



South African  
Weather Service



C O N T E N T S  
ANNUAL REPORT 2002/3



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PART 1  
GENERAL

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## MESSAGE BY THE DEPUTY MINISTER OF ENVIRONMENTAL AFFAIRS AND TOURISM

It is once again a great honour to provide a ministerial message in the 2002/2003 Annual Report of the South African Weather Service.

Meteorology has always been a big passion and interest to me. By providing quality meteorological services, the South African Government ensures that these valuable services benefit society, the economy, health, agriculture and many commercial sectors.

Good meteorological services contribute to South Africa's reputation as a prime tourist destination. Our aviation weather forecasts are of very high quality and enable the aviation industry to provide safe flights to this country.

The quality of our general forecasts, climate information and research programmes is of a very high level and the scientific training programme of the Weather Service is designed to ensure that high standards are maintained. We are renowned throughout Africa and the rest of the world for our training and have received students from several countries to participate in our training programmes.

Our research and technological advances are sought after, as was proven once again by the request of foreign countries to provide expertise and assistance to rainfall enhancement programmes, the installation of radars in other Southern African Development Community (SADC) countries, automatic weather stations and other assistance.

The heavy rain and floods in March 2003, especially over the Eastern Cape, as well as in Mpumalanga, again demonstrated South Africa's vulnerability to weather and climate extremes. Part of Africa was staggering under drought and famine or floods, while Europe and Asia have experienced severe flooding. In addition, the potential for highly variable climatic conditions and drought, caused by a weak El Niño, was predicted for the past summer season over the southern African region.

During times of floods, drought and severe weather conditions that frequently ravage south and southern Africa, the work of the South African Weather Service is invaluable. The National Forecasting Centre in

Pretoria, as well as 21 regional weather offices around South Africa, work together to deliver a 24-hour weather watch service to the public and disaster management centres.

I fully support the efforts of the South African Weather Service to ensure a close partnership with neighbouring countries in sharing information to deliver an excellent service, not only for the protection of life and property, but for the future of our beautiful country and the world. Natural disasters are part of the global picture, and communication between countries on regional and international level will help improve our capacity to reduce the vulnerability of communities to weather and climatic extremes and therefore enhance the sustainable development of our region.

The state of weather and climate observations, especially in developing countries, remains a serious concern to meteorology and hydrology. The quality of forecasts, climate change monitoring and other related factors are often compromised by a lack of observation data. The South African Weather Service has over the past years scaled down on these observations, due to the costs thereof, but still managed to comply with minimum requirements. It is, however, essential that steps be taken to increase the quality of these observations in order to have a more complete data set.

At the World Summit on Sustainable Development (WSSD), held in August and September 2002, the South African Government once again emphasised its dedication to national weather services on the African continent. This government is indeed committed to fostering global cooperation with its counterparts in areas such as data exchange, research, technology, skills exchange and capacity building under the umbrella of the World Meteorological Organization (WMO) in the quest for sustainable development.

**Rejoice Mabudafhasi**  
**Deputy Minister of Environmental Affairs and Tourism**



PART 1  
GENERAL

## CHAIRPERSON'S FOREWORD

The South African Weather Service kept close contact during the reporting period with the Department of Environmental Affairs and Tourism (DEAT), which administers the annual government grant to the organisation and which is also responsible for housing the Regulating Committee for Meteorological Services.

The South African Weather Service embarked on an agentisation process more than four years ago. A landmark event was the passing of the South African Weather Service Act in 2001, which officially made the Weather Service an agency of government, reporting to the Minister of Environmental Affairs and Tourism. This report covers the first year of the current Board's three year term.

Agentisation has brought with it unique challenges regarding the restructuring of the organisation and establishing financial management, while meeting income targets. The acquisition by the Lesotho Meteorological Service of an Automatic Weather Station (AWS) marked an important commercial breakthrough. It was the first AWS to be sold and more orders could follow. Another exciting development was the signing of a contract to conduct a feasibility study for the potential of cloud seeding in the United Arab Emirates (UAE). Furthermore, aviation user charges were introduced on 29 November 2002 and the South African Weather Service was awarded a tender to render a meteorological support service to the Koeberg Nuclear Power Station.

In line with the New Partnership for Africa's Development (NEPAD) initiatives, Mozambique was assisted with technical expertise in assessing its radar infrastructure and Botswana was assisted in the commissioning of its weather radar. At the same time five AWS's were installed in Tanzania as a pilot project.

