	3	3	-	-
Dr L Makuleni (CEO)	3	3	-	-
Dr Thembakazi Mali	3	2	-	-
Mr Siyabonga Makhaye*	3	1	-	-
Mr Peter Lukey	3	-	-	-
Mr Lance Williams**	3	1	-	-
Prof Harald Winkler**	3	-	-	-

\*Appointed member to the Strategic Programmes Committee, effective 28/07/2011 \*\*Retired 31/05/2011

*Note: Dr Makuleni and Mr Msomi also attended a joint meeting with the Audit and Risk Committee, held on 6 February 2012.*

### **1.4.3 Board Remuneration**

Board members are remunerated and/or reimbursed for expenses incurred in the course of executing SAWS-related activities, in accordance with the Remuneration Framework determined by the Executive Authority annually. Please refer to note 25 on page 117 of the Annual Financial Statements.

### **1.4.4 Board Development**

Board development is considered critical in order to keep the Board members abreast of relevant governance developments. As such, relevant training was identified and attended by Board members. The Board also assumed membership to the Institute of Directors (IoDSA), and get regular updates on Board and governance-related topics.

### **1.4.5 Board Evaluation**

The performance of the Board and its Committees for the 2010/11 financial year was conducted during the period under review and the outcomes thereof taken into account in strengthening the effectiveness of the Board Structure.

## **1.5 Risk Management**

SAWS has adopted an Enterprise-wide Risk Management (ERM) approach. Part of the reason is that ERM supports the alignment of the strategy, process, people and information technology. The ERM was conducted during the period under review, allowing SAWS to identify, prioritise and effectively manage those risks considered critical. This culminated into the establishment of the Risk Register. Implementations are reported to the Board on a quarterly basis. The ERM and the Risk Register also form the basis for the development of an Internal Audit Plan.

## **1.6 Materiality Framework**

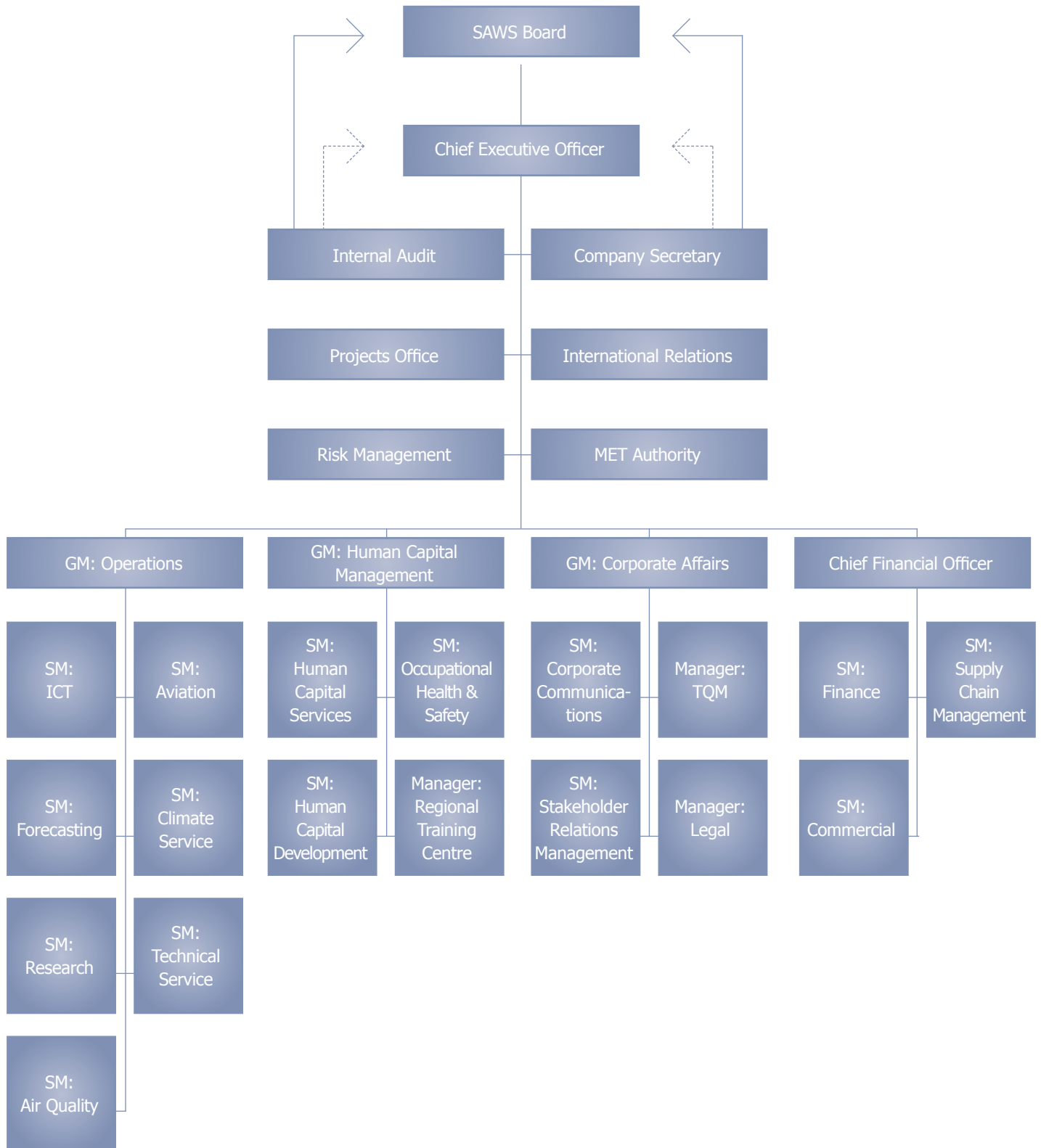
In line with the relevant provisions of the PFMA, the Materiality Framework was reviewed and approved and acceptable levels of materiality and significance agreed upon with the executive authority in consultation with the external auditors.

## **1.7 Audit**

During the period under review, SAWS had an internal audit function outsourced to an independent firm, SizweNtsalubaGobodo, and the external audit function provided by the Auditor-General.

- The internal auditors assist SAWS in identifying, evaluating and assessing significant organisational risks and provide the Audit and Risk Committee and Management with the assurance on the effectiveness of internal financial controls and systems, in line with the approved Internal Audit Plan.
- The external auditors are responsible for independently auditing and reporting on the financial statements in accordance with the auditing standards and in line with the approved External Audit Plan.

# 2. Organisational Structure



## 3. Meteorological Authority

The South African Weather Service established a Meteorological Authority (MET Authority) in 2008, following an audit finding by the International Civil Aviation Organisation (ICAO).

To ensure compliance with ICAO safety standards and the South African Civil Aviation Authority (SACAA) regulations, aerodrome inspections were conducted at twenty licensed aerodromes. The oversight of aeronautical meteorological services and products provided by SAWS to international and national air navigation, as required by ICAO, confirms the commitment of SAWS to ensure that safety standards are maintained and also promotes compliance with the ICAO Annex 3 Standards and Recommended Practices (SARPs), as well as SACAA Regulations and Civil Aviation Technical Standards (CATS).

The MET Authority's aeronautical meteorological services function, highlighted areas of non-compliance which could be addressed. It also showed that MET inspections had a positive impact on South Africa's aeronautical meteorological services and products. This helped SAWS to focus on requirements, resulting in a wider and deeper knowledge of ICAO

requirements in its ongoing mission to foster a global civil aviation system that consistently and uniformly operates at peak efficiency.

The Memorandum of Agreement (MoA) between SAWS and SACAA on certification of aeronautical meteorological instrumentation and licensing and/or approval of the aerodromes and air traffic service units, was reviewed by both parties. The annual plan as well as the products and services rendered by SAWS to the aviation industry were reviewed by SAWS and aviation stakeholders during the Advisory Committee for Aeronautical Meteorological Services (ACAMS) meetings.

Interdepartmental meetings were conducted to ensure that SAWS complies with the new WMO/ICAO requirement on competency of Aeronautical Meteorological Personnel (AMP). The implementation plan of the competency of AMP was developed and communicated to SAWS staff to provide awareness of the new WMO/ICAO requirement.

## 4. International Relations

### 4.1 International co-operation

SAWS continued to participate in international activities to enhance meteorology in South Africa and ensure fulfilment of the applicable international conventions. The international co-operation events included serving on the Executive Council and active participation in the 15<sup>th</sup> Congress of WMO. SAWS experts continued to serve in several technical teams of the WMO to improve forecasting products, international aviation activities, research and

data communications. In addition, SAWS signed a historical Memorandum of Understanding with the USA's National Ocean and Atmosphere Administration (NOAA), to formalise co-operation in meteorology between the two national weather services. NOAA is regarded as one of the most advanced and modern national weather services in the world. This event was also attended by senior officials from the South African Embassy in Washington, DC. Within this financial year, SAWS also signed a Memorandum of Intent with the UK Meteorological Office to enhance



co-operation with one of the largest and most advanced national weather services in Europe. Other international co-operation events included activities in data communication, technology sharing and capacity building.

## **4.2 Meteorological Association of Southern Africa and SADC**

South Africa, through SAWS, continued to play a leading regional role through the Meteorological Association of Southern Africa (MASA), where SAWS served as the Vice-Chairperson. SAWS continued to host the MASA Secretariat and also hosted two MASA Board meetings. In line with the implementation of the MASA Strategic Plan, SAWS was instrumental in the resource mobilisation initiatives to achieve the MASA objectives. SAWS, on behalf of MASA, held meetings with the World Bank and USAID to present the regional meteorological development plans. SAWS actively engaged the Finnish Mission in South Africa to support the regional meteorological infrastructure development. SAWS also actively advocated regional meteorological programmes within the WMO. As a result, the SADC region is well-known in global meteorology circles for delivering a successful Severe Weather Forecast Demonstration Project (SWFDP) which is now being emulated by other regions in the world, including the South Pacific and East Africa. The WMO Regional Specialised Meteorological Centre in Pretoria, which is operated by SAWS, has been driving the Southern African Regional Flash Flood Guidance System (SARFFGS) to expand the SWFDP and flash flood forecasting in the SADC region.

## **4.3 COP-17**

In support of the Government's activities towards climate change adaptation, SAWS participated actively during COP-17 through a state-of-the-art exhibition and several side events. The exhibition covered eight thematic areas of SAWS involvement: weather observations and infrastructure, ocean observations, air quality observations, weather and climate monitoring, early warnings systems in Southern Africa, aviation meteorological services and a live weather display. The exhibition was done in collaboration with the DEA Oceans and Coast Branch and the WMO. The exhibition was visited by many

students, the general public, non-governmental organisations, international delegates, local and international media and was extensively covered on radio and television. In addition, senior SAWS officials also participated in a pre-COP-17 cruise on the R/V Agulhas from Cape Town to Durban to raise COP-17 awareness and network with other scientific organisations on climate change issues. In fulfilling its role as the nominated co-ordinator of all the science and technology organisations in the CCR Expo, SAWS chaired planning meetings and participated in the design of the science and technology exhibition concept to showcase the progress of South African Science and Technology institutions in climate change adaptation and mitigation.

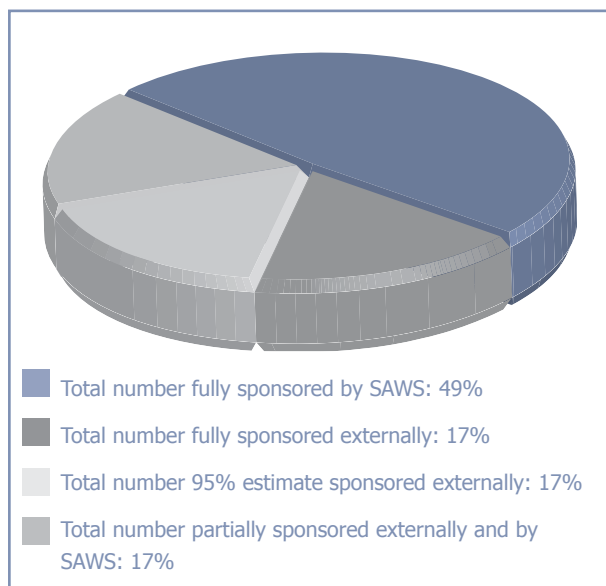
The SAWS exhibition was also graced by many Cabinet members as well as the Premier of KwaZulu-Natal. The SAWS side events on Early Warnings Systems and the Global Framework on Climate Services were done in partnership with the WMO and were addressed by Deputy Minister Rejoice Mabudafhasi, the WMO Secretary-General and eminent climate scientists from around the African continent. The other side event included the signing of a Memorandum of Understanding (MoU) with the WMO to establish the WMO Regional Training Centre, Pretoria (RTC-Pretoria). The WMO RTC-Pretoria is operated by SAWS and provides meteorological training to meteorologists from all over the SADC region.

## **4.4 SAWS international positioning**

SAWS actively participated in the WMO programmes and used these opportunities as platforms to pursue national and regional issues. During the WMO Congress in May and June 2011, the SAWS CEO was re-elected into the WMO Executive Council and several of its strategic working group committees. SAWS was furthermore designated by the WMO to become a WMO RTC. In addition, SAWS was also re-elected to the Executive Board of the Data Buoy Co-operation Panel (DBCP) as vice-chair as well as executive committee member to Joint Tariff Agreement (JTA), representing the African region and the Southern Hemisphere.

SAWS technical staff participated in key international conferences and workshops to address global meteorological programmes and meteorological infrastructure developments. During this reporting period, a large number of SAWS scientists participated and represented SAWS in international engagements. These missions contributed to SAWS's international positioning, both regionally and at a global level. These international trips were either fully funded by SAWS or financial assistance was obtained from international organisations. This external financial assistance continued to relieve the financial burden on SAWS's limited financial resources as indicated in Figure 1 to the right.

Figure 1: International Travel Sponsorship for April 2011 to March 2012



## 5. Operations

Operations form the core business of the organisation and involve weather and climate observations, analysis and processing of the data, and the dissemination of products and services. This system is supported by research and development to improve the understanding of the physical processes, development of tools and socio-economic applications. The Operations Division is responsible for infrastructure modernisation, climate change and mitigation, and products and services such as general, aviation and marine forecasting and observations.

### 5.1 Infrastructure modernisation

#### 5.1.1 Surface Observation Infrastructure

Observations form the backbone of any reliable meteorological service. The SAWS observational network consists of weather offices nationwide, automatic weather stations, climate and rainfall stations, upper-air observing stations, sea temperature stations, voluntary observing ships and weather buoys in the South Atlantic and South Indian oceans as well as meteorological radars.

A new generation Automatic Rainfall Station (ARS) was piloted and includes soil parameter measurement. This new ARS can also accommodate the inclusion of a temperature humidity probe and wind sensor which means it can double up as a low cost Automatic Weather Station (AWS) option. The inclusion of radiation sensors was piloted at some AWS sites and the AWS and ARS deployment plan is in the process of finalisation. Currently SAWS has 216 AWSs and 165 ARSs. The network is expected to grow further in the coming years to enable better and more representative observations especially in remote areas.

#### 5.1.2 Remote Sensing Infrastructure

##### a. Lightning Detection Network (LDN)

As part of the LDN expansion, five sites were relocated in Aberdeen, Lebowaqomo, Kathu, Musina and Vryheid, while a new site was commissioned at Alkantpan. The newly commissioned LDN sites greatly assisted improving the network efficiency and improved performance and redundancy of the network. The network started with 19 sensors and the network expansion included the incorporation of the Swaziland sensor into the SAWS network. Two

31 August 2012

additional sensors were then installed, making the coverage to be 24 sensors. With the completion of the new relocation and installation, SAWS would have a total of 25 sensors reporting on the network.

SAWS embarked on a repositioning project of its lightning sensors to improve the performance of the network as well as improving redundancy. The aim is to align the sensors in a grid over South Africa by moving four sensors and installing four additional sensors for a total of 24 sensors in the network. Figure 2 shows the improvement of the network on location accuracy (LA) better or equal to 500m and detection efficiency of 90% or better for the 121 blocks in the Eskom contract.

Figure 2: South African Lightning Detection Network phase 2 upgrade



### b. Upper-air Observations

In order to comply with an Occupational Health and Safety (OHS) regulations, all hydrogen storage tanks used in SAWS were certified to be compliant with the regulations of Vessels under Pressure. Tanks were all pressure-tested and repaired where necessary.

### c. Radar Project

With R240 million injected into the project and the launch by the former Minister Sonjica in 2010, the construction and completion of the construction work on the S-Band radars in all areas identified and agreed upon were realised. The radar systems were commissioned and the data was used by the regional and national forecasting sections. The quality of the data from the new radars significantly improved the operational and research capacity of SAWS. The data



Members of the Highbury Community in attendance



Learners from the local school are excited to attend



Learners enjoy the interactive workshops



Highbury sub-headman, Mr Maphanzela, thanks SAWS for its contribution

contributed to the enhancement of the South African Flash Flood Guidance (SAFFG) System, and will play a critical role in the development of the national and regional Early Warning System (EWS).

The additional velocity data field has proved invaluable in the detection of intense movement within storms and the potential for the formation of tornadic events. The data was used to verify the intensity and presence of the tornadoes in Duduza and Ficksburg.

SAWS worked on additional products and services to address the increased expenses for the aviation industry as a result of weather delays, and the aviation industry indicated its satisfaction with these developments, as well as the quality of data the radar provided.

### 5.1.3 ICT services

ICT developed and implemented a new SMS warning system for the forecasters to send out warnings to clients and authorities. The system replaced the platform that Vodacom had suspended.

SAWS successfully linked to the South African Research Network (SANReN), managed by TENET. SAWS, and particularly the research group, could see an immediate difference in downloading speed of large data sets. It is now possible to link to the Centre for High Performance Computing in Cape Town at 1 Gbps.

SAWS was successfully linked to the Regional Meteorological Data Communication Network (RMDCN) linking all main Meteorological Services on a secure MPLS-VPN network. SAWS also linked to the UK Met-Office for the sending and receiving of GTS data and downloading of Model data. This network replaced the GTS link to Washington, USA.

## 5.2 Climate Change adaptation and mitigation

Today climate change is seen as a major threat to sustainable development and human survival. With its 152 years' wealth of climate information that can at any time be shared with industries and sectors in facilitating the planning, decision-making and risk management in relation to socio-economic and environmental management and protection activities, SAWS remains a force to be reckoned with.

Adaptation is the key to coping with the unavoidable impacts of climate change, which could exacerbate the large existing variability in weather and climate of the region. To contribute to adaptation efforts, SAWS is improving on its drought monitoring capability through integration of various data sources, reinforcement of our climate information system, investigation that will improve climate change and seasonal projections to inter-annual forecasts as well as undertaking research aimed at more detailed assessment of exceptional climatic events from our National Climatology Database.

### 5.2.1 Climate Change and Variability

SAWS, through the Intergovernmental Panel on Climate Change (IPCC) Working Group 1, established collaboration with the British Atmospheric Data Center (BADC). This is an Earth System Grid data portal, mandated to archive data from the Coupled Model Inter-comparison Project Phase 5 (CMIP5). BADC provides SAWS with certain climate variables selected in accordance with the organisation's research needs. Amongst other overarching research questions, SAWS uses the CMIP5 data to investigate how the intensity and frequency of climate extremes such as droughts, floods, heat waves and coastal storms in Africa are expected to respond to climate change. Furthermore, an initiative was taken to establish collaboration with the climate impacts community to apply SAWS-developed climate change scenarios in regional impact assessments in hydrology, agriculture and health.

The implementation of HadGEM30-RA, which is a regional climate model that SAWS intends to use to produce decadal predictions and dynamically downscale CMIP5 data over South Africa, is in its final phase of implementation. What remains are the test runs which will be conducted in 2012/13 for the project to be completed. This will assist in producing localised climate information.

Climate Service endeavours to inform stakeholders on a regular basis about the most recent trends in the historical climate data, particularly surface temperature and precipitation. The results of the most recent comprehensive study on temperature trends were published in the International Journal of Climatology. Trends in daily maximum and minimum extreme temperature indices were investigated for

3 August 2011

28 weather stations in South Africa, for a common period, but also for longer periods which the individual record lengths of the stations would allow. The indices calculated were forthcoming from those developed by the WMO/CLIVAR Expert Team on Climate Change Detection and Indices, but only those applicable to the South African climate were selected.

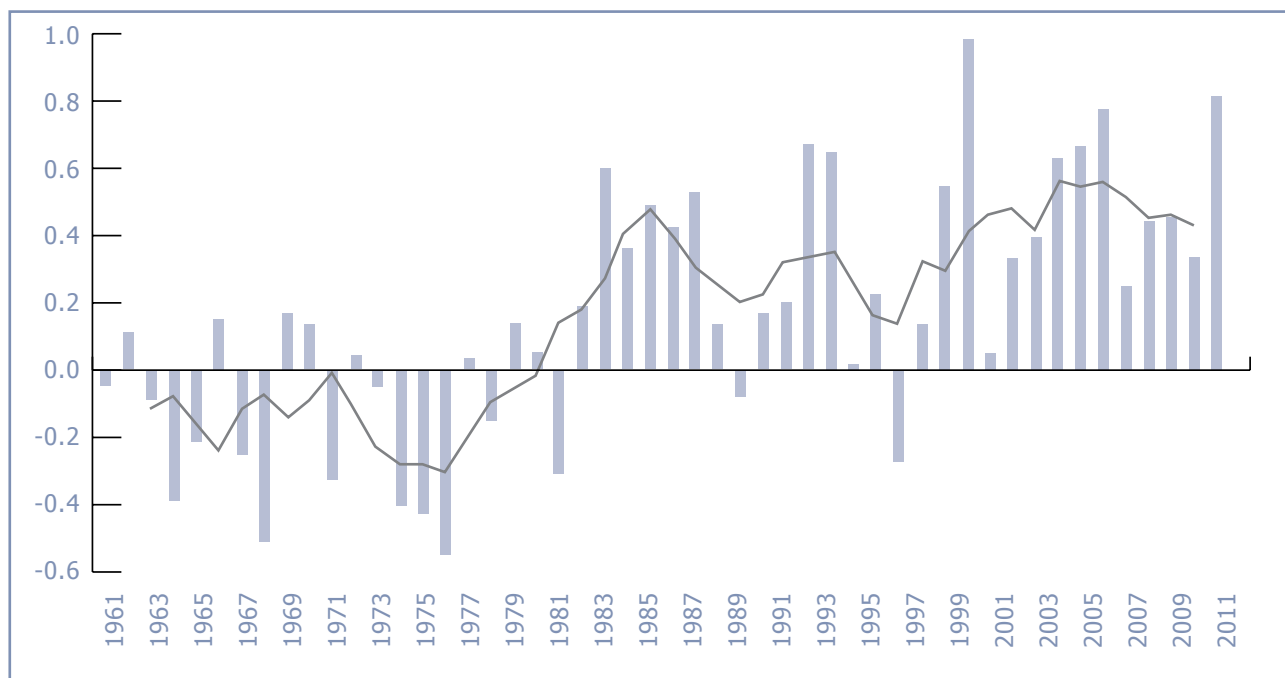
The general result was that warm extremes increased and cold extremes decreased for all of the weather stations. The trends, however, varied on a regional basis, both in magnitude and statistical significance, broadly indicating that the western half, as well as parts of the north-east and east of South Africa, showed relatively stronger increases in warm extremes and decreases in cold extremes than elsewhere in the country. These regions coincided, to a large degree, with the thermal regimes in South Africa which are susceptible to extreme temperatures. The annual absolute maximum and minimum temperatures did not reflect the general trends displayed by the other indices, showing that individual extreme events cannot always be associated with observed long-term climatic trends. The analyses of longer time series than the common period indicated that it was highly likely that warming in South Africa had accelerated since the mid-1960s.

In addition to the above, Climate Service publishes the latest state of the South African climate in the Annual State of the Climate Report, yearly published as a special edition of the Bulletin of the American Meteorological Society. Apart from the latest maps of annual averages or deviations of temperature and precipitation, a summary is presented on the dominant weather systems that influence our weather, as well as the most significant weather impacts. In addition, the general trend in the surface temperature is presented by the annual update of the mean surface temperature of a range of weather stations throughout the country, as shown in Figure 3. The annual mean temperature anomalies for 2011, based on the preliminary data of 27 climate stations, was about 0,1°C above the 1961 to 1990 base period. The warming trend indicated by the data of these particular climate stations is statistically significant and shows that the mean temperatures of the past 15 years were all above normal.



Staff and Eskom representatives celebrate the Eskom Foundation sponsorship for the Mthatha Highbury School Project

Figure 3: Annual mean temperature anomalies



Annual mean temperature anomalies (base period 1961 to 1990) for 27 climate stations in South Africa, 1961 to 2011. The bold line indicates the 5-year running mean. (Bulletin of the American Meteorological Society, in press.)

### 5.2.2 Long-term Trace Gas Records (Global Atmosphere Watch (GAW))

The South African Global Atmosphere Watch (GAW), with the Cape Point GAW research facility as focal point, forms part of the WMO Global Atmospheric Watch programme. It is recognised as one of 28 stations worldwide and one of only three on the African continent. The programme assists in the conducting of climatological measurements and entails comprehensive in-situ and regional research and sustains systematic monitoring of several atmospheric parameters (e.g. ozone, greenhouse gases, aerosol particles, ozone depleting substances (ODS), solar radiation and trace species). These measurements provide long-term trends of atmospheric species and detection of the atmosphere for climate change and research and for assessment of atmospheric changes in support of international conventions.

Information on the Cape Point site description, measurements programmes and data available, is available on the GAW Station Information System

(GAWSYS) site at <http://www.empa.ch/gaw/gawsys/>. During the report period, UV-B measurements from the De Aar station were re-instated and negotiations with the Department of Science and Technology to re-instate the SAWS solar radiation network as part of a national plan, also progressed well.

All Total Column Ozone datasets (covering 2011) from Dobson stations at Irene and Springbok were submitted to the WMO WOUDC World Data centre. Future data submissions might be influenced due to organisational restructuring at WOUDC.

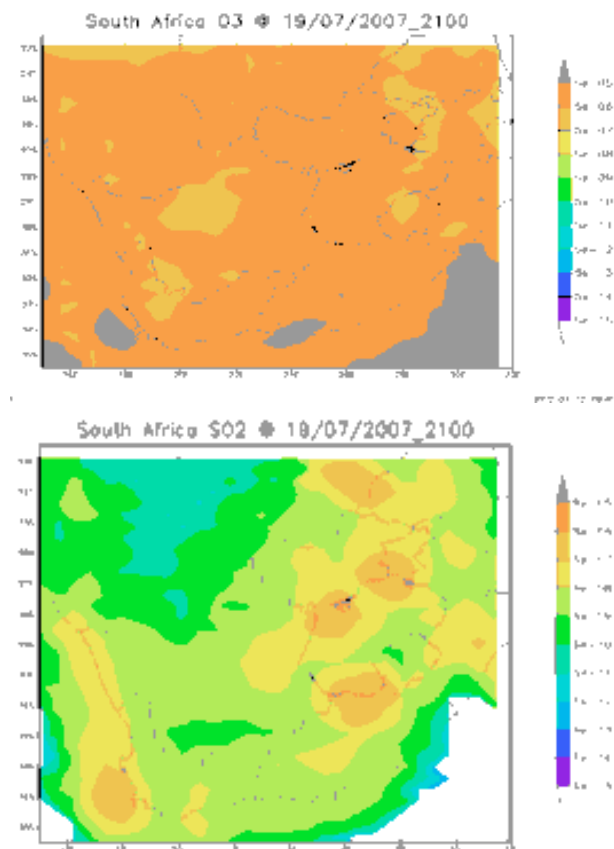
ARSIO/GDRI the SA French Project: Prof Hassan Bencherief and 16 MSc students from La Reunion University visited the Irene station on 26 January 2012. They were lectured on the SAWS atmospheric monitoring programmes, especially ozone in the GAW Cape Point efforts and on the meteorological observations and the new S-Band Radar.

A publication, "Seasonal trends on potential sunburn risk among outdoor workers in South Africa using monitored ambient solar UV radiation levels" was co-authored by Dr C Y Wright (CSIR), Mr G J Coetzee (SAWS) and Mrs K Ncongwane (SAWS) and accepted for publishing in Occupational Health Southern Africa, Vol. 17 No 6, December 2011.

### 5.2.3 Air Quality Modelling

The Air Quality Modelling and Forecasting group continued its work on preparing the NAMEIII chemical transport model for operational use. More pollutant species were included and tests conducted. Figure 4 below represents examples of the model output.

Figure 4: O<sub>3</sub> and SO<sub>2</sub> concentration over SA during the 19th of July 2007 predicted by NAMEIII



Additional work included comparison studies of the model output against data recorded at ground monitoring stations. Initial results emanating from the comparative studies indicated that the model underestimated the concentrations of all the pollutants. The next step in this study would be to use more accurate emission information as well as increasing the resolution of the model.

### 5.2.4 Air Quality Information Service

Since the development of the South African Air Quality Information System (SAAQIS) partnership between SAWS and the Department of Environmental Affairs, the Air Quality Information (AQI) unit has been able to provide scientific information to the general public with special air quality information needs such as education



institutions, consultants and the like. A reliable and responsible storage of data is being provided by Government's National Ambient Air Quality Monitoring Network (NAAQMN) and other industrial monitoring networks will help in the planning and decision-making activities beneficial to the country.

The number of SAAQIS stations reporting on various parameters (SO<sub>2</sub>, NO<sub>x</sub>, PM<sub>10</sub>, PM<sub>2.5</sub>, CO, O<sub>3</sub>, dust fallout, etc.) increased from 42 to 150. New networks that were added to the SAAQIS database included SASOL, Eskom, Western Cape, City of Cape Town and the Johannesburg dust fallout network. More stations are expected to follow, including the Nelson Mandela Bay Metropolitan Municipality and Buffalo City Municipality.

The operational responsibilities of the Vaal Triangle Ambient Air Quality Monitoring Network were taken over by SAWS. Data is now being received for all of the parameters from all six of the monitoring stations in the network. The data management system was updated and the status of the monitoring stations can be monitored on a real-time basis.

### 5.2.5 Climate Data and Information Service

SAWS is the custodian of national climate data. New software for reporting on data availability was developed and implemented, with an average availability of 95% for five-minute data. Daily rainfall availability was 97% and observations availability was 95%.

Qualimet (data quality control software) which is used to produce quality controlled meteorological data, became operational in January 2012. A new project was initiated to scan historical rainfall returns, of which 118 for the period 1997 to 2010 were completed. Historical sunshine charts were also archived and documented.

Rain reported by rainfall stations is now being looked at from a spatial dimension and will aid in identifying stations that are under-reporting rainfall.

A total of 52 850 rainfall data corrections and 44 300 wind data corrections were made to the database.

#### Climate Information Service

The average success rate for publishing near real-time data products was 93%. A variety of public good information was provided to tertiary institutions.

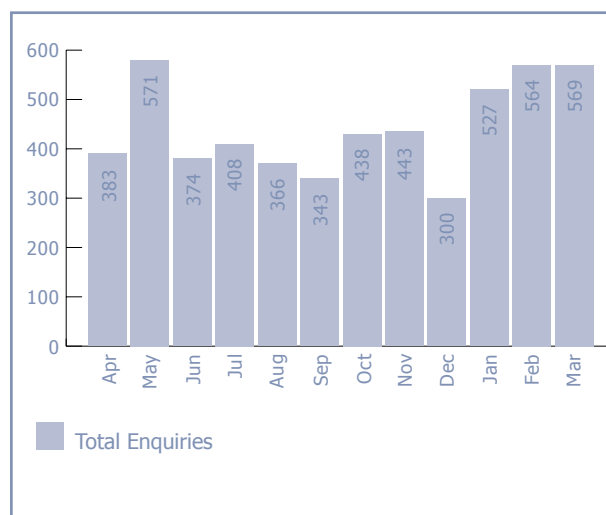
Furthermore, the drought monitoring desk on the website was updated regularly.

Publications for the year under review include:

- Twelve Daily Weather bulletins
- Twelve Climate Summaries of South Africa
- Updated Aeronautical Climatological Summaries for Cape Town and OR Tambo covering the period 1996 to 2010
- Twelve CLIMAT reports distributed via GTS as per WMO stipulation

The graph in Figure 5 below represents the number of climate enquiries handled on a month to month basis by the various SAWS offices.

Figure 5: General Product information and enquiries



## 5.3 Research

Research and development of weather and climate products are crucial factors in response to the events related to extreme variability. It further assists in improving the quality and accuracy of weather predictions, such as weather forecasts, seasonal predictions, warning of extreme weather events and understanding of the dynamic physical and chemical processes in the atmosphere and oceans. In the year under review, SAWS has developed and enhanced products and services to be applied in various industries and sectors. These products include, among others:

### 5.3.1 Nowcasting and Very Short Range Weather Forecasting Research

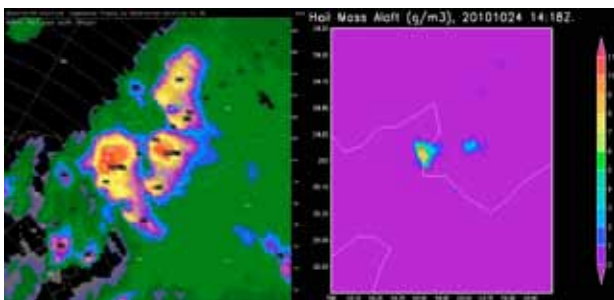
The Nowcasting and Very Short Range Weather Forecasting Group conducts research on weather phenomena that



occur on a very short time scale (0 to 12 hours). During this process SAWS's advanced observational infrastructure, such as the National Weather Radar Network, Meteosat Second Generation (MSG) Satellite, Lightning Detection Network and the SAWS real-time surface observation networks, are utilised.

Research on the implementation of an operational hail detection system, utilising the SAWS radar network, continued. This system will be able to detect hail within a thunderstorm and will be used to issue timeous warnings to the general public. The parameter Hail Mass Aloft (HMA) will become operational during the new financial year and will improve warnings of damaging hail that threaten safety of life and property.

Figure 6: Radar image of severe thunderstorms and the Hail Mass Aloft (HMA) within the most severe part of the thunderstorms.



In order to improve radar-based rainfall monitoring, ongoing research was conducted, namely:

- Comparison of S-band vs. C-band radars.
- The improvement of rainfall monitoring by testing new classification schemes for convective and stratiform rainfall. Tests were conducted with data from the Irene and Port Elizabeth radars which showed mixed results, emphasising the need for high quality data and further research in this field.

SAWS also worked towards the evaluation of a hail forecasting system (HAILCAST) that was implemented in October 2011. The evaluation consisted of comparisons between hail forecast areas and actual hail damage maps constructed from data received from insurance agencies. Model-generated upper-air soundings were also evaluated against actual soundings to determine the quality of the model data on which the HAILCAST system is based. A methodology to use satellite and model data to get an index to now-cast hail will be developed in the new financial year.



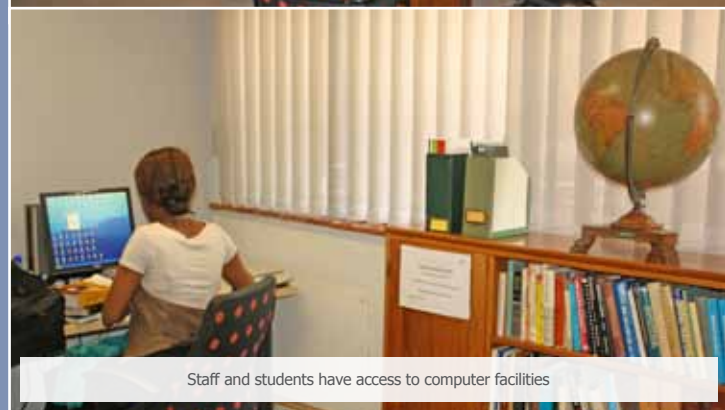
Books and records dating back to 1912 are kept on shelves



The library display

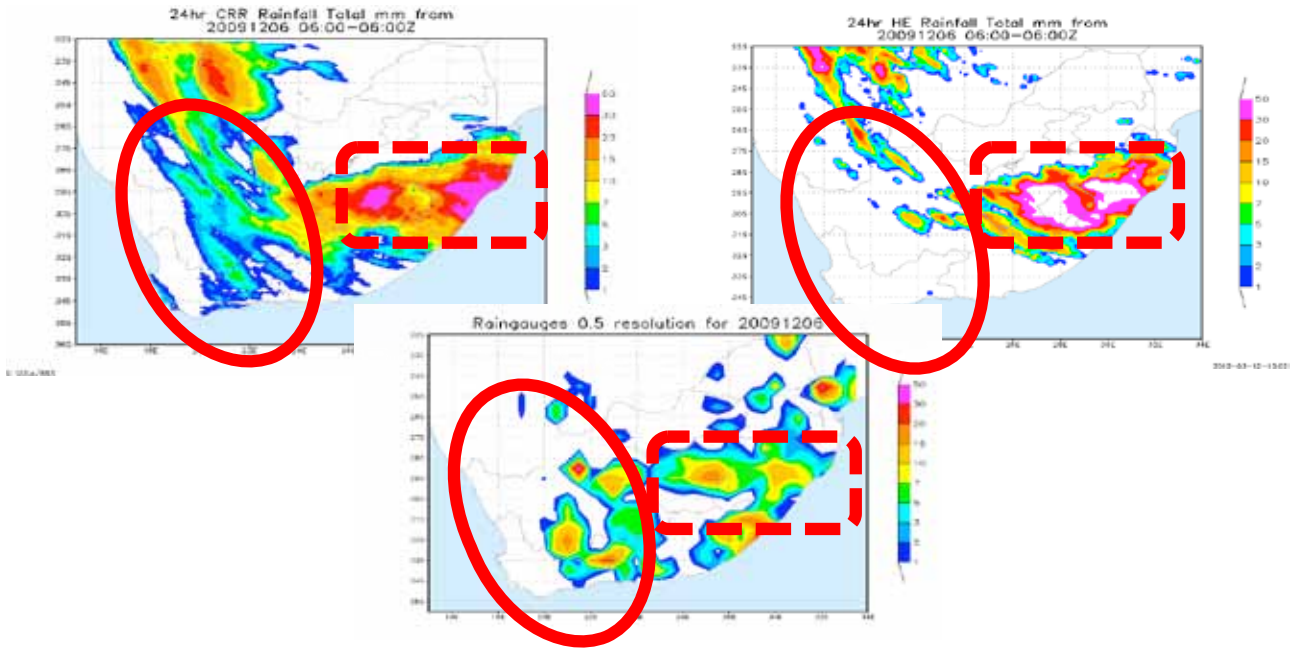


Staff reading corner



Staff and students have access to computer facilities

Figure 7: A case study for 6 December 2009 indicating 24-hour total rainfall fields derived from the new CRR-method (top left), Hydro Estimator (top right) and gauges (bottom) on a 0.5° resolution. This example is for two MSG channels used in the CRR method.

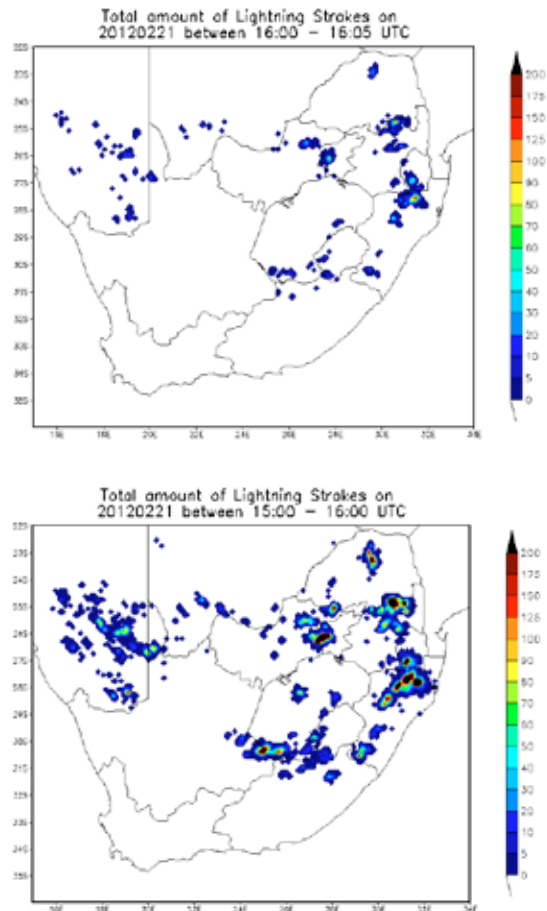


A new satellite-based precipitation estimation technique using 3 x MSG satellite channels was tested, showing promising results. This work emanated from collaboration between SAWS and the Nowcasting SAF in Europe. The system developed at the Nowcasting SAF was adapted and ran at SAWS in a case-study-mode (see figure 7).

Statistical results of the above images indicate that the new method with 2 x MSG channels already gives an improved rainfall field compared to the Hydro Estimator (HE) method. This would imply improvement of heavy rain and flash flood warnings with high confidence. With 3 x channels the result is expected to further improve. More tests need to be performed on case studies to verify the improvement, or not, of the new CRR method.

Operational lightning maps were created during this reporting period and made available on the forecasting web. This included 5-minute maps for all lightning strokes as well as a separate map only for positive lightning strokes. One hour accumulated maps will also become available and the Lightning Climatology was updated to cover the period 2006 to 2011.

Figure 8: Images indicating lightning over a 5 minute period and also accumulated over 1 hour.



**5.3.2 Short and Medium Range Forecasting Research**

SAWS researchers continued to develop web-based products to improve the SAWS website and service offerings. Developments in this area include the transfer of the product generation processes utilising NCEP data to the new server, resulting in improved delivery times of the products. The monitoring of the Unified Model continued, but several problems were experienced with the SX-8 High Performance Computer (HPC). It is important to acquire a better High Performance Computing capability.

A verification system performing multi-model inter-comparisons was developed. This system compares the different models used in SAWS and their output and statistics, leading to improved model applications.

A bias correction technique to address the over-forecasting of heavy rainfall by the NCEP GEFS model was developed and implemented, resulting in drastic improvements in the 6-hourly Probability of Precipitation (PoP) products sent to the SYNERGIE / METEFACTORY system, being tested by SAWS forecasters. This technique will ultimately improve the accuracy of heavy rainfall warnings.

Work continued to upgrade the Unified Model (UM) to version 7.8. Test runs were conducted in this new configuration, but due to HPC resources, the full capabilities of this version could not be realised. A request to develop a National Fire Danger Rating product was completed and implementation will be conducted during the new financial year. This forms part of the work performed by SAWS in support of the Department of Forestry.

**5.3.3 Long Range Forecasting (LRF)**

A new operational system, based on the ECHAM4.5 global atmospheric model, was developed and implemented. This ensemble prediction system uses (for the first time) a model climate generated directly from the retro-active integrations of the very same model which mimics truly operational set-up, unlike its predecessor, which adopts the AMIP (Atmospheric Model Inter-comparison Project) model climate. In addition, the forecasting system interestingly employs an initialisation strategy that capitalises best available information of the atmosphere and soil moisture.



CALMet delegates: Mr Yong Wong, Mr Han Fei, Mr Jeff Wilson



Ms Hannelee Doubell, Ms Kenosi Machepe, Mr Thabiso Machepe



Address by Mr Lindani Gcwensa



Delegates: Ms Charlotte McBride, Ms Vibeke Kristensen, Ms Aileen Semple

This new operational system is expected to improve SAWS's Multi-Model System (for seasonal and extended-range timescales), climate applications and commercial-oriented customised products. The forecasting system will also complement the NCEP based on the SAWS Medium-Range forecasting system, as it is configured in a manner that supports seamless forecasting.

## 5.4 Products and Services

### 5.4.1 Forecasting and warning service

From April to June 2011, many areas in the central and eastern parts of the country received above normal rainfall. This was due to a cut-off low pressure system, which is not common for this period, that developed on 6 June 2011. This weather system was accompanied by strong winds, heavy rains, snow and very cold conditions. Significant damage was done to roads in some areas. SAWS was able to forecast this weather system well in advance, which allowed forecasters to issue alerts to Disaster Management and the media.

A series of weather systems occurred over Gauteng and the Free State from 1 October 2011. Of significance was the F2 tornado (upgraded to F3 by the CSIR after an investigation into the damage) which occurred in Duduza on 2 October, as well as a severe thunderstorm that occurred in Ficksburg. The SAWS forecasting team issued a watch of possible severe thunderstorms from Friday, 30 September 2011, followed by subsequent warnings on 1 and 2 October. The investigation into the tornado damage was followed by a media conference to provide further clarity.

The first quarter of the year (January to March 2012) is the peak of the rainfall season for summer rainfall areas of South Africa and is also the peak season for tropical storms over the south-west Indian Ocean basin. Two tropical systems affected the Southern Africa sub-continent during this period, namely "Dando" and "Irina". Dando had the most effect on South Africa. It resulted in heavy rains and floods over the lowveld areas of Mpumalanga and Limpopo from 17 to 19 January. As a result, six people died and 1 452 houses and 111 schools were damaged. Several routes in and around the Kruger National Park were closed and a number of bush camps were evacuated.