Weather forecasting services have remained the core activity, provided to the public and specific commercial clients. Much effort was invested in expanding radar services over the whole of South Africa.

Over the past four years, the budget has decreased in real terms. The effects of this were aggravated by a steep rise in the Rand/Dollar exchange rate, leading to a cut in many important services dependent on capital expenditure. There were therefore several innovative service improvements during the year under review – with a view to mitigating the impact of the constrained budget.

The reporting period was characterised by continued technical service delivery within a constrained budget. Internal controls to ensure proper financial management were implemented and stronger emphasis was placed on the budgeting process and expenditure controls.

Much was done to bring home to the people the everyday importance of meteorology. Major events were used to raise weather awareness and create publicity about weather services and products. Meteorological training of agricultural extension officers – with the ultimate objective of introducing subsistence farmers to the interpretation and use of weather forecasts – continued.

There has been significant progress in the area of transformation, and programmes on change management were introduced.

Several highlights occurred during this period, which included the participation of the South African Weather Service at the WSSD, coinciding with celebrating 25 years of atmospheric trace gas monitoring at the Cape Point Global Atmosphere Watch (GAW) laboratory. The WSSD provided an excellent opportunity to showcase the work of the South African Weather Service and further enhance international cooperation with other weather services of the world, particularly in Africa.

At the end of the reporting period the Board completed the process of appointing of the Chief Executive Officer (CEO) of the South African Weather Service.

I wish to thank the Minister, Deputy Minister and Director General of the Department of Environmental Affairs and Tourism for their continued support for the South African Weather Service. I also wish to thank Board members for their hard work and assistance during a challenging period and I commend the executive management, management and staff of the South African Weather Service for their dedication during the reporting period.

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

**Sizeka Rensburg**  
**Chairperson: Board of the South African Weather Service**



PART 1  
GENERAL

## REMARKS BY THE CHIEF EXECUTIVE OFFICER

I took up office as CEO at the beginning of March 2003, challenged with converting the South African Weather Service into a truly vibrant organisation, properly aligned to achieving its vision and mission.

As initial terms of reference of my five-year contract, three issues were identified for urgent resolution, namely getting the finances right, getting people issues right and getting the organisational structure right. In this light our executive management strategic session finalised a new vision to coincide with our future operations.

We demonstrated our invaluable service delivery to the Portfolio and Standing Committee of Parliament, which was briefed on the highlights and achievements of the previous year and plans for the forthcoming financial year. This meeting, held in March 2003, came under threat from tropical cyclone Japhet, forecast to strike the meeting venue in Skukuza. The South African Weather Service, by its timely forecast and warning, enabled the organisers to move the meeting venue and protect our Parliamentarians from possible weather hazards. A similar service was also delivered to our Board before one of its meetings and this Annual Report highlights much of the work done behind the scenes by officials of the South African Weather Service to ensure timely weather hazard warnings.

In our quest to deliver an excellent weather information and warning service to all the people of South Africa, and in an effort to expand our observational network, the South African Weather Service took possession of the Russian-built MRL5 radar of the Water Research Commission (WRC) in March 2003. The relocation of one of our radars to the tornado-prone Umtata area will complete our full coverage of the eastern parts of South Africa by essential radar technology.

Further cooperation between the South African Weather Service and other SADC countries was enhanced by a variety of initiatives, which ranged from the selling of equipment to the Lesotho Meteorological Service, technical assistance on radar equipment to Botswana and technical assistance to Mozambique.

As the South African Weather Service is a public entity obliged to charge for its value-added services, we appreciated the promulgation of aviation-user tariffs by the Minister of Environmental Affairs and Tourism on 29 November 2002. We embarked on relationship building between the Weather Service and the aviation community, as understanding our clients' needs is important if we are to meet and exceed client expectations at all times.

I am committed over the next five years, with the support of all the personnel of the South African Weather Service, the Board members and the Department of Environmental Affairs and Tourism, to work tirelessly towards transforming the organisation into an excellent weather service of world class standards.