Figure 9: Illustration of the track followed by 'Dando', courtesy of RSMC La Reunion



Figure 10: Tropical Cyclone 'Dando'

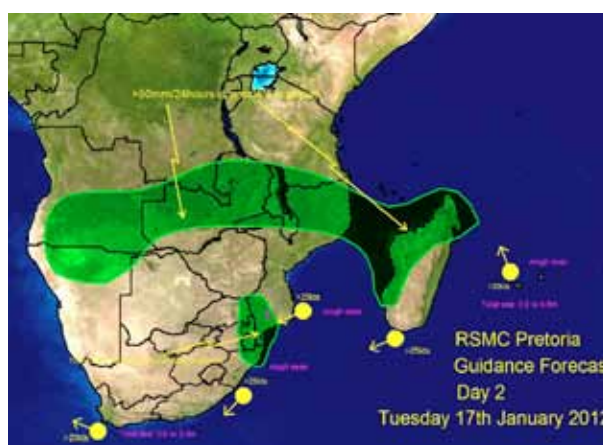


Table 6: New rainfall records during January 2012

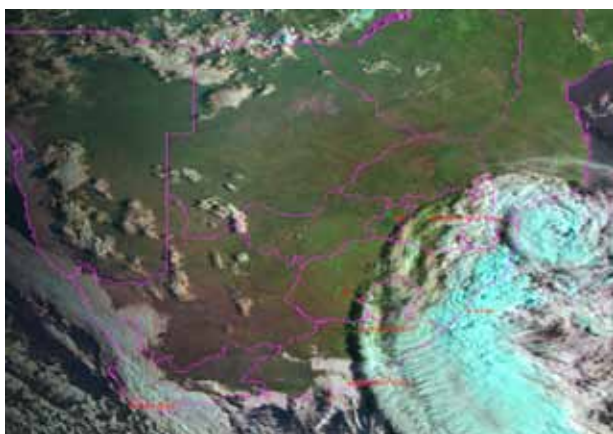
Weather Station	Previous Record	Date	New Record	Date	Period (years)
Belfast	44,6 mm	2006-01-08	50,8 mm	2012-01-05	6
Middelburg (Mpumalanga)	65,0 mm	2008-01-13	68,0 mm	2012-01-09	51
Ladysmith	63,4 mm	1996-01-25	84,2 mm	2012-01-13	17
Hoedspruit	75,0 mm	1995-01-08	268,8 mm	2012-01-17	17
Kruger Mpumalanga Int. Airport	46,0 mm	2009-01-26	100,0 mm	2012-01-17	3

Towards the end of February 2012, all Numerical Weather Prediction modelling guidance gave strong indications that Irina's track would take it south-westwards towards Maputo as well as the KwaZulu-Natal Maputoland coast. "Irina" was monitored carefully and SAWS issued the first media release on 28 February 2012 to warn the South African public about this development.

Once again, regular and frequent SAWS updated media bulletins were issued daily and all possible steps were taken to inform and alert Disaster Management Authorities. SAPS and SANDF were also put on standby, following communication and liaison between NATJOC and SAWS in this regard. In the early morning hours of 4 March 2012, Irina just clipped past, close to the coastline near Ponta d'Ouro and Kosi Bay, still delivering heavy rainfall overnight, with a number of rainfall stations (including Richards Bay) reporting well over 100 mm and Hluhluwe in excess of 200 mm.

Localised flooding was also a factor, but authorities were able to cope with this, as the event was well-anticipated by SAWS, Disaster Management and local municipalities. This was a very close call, as damage could easily have been more destructive and spatially extensive, but nevertheless a good example of SAWS working closely with NATJOC and Disaster Management to ensure that the public was prepared and aware of unfolding weather events that had the potential to adversely affect lives and property.

Figure 9: Severe Tropical Storm Irina



**5.4.2 MeteoFactory (Forecast Product Generator)**

The MeteoFactory project for the new Forecast Product Generator (FPG) continued according to schedule as MFI in France signed Factory Acceptance Tests, installed the system and conducted a first round of training in South Africa. This will ensure a more modern and up-to-date software application tool for forecasters serving our clients.



Dr Linda Makuleni and Cllr James Nxumalo, mayor of eThekweni, officially open the King Shaka Weather Office



SAWS legal adviser, Mr Daniel Letsoalo



Learners from Tempe Valley School and Mr Mnikeli Ndamambi



SAWS Alumni, Mr Sifiso Ngubane, receives his Alumni certificate

### 5.4.3 Aviation Service

SAWS continued to demonstrate its commitment to contribute towards the enhancement of air transport industry safety by means of rendering aerodrome forecasts, significant weather warnings and en-route weather. Aviation weather forecasts were made available through the log-in aviation web <http://aviation.weathersa.co.za>.

Figure 10: TAF Evaluations

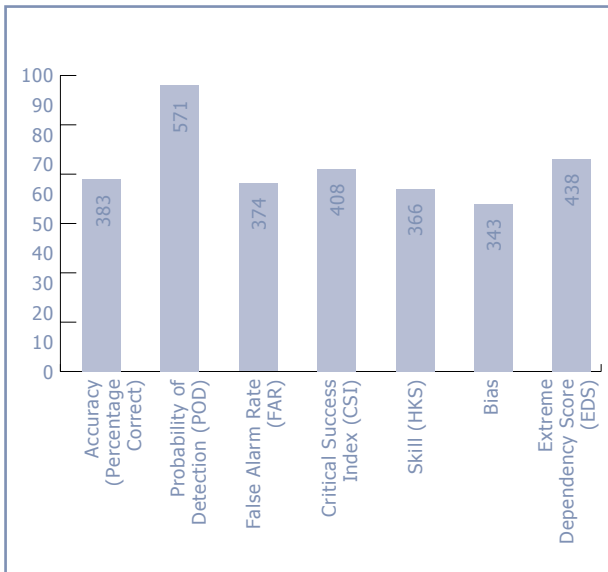


Table 7: Summary of aviation services reflecting % accuracy and availability

Product / Service	Accuracy %	Availability %
Aerodrome warnings	98,8	n/a
Terminal Aerodrome Forecast (TAF)	93,8	99,3
Trend forecasts	96,0	99,5
METARS	n/a	99,3
SPECI	n/a	96,9
Webcams	n/a	99,1

#### a. Aerodrome and SMS warnings

Aerodrome warnings were issued and their accuracy evaluated as shown in Figure 11. On average 98,8% accuracy on aerodrome messages was achieved. In addition, SMS warnings for Lanseria were issued. This was following a request from Lanseria airport management for these messages.

Figure 11: Aerodrome warnings

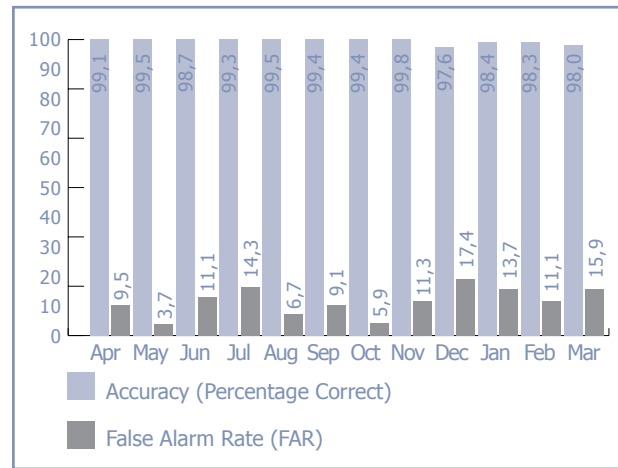
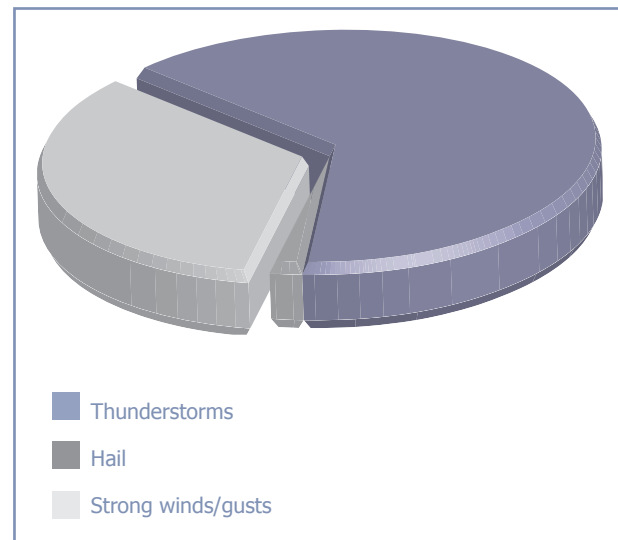


Figure 12: Aerodrome warning categories



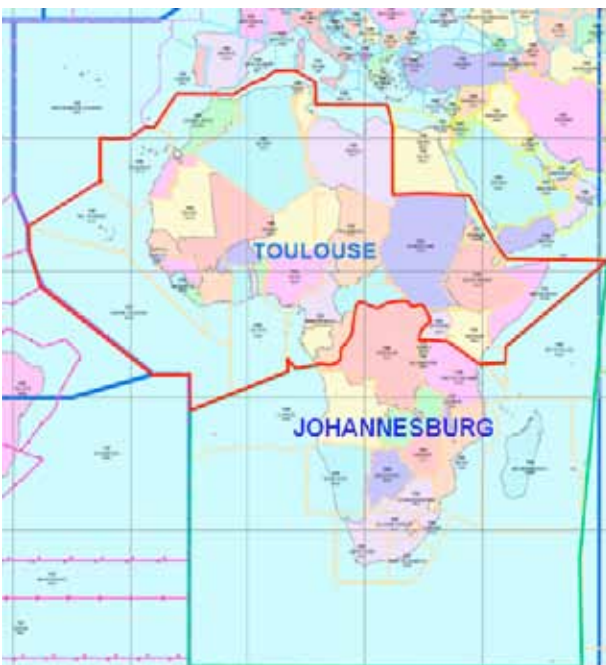
#### b. SIGMET Trial

ICAO continuously strives to ensure improvement in the issuing of SIGMET by states and this led to a request for SAWS to host a Regional SIGMET Advisory Centre (RSAC). The centre was to be used to issue advisory information to Meteorological Watch Offices (MWOs) in the SADC countries, including Rwanda and Burundi (AFI-S Region, see map - figure 14) during the first quarter of the financial year, from 4 April to 31 July 2011. Advisories were issued 24/7 over a period of three months by SAWS Aviation forecasters in their area of responsibility.

Figure 13: Aviation forecasters issuing SIGMET Advisory



Figure 14: Map of area covered during the trial



Over 2000 SIGMET advisories were issued by SAWS aviation forecasters during the three-month trial period. A new tool (Geo-Centric Information Briefing) was developed specifically for trial purposes and will be used in future for the generation of graphical SIGMETs and AIRMETS. The South African Weather Service was complimented by both ICAO and WMO for the successful hosting of the trial. The statistical analysis was conducted by the RSAC and results projected as in Figure 15 overleaf.

## SAWS's 10th Anniversary

15 July 2011



SAWS celebrates 10 years as government parastatal



Mr Jerry Lengoasa, Deputy Secretary-General of WMO, congratulates SAWS



Dr Linda Makuleni presents the Office of the Deputy Minister with a collage of the Deputy Minister's involvement with SAWS



Mr Mark Majodina, Mr Donovan Nadison (first interim SAWS CEO) and Mr Daniel Letsoalo

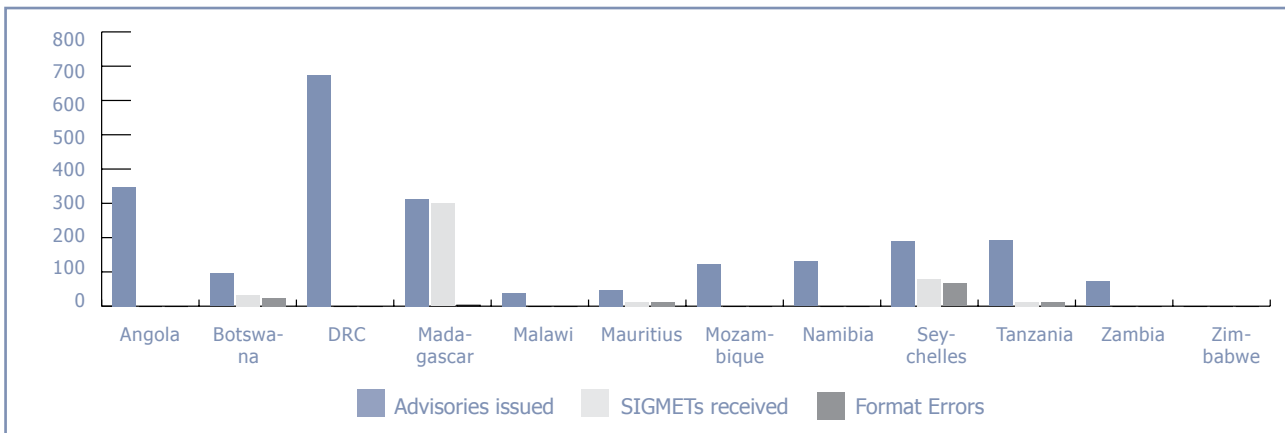


Mr Nkhumeleni Mathelimusa and Mr Peter Mbelengwa (both from the Office of the Deputy Minister) with Ms Modjadji Makoela



Mr Mnikeli Ndabambi and Mr Lindani Gwenzwa

Figure 15: Results of the SIGMET Trial



#### c. Scheduled SIGMET Tests

Three SIGMET tests were conducted in the Africa and Indian Ocean Region (AFI-Region) on 2, 23 and 30 November 2011. The Pretoria Regional OPMET Data Bank (RODB) monitored all SIGMETs received from MWOs and statistical analyses were completed and the report sent to ICAO's Eastern and Southern Africa Regional Office (EASAF). SAWS was complimented for the good work during the SIGMET trial by ICAO during the tenth ICAO SUBMET group meeting that was held and attended by SAWS in Dakar, Senegal.

Furthermore, SAWS was requested to assist in SIGMET tests in both graphical and text format by issuing advisories for the whole ICAO AFI Region, and they were all carried out as per ICAO request. This is an ongoing process to assist the National Meteorological Services to comply with the format of SIGMET (aviation severe weather) issuing to support international air navigation during extreme weather events.

#### d. Web Camera Availability

The webcams that are deployed in strategic areas, after consultation with aviation clients, showed 92,7% availability. The non-availability was partly due to network challenges as well as relocations of some of the webcams.

#### e. Availability of Operational Aeronautical Meteorological Data (OPMET)

The monitoring of the Operational Aeronautical Meteorological data (OPMET) at the Pretoria Regional OPMET databank continued and statistical reports were compiled. Three indices were computed, namely compliance, regularity and availability. The results were sent to ICAO regional offices for the AFI Region. All data was provided on time.

SAWS runs the SA-AMDAR Programme in partnership with South African Airways (SAA) which is a regional airline and European airlines through European-AMDAR (E-AMDAR) programme to augment AMDAR data in African regions where SAA has few or no flights. The partnership is aimed at improving the upper-air data crisis in the sub-continent by taking advantage of the available platform which is cost-effective and in support of the WMO's call for participation by the member states.

To date there are thirty-two (32) SAA aircraft that participate in the SA-AMDAR Programme, which operate on the following airports: FAJS; FACT; FALE; FAPE; FAEL; FAGG; FYWH; FBSK; HKNA; FVHA; HUEN; HTDA; FLLS; FQMA; FWKI; GOOY; GVAC; FIMP; and FNLU (see glossary for explanation of airport abbreviations).

The SA-AMDAR Programme contributes about 3 200 ascents per month to the global AMDAR Programme, giving a daily average of 106 ascents. Further development and management of AMDAR Programmes by National Meteorological and Hydrological Centers (NMHSs) in Africa is a valuable alternative to other expensive methods of upper-air data generation. This data will play an important role in improving the existing poor state of upper-air data network in the African continent in support of air travel safety.

#### 5.4.4 Marine Services

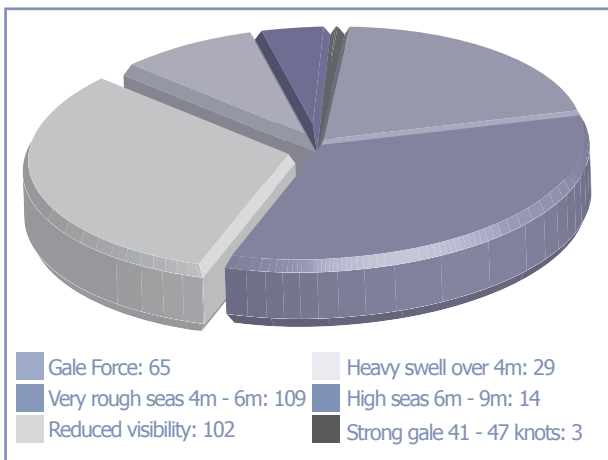
South Africa is surrounded by large oceans which play a role in the weather and climate of the country and the sub-region. South Africa is also responsible for weather monitoring and warnings over the second largest ocean area of responsibility in the world (known as METAREA VII), after the United States. This area extends from the mid-Atlantic to the mid-Indian Oceans, from the



equator to Antarctica. This implies that the South African Weather Service, in addition, has to collect data, co-operate with other international partners and distribute weather information from these oceans to various global stakeholders.

In fulfilling these tasks, the South African Weather Service has provided coastal and deep sea forecasts twice per day with an availability of 99%. During this period, the South African Weather Service issued 296 marine-related warnings with an accuracy of 96,5%. The categories of the marine warnings made, are reflected in Figure 16 below.

Figure 16: Marine warning categories



In addition, SAWS has partnered with Disaster Management Centres and the CSIR to develop a national Storm Surge Early Warning System. This system will assist with national marine activities, related planning, public safety and the protection of property along the South African coastline. In order to develop the maritime weather services, the SAWS deployed 42 drifting weather buoys in the south Atlantic and Indian oceans. SAWS also assisted with the allocation of personnel in the international NOAA Project on Expendable Bathy Thermograph. This project allowed for the collection of additional and high density marine temperature data in the surrounding oceans.

In an attempt to improve maritime weather services, co-operation between SAWS and CLS has ensured an investment in data communications infrastructure by installing the new high resolution picture transmitter antenna in Cape Town. This antenna has now improved data delivery time for distribution to global partners and also for the production of quality weather forecasts, especially marine-related severe weather warnings in the METAREA VII region.



Dr Linda Makuleni announces our ISO 9001:2008 certification



Mr Herman Pheiffer, TQM Manager, is acknowledged for his contribution



Mr Gerhard Schulze, retired General Manager: Projects, provides an overview of the process



SAWS staff members celebrate the results of their hard work and dedication

# 6. Corporate Affairs

## 6.1 Legal Services

The legal services department monitors and advises on external and internal legal compliance requirements and matters. These include opinions, advice and guidance, contract management to enhance internal control and manage risk exposure and litigating services. The unit represents the organisation in the event of legal disputes, advises on good governance, puts in place frameworks and guidelines to ensure efficiency and also takes steps to safeguard the organisation against potential legal disputes. It also provides support to all internal departments in areas such as policy awareness and understanding to ensure good governance and business practices.

### 6.1.1 Contract Management

SAWS's contract management process is guided by the approved Contract Management Framework and Legal Services Framework. SAWS conducts review and vetting of contracts and Memoranda of Understanding on a regular basis to ensure optimum management of the legal risks and related contingencies.

### 6.1.2 Litigation

There was no litigation matter that was ruled against SAWS during the financial year. SAWS is in the process of recovering legal costs of approximately R450 000 awarded in its favour. During the financial year an amount of R140 000 was recovered from third parties in respect of the taxed bill of costs.

### 6.1.3 SAWS Legislation Review

SAWS initiated the process of reviewing the SAWS Act during February 2010. The initial draft Amendment Bill was presented to SAWS in May 2010 by the Legal Drafters. The Bill development process was put on hold until finalisation of the business case during February/March 2011.

On 20 April 2011, the Cabinet approved the draft SAWS Amendment Bill. The Bill was published in the

Gazette for public comments for a period of thirty days from 6 May 2011 to 5 June 2011.

On 8 September 2011, the Cabinet approved the submission of the South African Weather Service Amendment Bill, 2011, to Parliament. The Amendment Bill, 2011, was thereafter referred to the Portfolio Committee on Water and Environmental Affairs (PCWEA). PCWEA duly scheduled a public hearing on the Bill on 24 and 25 January 2012.

Management attended PCWEA public hearings meetings on 24 and 25 January 2012. The Portfolio Committee indicated that they received 15 written submissions from the public, however, only 13, including the Department of Environmental Affairs, submitted oral presentations during the hearings which lasted two days.

The Portfolio Committee requested the DEA to deal with the issues raised during the oral hearings and a follow-up meeting was held on 14 February 2012. Three outstanding issues were referred for further investigation and another meeting will be convened once these matters are resolved.

### 6.1.4 Annual Policies Review

The best corporate practices require that policies must be reviewed annually. SAWS reviewed its policies to strengthen and improve internal controls.

## 6.2 Corporate Communications

### 6.2.1 External Communications

SAWS continued to build its corporate image externally and hosted the quarterly DEA Government Communicators forum in May 2011. This meeting included an insightful site visit to the Irene Weather Office, effectively demonstrating the technical work done by SAWS.

## Staff Meetings

A Youth Empowerment day "Empower a Child", was co-hosted with the DEA when fifty secondary school learners visited the Irene Weather Office on 28 June 2011.

On 15 July 2011, SAWS celebrated ten years of Service Excellence as government parastatal. This event, attended by the Deputy Secretary-General of WMO, was aimed at showcasing SAWS products and services and highlighting the role of National Meteorological Services in relation to climate change.

SAWS, led by the Deputy Minister for Water and Environmental Affairs, Mrs Mabudafhasi, and in partnership with the DEA, municipalities, the Department of Rural Development and Land Reform and the NDMC, conducted three roadshows to areas affected by severe weather during the fourth quarter. Areas included Duduza, Evaton and Mount Frere. This outreach culminated in the celebration of World Meteorological Day on 23 March 2012 at the King Shaka Airport in Durban, which included the official opening of the Weather Office.

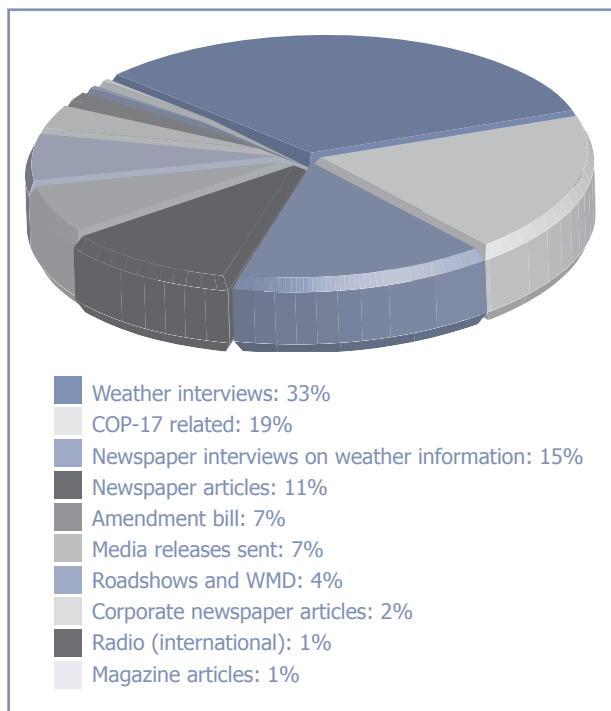
### 6.2.2 Media Relations

SAWS continued to provide an invaluable service to the media on a wide range of topics which included severe weather, marine and aviation warnings, seasonal outlooks, climate change and COP-17, as reflected in Figure 17 overleaf. Sixteen staff members received media training from the Institute of Advanced Journalism in preparation for SAWS's participation in COP-17. Wide media coverage was obtained during COP-17. Media relations were further fostered with the distribution of media releases on expected severe weather events, which included severe cold and snow, reports on severe thunderstorms and tornadoes and cyclones Dando and Irina.



Quarterly staff meetings provide an opportunity for management and staff to interact on issues of importance

Figure 17: Media activities April 2011 to March 2012



### 6.2.3 Brand Awareness Programme

The purpose of the brand awareness programme is to sensitise internal staff about SAWS as a brand, the use of its visual icon, as well as issues of quality and service delivery associated with the brand. Externally the purpose of brand awareness is to foster a strong association between the SAWS logo and the quality of products and services associated with the brand.

All weather offices around the country were issued updated material in terms of SAWS's vision, mission, values and Total Quality Management statements.

SAWS supported the Rugby World Cup by means of a large Bokke banner on the day of the team's arrival back home from New Zealand. SAWS maintained its logo on SABC weather channels and appropriately changed the slogan associated with World Meteorological Day in March 2012.

### 6.2.4 Internal Communication

Staff communiqués, newsletters, staff meetings and the intranet were used as channels to communicate SAWS programmes and other information. A new SAWS intranet was developed, content managers trained and it became operational in March 2012.

Corporate Communications processes were revised for implementation in the new financial year.

## 6.3 Stakeholder Relations Management

A strategic objective of SAWS is to "promote beneficial and enduring relationships with key stakeholders" by effectively managing stakeholder relations and collaborative partnerships. Various stakeholder groups and engagement frameworks are contained in the SAWS Stakeholder Relations Management Framework.

### 6.3.1 Media Engagement

Several relationship building meetings were held with various media, including print, radio and television. Focused interaction with the SABC commenced and a task team comprising SAWS and SABC personnel was formed to work on a Memorandum of Understanding (MoU). Despite the MoU not being finalised, engagement with the SABC continues to grow.

SAWS played an integral role during a workshop hosted by the SABC where COP-17 activities were discussed. This workshop was led by the then Deputy Minister in the Presidency: Performance Monitoring and Evaluation as well as Administration, Ms Dina Pule, and the then SABC Acting Group CEO, Mr Phil Molefe.

The workshop was part of the build-up of events leading to the 17th Conference of the Parties (COP-17) to the United Nations Framework Convention on Climate Change (UNFCCC) which was held in Durban between 28 November 2011 and 9 December 2011. The engagement was aimed at informing and educating key broadcast stakeholders on the issues and messages that government would like to be highlighted to the public around the growing phenomenon of climate change globally. Interaction with the SABC continues to raise awareness about SAWS's services and products, thus educating South African citizens at large.

12 August 2011

## 6.3.2 Women Empowerment

SAWS CEO, Dr Linda Makuleni, serves as the chairperson of gender mainstreaming with the WMO. She was accompanied by several women within the organisation to the Third Development Conference for Women in July 2011, held at the Sandton Convention Centre, in an effort to develop them in relation to her gender mainstreaming responsibilities. SAWS also participated in the annual Women in Science Awards.

SAWS was again nominated this year in two categories of the Top Women Awards, namely 'Most Gender Empowered Organisation' and 'Top Woman in the Public Sector'. The CEO took home the 'Top Woman in the Public Sector' award.

The women of SAWS converged to celebrate Women's Day in honour of the SAWS Women's Forum that was established in 2009 with the mandate to do public good to the less fortunate.



Staff member, Nomande Maseko (right), forms part of Mdali Productions group that provides entertainment



Dr Rina de Klerk-Weyer (left), expert speaker on emotional intelligence, joins the celebrations



Mdali Productions in action



Dr Linda Makuleni (right) thanks Deputy Minister Mrs Rejoice Mabudafhasi for her presence and keynote address

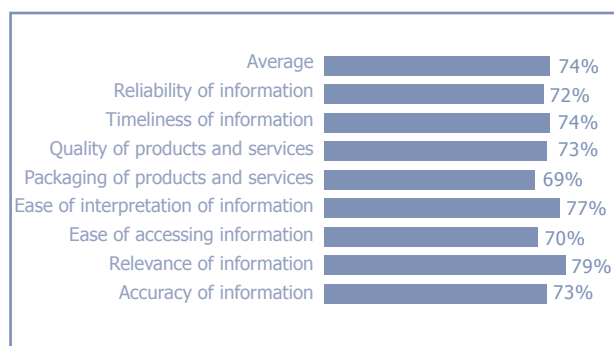
### 6.3.3 Other Stakeholders

Stakeholder	Nature of engagement	Benefit to SAWS
Sky Raiders Air Services	Project CAVOK (Creating Awareness Via Our Knowledge)	Promoting the safety of air navigation by sensitising the general aviation (flight schools, etc) to the efficient means of utilising the aviation website for various products and how to interpret them.
School visits by national and regional offices	Presentation to educators and learners. Exhibitions with the aim of show-casing the organisation and lectures to learners with the aim of explaining its role and activities.	Data requests from students and government institutions. Raising awareness on careers in Meteorology.
DMISA – Disaster Management Institute for Southern Africa	Participation in conference. During the special plenary session two employees of the SAWS presented papers which were regarded by attendees to be of extremely high standard and one of the highest seen at DMISA.	Two awards were won by the SAWS team during this conference, namely a special "Team Spirit Award" and the relevance of the SAWS exhibition stand earned SAWS the Best Presenter Shield for the 2011 DMISA conference.
ESKOM	Planning workshop and National Weather workshop	To develop a broad understanding of Eskom's vulnerabilities due to climate variability as well as determine the most appropriate daily operational response they need.
Green Municipality Awards	Green Municipality Competition Awards hosted by the Deputy Minister of the Department of Environmental Affairs, Honourable RT Mabudafhasi.	Relationship establishment with various municipalities and enhancement of relationship with the Department of Environmental Affairs.
GCIS	Meetings with GCIS's Government and Stakeholder Engagement division which provides leadership and strategic advice to the provincial and local government communication system.	With SAWS's public good mandate, it will be able to equip South African citizens with weather information for their own development, thus promoting a better life for them.
CALMET	Sponsorship for dinner during a conference which took place at the University of Pretoria.	CALMET is an international forum, which provides an opportunity to share experiences in meteorological education and training.
ACAMS	Quarterly stakeholder meetings.	The weather information was deemed critical for policy formulation hence the matter was elevated to the Department of Transport and South African Civil Aviation Authority to drive the process further in developing the national framework.
International Aviation Day	Awareness programme and exhibition	Celebrated annually on 7 December and hosted by the South African Civil Aviation Authority. This day took place in the Eastern Cape at East London Airport.
FAI World Precision Flying Championships	Forecast and on-site advice	FAI is an organisation with 100 member countries and its aim is to further aeronautical and astronautical activities worldwide. SAWS's role was to provide aeronautical forecast and onsite advice to the participants to ensure the safety of their operations.
WMO expert team	Meeting on Governance and Partnership	The work programme was drafted where the team will carry out focused work with regards to ICAO and WMO aviation co-ordination programmes, including the review and updates of publications.
Grahamstown Science Festival	Exhibition	SAWS once again took home the "Best Exhibition" award and 72 710 people visited the Grahamstown Monument where the festival took place. This year's theme was a virtual walk through the atmosphere from surface into space.
Climatology and Air Quality	Presentations	An overview of the climate of South Africa was supplied to the Department of Tourism for documentation and presentation that will assist the country's bid to become a member of the OECD – Tourism Committee. SAWS now chairs the Northern Branch of the National Association for Clean Air (NACA). Lectures on air quality modelling and emission inventories were given to the University of Pretoria Meteorology honours class.

### 6.3.4 Stakeholder Perception Survey and Impact Assessment

The South African Weather Service commissioned a survey to determine the level of satisfaction of stakeholders as it relates to its services, the delivery thereof, products, image and pricing structure. The analysis of the results was based on 100 respondents who completed questionnaires, as well as 33 in-depth interviews that were conducted. The survey revealed that the South African public and other stakeholders remained satisfied with the overall customer satisfaction at 78%, and an overall satisfaction with service quality at 83%. The organisation's overall corporate image was measured at 70%.

Figure 18: Level of satisfaction per attribute



### 6.3.5 Corporate Social Investment

#### a. Highbury Community – Building Project

SAWS has built an upgraded weather radar on land that belongs to the Highbury community outside Mthatha. The community has been providing security for this radar over a number of years. The radar network is one of the key strategic projects for which government provided funding of R240 million. The upgrade of the weather radar network enhances SAWS's products and services, especially in the prediction of severe weather events and aviation.

In discussion with the community's leadership, a need was identified to upgrade the local school. SAWS renovated the school in Phase 1 of the project as part of its CSI initiatives. The Eskom Foundation partnered with SAWS and donated R1,9 million towards the project for Phase 2 of the project. Extra classrooms and ablution blocks were built.

SAWS manages all stakeholders involved in the project. The school will be ready for occupation during the next financial year.

#### b. SAWS Corporate Golf Day 2011

SAWS hosts a Golf Day annually and a portion of the proceeds from the event is donated to charities. In 2011/12, the two charities that benefited from this event are Estin Academy in Nelspruit and House of Hope in Bloemfontein. Both charities focus on children without proper family support systems and receive no financial support from Government. Each charity received R10 000.

#### c. Fognet Project

SAWS, together with second-year meteorology students from University of Pretoria, engaged in a water harvesting project in Limpopo. The project was a great success, not only because of what was achieved, but also the different experiences each of the members that were part of the group had. Hydro mentors learned teamwork as they helped each other in performing different tasks. They also learned to interact with different people from different cultures. The fog nets at Tshiavha Primary School were repaired and restored to their useful condition and the school is now able to gather water. Community members and the learners at Murangoni Primary School gained a lot of knowledge regarding the conservation of water, and what should be done and not be done when there is lightning and flooding.

The project will expand to Mpumalanga during the next financial year.

## 6.4 Total Quality Management

SAWS was awarded ISO 9001:2008 certification for its Quality Management System in October 2011, which is a requirement of ICAO. This certification, valid for a period of three years, and having a positive impact on business and systems efficiency, followed months of planning and preparation and SAWS is now one of a few Meteorological Services in Africa with this certification.

# 7. Commercial Services

## SAWS Technology



AP2 solar tracker measuring aerosol optical depth of the atmosphere



Mthatha radar system



Weather satellite receiving dish, OR Tambo International Airport

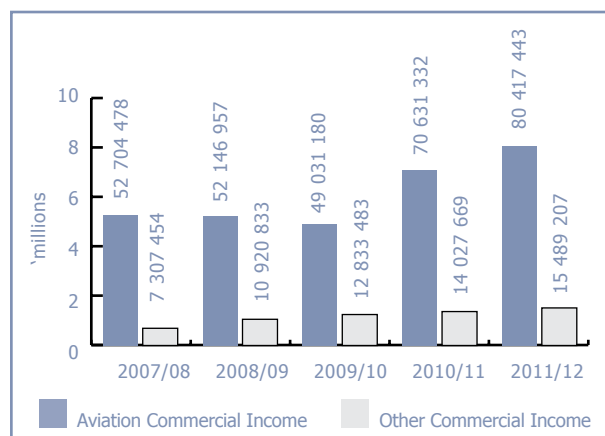
## Commercialisation Programme

SAWS's commercial revenue comprises of regulated aviation revenue and other non-regulated income. The regulated aviation revenue is based on a regulated tariff that allows SAWS to recover its costs, whilst providing a value-added service to all commercial airlines within the aviation industry. In the 2008/9 and 2009/10 financial years, SAWS did not recover all aviation-related costs, however, the tariff was adjusted in 2010/11 and 2011/12 to allow for fair recovery. Aviation revenue grew from R70,6 million in 2010/11 to R80,4 million in 2011/12.

In respect of non-regulated revenue, valuable time and expertise were provided by both internal and external stakeholders to draft a Commercial Strategy by July 2011, authorised by the Board in December 2011. Twelve Basic Service Offerings were identified and prioritised, and these included the selling and rental of instruments (automatic weather stations and automatic rainfall stations), the provision of lightning data, and the development of industry-specific web portals built into a new release of the website. Commercial sales increased from R14,03 million in 2010/11 to R15,5 million in 2011/12. Now that the fundamentals of both the commercial strategy and a dedicated commercial team are in place, it is envisaged that the focus on commercial revenue streams will be enhanced in 2012/13.

Figure 19 below depicts the revenue trends over a 5-year period.

Figure 19: Revenue trends over a 5-year period





# 8. Human Capital Management

## To create a strategy-driven human capital capacity for SAWS's performance

Human Capital Management is tasked to attract, select, employ and retain qualified staff to suit all areas of expertise in SAWS. Specified measures, as defined by organisational policies, are in place. SAWS continuously grows its pool of highly skilled, multi-disciplinary employees.

### 8.1 Performance Culture Underpinned by an Effective Performance Management System and Best Practice Reward and Incentive Programme

#### Performance Management

Assessments and personal development plans of SAWS staff were done according to schedule and training needs determined. The continuous improving of SAWS's performance as an organisation was supported by the implementation of stretched targets and 360 degree feedback for Executive and Senior Managers.

#### Change Management Programme

SAWS operates in a changing environment which requires rapid responses. Some of the internal factors that impact directly on the organisation's sustainable growth or progression include, among others: recognition of excellence, empowering people, professionalism, learning, innovation and creativity, and embracing change and teamwork.

Change management initiatives were introduced to enable SAWS to maintain a high performance standard in terms of its strategic and business plans. The output of this initiative was a Change Management Business Case, which will cover the areas identified for implementation, ranging from highly technical, to procedural and soft skills.

This Change Management programme is ongoing.

## SAWS Training



International delegates frequently attend workshops hosted by SAWS



AMESD Synergie Training 2011



Meteorological Technician Training



Students are frequently assessed for competency

### Career Pathing Implementation

The dual career pathing for scientific personnel was developed and implementation commenced. Final endorsement is envisaged for the new financial year.

### Employee Awards Function

In line with SAWS's value of "Recognition and Excellence", an Employee Awards function took place on 22 November to recognise employees for each month and award quarterly "Chairperson Awards".

### Bargaining Forum

Six Bargaining Forum meetings were convened during the year. A policy review workshop for the forum took place on 26 September 2011. The Employment Equity Report for 2010/2011 was submitted to the Department of Labour on 3 October 2011. CCMA cases were handled within the CCMA rules and relevant legislation (see Table 9). Internal disciplinary cases and grievances were handled in compliance with SAWS Policies.

### Employee Wellness

SAWS participated in the Discovery 702 Fun Walk during July 2011 and 78 employees registered for the event. A colourful SAWS Corporate Sports Day was successfully held on 23 October 2011 at the Centurion Rugby Club where SAWS employees participated in their numbers. Presentations by medical aid schemes for the 2012 products were given to SAWS employees around the country. World Aids Day was commemorated on 1 December 2011 where 43 employees participated, followed by a voluntary counselling and testing on 6 December 2011. A Wellness Day was held on 30 March 2012 where 42 employees participated for the HCT and 67 employees were screened for hypertension, diabetes, cholesterol and BMI.

## 8.2 The Availability of Specialised and Core Competencies to Ensure Delivery of High Quality Projects

### Regional Training Centre

The Meteorological Training Institute of the South African Weather Service is now a WMO-recognised Regional Training Centre (RTC). The agreement was signed on 8 December 2012 by the WMO Secretary-General, Michel Jarraud, and the CEO of the South African Weather Service, Dr Linda Makuleni.

SAWS hosted the WMO Human Resource Development Workshop for National Meteorological and Hydrological Services (NMHS) for Southern and East African countries in Pretoria from 3 to 7 May 2011. The main objective of the workshop was to enhance skills development activities for senior and middle-level managers in areas of management, strategic planning, project development and management, marketing and communication, as well as in resource mobilisation.

The CALMET Conference took place between 3 and 8 October 2011. The South African Weather Service was co-host of this event. Fifty delegates from around the world attended the conference. It was a huge success.

### Internal Training

Aviation competency assessment preparation is being carried out within the organisation to ensure readiness for WMO-approved competence. Aviation personnel embarked on the training, which was set up on Moodle websites.

SAWS furthermore embarked on the training of personnel for the assessor's course, which is used in the assessments of the competencies of aviation personnel.

An induction programme for new employees was conducted in March 2012.

### Compliance

The Workplace Skills Plan was submitted to the TETA SETA and was approved, allowing SAWS to receive the discretionary grant amount.

### Scarce and Critical Skills Programme

The Scarce and Critical Skills programme came to its final conclusion with reports that were sent in. The evaluation of the efficacy of the programme is underway.

### National Training

The new forecasting course has been finalised. A third-party agreement for the running of the forecasting post-graduate certificate course, was signed by SAWS, the Continuous Education Department at the University of Pretoria and the University of Pretoria. Three students registered for the 2012 course.

## Awards and Achievements

The South African Air Force (SAAF) requested training for their personnel on aviation observations. An 8-week course was presented to 17 members of the SAAF. This included aviation competency training. The graduation was held on 5 April 2012.

### Educational Outreach

A successful SAWS Careers Day and Community event was held in Umtata on 31 August 2011. This was a joint effort between Corporate Affairs and Human Capital Management. More than 300 learners and teachers were reached.

### Library

The library continued delivering an excellent service. Library staff started with an outreach programme where the library's services were promoted and explained. In this period most of the staff in Bolepi House and all the new students were invited to attend. The outreach programme was also presented during the induction programme.

## 8.3 Compliance with all Applicable National and International Regulatory Frameworks

### Occupational Health and Safety

During the year under review, eight of the nine hydrogen storage tanks located at various SAWS weather offices countrywide were pressure-tested and certified by the Independent Inspection Authority (IIA). The ninth tank located at the Durban weather office will be replaced with a compliant tank during the first quarter of 2012/13. This ensures that SAWS weather offices are compliant with the Vessels Under Pressure (VUP) Regulation of Occupational Health and Safety Act 85 of 1993.

### 8.4 Staff Profile

Overleaf is the Human Capital Management Report as of 31 March 2012. It includes work profile as per Employment Equity categories, Employee Relations Statistics and Staff turnover.



Mr Mnikeli Ndabambi, Prof Lindsizwe Magi, Ms Khungeka Njobe (Board Chairperson), Mr Slingsby Mda, Mr Lindani Gwensa, Ms Adri du Plessis (PWC), Dr Linda Makuleni, Ms Modjadji Makoela, Rev Lulamile Mbete with the ISO 9001:2008 certificate



SAWS TQM internal audit team



SAWS is the overall prize winner at the 2011 DMISA conference



Dr Linda Makuleni is awarded Top Women in the Public Sector in 2011



Retiree, Mr Gerhard Schulze, shares the ISO 9001:2008 certificate with Dr Linda Makuleni

Table 8: Staff Profile as at 31 March 2012

Occupational Levels	Male				Female				Foreign Nationals		Total
	A	C	I	W	A	C	I	W	Male	Female	
Top management	3	0	0	0	2	0	0	0	0	0	5
Senior management	7	0	1	2	7	0	0	2	0	0	19
Professionally qualified and experienced specialists	28	4	3	21	11	1	2	10	2	1	83
Skilled technical and academically qualified workers	50	7	4	28	32	3	3	17	0	0	144
Semi-skilled and discretionary decision-making	40	9	0	8	34	6	1	6	0	0	104
Unskilled and defined decision-making	15	5	0	0	4	0	0	0	0	0	24
Total Permanent	143	25	8	59	90	10	6	35	2	1	379
Temporary employees	0	0	0	0	0	0	0	0	0	0	0
Grand Total	143	25	8	59	90	10	6	35	2	1	379

Table 9 below represents the Employee Relations activities for the period and is indicative of the results of interventions made by the Employee Relations:

Table 9: Employee Relations Activities

Nature of Cases	Black		White		Coloured		Asian		Outstanding Cases	Other
	Male	Female	Male	Female	Male	Female	Male	Female		
CCMA cases	1	0	1	0	0	0	0	0	1	0
Grievances	0	0	0	0	0	0	0	0	0	0
Disciplinary cases	6	1	2	0	0	1	0	0	1	0
Total	7	1	3	0	0	1	0	0	2	0

As at 31 March 2012, the total staff establishment at SAWS was 379.

- The overall organisational turnover (Table 10) for the year 2011/12 is 4,66%.
- The overall scarce skills turnover for 2011/12 financial year is 2,20%
- The overall turnover for the quarter ending 31 March 2012 is 0,80%
- The turnover in core business (research scientists, technologists and forecasters) for the quarter ending in 31 March 2012 is 0,27%.
- The interventions initiated by the organisation are contributing to the increased focus towards stability in the turnover figures in the core business, i.e. the implementation of Career Pathing contributed in reducing exit of core employees.

Table 10: Staff turnover

Occupational Category	Number of Resignations/ Retirement/ Termination	Total Number	% of Resignations per Category	Overall Employee Turnover	Reason and Co-Joined
Executives		5			
Senior Management		15			
Unit Managers		10			
Middle Management/ Managers		18	3,57%	0,27%	Digby Wells Environmental
Chief Scientists		3			
Senior Scientists		15			
Scientists		23			
Chief Forecasters		2			
Senior Forecasters		24	5,26%	0,27%	Relocated overseas - Australia
Forecasters	1	23	4,35%	0,26%	Joined e-TV
Port Met Officers		2			
Chief Met Technicians		29			
Senior Met Technicians		43			
Met Technicians		31			
Office Supervisors		11			
Technicians/ Technologists		24			
Client Liaison Officers		5			
Office Administrators		9			
Tradesman Aids	1	18	5,56%	0,26%	Joined Government
Assistant Managers		3			
Administrative Clerks		7			
Personal Assistants	1	7	14,29%	0,26%	Contract of employment terminated
Other	1	52	2%	0,27%	

Table 11: Recipients of bursaries and internships

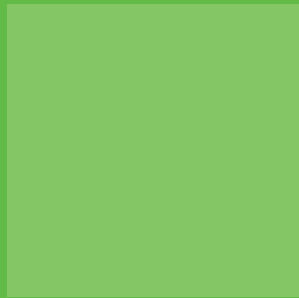
2011/2012									
Occupational Levels	Male				Female				Total
	A	C	I	W	A	C	I	W	
Weather observers	4	1	0	0	5	2	0	0	12
BSc: Undergraduate: Meteorology/Geography & Hydrology/Physics /Marine Biology & Oceanography/ Environmental & Geography & Oceanography/ Agro Meteorology and Geography / Environmental Geography	9	0	0	2	8	0	0	3	22
BSc Hons (Meteorology/Geography)	2	0	0	1	4	0	0	0	7
Postgraduate forecasting Internships	0	0	0	0	0	0	0	3	3
Interns	4	0	0	0	8	0	0	0	12
Grand Total	19	1	0	3	25	2	0	6	56

In total 41 bursaries and 15 internships were awarded during this financial year. All bursaries were allocated in respect of the critical core skills needed within SAWS. Three of the internships were in respect of the new practical forecasting course. The other twelve internships were for supporting roles.

Table 12: Bursaries and Internships for 2010-2011

2011/2012									
Courses	Male				Female				Total
	A	C	I	W	A	C	I	W	
Weather observers	8	1	0	0	3	1	0	0	13
BSc: Undergraduate: Meteorology/Geography & Hydrology/Physics	8	0	0	0	6	0	0	2	16
BSc Hons (Meteorology/Geography)	3	0	0	0	1	0	0	4	8
Master's of Science	0	0	0	0	0	0	1	1	2
National Diploma in Information Technology	0	0	0	0	1	0	0	1	1
Interns	5	0	0	0	8	0	0	0	13
Grand Total	24	1	0	0	19	1	0	8	53

Table 12 shows the number of bursaries and internships what were awarded during the 2010/2011 financial year. There was thus an increase in the number of bursaries and internships awarded during 2011/2012.







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# REPORT

## By the Audit and Risk Committee

### Report by the Audit and Risk Committee for the year ended 31 March 2012

#### Audit and Risk Committee Responsibility

The Audit and Risk Committee reports that it has complied with its responsibility arising from section 38(1)(a) of the PFMA and Treasury Regulations 3.1.13. The Audit and Risk Committee reports that it has adopted appropriate formal Terms of Reference as its committee charter and has regulated its affairs in compliance with this Charter and discharged all its responsibilities as contained therein.

### Audit and Risk Committee Members and attendance

The Audit and Risk Committee plays a critical role in the corporate governance of the entity. The Audit and Risk Committee consists of the members listed hereunder. During the current financial year four meetings were held.

Members	Number of Ordinary Meetings		Number of Special Meetings	
	Meetings Held	Meetings Attended	Meetings Held	Meetings Attended
Ms Medi Mokuena (Chairperson)	4	3	2	2
Mr Lance Williams*	4	1	2	-
Mr Siyabonga Makhaye	4	3	2	2
Mr Melusi Ntumba**	4	3	2	-
Dr Thembakazi Mali***	4	1	2	-
Dr Linda Makuleni (CEO/SP Member)****	4	1	2	-
Mr Welcome Msomi (SP Chair)****	4	1	2	-

\* Retired 31/05/2011

\*\* An independent member of the Committee who is not necessarily a member of the board.

\*\*\* Appointed member to the Audit and Risk Committee effective 28/07/2011.

\*\*\*\* The meeting of 06/02/2012 was also attended by Dr Linda Makuleni (CEO) and Mr Welcome Msomi as members of the Strategic Programmes Committee.

## The Effectiveness of Internal Control

The Audit and Risk Committee guided the Internal Audit unit in the preparation and implementation of the annual audit plan. The internal audit function has been outsourced to SizweNtsalubaGobodo. The systems of control are designed to provide cost-effective assurance that assets are safeguarded and that liabilities and working capital are efficiently managed. In line with the PFMA and the King II Report on corporate governance requirements, internal audit provides the Audit and Risk Committee and management with assurance that the internal controls are appropriate and effective. This is achieved by means of the risk management process, as well as the identification of corrective actions and suggested enhancements to the controls and processes.

According to various reports of the internal auditors and the Audit Report on the annual financial statements and the management report of the Auditor-General, it was noted that no significant or material non-compliance with the prescribed policies and procedures have been reported. Accordingly, we can report that the systems of internal control for the year under review were effective and efficient.

## The quality of management and monthly/quarterly reports submitted in terms of the PFMA and the Division of Revenue Act

The Audit and Risk Committee is satisfied with the content and quality of monthly and quarterly reports prepared and issued by the Chief Executive Officer of the entity during the year under review.

## Evaluation of Annual Financial Statements

The Audit and Risk Committee has:

- Reviewed and discussed the audited annual financial statements, to be included in the Annual Report, with the Auditor-General and the Accounting Officer;
- Reviewed the Auditor-General's management letter and management's response thereto;
- Reviewed changes in accounting policies and practices; and
- Reviewed significant adjustments resulting from the audit.

The Audit and Risk Committee concurs and accepts the Auditor-General's conclusions on the Annual Financial Statements and is of the opinion that the audited Annual Financial Statements be accepted and read together with the Report of the Auditor-General.



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Mr S Makhaye  
Chairperson of the Audit and Risk Committee  
Date: 27 July 2012

# REPORT

## By the Auditor-General

### Report by the Auditor-General to Parliament on The South African Weather Service

#### Report on the Financial Statements

##### Introduction

1. I have audited the financial statements of the South African Weather Service set out on pages 85 to 119, which comprise the statement of the financial position as at 31 March 2012, the statement of financial performance, the statement of changes in net assets and the cash-flow statement for the year then ended, and the notes, comprising a summary of significant accounting policies and other explanatory information.

##### Accounting authority's responsibility for the financial statements

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

##### Auditor-General's responsibility

3. My responsibility is to express an opinion on these financial statements based on my audit. I conducted my audit in accordance with the Public Audit Act of South Africa, 2004 (Act No.

25 of 2004) (PAA), the General Notice issued in terms thereof and International Standards on Auditing. Those standards require that I comply with ethical requirements, and plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

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

##### Opinion

6. In my opinion, the financial statements present fairly, in all material respects, the financial position of the South African Weather Service as at 31 March 2012, and its financial performance and cash-flows for the year then ended in

accordance with South African Standards of Generally Recognised Accounting Practice (SA Standards of GRAP) and the requirements of the Public Finance Management Act of South Africa, 1999 (Act No. 1 of 1999) (PFMA).

### Report on other Legal and Regulatory Requirements

7. In accordance with the PAA and the General Notice issued in terms thereof, I report the following findings relevant to performance against predetermined objectives, compliance with laws and regulations and internal control, but not for the purpose of expressing an opinion.

#### Predetermined objectives

8. I performed procedures to obtain evidence about the usefulness and reliability of the information in the annual performance report as set out on pages 24 to 31 of the report.
9. The reported performance against predetermined objectives was evaluated against the overall criteria of usefulness and reliability. The usefulness of information in the annual performance report relates to whether it is presented in accordance with the National Treasury's annual reporting principles and whether the reported performance is consistent with the planned objectives. The usefulness of information further relates to whether indicators and targets are measurable (i.e. well defined, verifiable, specific, measurable and time bound) and relevant as required by the National Treasury's framework for managing programme performance information.

The reliability of the information in respect of the selected objectives is assessed to determine whether it adequately reflects the facts (i.e. whether it is valid, accurate and complete).

10. There were no material findings on the annual performance report concerning the usefulness and reliability of the information.

#### Compliance with laws and regulations

11. I did not identify any instances of material non-compliance with specific matters in key applicable laws and regulations as set out in the General Notice issued in terms of the PAA.

#### Internal control

12. I did not identify any deficiencies in internal control which we considered sufficiently significant for inclusion in this report.

*Auditor-General*

Pretoria

31 July 2012



AUDITOR-GENERAL  
SOUTH AFRICA

*Auditing to build public confidence*

# STATEMENT

## of Responsibility by the Board

The Annual Financial Statements are the responsibility of the Board. The Financial Statements, presented on pages 85 to 119 were prepared in accordance with South African Statements of Generally Accepted Accounting Practices and South African Statements of Generally Recognised Accounting Practices, and include amounts based on judgment and estimates made by Management. The Board also prepared the other information included in the Annual Report and is responsible for both its accuracy and consistency with the Financial Statements.

The Board is also responsible for the systems of internal control. These are designed to provide reasonable but not absolute assurance as to the reliability of the Financial Statements, and to adequately safeguard, verify and maintain accountability of assets, and to prevent and detect material misstatement and loss. The systems are implemented and monitored by suitably trained personnel with an appropriate segregation of authority and duties. The board reviewed the entity's systems of internal control and risk management were effective for the year under review.

The going concern basis was adopted when preparing the Financial Statements. The Board has no reason to believe that the South African Weather Service will not be a going concern in the foreseeable future based on forecasts and available cash resources. The Financial Statements support the viability of the South African Weather Service.

The Financial Statements were audited by the Auditor-General, who had unrestricted access to all financial records and related data, including minutes of the Board and all its committees. The Board believes that all representations made to the Auditor-general during their audit were valid and appreciated.

### Approval of financial statements

The Financial Statements on pages 85 to 119 were approved by the Board on 27 July 2012 and signed on its behalf by:



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Dr Linda Makuleni  
Chief Financial Officer



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Prof L M Magi  
Chairperson of the Board

# REPORT

## By the Accounting Authority for the year ended 31 March 2012

Report by the Accounting Authority to the Executive Authority and Parliament of the Republic of South Africa.

### Preparation and presentation of the Annual Financial Statements

The financial statements have been prepared in accordance with the South African Statements of Generally Recognised Accounting Practices (GRAP) including any interpretations of such Statements issued by the Accounting Standards Board.

In managing its financial affairs, the South African Weather Service complies with the Public Finance Management Act (PFMA), Treasury Regulations, Companies Act and the principles of Good Corporate Governance recommended by King III.

### General review of the state of affairs

The South African Weather Service (SAWS) is the primary provider of weather- and climate-related information within South Africa, and this is derived from the SAWS Act. SAWS supplies weather-related information to the public at large as part of its Public Good mandate for which a Government Grant is received to support this activity.

SAWS also provides weather-related information to the aviation industry for which it charges a tariff based on the discussions with the Commercial Aviation Industry role-players. The Aviation Regulator plays a pivotal role in these discussions by ensuring that the recommended tariff is just and fair for all parties involved. Once the discussions are concluded, the recommendations are sent to the Minister of the Department of Environmental Affairs for approval and promulgation. Upon promulgation the set tariffs are published in the Government Gazette.

In addition to this, SAWS provides weather- and climate-related information to various commercial clients such as mining, insurance, tourism, telecommunication, municipalities and other international meteorological organisations, to name a few. Despite the current adverse economic conditions, the revenue from this stream has been quite stable year-on-year.

For SAWS to continuously provide quality products and services to the public at large and its various stakeholders, be it aviation or other commercial services, it needs to constantly improve its infrastructure. During the financial period of 2007/08, SAWS received an amount of R240 million to upgrade its radar infrastructure. This process was concluded during the current financial period, where a total of twelve radars were completed.

### Revenue

Total revenue decreased by 17% (R56,04 million) from R322,97 million (FY: 2011) to R266,93 million.

Below is the movement in revenue year-on-year:

	2012	2011	Increase/ (Decrease)	
	Rm	Rm	Rm	%
Government grant - operational income	127,88	137,39	(9,52)	-7%
Government - capital income	34,60	95,67	(61,07)	-64%
Aviation revenue	80,42	70,63	9,79	14%
Other commercial income	15,49	12,33	3,16	26%
Aviation instruments maintenance income	0,57	0,52	0,05	10%
Information fees	6,95	5,64	1,32	23%
Letting aircraft	2,84	2,10	0,74	35%
Lightning detection network sales	2,52	4,03	(1,51)	-38%
Project/Automatic weather stations income	2,60	0,03	2,57	90,95%
Other income	8,55	6,95	1,60	23%
Sundry income	0,88	0,70	0,17	24%

	2012	2011	Increase/ (Decrease)	
	Rm	Rm	Rm	%
Profit/(Loss) on disposal of assets	0,45	-	0,45	-100%
Donations received	0,21	0,11	0,10	88%
Interest received from debtors	0,48	0,46	0,02	3%
Interest due to discounting of receivables	1,31	1,85	(0,54)	-29%
Income from investments	5,22	3,81	1,41	37%
	266,93	322,97	(56,04)	-17%

### Government grant

Operational income from government in the form of a grant, decreased by 7% based on the Medium Term Expenditure Funding (MTEF). Capital grant income decreased by 64% year-on-year due to completion of the radar infrastructure, as most of the assets relating to this project were capitalised in the previous financial period.

### Aviation income

The income from the aviation industry for the period increased from R70,6 million to R80,4 million year-on-year. This was mainly boosted by an increase in the tariff charge from R31,79 to R35,23 year-on-year.

### Non-regulated commercial income

Non-regulated commercial revenue increased from R12,3 million to R15,5 million year-on-year, mainly due to the increase in the web sales, rental of equipment and maintenance income, lease of the aircraft in India and revenue from portal subscriptions and mobile sales.

Web sales have increased by 64% to R3,5 million (FY 2011: R2,1 million) year-on-year mainly due to revenue from some of our key partners.

### Other income

Revenue from investments increased by 37% from R3,81 million to R5,22 million year-on-year due to increased cash surplus. Surplus cash funds from the current account have been allocated to interest bearing short-term investment and call accounts. Interest rates are negotiated with financial institutions on a monthly

basis or when the investment matures. Investments are placed according to the rules of the PFMA.

The relation between externally-generated revenue and internally-revenue received as a grant (excluding capital expenditure grant) from the DEA, is as follows:

	2012	2011
External revenue as % of total revenue	45%	40%
Internal revenue as % of total revenue	55%	60%

### Expenses

Total expenses year-on-year have increased by 10% (R21,01 million) from R213,53 million to R234,55 million. Below is the breakdown of the expenses:

	2012	2011	Increase/ (Decrease)	
	Rm	Rm	Rm	%
Administrative expenses	6,56	9,90	(3,33)	-34%
Employee costs	138,07	121,18	16,89	14%
Amortisation	2,40	1,08	1,32	122%
Depreciation	15,36	14,70	0,66	4%
Other operating expenses	71,78	66,30	5,49	8%
Finance costs	0,38	0,38	(0,00)	-1%
Total	234,55	213,53	21,01	10%

### Administration expenses

Administration expenses have decreased by 34% from R9,90 million to R6,56 million year-on-year. This increase was mainly attributed to the following:

- Legal fees decreased from R1,27 million to R995 000 year-on-year.
- Provision for Bad Debts decreased from R3,85 million to R140 000 year-on-year due to improved collection of debtors. Debtors collection days at the end of March 2012 were at 41.

### Employee benefits

Employee costs have increased by 14% year-on-year to R138,07 million (FY 2011: R121,18 million). The main reason is due to filling of vacant positions within senior management and promotion of staff within the organisation.



Included under employee costs is an amount of R4,38 million for service and interest costs arising from the revaluation of the Post-Retirement Medical Aid Benefit, in accordance with IAS 19 (International Accounting Standard). This is discussed further under Revaluations below.

Employee costs constitute 59% (FY 2011: 57%) of the total expenses of the SAWS.

### Depreciation

Depreciation increased by 4% from R14,70 million to R15,36 million year-on-year. The increase is as a result of capital expenditure spent on the new radar equipment.

### Other operating expenses

Other operating expenses increased by 8% (R5,49 million) from R66,30 million to R71,78 million year-on-year.

The following were the major increases in operating expenses:

- Communication costs which comprise, among others, internet fees, software licenses, satellite fees and telephone expenses have increased from R8,5 million to R9,5 million year-on-year.
- Equipment expensed items, consisting mainly of upper-air balloons and radiosondes decreased from R4,91 million to R3,59 million, mainly due to a favourable exchange rate and a delay in the procurement of radiosondes from an international supplier as a result of the earthquake in Japan.
- Insurance increased from R1,1 million to R1,6 million year-on-year, mainly due to the newly acquired radar equipment.

### Ratio Analysis

Below are the major ratios for SAWS for the period:

	2012	2011
Debtors days	41	48
Creditors' days	28	34
Current ratio	2,22	2,17
Employee costs to total expenditure	59%	57%
Expenditure variance to budget (above budget)	1%	9%

### Post-Retirement Medical Aid Benefit

SAWS has a defined benefit obligation for all staff employed before November 2008. This obligation has been funded by payments from the entity and its employees taking into account the recommendations of the independent qualified actuaries.

Actuarial gains and losses are recognised as comprehensive income in accordance with IAS 19.

The entity contributions to defined benefit obligation are charged to the income statement in the year to which they relate. Once the contribution has been paid, the entity has no further payment obligations.

During the current financial period, based on the approval from the Board, an offer was made to all in-service members that qualify for the Post-Retirement Medical Aid Benefit in a form of a lump sum. Momentum was appointed by SAWS to oversee this process. At the time of making this offer, SAWS had a total of 243 qualifying employees and out of these, a total of 217 accepted the offer which amounted to R18,924 million.

This settlement resulted in the reduction of the liability from R30,976 million to R16,202 million. This current liability represents a total of 62 employees, of which 36 are already in retirement/pension while the remaining 26 are still in service.

In addition to the above, SAWS purchased a plan asset in a "Customised With-Profit Annuity" from Momentum.

## Services rendered by the South African Weather Service

A list of services rendered by SAWS, significant events that have taken place during the year as well as major projects undertaken, are discussed in detail in the annual report under the report by the Chief Executive Officer and the report by the operations department.

### Tariff policy

In terms of Section 28(b) of the SAWS Act, 2001 (Act No. 8 of 2001), the SAWS charges fees for the provision of aviation meteorological services by the operator of an aircraft in respect of a flight undertaken within any flight information region established by the Commission for Civil Aviation in terms of the Civil Aviation Regulations, 1997, as amended.

Aviation meteorological user charges have two categories:

#### Category 1:

In respect of an aircraft with a Maximum Certified Mass (MCM) of 2 000 kg and above:

- Charge = Tariff x W x D
- Where tariff =  
Year 1 (1 April 2012 – 31 March 2013): R 33,38  
Year 2 (1 April 2013 – 31 March 2014): R 34,87  
Year 3 (1 April 2014 – 31 March 2015): R 35,93
- W = Square root of (MCM in metric tonnes divided by 50)
- D = Distance of flight in the flight information region of South Africa in kilometre divided by 100.

#### Category 2:

With regard to aircraft with a published Certified Maximum Mass between 2 000 kg and 4 999 kg that operate under Visual Flight Rules (VFR) and aircraft with a Maximum Certified Mass (MCM) of below 2 000 kg, the tariff is set at zero.

No fees are payable for an aircraft engaged in search and rescue operations and coastal patrol flights of the South African Air Force.

## Capacity and other constraints

Funding sources – SAWS's optimal productivity relies heavily on the availability of financial enablers to ensure that desired yields on investment are attained. It is in this context that the diminishing grant allocation from the Shareholder poses a significant constraint when juxtaposed against the economic realities under which SAWS as a public entity has to operate.

- Operational Capacity – Global trends and developmental pressures have propelled organisations similar to ours to invest more heavily in capacity building such as modern technology and human capital. The enhancement in capital injections and technology ensures that there are up-to-date enablers to assist in generating relevant applications in research that will assist government in planning and decision-making. It is highly desirable that South Africa takes a leading role in this process. This is hamstrung by the lack of funds to invest in advanced technology and human capital, a necessary resource to drive these processes.
- Employees – In as much as there has been marked progress in the attraction and retention of skills, as demonstrated by the steadily declining turnover figures in critical and scarce skills, there is also an equally demanding challenge to maintain the figures and give such employees a conducive environment within which to operate. Part of that responsibility is to respond to creating a greater pool of scientists and technologists with greater focus on the previously disadvantaged individuals. Without the necessary financial resources it is a tall order to achieve these objectives, more so because these are part of the SAWS mandate as per the Act.

### Utilisation of donor funds

An amount of R15,44 million (FY 2011: R14,55 million) including interest was received during the year under review from donor funds. A total of R3,74 million (2011: R1,04 million) was utilised as donor funding expenditure based on the current year's donations received and funds carried over from the previous financial period. These funds were received with conditions, as agreed with the donors.

Detailed information on these projects is discussed under the Chief Executive Officer's report in the Annual Report 2012. The amounts received from donors are recorded as a liability against which expenses are charged. The balance available at year end was R19,18 million (FY 2011: R15,59 million).

### Capital expenditure grant

SAWS received an amount R240 million in the 2007/08 financial period towards the upgrade of its old and outdated radar infrastructure. The total amount of radars requiring manufacturing amounted to twelve. By the end of the 2010/11 financial period, a total of eight radars were completed.

During the current financial period an amount of R29 million was spent to complete the outstanding four radars at OR Tambo International, Cape Town, Bloemfontein and East London airports. At year-end there was an amount of R301 000 unspent towards this project.

### SAAQIS project

The South African Air Quality Information System (SAAQIS) is an electronic, web-based, information management and reporting system designed to meet all the air quality information-related requirements directed or implied by the Air Quality Act and the 2007 National Framework for Air Quality Management. The SAAQIS is operated by the Air Quality Information Unit (AQIU) at the South African Weather Service (SAWS).

The SAAQIS was transferred from the Department of Environmental Affairs (DEA) to SAWS during the 2010/11 financial year. The initial responsibility afforded to the AQIU was the management of the SAAQIS database which includes the historical data from a number of government-owned (national, provincial and municipal) ambient air quality monitoring networks. In February 2011 the responsibility for the management of the six ambient air quality monitoring stations in the Vaal Triangle Ambient Air Quality Monitoring Network (VTAAQMN) was transferred to the SAWS. The initial uptake of the duties of managing the network was slow and the monitoring network maintenance and operations were conducted by an external service provider between March 2011 and June 2011.

An amount of R12,181 million (FY 2011: R11,221 million) was received from the DEA towards the SAAQIS project. For the current year, R5,730 million was utilised (FY 2011: R826 000). This has resulted in a net surplus of R19,738 million for the year.

The budget surplus in the AQIU is due to under-spending in the 2010/11 and 2011/12 financial years. During this time period the AQIU was not fully staffed and was not able to ramp up the level of operation in such a way as to utilise the budget effectively. A slow start in the project caused by delays in finalising the SAWS-DEA MoU and later the Business Case contributed to the 2010/11 and 2011/12 roll-overs.

Below is a table depicting the income and expenditure since the inception of the project in 2009/10:

	FY 2009/10	FY 2010/11	FY 2011/12
Opening balance	-	2 000 000	12 577 564
Grant received	2 000 000	11 221 000	12 181 000
Interest capitalised	-	182 714	709 687
Expenditure	-	(826 150)	(5 729 822)
Closing balance	2 000 000	12 577 564	19 738 428

During the development of the Business Plan for the 2012/13 financial year a number of ideas were put forward for inclusion in the budget. Some of these however were rejected during the negotiations between the DEA and the SAWS as it was believed that the AQIU operational and capital expenditure for the 2012/13 should approximately equal the financial provision made by the DEA. Since there is a budget surplus it is possible that some of the surplus be used to cover items that were originally excluded from the 2012/13 business plan. These items include:

- The update of the SAAQIS website
- The purchase of spare instrumentation
- The establishment of a calibration and reference laboratory at Irene
- Commissioning of terrestrial and marine air quality background stations
- Installation of Black Carbon Measurement Instrumentation (MAAP) in the VTAAQMN stations

## Corporate governance arrangements

SAWS is committed to the principles of corporate governance as contained in the King III Report on Corporate Governance (see Corporate Governance Report on page 34).

Full disclosure of risk items and policies are discussed under note 20 in the Annual Financial Statements. Disclosure of all conflict of interest and contracts with related parties appears in the note 23 in the Annual Financial Statements.

Disclosure of remuneration to members of the Accounting Authority and Executive Management appears in note 28 in the Annual Financial Statements.

The strategic plan was amended and improved to include clear and precise direction for the organisation for the coming three years with the focus on the increase in commercial revenue. Internal controls have been strictly monitored.

The Audit and Risk Committee meets on a regular basis and ensures that management adheres to internal controls and accounting policies and procedures. SizweNtsalubaGobodo was appointed in the financial period ending 31 March 2012 as internal auditors to SAWS. This is an ongoing process that aims to ensure the effective implementation of internal audit and control procedures and adherence of management thereto.

The Audit and Risk Committee has adopted a formal terms of reference and this Committee is satisfied that it covered all responsibilities for the year in compliance with its term of reference (refer to the report of the Audit and Risk Committee in this report).

## Performance information

Performance targets are set on an annual basis. Full disclosure of these targets and performance against them are disclosed in the Annual Report. Quarterly performance reports are prepared by the South African Weather Service and submitted to the Department of Environmental Affairs, stating achievements during the previous year and assessing results against targets set.

## SCOPA Resolutions

There were no resolutions taken by the Standing Committee on Public Accounts (SCOPA) for the year under review.

## Address

### Registered Office:

South African Weather Service  
442 Rigel Avenue  
Erasmusrand  
Pretoria  
0181

### Postal address:

Private Bag X097  
Pretoria  
001

## Auditors

SAWS is a public entity audited by the Auditor-General.

## Approval

The Annual Financial Statements set out on pages 85 to 119 have been approved by the Accounting Authority.



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Prof L Magi  
Chairperson of the Board  
Date: 27 July 2012

## Statement of Financial Position as at 31 March 2012

	Notes	2012 R	2011 R
<b>ASSETS</b>			
<b>Non-Current Assets</b>			
Property, plant and equipment	6	313 047 568	295 043 380
Intangible assets	7	3 009 414	4 512 176
Investment property	8	44 530 000	44 530 000
		<b>360 586 982</b>	344 085 556
<b>Current Assets</b>			
Inventory	9	4 567 938	4 773 979
Trade and other receivables from exchange transactions	10	15 604 629	13 910 346
Cash and cash equivalents	11	119 799 397	141 714 824
		<b>139 971 964</b>	160 399 149
<b>TOTAL ASSETS</b>		<b>500 558 946</b>	504 484 705
<b>LIABILITIES</b>			
<b>Non-Current Liabilities</b>			
Deferred rental obligations	12	4 749 546	7 001 299
Retirement benefit obligations	13	16 202 000	30 146 290
Provisions - non-current	15	416 942	453 286
		<b>21 368 488</b>	37 600 875
<b>Current Liabilities</b>			
Current portion: Retirement benefit obligations		-	829 215
Trade and other payables from exchange transactions	14	25 421 475	17 042 427
Provisions - current	15	16 804 115	12 131 504
Donor funding	16	20 429 538	15 592 888
Radar recapitalisation project	16	298 331	28 428 291
		<b>62 953 459</b>	74 024 325
<b>TOTAL LIABILITIES</b>		<b>84 321 947</b>	111 625 200
<b>Net Assets</b>			
Non-distributable reserve		57 497 077	57 184 730
Accumulated surpluses		358 739 922	335 674 775
		<b>416 236 999</b>	392 859 505
<b>TOTAL EQUITY AND LIABILITIES</b>		<b>500 558 946</b>	504 484 705
<b>TOTAL NET ASSETS</b>		<b>416 236 999</b>	392 859 505

## Statement of Financial Performance for the year ended 31 March 2012

	Notes	2012 R	2011 R
<b>Revenue</b>			
Revenue from non-exchange transactions - Opex grant		127 875 427	137 392 882
Revenue from non-exchange transactions - Capex grant		34 600 678	95 672 581
Revenue from exchange transactions		95 906 651	82 957 905
Other revenue		8 547 621	6 945 884
<b>Total revenue</b>	17	<b>266 930 377</b>	322 969 252
<b>Expenses</b>			
Administrative Expenses	18	(6 564 580)	(9 899 134)
Employee costs	19	(138 066 083)	(121 177 862)
Amortisation	7	(2 397 761)	(1 079 845)
Depreciation	6	(15 355 341)	(14 698 387)
Other operating expenses		(71 780 886)	(66 295 454)
Finance costs	20	(380 974)	(383 911)
<b>Total expenses</b>		<b>(234 545 625)</b>	(213 534 592)
<b>Operating surplus for the period</b>		<b>32 384 752</b>	109 434 660
(Loss)/gain from fair value adjustments	6	(538 318)	9 799 345
Actuarial (loss)/gain on defined benefit pension plan	13	(6 598 000)	-
<b>Surplus for the period</b>	21	<b>25 248 434</b>	119 234 005

## Statement of Changes in Net Assets for the year ended 31 March 2012

	Notes	Non-distributable Reserve R	Accumulated Surpluses / (Deficits) R	Total R
<b>Balance at 1 April 2010</b>				
<b>- as previously reported</b>		<b>57 509 494</b>	<b>211 788 955</b>	<b>269 298 449</b>
Property revaluation		315 792	-	315 792
Aircraft revaluation / (impairment)		(640 556)	-	(640 556)
Effect of prior year adjustments	31	-	2 274 278	2 274 278
Prior year depreciation write back			2 183 287	2 183 287
Effect of prior year adjustments	31	-	194 250	194 250
<b>Balance at 1 April 2010 - restated</b>		<b>57 184 730</b>	<b>216 440 770</b>	<b>273 625 500</b>
Surplus / (deficit) for the year		-	119 234 005	119 234 005
<b>Balance at 1 April 2011 - restated</b>		<b>57 184 730</b>	<b>335 674 775</b>	<b>392 859 505</b>
Reversal of prior years depreciation write back		-	(2 183 287)	(2 183 287)
Property revaluation / (impairment)		80 000	-	80 000
Aircraft revaluation / (impairment)		232 347	-	232 347
Surplus / (deficit) for the year		-	25 248 434	25 248 434
<b>Balance at 31 March 2012</b>		<b>57 497 077</b>	<b>358 739 922</b>	<b>416 236 999</b>

## Cash-flow Statement for the year ended 31 March 2012

	Notes	2012 R	2011 R
<b>CASH-FLOWS FROM OPERATING ACTIVITIES</b>			
<b>Receipts</b>			
		<b>264 746 467</b>	320 028 697
Government grant		162 476 104	233 065 463
Commercial and other income		97 053 452	83 152 155
Income from investments		5 216 911	3 811 079
<b>Payments</b>			
		<b>(236 582 397)</b>	(169 008 201)
Employee costs		(138 066 083)	(121 177 862)
Suppliers		(98 135 340)	(47 446 430)
Finance costs		(380 974)	(383 909)
<b>Net cash-flows from / (used in) operating activities</b>	22	<b>28 164 070</b>	151 020 496
<b>CASH-FLOWS FROM INVESTING ACTIVITIES</b>			
Proceeds on disposal of property, plant and equipment and intangible assets		198 519	193 911
Acquisition of property, plant and equipment and intangible assets		(34 600 678)	(95 672 581)
<b>Net cash-flows from / (used in) investing activities</b>		<b>(34 402 159)</b>	(95 478 670)
<b>CASH-FLOWS FROM FINANCING ACTIVITIES</b>			
(Decrease)/increase in long-term liabilities		(15 677 338)	2 124 120
(Decrease)/increase in short-term liabilities		-	-
<b>Net cash-flow from / (used in) financing activities</b>		<b>(15 677 338)</b>	2 124 120
<b>Net increase/(decrease) in cash and cash equivalents</b>		<b>(21 915 427)</b>	57 665 946
<b>Cash and cash equivalents at beginning of period</b>		<b>141 714 824</b>	84 048 878
<b>Cash and cash equivalents at end of period</b>	11	<b>119 799 397</b>	141 714 824



## Notes to the Annual Financial Statements for the year ended 31 March 2012

### 1. Basis of Preparation

The annual financial statements have been prepared in accordance with the effective Standards of Generally Recognised Accounting Practices (GRAP) including any interpretations, guidelines and directives issued by the Accounting Standards Board.

The financial statements are presented in South African Rands since that is the functional currency in which the majority of the South African Weather Service's transactions are denominated. The annual financial statements have been prepared on the going concern basis. All accounting policies have been consistently applied to all the periods presented.

### 2. Summary of Significant Accounting Policies

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

#### 2.1 Revenue recognition

##### Revenue from exchange transactions

Revenue from exchange transactions comprises regulated and non-regulated commercial revenue. This is revenue of fees levied for the supply of weather-related information to the aviation industry as well as other users. Revenue from information fees levied is recognised when the information is supplied to the customer.

Revenue is measured at the fair value of the consideration received or receivable and represents the amounts receivable for services provided in the normal course of business.

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

Project income received is recognised together with the respective expenses in the Statement of Financial Performance.

Monies received from donors are recorded as a liability against which expenses are charged. Surpluses are either paid back or recognised in the Statement of Financial Performance, depending on the terms of the particular contract.

##### Revenue from non-exchange transactions

Revenue from non-exchange transactions is comprised of government grants. Government grants are recognised when it is probable that future economic benefits will flow to the organisation and when the amount of the grant can be reliably measured. Government grants are recognised as revenue to the extent that there is no further obligation arising from the receipt of the transfer payment. A liability is recognised to the extent that the grant is conditional. The liability is transferred to revenue as and when the conditions attached to the grant are met.

## Notes to the Annual Financial Statements for the year ended 31 March 2012

### 2.2 Leases

Leases in which a significant portion of the risks and rewards of ownership are retained by the lessor are classified as operating leases. Payments made under operating leases (net of any incentives received from the lessor) are charged to the Statement of Financial Performance on a straight-line basis over the period of the lease.

A lease is classified as a finance lease if it transfers substantially all the risks and rewards incidental to ownership. A lease is classified as an operating lease if it does not transfer substantially all the risks and rewards incidental to ownership.

Operating lease payments are recognised as an expense on a straight-line basis over the lease term. The difference between the amounts recognised as an expense and the contractual payments are recognised as an operating lease asset. This liability is not discounted.

Any contingent rents are expensed in the period they are incurred.

### 2.3 Foreign currencies

Transactions in currencies other than the functional currency (Rands) are initially recorded at the rates of exchange ruling on the dates of the transactions. Monetary assets and liabilities denominated in such currencies are retranslated at the rates ruling on the Statement of Financial Position date. Exchange differences arising from the settlement of monetary items or from reporting an enterprise's monetary items at rates different from those at which they were initially recorded, are recognised as income or expenses in the period in which they arise.

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

### 2.4 Property, plant, equipment and depreciation

Land and buildings and aircraft are shown at fair value. Revaluations of aircraft, land and buildings are performed annually using fair values at the Statement of Financial Position date. Any revaluation increase arising from the revaluation is credited to the revaluation reserve, except to the extent that it reverses a revaluation decrease for the same asset previously recognised as an expense, in which case the increase is credited to the Statement of Financial Performance to the extent of the decrease previously charged.

A decrease in the carrying amount arising from the revaluation is charged as an expense to the extent that it exceeds the balance, if any, held in the properties revaluation reserve relating to a previous revaluation of that asset.

Regarding the subsequent sale or retirement of a revalued asset, the attributable revaluation surplus remaining in the revaluation reserve is transferred to accumulated surpluses.

Subsequent costs are included in the asset's carrying amount or recognised as a separate asset, as appropriate, only when it is probable that future economic benefits associated with the item will flow to the entity and the cost of the item can be measured reliably.

## Notes to the Annual Financial Statements for the year ended 31 March 2012

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

Depreciation is charged so as to write off the cost or valuation of assets over their estimated useful lives, using the straight-line method, on the following bases:

	2012 (Years)	2011 (Years)
Buildings - lease improvements	10	10
Fence	10	10
Houses	50	50
Commercial property	-	-
Aircraft - Airframes	20	20
Aircraft - Engines	5400 hrs	5400 hrs
Aircraft - Propellers	5	5
Motor vehicles	5	5
Meteorological instruments - Other	10	10
Meteorological instruments - Radar	25	25
Office equipment	15	10
Computer equipment	5	5
Computer software and website development	5	5
Library books and equipment	10	10
Furniture and fittings	15	10
Tools and other equipment	10	10

The assets' residual values and useful lives are reviewed, and adjusted if appropriate, at each Statement of Financial Position date.

The gain or loss arising from the disposal or retirement of an asset is determined as the difference between the sales proceeds and the carrying amount of the asset and is recognised in the Statement of Financial Performance. When revalued assets are sold, the amounts included in other reserves are transferred to accumulated surpluses.

All other repairs and maintenance are charged to the Statement of Financial Performance during the financial period in which they are incurred.

## Notes to the Annual Financial Statements for the year ended 31 March 2012

### 2.5 Intangible assets

An intangible asset is recognised when:

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

Intangible assets are initially recognised at cost.

Acquired computer software and website development are capitalised on the basis of the costs incurred to bring to use the specific software or website and amortised over the useful lives (five years) using the straight-line method.

### 2.6 Investment property

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

Investment property is shown at fair value based on periodic, but at least annual valuations by external independent valuers. The investment property is held for capital appreciation. A gain or loss arising from a change in the fair value of investment property is recognised in surplus or deficit in the year in which it arises.

### 2.7 Inventories

Inventories are stated at the lower of cost and net realisable value. Net realisable value represents the estimate selling price less all estimated cost to completion and cost to be incurred in marketing, selling and distribution. Inventory consists of consumable goods and goods held for resale.

Cost is determined on the following basis:

- Consumable goods are valued using the weighted average cost basis.
- Redundant and slow moving stocks are identified and written down with regard to their estimated economic or realisable values.

### 2.8 Impairment

At each Statement of Financial Position date, the South African Weather Service reviews the carrying amounts of its tangible assets to determine whether there is any indication that those assets have suffered impairment. If any such indications exist, the recoverable amount of the asset is estimated in order to determine the extent of the impairment.

The recoverable amount is the higher of the assets less cost to sell or the value in use.

If the recoverable amount of an asset is estimated to be less than its carrying amount, the carrying amount of the asset is reduced to its recoverable amount. Impairment losses are recognised as an expense immediately.

## Notes to the Annual Financial Statements for the year ended 31 March 2012

### 2.9 Financial instruments

#### Recognition

Financial assets and liabilities are recognised on the entity's Statement of Financial Position when the entity becomes a party to the contractual provisions of the instrument. All "regular way" purchases and sales of financial assets are initially recognised using trade date accounting.

#### Measurement

Financial instruments are initially measured at cost, which include transaction costs. Subsequent to initial recognition, these instruments are measured as set out below.

#### Financial assets

- Trade and other receivables  
Trade and other receivables are recognised initially at fair value and subsequently measured providing for the time value of money and impairment of receivables.
- Writing off of debts  
Prior to writing off debts, management assesses the recoverability of the debt. If it is determined that the debt is irrecoverable, the debt is written off. If management is convinced that the recovery of the debt would be uneconomical or the recovery would cause undue hardship to the debtor or his or her dependants, or it would be to the advantage of the state to effect a settlement of its claim, or to waive the claim, the debt is written off.
- Cash and cash equivalents  
Cash and cash equivalents include cash in hand, deposits held at call with banks, other short-term highly liquid investments and bank overdrafts. Cash and cash equivalents are measured at fair value.

#### Financial liabilities

The entity's principal financial liabilities are trade and other payables. Trade and other payables are stated at fair value of money.

#### Gains and losses on subsequent measurement

Gains and losses arising from a change in the fair value of financial instruments, are included in the net surplus or deficit for the period in which it arises.

#### De-recognition

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

## Notes to the Annual Financial Statements for the year ended 31 March 2012

### Fair value considerations

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

### 2.10 Provisions

#### Liabilities

Provisions for liabilities are recognised when the South African Weather Service has a present obligation as a result of a past event and it is probable that this will result in an outflow of economic benefits that can be reliably estimated.

#### Impairment of receivables

Impairment of receivables are recognised when the South African Weather Service's outstanding debtors are above 120 days and debts which on merit appear to be irrecoverable.

#### Post-retirement medical aid benefit

The entity has a defined benefit obligation. The obligation is generally funded by payments from the entity and employees, taking account of the recommendations of independent qualified actuaries. For defined benefit obligation the related current service cost, and where applicable, the past service cost are determined by using projected unit credit method.

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

Actuarial gains and losses are recognised as income or expense in the statement of financial performance. The entity contribution to defined benefit obligation are charged to the Statement of Financial Performance in the year to which they relate. Once the contribution has been paid, the entity has no further payment obligations.

#### Short-term employee benefits

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

## Notes to the Annual Financial Statements for the year ended 31 March 2012

### 2.11 Comparative figures

Where necessary, comparative figures were adjusted to conform to changes in the presentation during the current period.

### 2.12 Taxation

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

### 2.13 Value added taxation (VAT)

The Revenue Laws Amendment Act, 2003 (Act No. 45 of 2003) commenced on 22 December 2003. Previously, the definition of enterprise placed the South African Weather Service listed in Schedule 3 A within the scope of VAT. The Amendment Act, however, has amended this definition of enterprise and effectively places the entity outside the scope of VAT. The amended definition of enterprise came into operation on 1 April 2005.

### 2.14 Related parties

All transactions and balances with national departments of Government and state-controlled entities are regarded as related party transactions and are disclosed separately in the notes to the financial statements (refer note 25).

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

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

### 2.15 Fruitless, wasteful and irregular expenditure

Irregular expenditure means expenditure incurred in contravention of, or not in accordance with a requirement of the Public Audit Act, 2004 (Act No. 25 of 2004). Fruitless and wasteful expenditure means expenditure that was incurred in vain and would have been avoided should reasonable care have been exercised. All irregular, fruitless or wasteful expenditure is charged against income in the period it was incurred.

## 3. Significant Accounting Judgements

In preparing the financial statements, management is required to make estimates and assumptions that affect the amounts represented in the financial statements and related disclosures. Use of available information and the application of judgement is inherent in the formation of estimates. Actual results in the future could differ from these estimates which may be material to the financial statements.

### 3.1 Useful lives of property, plant and equipment

For the financial period under review, management applied judgement in determining the extended useful lives of fixed assets in terms of GRAP 17 Property, Plant and Equipment and the results was that the useful life has not changed from the previous financial year.

## Notes to the Annual Financial Statements for the year ended 31 March 2012

### 4. Going Concern

The annual financial statements have been prepared on a going concern basis. Nothing has come to the attention of the Accounting Officer, Executive Management and the Board to indicate that the organisation will not remain a going concern for the foreseeable future, based on forecasts and its liquidity. These financial statements support the viability of SAWS.

### 5. GRAP, amendments and interpretations of standards issued, but not yet effective or adopted

GRAP 3, Accounting Policies, Changes in Accounting Estimates and Errors, require disclosures in respect of new GRAP standards, amendments and interpretations that are or will be applicable after the reporting period. There are a number of GRAP standards, amendments and interpretations that have been issued by the Accounting Standards Board that are effective for financial statements after this reporting period. The following standards of GRAP have been approved, but their effective date has not yet been determined by the Minister and have thus not been adopted by SAWS:

GRAP 25	Employee Benefits
GRAP 104	Financial Instruments
GRAP 105	Transfers of Functions Between Entities Under Common Control
GRAP 106	Transfers of Functions Between Entities Not Under Common Control
GRAP 107	Mergers

The entity has opted to continue applying IAS 19 instead of GRAP 25, consistent with the previous application of the Standard.

The following standard of GRAP has been approved, but entities are not required to apply and therefore SAWS has not adopted this standard:

GRAP 18	Segment Reporting
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Management believes that the adoption of these standards in future periods will have no material impact on the financial statements of SAWS as most of them are not applicable due to the nature and transactions of SAWS.



## Notes to the Annual Financial Statements for the year ended 31 March 2012

### 6. Property, plant and equipment

	2012											2011										
	Land & buildings			Aircraft				Meteorological instruments				Library books & equipment			Furniture & fittings			Tools & equipment				
Total	Leasehold improvements	Commercial property	Fence	Bethlehem houses	Irene property	Airframes	Engines	Propellers	Motor vehicles	Radars	Other	Office equipment	Computer equipment	Library books & equipment	Furniture & fittings	Tools & equipment						
<b>Cost</b>																						
<b>At 1 April 2011</b>	366 276 989	2 168 823	12 000 000	1 172 728	1 529 421	2 100 000	3 053 756	6 820 777	1 057 354	83 064	245 154 659	45 912 919	1 568 678	30 083 655	18 449	5 574 527	7 978 179					
Additions	33 705 679	-	-	-	-	-	-	-	-	383 418	29 197 629	2 452 387	8 198	977 506	12 263	140 827	533 451					
Revaluations	(225 970)	-	-	80 001	-	107 838	(538 318)	124 509	-	-	-	-	-	-	-	-	-					
Disposals	(6 101 332)	-	-	-	-	-	-	-	-	-	(1 218 464)	(26 578)	(4 472 234)	-	(46 277)	-	(337 779)					
Adjustment to cost	110 085	-	-	-	-	-	-	-	-	-	(659 310)	(1 795)	(57 462)	-	2 176	258 119	568 361					
<b>At 31 March 2012</b>	<b>393 765 451</b>	<b>2 168 823</b>	<b>12 000 000</b>	<b>1 172 728</b>	<b>1 609 422</b>	<b>2 100 000</b>	<b>3 161 594</b>	<b>6 282 459</b>	<b>1 181 863</b>	<b>466 482</b>	<b>274 352 288</b>	<b>46 487 532</b>	<b>1 548 499</b>	<b>26 531 465</b>	<b>32 888</b>	<b>5 927 196</b>	<b>8 742 212</b>					
<b>Accumulated depreciation</b>																						
<b>At 1 April 2011</b>	71 233 609	1 601 272	-	324 460	282 603	-	1 350 512	2 605 618	763 591	78 538	17 752 445	19 468 663	790 879	19 715 125	1 041	3 251 156	3 247 706					
Depreciation	15 355 341	216 882	-	117 273	46 971	-	152 688	50 937	(211 471)	15 033	8 297 490	4 465 548	82 147	1 124 363	2 198	88 175	907 107					
Disposals/Impairments	(5 871 067)	-	-	-	-	-	-	-	-	-	(706 190)	(19 010)	(4 387 492)	-	(31 933)	(726 442)						
<b>At 31 March 2012</b>	<b>80 717 883</b>	<b>1 818 155</b>	-	<b>441 733</b>	<b>329 574</b>	-	<b>1 503 200</b>	<b>2 656 555</b>	<b>552 120</b>	<b>93 571</b>	<b>26 049 935</b>	<b>23 228 021</b>	<b>854 016</b>	<b>16 451 996</b>	<b>3 239</b>	<b>3 307 398</b>	<b>3 428 371</b>					
<b>Net book value</b>	<b>313 047 568</b>	<b>350 669</b>	<b>12 000 000</b>	<b>730 995</b>	<b>1 279 848</b>	<b>2 100 000</b>	<b>1 658 394</b>	<b>3 625 904</b>	<b>629 743</b>	<b>372 911</b>	<b>248 302 353</b>	<b>23 259 511</b>	<b>694 483</b>	<b>10 079 469</b>	<b>29 649</b>	<b>2 619 798</b>	<b>5 313 841</b>					
<b>Cost</b>																						
<b>At 1 April 2010</b>	278 925 591	2 742 445	11 760 000	1 172 728	1 453 627	2 100 000	3 518 608	6 817 635	763 593	61 722	158 432 599	51 798 610	1 577 127	28 383 519	157 395	4 862 854	3 323 129					
Additions	95 318 820	-	-	-	-	-	-	2 300 209	-	-	87 007 969	1 642 080	126 760	3 360 200	20 622	260 672	600 308					
Revaluations	(2 155 424)	-	-	-	-	-	(467 910)	(2 297 067)	293 761	-	-	-	-	-	-	-	-					
Disposals	(6 037 265)	-	-	-	-	-	-	-	-	-	-	(4 917 598)	(789)	(874 801)	(156 798)	(29 020)	(58 259)					
<b>At 31 March 2011</b>	<b>366 051 722</b>	<b>2 742 445</b>	<b>12 000 000</b>	<b>1 172 728</b>	<b>1 529 419</b>	<b>2 100 000</b>	<b>3 050 698</b>	<b>6 820 777</b>	<b>1 057 354</b>	<b>61 722</b>	<b>245 440 568</b>	<b>48 523 092</b>	<b>1 703 098</b>	<b>30 868 918</b>	<b>21 219</b>	<b>5 094 506</b>	<b>3 865 178</b>					
Adjustments/Reclassifications	225 267	(573 622)	-	-	2	-	3 058	-	-	21 342	(285 909)	(2 610 173)	(134 420)	(785 263)	(2 770)	480 021	4 113 001					
<b>Restated cost</b>	<b>366 276 989</b>	<b>2 168 823</b>	<b>12 000 000</b>	<b>1 172 728</b>	<b>1 529 421</b>	<b>2 100 000</b>	<b>3 053 756</b>	<b>6 820 777</b>	<b>1 057 354</b>	<b>83 064</b>	<b>245 154 659</b>	<b>45 912 919</b>	<b>1 568 678</b>	<b>30 083 655</b>	<b>18 449</b>	<b>5 574 527</b>	<b>7 978 179</b>					
<b>Accumulated depreciation</b>																						
<b>At 1 April 2010</b>	63 784 503	1 855 715	-	207 448	128 628	-	1 197 825	2 382 357	409 948	61 722	11 869 701	22 129 299	776 743	18 551 216	82 023	2 770 586	1 361 292					
Depreciation	14 698 386	216 881	-	117 273	30 588	-	152 688	223 261	353 643	(14 250)	5 882 749	4 581 181	89 335	1 747 187	1 042	521 190	795 618					
Disposals/Impairments	(3 120 363)	-	-	-	-	-	-	-	-	-	(2 259 905)	(711)	(760 113)	(81 885)	6 493	(24 242)						
<b>At 31 March 2011</b>	<b>75 362 525</b>	<b>2 072 596</b>	-	<b>324 721</b>	<b>159 216</b>	-	<b>1 350 512</b>	<b>2 605 618</b>	<b>763 591</b>	<b>47 472</b>	<b>17 752 450</b>	<b>24 450 575</b>	<b>865 367</b>	<b>19 538 290</b>	<b>1 180</b>	<b>3 298 269</b>	<b>2 132 668</b>					
Adjustments	(4 128 916)	(471 324)	-	(261)	123 387	-	-	-	-	31 066	(5)	(4 981 912)	(74 488)	176 835	(139)	(47 113)	1 115 038					
<b>Restated balance</b>	<b>71 233 609</b>	<b>1 601 273</b>	-	<b>324 460</b>	<b>282 603</b>	-	<b>1 350 512</b>	<b>2 605 618</b>	<b>763 591</b>	<b>78 538</b>	<b>17 752 445</b>	<b>19 468 663</b>	<b>790 879</b>	<b>19 715 125</b>	<b>1 041</b>	<b>3 251 156</b>	<b>3 247 706</b>					
<b>Net book value</b>	<b>295 043 380</b>	<b>567 551</b>	<b>12 000 000</b>	<b>848 268</b>	<b>1 246 818</b>	<b>2 100 000</b>	<b>1 703 244</b>	<b>4 215 159</b>	<b>293 763</b>	<b>4 526</b>	<b>227 402 214</b>	<b>26 444 256</b>	<b>777 799</b>	<b>10 368 530</b>	<b>17 408</b>	<b>2 323 371</b>	<b>4 730 473</b>					

## Notes to the Annual Financial Statements for the year ended 31 March 2012

Reconciliation of revaluation surplus recognised as losses or gains in the Statement of Comprehensive Income:

### Revaluation of PPE

#### Aircraft - Revaluation

Aircraft airframes  
Aircraft engines  
Aircraft propeller

#### Add: Property revaluation

Bethlehem houses  
Commercial property  
Investment property

Total revaluations for the year

#### Net revaluations transferred directly to revaluation surplus account

Bethlehem houses  
Commercial property  
Aircraft airframes  
Aircraft engines  
Aircraft propeller

	2012 R	2011 R
	107 838	(467 910)
	(538 318)	(2 297 066)
	124 509	293 763
	(305 971)	(2 471 213)
	80 001	11 945 792
	80 001	75 792
	-	240 000
	-	11 630 000
	(225 970)	9 474 579
	(312 348)	324 766
	(80 001)	(75 792)
	-	(240 000)
	(107 838)	467 910
	-	466 411
	(124 509)	(293 763)
	(538 318)	9 799 345

### Aircraft

The Entity's aircraft were revalued on 31 March 2012 by independent valuers, Skycare Maintenance.

Valuations were made on the basis of open market value. The revaluation deficit was debited to the non-distributable reserve in the case where sufficient credits existed to offset the deficit. In cases where no credit exists, the deficit is expensed. If aircraft were stated on the historical cost basis, the amounts would be as follows:

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

### Bethlehem houses

The houses were revalued at 31 March 2012 by an independent valuer, Johan Breytenbach. Valuations were made on the basis of open market value. The revaluation surplus was credited to the non-distributable reserve. If the houses were stated on the historical cost basis, the amounts would be as follows:

Cost	600 000	600 000
Accumulated depreciation	(108 000)	(92 000)
Net book value	492 000	508 000

## Notes to the Annual Financial Statements for the year ended 31 March 2012

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

Erf 1997, also known as 8 Dr Clark Street, Bethlehem, has an area of 1 997 square meters and includes a house and outbuildings.

Erf 2064, also known as 19 Gordon Dreyer Street, Bethlehem, has an area of 1 568 square meters and includes a house and outbuildings.

The title deed of the Bethlehem property has not been registered in the name of the South African Weather Service at financial year-end, however, the Minister of Public Works passed all the rights, obligations and liabilities of the properties to the South African Weather Service at the commencement of the South African Weather Service Act, No. 8 of 2001.

### Irene property

The property consists of Portion 110 of the Farm Doornkloof 391 JR. Improvements on the property consist of two interconnected offices, workshop, storage wings and some supporting outbuildings and carports. In accordance with the registration of ownership of the property, the property may only be used for scientific purposes, and may not be transferred. Due to this restriction the municipal value was used as the most accurate value of the property.

### Commercial property

The entity's commercial and investment properties were revalued on 31 March 2012 by independent valuers, T.I. Lehobye Valuations.

Valuations were made on the basis of open market value. The revaluation surplus for commercial property was credited to the non-distributable reserve. The property was brought into the books for the first time in 2003 year-end. The valuation from independent valuers was accepted to also reflect the fair value at 31 March 2002 for comparative purposes. If the property was stated on the historical cost basis, the amounts would be as follows:

Historical cost - commercial property	8 960 000
---------------------------------------	-----------

## Notes to the Annual Financial Statements for the year ended 31 March 2012

### 7. Intangible assets

Intangible assets comprise computer software

#### Cost

##### At beginning of period

Additions

Disposals

##### At end of period

Adjustment

##### Restated cost

#### Accumulated amortisation

##### At beginning of period

Amortisation

Disposals/impairments

##### At end of period

Adjustment accumulated amortisation

Restated accumulated amortisation

#### Net book value

	2012 R	2011 R
<b>At beginning of period</b>	<b>14 292 683</b>	13 128 556
Additions	894 999	353 761
Disposals	-	(113 978)
<b>At end of period</b>	<b>15 187 682</b>	13 368 339
Adjustment	-	924 344
<b>Restated cost</b>	<b>15 187 682</b>	14 292 683
<b>Accumulated amortisation</b>		
<b>At beginning of period</b>	9 780 507	7 936 165
Amortisation	2 397 761	1 079 845
Disposals/impairments	-	(56 461)
<b>At end of period</b>	<b>12 178 268</b>	8 959 549
Adjustment accumulated amortisation	-	820 958
<b>Restated accumulated amortisation</b>	<b>12 178 268</b>	9 780 507
<b>Net book value</b>	<b>3 009 414</b>	4 512 176

A reassessment of useful lives for the intangible assets was done in 2011 financial year resulting in the write back of the accumulated amortisation for the assets that had a nil book value.

### 8. Investment property

#### Fair value at beginning of period

Additions

Revaluations

Disposals

#### Fair value at end of period

	Total	Portion 264 of Garsfontein 374	Commercial property
<b>2012</b>			
<b>Fair value at beginning of period</b>	<b>44 530 000</b>	<b>56 530 000</b>	<b>(12 000 000)</b>
Additions	-	-	-
Revaluations	-	-	-
Disposals	-	-	-
<b>Fair value at end of period</b>	<b>44 530 000</b>	<b>56 530 000</b>	<b>(12 000 000)</b>
<b>2011</b>			
<b>Fair value at beginning of period</b>	32 900 000	44 660 000	(11 760 000)
Additions	-	-	-
Revaluations	11 630 000	11 870 000	(240 000)
Disposals	-	-	-
<b>Fair value at end of period</b>	<b>44 530 000</b>	<b>56 530 000</b>	<b>(12 000 000)</b>

The property was valued on 31 March 2012 by an independent valuator, T.I. Lehobybe Valuations. The valuator used the market data valuation approach, whereby similar properties' valuations are used as a motivation to value the property, which is an acceptable method to determine the value of this type of property.

The fair value adjustment for the investment property was debited to the statement of financial performance. The property was brought into the books for the first time in 2003 year-end. The valuation from independent valutors was accepted to also reflect the fair value at 31 March 2002. If the property was stated on the historical cost basis, the amounts would be as follows:

## Notes to the Annual Financial Statements for the year ended 31 March 2012

Historical cost - investment property	26 890 000
Less historical cost of commercial property	(8 960 000)
Net book value	<u>17 930 000</u>

The investment property includes portions 411, portion of portion 412, portion 423 and 424 (which are portions of the remaining extent of portion 264) of the farm Garsfontein 374, Registration Division JR, Gauteng. The property consists of 37,1116 ha and is located immediately west of the N1 National Freeway to the Northern Province and immediately north of Rigel Avenue.

### 9. Inventory

		2012	2011
		R	R
Bolepi	Consumables and maintenance	269 760	348 885
Irene	Maintenance and parts	3 454 457	3 739 246
Irene work-in-progress	AWS	843 721	685 848
		<b>4 567 938</b>	<b>4 773 979</b>

### 10. Trade and other receivables from exchange transactions

Trade receivables	21 157 112	18 863 281
Discounting of receivables	(95 660)	(151 016)
Provision for impairment of receivables	(9 393 649)	(9 252 540)
Prepayments	2 273 284	1 940 751
Other receivables	1 663 542	2 509 870
	<b>15 604 629</b>	<b>13 910 346</b>

Interest is charged on any long outstanding trade debtor accounts. The carrying amount of trade and other receivables approximate their fair value.

Trade and other receivables are stated at fair value providing for the time value of money and impairment of receivables.

#### Trade and other receivables past due, but not impaired

Trade and other receivables which are under three months past due, are not automatically considered to be impaired. Judgement is used to impair amounts under three months past due. At 31 March 2012, R2 983 944 (2011: R4 949 889) were past due, but not impaired.

The ageing of amounts past due, but not impaired is as follows:

	31-60 days	61-90 days	91-120 days	Over 120 days
Trade receivables	2 891 580	92 364	-	-

## Notes to the Annual Financial Statements for the year ended 31 March 2012

	2012 R	2011 R
Reconciliation of provision for impairment of trade and other receivables		
Opening balance	(9 252 540)	(5 619 954)
Provision raised/(utilised)	(141 109)	(3 632 586)
Reversal of provision not utilised	-	
Closing balance	(9 393 649)	(9 252 540)

The maximum exposure to credit risk at the reporting date is the fair value of each class of loan mentioned above. The entity does not hold any collateral as security.

### 11. Cash and cash equivalents

Bank balances and cash	62 678 818	62 064 095
Short-term investment	57 120 579	79 650 729
	<b>119 799 397</b>	141 714 824

Cash and cash equivalents consists of cash and short-term investments.

### 12. Commitments

#### Operating leases

The following lease payments are related to the operating lease for computer equipment, furniture and fittings, the rental of premises and motor vehicles.

SAWS leases 23 premises from various lessors. The rental agreements for the premises include escalations of between 8% and 11% per year. The duration of the rentals varies between two and ten years.

There is no fixed escalation for the rental agreements relating to the computer equipment, equipment and furniture and fittings. The duration of the rentals varies between eighteen months and three years.

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

	Equipment	Premises	Motor Vehicles	Total
Rent commitment: 0 - 1 year				
Minimum lease payments - 2013	500 694	13 241 991	3 091 477	16 834 162
	500 694	13 241 991	3 091 477	16 834 162
Rent commitment: 2 - 5 year				
Minimum lease payments - 2014	40 063	2 801 769	3 091 477	5 933 309
Minimum lease payments - 2015	4 309	613 343	-	617 652
	44 372	3 415 112	3 091 477	6 550 961
<b>Total commitment</b>	<b>545 066</b>	<b>16 657 103</b>	<b>6 182 954</b>	<b>23 385 123</b>

## Notes to the Annual Financial Statements for the year ended 31 March 2012

	2012 R	2011 R
Opening balance	7 001 299	8 493 466
Additional deferred rental	(2 251 753)	(1 492 167)
<b>Closing balance</b>	<b>4 749 546</b>	7 001 299

### 13. Retirement benefit obligations

#### Amounts recognised in the statement of financial performance

Post-employment medical benefits:		
Current service cost	1 508 000	910 000
Interest cost	2 863 000	2 500 000
Expected return on plan assets	(128 000,00)	-
Net actuarial losses/(gains) recognised in the year	6 598 000	1 036 000
Past service cost	-	-
Total included in 'employee benefits expense'	10 841 000	4 446 000
Actual return on plan assets	(1 449 000)	-

#### Amounts recognised in the statement of financial position

Post-employment medical benefits:		
Present value of funded obligations	20 743 000	-
Fair value of plan assets	(4 541 000)	-
Present value of unfunded obligations	-	30 975 505
Unrecognised actuarial gains/(losses)	-	-
Unrecognised past service cost	-	-
Net liability in the statement of financial position	16 202 000	30 975 505
Less: Current liability	-	829 215
Long-term provision	19 991 000	30 146 290
Amounts in the statement of financial position:		
Liabilities	20 743 000	30 975 505
Assets	(4 541 000)	-
Net liability in the statement of financial position:	16 202 000	30 975 505
Current provision	-	829 215

## Notes to the Annual Financial Statements for the year ended 31 March 2012

### Movements in the net liability in the statement of financial position:

Post-employment medical obligation:

	2012 R	2011 R
Net liability at start of year	30 975 505	27 090 000
Net expense recognised in the statement of financial performance	(8 773 505)	4 446 000
Contributions	(6 000 000)	(560 495)
Net liability at end of year	16 202 000	30 975 505
Less: Current portion	-	829 215
Long-term provision	16 202 000	30 146 290
Principal actuarial assumptions at statement of financial position date:		
Discount rate 31 March (%)	8,50%	9,24%
General increases to medical aid subsidy (%)	8,00%	7,91%
Proportion continuing membership at retirement (%)	100,0	100,0
Proportion of retiring members who are married (%)	90,0	90,0
Retirement age (years)	60	60

The projection of the results from 31 March 2012 to 31 March 2013, assuming that future events follow the assumptions exactly, is as follows :

	R
Post-employment medical obligation:	
Net liability at start of year	16 202 000
Interest cost	1 728 000
Current service cost	312 000
Benefit payments	(781 000)
Projected accrued services liability at end of year	17 461 000

### Sensitivity analyses

The results are dependent on the assumptions used. The table overleaf shows how the past service cost as at 31 March 2012 would be impacted by changes to these assumptions:



## Notes to the Annual Financial Statements for the year ended 31 March 2012

### In-service and continuation members

	Accrued service liabilities as at 31 March 2012 (R million)	% Increase
Assumptions as above	20,743	
Discount rate - increases by 1% p.a.	18,049	-13%
Discount rate - reduces by 1% p.a.	24,116	16%
Subsidy inflation - increases by 1% p.a.	21,241	2%
Subsidy inflation - reduces by 1% p.a.	18,887	-9%
Retirement age - 60	20,743	0%

The tables below show how the current service cost and interest cost for the year to 31 March 2012 would be impacted by changes to the assumptions:

### In-service members

	Current service + interest cost 2012/13 (R million)	% Increase
Assumptions as above	2,04	
Subsidy inflation - increases by 1% p.a.	2,113	4%
Subsidy inflation - reduces by 1% p.a.	1,846	-10%
Retirement age - 60		

### Interest cost

	Interest cost 2011/12 (R million)	% Increase
Assumptions as above	4,371	
Subsidy inflation - increases by 1% p.a.	5,35	23%
Subsidy inflation - reduces by 1% p.a.	3,599	-18%

## 14. Trade and other payables from exchange transactions

	2012 R	2011 R
Trade payables	9 555 754	13 112 986
Discounting of payables	(32 082)	(66 243)
Other payables	15 897 803	3 995 684
	<b>25 421 475</b>	<b>17 042 427</b>

The carrying amount of trade and other payables approximate their fair value. Unrealised foreign exchange profit and loss is calculated using the spot rate at year-end.

## Notes to the Annual Financial Statements for the year ended 31 March 2012

Included in the trade payables are foreign creditors:

	2012 Foreign Currency	2011 Foreign Currency	2012 R	2011 R
EUMETSYS	EUR 131 150	EUR 124 411	1 343 461	1 198 060
Ask Innovative	EUR 52 680	-	539 635	-
Skyview	-	GBP 975	-	10 678
UK Met Office	-	GBP 53 017	-	580 658
Vaisala Inc.	-	USD 80 649	-	550 970
Vaisala Oyj	-	EUR 109 800	-	1 057 356
Australian Nuclear Science & Technology	-	AUD 5 494	-	38 694
Meteorological Technology International	-	GBP 3 915	-	42 878
Meteorological Association of SA (MASA)	-	USD 35 768	-	244 356
CLS	EUR 18 126	EUR 55	185 677	530
Swedish Meteorological	EUR 0	EUR 699	-	6 729
Radar Technology Inc.	USD 0	USD 101	-	693
Solar Light	USD 4 988	-	38 297	-
Scott Marrin	USD 766	-	5 881	-
			2 112 951	3 731 602

Spot rates at period-end

2012	2011
USD = R7.67791	USD = R6.8317
EUR = R10.2437	EUR = R9.62984
	GBP = R10.9522
	AUD = R7.04287
5 867 137	-
1 775 068	1 564 736
7 232 555	1 680 009
427 425	-
310 711	514 603
284 907	236 336
<b>15 897 803</b>	<b>3 995 684</b>

Included in other payables, are the following:

Sundry accruals	5 867 137	-
Payroll creditors	1 775 068	1 564 736
Deferred income	7 232 555	1 680 009
Bursary students	427 425	-
Debtor: Staff S&T	310 711	514 603
Other payables	284 907	236 336
	<b>15 897 803</b>	<b>3 995 684</b>

## Notes to the Annual Financial Statements for the year ended 31 March 2012

### 15. Provisions

	Opening Balance	Additional Provision	Utilised	Closing Balance
	R	R	R	R
<b>2012</b>				
<b>Non-current provisions</b>				
Capped leave provision	453 286	31 363	(67 707)	416 942
<b>Current provisions</b>				
Bonus provision	7 410 207	11 277 276	(8 687 483)	10 000 000
Leave pay provision	2 411 194	848 119	(255 197)	3 004 116
Reward & remuneration provision	2 310 102	1 489 897	-	3 799 999
	<b>12 131 503</b>	<b>13 615 292</b>	<b>(8 942 680)</b>	<b>16 804 115</b>
<b>2011</b>				
<b>Non-current provisions</b>				
Capped leave provision	497 301	26 937	(70 952)	453 286
<b>Current provisions</b>				
Bonus provision	8 000 000	6 152 781	(6 742 574)	7 410 207
Leave pay provision	2 102 098	761 611	(452 515)	2 411 194
Reward & remuneration provision	2 310 102	-	-	2 310 102
	12 412 200	6 914 392	(7 195 089)	12 131 503

#### Capped leave provision

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

### 16. Donor funding

	2012 R	2011 R
Radar recapitalisation project	298 331	28 428 291
Donor funding	20 429 538	15 592 888
	<b>20 727 869</b>	44 021 179

## Notes to the Annual Financial Statements for the year ended 31 March 2012

### 17. Revenue

	2012 R	2011 R
Revenue from non-exchange transactions - operational expenditure	127 875 427	137 392 882
Government grant - operational expenditure	126 024 000	137 392 882
Funds roll-over - operational expenditure	1 851 427	-
Revenue from non-exchange transactions - capital expenditure	34 600 678	95 672 581
Revenue from non-exchange transactions	162 476 105	233 065 463
Revenue from exchange transactions	95 906 651	82 957 905
Aviation revenue	80 417 444	70 631 332
Non-regulated commercial revenue	15 489 207	12 326 573
Aviation instruments maintenance income	574 830	524 002
Information fees	6 954 516	5 638 653
Letting aircraft	2 840 339	2 101 695
Lightning detection network sales	2 521 052	4 033 962
Project/automatic weather stations income	2 598 470	28 261
Other income	8 547 621	6 945 884
Other income	868 401	704 893
Write off - scrapped assets	452 850	-
Donations received	221 160	114 009
Interest received from debtors	477 251	461 138
Interest due to discounting of receivables	1 311 048	1 854 765
Income from investments	5 216 911	3 811 079
	<b>266 930 377</b>	322 969 252

#### Letting of aircraft

SAWS has an annual rental agreement with Orsmond Aviation. The agreement states that SAWS will invoice Orsmond Aviation based on usage of the aircraft.

#### Income from investments

The amount of income from investments is made up of interest received from banks.

### 18. Administrative expenses

Marketing and sales	619 670	599 979
Audit fees - internal	711 156	618 242
Administrative fees	765 117	672 023
Bad debts	140 068	3 850 003
Bank charges	194 650	259 486
Board remuneration	303 605	289 649
Conference costs	382 743	456 316
Entertainment costs	506 929	451 272
Foreign exchange gains/(loss)	106 070	7 172
Legal fees	995 147	1 266 993
Printing and stationery	823 754	896 039
Training	1 015 671	531 960
	<b>6 564 580</b>	9 899 134

## Notes to the Annual Financial Statements for the year ended 31 March 2012

### 19. Employee costs

Salaries and wages
Medical aid contributions
Pension fund contributions
Overtime and shift allowance
Post retirement medical aid
Leave pay and bonus performance
Compensation commissioner
Bargaining council and casual labour

2012	2011
R	R
98 115 231	87 573 357
7 796 726	7 088 267
7 724 320	7 056 210
8 505 182	7 759 334
3 987 886	4 445 505
11 593 243	7 072 532
290 835	131 619
52 660	51 038
<b>138 066 083</b>	<b>121 177 862</b>

### 20. Finance costs

Interest due to discounting of payables
---

380 974	383 911
<b>380 974</b>	<b>383 911</b>

### 21. Surplus for the period

#### Net surplus has been arrived at after charging (crediting):

Foreign exchange realised
Foreign exchange unrealised
Auditor's remuneration
Bad debts
Inventory expensed: Equipment expensed
Impairment losses
Legal fees
Impairment of receivables
Communication cost/(refund)
Surplus on disposal of assets
Operating lease payments
Inventory adjustment

(418 744)	(185 249)
524 814	192 421
1 556 694	1 571 032
-	217 413
4 745 175	4 909 936
-	121 028
995 147	1 266 993
140 068	3 632 586
9 552 818	8 510 539
(452 851)	2 658 886
16 019 523	14 145 703
(121 634)	(174 843)

#### Depreciation:

Building lease improvements
Fence
Bethlehem houses
Aircraft airframes
Aircraft engines
Aircraft propellers
Motor vehicles
Meteorological instruments - Other
Meteorological instruments - Radar
Office equipment
Computer equipment
Library books and equipment
Furniture and fitting
Tools and other equipment

216 882	216 881
117 273	117 273
46 971	30 588
152 688	152 688
50 937	223 261
(211 471)	353 643
15 033	(14 250)
4 465 548	4 581 181
8 297 490	5 882 749
82 147	89 335
1 124 363	1 747 187
2 198	1 042
88 175	521 190
907 107	795 618
<b>15 355 341</b>	<b>14 698 386</b>

Amortisation: Intangible assets
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2 397 761	1 079 847
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## Notes to the Annual Financial Statements for the year ended 31 March 2012

### 22. Net cash-flows from/(used in) operating activities

	2012 R	2011 R
<b>Surplus/(deficit)</b>	24 693 385	119 234 005
<b>Non-cash movements</b>		
Depreciation	15 355 341	14 698 386
Amortisation	2 397 761	1 079 845
Revaluation	225 970	(9 799 345)
Impairment	3 651	121 028
Surplus/(deficit) on disposal of property, plant and equipment	(254 331)	2 659 488
Prior year adjustments	73 401	-
Decrease/(increase) in inventories	206 041	1 944 639
Decrease/(increase) in receivables	(1 694 283)	525 039
Increase/(decrease) in donor funding	(23 293 310)	17 012 590
Increase/(decrease) in payables	6 607 048	3 319 621
Increase/(decrease) in provisions	4 672 611	(44 015)
Increase/(decrease) in current portion retirement obligation	(829 215)	269 215
	<b>28 164 070</b>	151 020 496

### 23. Contingent liabilities

- 23.1 The South African Weather Service assists qualifying officials to obtain 100% housing loans from financial institutions without a cash deposit. For this purpose agreements have been entered into with approved financial institutions to the effect that the South African Weather Service will guarantee a maximum of 20% of the housing loan for which a person qualifies. The maximum amount is based on the official's basic salary. The South African Weather Service guaranteed 59 loans at 11 financial institutions with one remaining. The maximum contingent liability amounts to R11 000 (2011: R32 000).
- 23.2 SAWS versus 1Time: SAWS initiated legal action against 1Time Airlines for outstanding monies due for non-payment of tariff fees to the value of R1 922 067 plus interest at the annual rate prescribed by National Treasury a tempore morae. Legal expenses incurred during the year amounted to R444 174. Estimated legal costs R250 000.
- 23.3 King versus SAWS: This case relates to an alleged unfair dismissal that occurred in 2003. This matter is currently being heard at the CCMA. The estimated legal costs relating to the case amount to R250 000. In the event that SAWS loses the case, it will be liable for twelve months' salary at a cost of R175 619.
- 23.4 SAWS and the Government Employee Pension Fund (GEPF): The GEPF submitted a claim to SAWS towards an additional liability as a result of one of the SAWS employees whose contract of employment was not renewed at the end of its term. According to the letter received from GEPF, an additional liability occurs when a member of the GEPF retires or is discharged from public service prior to normal retirement age. Due to the fact that the said employee and his previous employer never supplied the GEPF with the necessary form when he resigned, his employment at SAWS was treated as continuous employment, hence the additional liability. SAWS has since written to the GEPF requesting the recalculation of the additional liability and to effectively stop all payments to the said employee relating to the gratuity. The amount of the additional liability as at 31 March 2012 amounted to R1 383 327.

## Notes to the Annual Financial Statements for the year ended 31 March 2012

23.5 There is currently a dispute between the land owner of the Bloemfontein radar and SAWS regarding the site. The landowner is demanding that SAWS buy the land for the amount of R2 500 000 or vacate the site whereas SAWS is insisting on leasing the sites for the sum of R74 000 per annum as agreed initially. To this end, SAWS is investigating its legal options in this regard. The estimated legal costs are not expected to exceed R600 000 whilst the relocation costs could not be reasonably estimated at 31 March 2012.

### 24. Risk management

In the course of the entity's operations it is exposed to interest rate, foreign exchange, credit and liquidity risk. The entity has developed a comprehensive risk strategy in terms of TR 28.1 in order to monitor and control these risks. The risk management process relating to each of these risks is discussed under the headings below. The entity's overall risk management programme focuses on the unpredictability of financial markets and seeks to minimise potential adverse effects on the entity's financial performance. The entity does not use derivative financial instruments to hedge risk exposures. Risk management is performed by management under policies approved by the executive committee. Management identifies, evaluates and hedges financial risks in close co-operation with the entity's operating units.

#### Liquidity risk

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

Cash-flow forecasts are prepared and adequately utilised borrowing facilities are monitored.

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

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

Due to the nature of the business, management maintains flexibility in funding by maintaining expenses below budget and continuously pursuing additional income via donor funding, information fees, letting of aircraft and the sale of Lightning Detection Networks.

The table overleaf analyses the entity's financial liabilities at statement of financial position date.

## Notes to the Annual Financial Statements for the year ended 31 March 2012

	Less than 1 year	Between 1 and 2 years	Between 2 and 5 years	Over 5 years
<b>Period end 31 March 2012</b>				
Trade and other payables	25 421 475	-	-	-
<b>Year end 31 March 2011</b>				
Trade and other payables	17 042 427	-	-	-

### Interest rate risk

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

	Floating rate		TOTAL R'000
	Amount R'000	Effective interest rate	
<b>YTD 31 March 2012</b>			
<b>Assets</b>			
Cash	119 799 397	5%	119 799 397
Accounts receivable	16 153 537	8,50%	16 153 537
<b>Total financial assets</b>	<b>135 952 934</b>	<b>5,00%</b>	<b>135 952 934</b>
<b>Total financial assets</b>	<b>135 952 934</b>	<b>-</b>	<b>135 952 934</b>
<b>Total financial liabilities</b>	<b>40 645 956</b>	<b>-</b>	<b>40 645 956</b>
	<b>95 306 978</b>	<b>-</b>	<b>95 306 978</b>

### Credit risk

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

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

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

Due to the nature of the entity's financial instruments, it is highly unlikely that the entity will encounter difficulty in raising funds to meet commitments associated with financial instruments.



## Notes to the Annual Financial Statements for the year ended 31 March 2012

### Foreign currency risk

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

Foreign currency exposure at financial year-end relates to trade payables and is disclosed under note 12.

Summary:

	2012	2011	2012	2011
	Foreign currency	Foreign currency	R	R
Euro payables	EUR 201 956	EUR 234 965	2 068 774	2 262 675
USD payables	USD 5 754	USD 116 518	44 179	796 024
GBP payables	GBP 0	GBP 57 907	-	634 209
AUD Payables	AUD 0	AUD 5 494	-	38 694

### Foreign currency sensitivity analysis

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

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

	Euro Impact		USD Impact	
	2012	2011	2012	2011
	R	R	R	R
Profit or loss	51 277	113 134	(71)	39 801

	GBP Impact		AUD Impact	
	2012	2011	2012	2011
	R	R	R	R
Profit or loss	-	31 710	-	1 935

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

## Notes to the Annual Financial Statements for the year ended 31 March 2012

### 25. Related party transactions

#### Relationships

The listed related parties are public entities on the national level of government with the exception of the Department of Environmental Affairs being the parent department of the South African Weather Service.

Transactions	2012 R	2011 R
<b>Government grant</b>		
Department of Environmental Affairs	160 050 662	233 065 463
<b>Purchases</b>		
Air Traffic and Navigation Services Company	1 118 063	1 394 090
Airports Company SA	2 455 003	1 984 544
Council for Scientific and Industrial Research	182 863	166 670
Eskom	157 726	200 715
SA Broadcasting Corporation Ltd	-	11 748
ARC	183 497	216 545
SA Post Office	31 254	51 217
South African Airways	434 815	318 928
SA Bureau of Standards	-	2 147
Telkom	5 765 500	5 934 996
<b>Sales</b>		
Airports Company SA	607 904	370 311
Council for Scientific and Industrial Research	10 556	-
Denel Aviation (Military)	1 283	1 171
Eskom	2 433 045	2 433 208
SA Civil Aviation Authority	21	21
SA National Roads Agency	(150)	(150)
South African Air Force	496 488	445 507
South African Airways	22 847 112	22 091 089
South African Police	23 472	25 881
Transnet	(283 280)	950 751

## Notes to the Annual Financial Statements for the year ended 31 March 2012

### Related party transactions

#### Balances

#### Accounts payables

	2012 R	2011 R
Airports Company SA	29 610	41 530
Council for Scientific and Industrial Research	6 384	41 677
Eskom	17 046	9 586
South African Airways	1 898	80 972
Dihlabeng Local Municipality	23 423	8 548
eThekweni DC Durban	-	114
Telkom	486 794	672 810

#### Accounts receivables

Airports Company SA	29 610	274 137
Council for Scientific and Industrial Research	9 941	-
Denel Aviation (Military)	308	702
Eskom	2 277 536	2 441 932
SA Civil Aviation Authority	2 381	2 360
SA National Roads Agency	(150)	(150)
South African Air Force	79 086	75 705
South African Airways	1 965 816	1 842 239
South African Express	613 203	-
Hantam Municipality	-	3 501
South African Police	10 617	10 542
Transnet	2 559	571 978

During the period under review members of the Board and employees were required to disclose their interest in any contracts that SAWS is entering into with an outside party.

Notes to the Annual Financial Statements  
for the year ended 31 March 2012

## Executive members' remuneration

Executive management 2012

Name	Status	Salary		Performance Bonus		Medical & UIF		Pension		Travel Allowance		Cell phone Allowance		Lump sum and Leave Pay		Total	
		R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
Dr L Makuleni		1 715 561	519 971	9 017	85 833	120 000											2 450 382
Mr G Schulze*	Retired - 30/04/2011	59 323	219 917	2 365	6 326	7 589						3 000		141 467			439 987
Ms M Makoela		792 067	211 724	18 891	18 632							36 000					1 077 314
Mr L Gcwensa		912 247	240 268	1 497	19 826							36 000					1 209 838
Mr S Mda		1 014 878	235 128	32 615	7 904	-						36 000					1 326 525
Mr M Ndabambi**	Appointed - 01/06/2011	660 892	-	14 648	60 048	95 000						30 000		112 047			972 635
		<b>5 154 968</b>	<b>1 427 008</b>	<b>79 033</b>	<b>198 569</b>	<b>222 589</b>						<b>141 000</b>		<b>253 514</b>			<b>7 476 681</b>

Executive management 2011

Name	Status	Salary		Performance Bonus		Medical & UIF		Pension		Travel Allowance		Cell phone Allowance		Lump sum and Leave Pay		Total	
		R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
Dr L Makuleni		1 592 319	462 711	1 497	80 685	120 000											2 257 212
Mr G Schulze		640 345	192 213	28 379	75 913	91 064						36 000					1 063 915
Ms M Makoela		738 518	189 767	18 886	17 482	3 635						36 000					1 004 287
Mr L Gcwensa		803 722	219 600	1 497	19 481	30 000						36 000					1 110 300
Mr S Mda		959 596	154 723	32 615	7 487	-						36 000					1 190 421
		<b>4 734 499</b>	<b>1 219 013</b>	<b>82 875</b>	<b>201 048</b>	<b>244 699</b>						<b>144 000</b>		<b>-</b>			<b>6 626 134</b>

\* Mr G Schulze went into retirement on 30 April 2011

\*\* Mr M Ndabambi was appointed as a General Manager Operations on 1 June 2011

## Notes to the Annual Financial Statements for the year ended 31 March 2012

Board members Name	Status	2012			2011
		Fees	Travel	Total	Total
		R	R	R	R
Prof L M Magi		49 929	7 638	57 567	43 784
Ms M M Mokuena		39 942	1 214	41 156	34 234
Dr T N Mali		-	2 440	2 440	1 524
Prof H Winkler	Retired - 31/05/2011	-	-	-	199
Rev L W Mbetse		44 844	1 236	46 080	48 058
Mr T W Msomi		66 008	2 808	68 816	38 323
Ms K Njobe		46 114	539	46 653	-
Mr L R Williams	Retired - 31/05/2011	17 214	532	17 746	49 638
Mr S Makhaye		52 134	9 057	61 191	51 333
Mr M C Ntumba*		22 032	1 313	23 345	11 462
		<b>338 217</b>	<b>26 778</b>	<b>364 995</b>	<b>278 555</b>

\*Mr M C Ntumba is a co-opted member of the Audit and Risk Committee.

### 26. Material losses

No material losses through criminal conduct, irregular, unauthorised, fruitless and wasteful expenditure was incurred during the year ended 31 March 2012.

### 27. Irregular expenditure

During the period under review, management did not detect any irregular expenditure.

### 28. Events after the reporting period

Management is not aware of any matter or circumstance arising since the end of the financial period.

## Notes to the Annual Financial Statements for the year ended 31 March 2012

### 29. Statement of comparison between actual and budget

	Actual 2012 R	Approved budget 2012 R
<b>Revenue</b>		
Revenue from non-exchange transactions - Opex grant	127 875 427	127 875 427
Revenue from non-exchange transactions - Capex grant	34 600 678	39 393 056
Revenue from exchange transactions	95 906 651	95 029 636
Other revenue	8 547 621	3 114 853
<b>Total revenue</b>	<b>266 930 377</b>	265 412 972
<b>Expenses</b>		
Administrative Expenses	(6 564 580)	(8 315 684)
Employee costs	(138 066 083)	(130 482 670)
Amortisation	(2 397 761)	(2 098 524)
Depreciation	(15 355 341)	(14 961 444)
Other operating expenses	(71 780 886)	(73 805 745)
Finance costs	(380 974)	-
<b>Total expenses</b>	<b>(234 545 625)</b>	(229 664 067)
<b>Operating surplus for the period</b>	<b>32 384 752</b>	35 748 905
Gains from fair value adjustments	(538 318)	3 644 151
Actuarial (loss)/gain on defined benefit pension plan	(6 598 000)	-
<b>Surplus for the period</b>	<b>25 248 434</b>	39 393 056

### 30. Changes in accounting estimate

Based on experience gained in practice, the South African Weather Service changed the depreciation period of furniture and fittings as well as office equipment. The new depreciation period is believed to more fairly represent the consumption of economic benefits embodied in the assets. The depreciation pattern change is as follows:

	2012 (Years)	2011 (Years)
Furniture and fittings	10 -15	10
Office equipment	10 -15	10

### 31. Prior period adjustments

#### Accrued income

During the financial year ending 31 March 2011, revenue relating to selling of instruments was accrued for based on the then negotiated contract. However, the contract did not materialise in the current financial year and the accrual had to be reversed against the retained earnings and is as follows:

Effect of the correction	Prior disclosure	Movement	Restated
Commercial revenue - (selling of instruments)	84 659 001	(1 701 096)	82 957 905
Trade and other receivables	15 462 202	(1 701 096)	13 761 106

## Notes to the Annual Financial Statements for the year ended 31 March 2012

### Property, plant and equipment

During the current year SAWS embarked on an exercise to update and correct the fixed assets register. The exercise entailed the physical verification and the test for completeness of property, plant and equipment, reclassification of individual assets and recalculation of depreciation to take into account the estimation of the useful lives and residual values of asset categories. The result was that accumulated depreciation and depreciation for the previous year had to be restated as a prior period error.

#### Effect of the correction

	Prior disclosure	Movement	Restated
Property, plant and equipment			
- Cost	366 051 725	225 263	366 276 988
- Accumulated depreciation	73 928 585	4 128 916	69 799 669
Intangible assets			
- Cost	13 368 339	924 344	14 292 683
- Accumulated amortisation	8 135 728	(820 958)	8 956 686
	461 484 377	4 457 565	459 326 026
Depreciation	13 264 445	1 433 941	14 698 386
Amortisation	256 023	823 824	1 079 847
	13 520 468	2 257 765	15 778 233

### Trade and other receivables

- An amount of R149 240 relates to the sundry debtor for the recovery of an overpayment.
- An amount of R45 010 relates to an approved reversal of finance charges. The effect of the adjustment is as follows:

#### Effect of the correction

	Prior disclosure	Movement	Restated
Commercial revenue	84 659 001	1 701 096	82 957 905
Other revenue	6 990 893	45 010	6 945 883
Accumulated surplus	211 788 955	149 240	211 938 195
Trade and other receivables	15 462 202	(1 551 856)	13 910 346

# Glossary of Terms

ABC	Activity Based Costing	ESKOM	Electricity Supply Commission of South Africa
ACAMS	Aeronautical Meteorological Services	FACT	Cape Town International Airport
ACSA	Airports Company South Africa	FAEL	East London Airport
AFI-Region	Africa and Indian Ocean Region	FAGG	George Airport
AFS	Annual Financial Statements	FAI	International Air Sports Federation
AG	Auditor-General	FAJS	Johannesburg (OR Tambo) International Airport
AMDAR	Aircraft Meteorological Data Relay	FALE	King Shaka International Airport
AMIP	Atmospheric Model Inter-comparison Project	FAPE	Port Elizabeth Airport
AMP	Aeronautical Meteorological Personnel	FAR	False Alarm Rate
AQI	Air Quality Information	FBSK	Gaborone Airport
AQIU	Air Quality Information Unit	FIMP	Mauritius Airport
ARS	Automatic Rainfall Station	FLLS	Lusaka Airport
ARSAIO	Atmospheric Research in Southern Africa and Indian Ocean	FNLU	Luanda Airport
AWS	Automatic Weather Station	FPG	Forecast Product Generator (FPG)
BADC	British Atmospheric Data Centre	FQMA	Maputo Airport
BEE	Black Economic Empowerment	FVHA	Harare Airport
BMI	Body Mass Index	FWKI	Lilongwe Airport
BSc	Bachelor of Science (university degree)	FYWH	Windhoek Airport
CALMet	Computer Aided Learning in Meteorology	GAW	Global Atmosphere Watch
CATS	Civil Aviation Technical Standards	GAWSIS	GAW Station Information System
CAVOK	Creating Awareness Via Our Knowledge (not the term as used in aviation)	GCIS	Government Communication and Information Service
CCMA	Commission for Conciliation, Mediation and Arbitration	GDR1	Groupemet de Recherche International (French term referring to a research consortium of which SAWS and France are members)
CCR	Climate Change Response	GM	General Manager
CEO	Chief Executive Officer	GOOY	Dakar Airport
CFO	Chief Financial Officer	GRAP	Generally Recognised Accounting Practice
CLIMAT	Code for reporting monthly climatological data assembled at land-based meteorological surface observations sites to data centres	GTS	Global Telecommunication System
CLIVAR	Climate Variability and Predictability (A WMO programme)	GVAC	Sal Cape Verde Airport
CLS	Collecte Localisation Satellites	HAILCAST	Hail Forecasting system
CMIP5	Coupled Model Inter-comparison Project Phase 5 (CMIP5)	HCD	Human Capital Development
COP-17	17th Meeting of the Conference of the Parties to the Framework Convention on Climate Change	HCM	Human Capital Management
CRR	Convective Rainfall Rate	HCT	HIV Counselling and Testing
CSIR	Council for Scientific and Industrial Research	HE	Hydro Estimator
DBCP	Data Buoy Co-operation Panel	HKNA	Nairobi Airport
DEA	Department of Environmental Affairs	HMA	Hail Mass Aloft
DMISA	Disaster Management Institute of Southern Africa	HPC	High Performance Computer
EASAF	ICAO's Eastern and Southern Africa Regional Office	HRD	Human Resource Development
ERM	Enterprise-wide Risk Management	HTDA	Dar-es-Salaam Airport
		HUEN	Entebbe Airport
		IATA	International Air Transport Association
		ICAO	International Civil Aviation Organisation
		ICT	Information and Communication Technology
		IIA	Independent Inspection Authority



ToDSA	Institute of Directors
IPCC	Intergovernmental Panel on Climate Change
ISO	International Organisation for Standardisation
JTA	Joint Tariff Agreement
LA	Location Accuracy
LDN	Lightning Detection Network
LRF	Long-range Forecasting
M&E	Monitoring and Evaluation (term used in performance management)
MAAP	Black Carbon Measurement Instrumentation
MASA	Meteorological Association of Southern Africa
MET	Meteorological
METARS	Aviation routine weather report (with or without TREND)
MINMEC	The Minister and MEC's forum that deals with political cohesion and co-operation
MoA	Memorandum of Agreement
MoU	Memorandum of Understanding
MPLS-VPN	Multi-Protocol Label Switching – Virtual Private Network
MSc	Master's of Science (university degree)
MSG	Meteosat Second Generation (Satellite)
MTEF	Medium Term Expenditure Funding
MWOs	Meteorological Watch Offices
NAAQMN	National Ambient Air Quality Monitoring Network
NACA	National Association for Clean Air
NAMEIII	Numerical Atmospheric Dispersion Modelling Environment, version 3
NATJOC	National Joint Operations Centre
NCEP	National Centre for Environmental Prediction
NDMC	National Disaster Management Centre
NMHS	National Meteorological and Hydrological Services
NOAA	National Ocean and Atmosphere Administration
ODS	Ozone Depleting Substance
OECD	Organisation for Economic Co-operation and Development
OHSA	Occupational Health and Safety
OPMET	Operational Aeronautical Meteorological Data
PAA	Public Audit Act of South Africa, 2004
PAs	Personal Assistants
PCWEA	Portfolio Committee on Water and Environmental Affairs
PFMA	Public Finance Management Act
PMP	Preventative and Maintenance Plan
PoP	Probability of Precipitation
QMS	Quality Management System
R&D	Research and Development
RMDCN	Regional Meteorological Data Communication Network
RODB	Regional OPMET Databank
RSAC	Regional SIGMET Advisory Centre

RTC	Regional Training Centre
RTH	Regional Telecommunications Hub
S&T	Science and Technology
SAA	South African Airways
SAAQIS	South African Air Quality Information System
SACAA	South African Civil Aviation Authority
SADC	Southern African Development Community
SAFFG	South African Flash Flood Guidance System
SANDF	South African National Defence Force
SANReN	South African Research Network
SAPS	South African Police Service
SARFFGS	South African Regional Flash Flood Guidance System
SARPs	Standards and Recommended Practices
SAWS	South African Weather Service
SCM	Supply Chain Management
SCOPA	Standing Committee on Public Accounts
SETA	Sector Education and Training Authority
SM	Senior Manager
SMS	Short Message Service
SOLAS	Safety of Life at Sea
SPECI	Aviation selected special weather report (with or without TREND forecast)
SWFDP	Severe Weather Forecast Demonstration Project
TAF	Terminal Aerodrome Forecast
TENET	The Tertiary Education and Research Network of South Africa
TETA	Transport Education and Training Authority
TQM	Total Quality Management
TREND	Two hour forecast attached to an aviation METAR or SPECI report
UK	United Kingdom
UM	Unified Model (UM)
UNFCCC	United Nations Framework Convention on Climate Change
USA	United States of America
USAID	United States Agency for International Development
UV	Ultra-violet
VOS	Voluntary Observing Ships
VTAAQMN	Vaal Triangle Air Quality Monitoring Network
VUP	Vessels Under Pressure
WITS	University of the Witwatersrand
WMO	World Meteorological Organisation
WOUDC	World Ozone and Ultraviolet Radiation Centre
WRC	Water Research Commission
YTD	Year-to-date



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