**Jerry Lengoasa**  
**Chief Executive Officer**



PART 1  
GENERAL

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## CORPORATE GOVERNANCE

### FUNCTIONS OF THE BOARD AND SUB-COMMITTEES

Corporate governance is defined *inter alia* as the ability of an organisation to spend within approved budgets, its accountability in the use of public money, its demonstration of value for money and the productivity of its operations. This, broadly, constitutes the purpose towards which the South African Weather Service was converted from a governmental organ within the DEAT into an agency on 15 July 2001. The DEAT is the sole shareholder in the agency. The objectives of agentisation include the requirement to strive for the highest possible standards of service to the South African public, particularly the communities most at risk of adverse weather conditions, in alignment within government priorities, notably NEPAD; the development of costs associated with weather products; the establishment of a regulatory environment; and the collection of user charges from organisational beneficiaries of weather services (e.g. the aviation industry, the South African Broadcasting Corporation (SABC) and cellular phone companies) for the purpose of supporting the organisation's core business – in particular to finance the infrastructural needs of the new South African Weather Service.

The management of the South African Weather Service since its inception as a public entity came under the guidance of a Board appointed by Cabinet. The Board had its first full year of functioning after being appointed during the previous financial year. The functions of the Board, set out in the South African Weather Service Act, Act No 8 of 2001, are broadly to set policy and ensure the good corporate governance of the South African Weather Service operationally, financially, in terms of its staffing (recruitment, training and transformation) and within the overall framework of government policy, which requires that the majority of the South African population benefit from its public good services. The Board is supported in the day-to-day running of the organisation by the Executive Committee, the Risk and Audit Committee required in terms of the Public Finance Management Act (PFMA), the Programmes Committee and the Commercial and Finance Committee.

A strategic plan to guide the South African Weather Service over the three-year period to 2005, and a

business planning framework to give effect to the strategic plan, were developed in partnership with the DEAT as the shareholder. Objectives include organisational transformation through an extensive change management programme coupled with staff training and the fast-tracking of middle management with the focus on optimal service delivery. Further important objectives are the national and international branding and positioning of the organisation and the further development of international relationships through WMO and NEPAD.

An Aviation Branch was established to strengthen client management and service delivery in relation to the collection of user charges, a commercial business team was established, and the Commercial and Finance Committee is considering the feasibility of creating a Commercial Division. A Change Management Design Team and Change Management Business Plan were established to coordinate training and capacity building. Operational achievements are set out in the relevant sections of this report.

The agentisation of the South African Weather Service was characterised by teething problems in the corporate governance area.

Although some issues of non-compliance were picked up in the audit, none of them were considered material enough to distort the financial position and performance of the organisation during the financial year. That said, the Board and the new CEO take a serious view of the situation, and have already taken urgent action to institute corrective measures and systems. Most of the items that arose in the audit opinion have been addressed, in some cases by means of outsourcing relevant functions to firms with the required capacities while the South African Weather Service prepares for in-house resumption of the functions concerned.

In this light, with the concurrence of the DEAT and the Ministry, the South African Weather Service finalised through tender the appointment of a financial services company (Deloitte and Touche) to develop a financial management system that complies with the requirements of the PFMA. The audit committee of the Board appointed, also by tender, Manase and Associates to deliver an internal audit function for a period of three years.

The most significant outstanding issue was that of fixed assets, which had not yet been transferred to the South African Weather Service from the DEAT. The Chief Financial Officer and Senior Manager: Finance were appointed in June 2003.

The Board is determined to rectify adverse situations, where such exist, in the shortest possible time, in order to report favourably on these aspects in its next and subsequent annual reports.

## **BOARD MEMBERS**

**Ms. Sizeka Monica Rensburg**

- Chairperson

**Mr. Donovan Nadison**

- Interim Chief Executive Officer
- Resigned 1 November 2002

**Mr. Ratlaleng Desmond Jeremiah Lengoasa**

- Chief Executive Officer
- Appointed 1 March 2003

**Prof. Geoff Brian Brundrit**

**Mr. Sibusisu Gamede**

- Resigned May 2002

**Mr. Leslie Maasdorp**

**Mr. Prince Maluleke**

**Dr. Joseph Matjila**

- DEAT representative

**Ms. Nomboniso Patricia Maqubela**

**Ms. Tlharesang Mkhwanazi**

- Resigned 1 December 2002

**Ms. Lindiwe Sangweni-Siddo**

**Prof. Derrick Ian Swartz**

**Dr. Nombasa Tsengwa**

- Resigned 1 March 2003





PART 2

SCIENTIFIC AND TECHNICAL OPERATIONS

## FORECASTING SERVICES

### GENERAL FORECASTING SERVICES

The South African Weather Service continuously aimed at providing accurate and timely weather warnings, forecasts and other information to the public, including -

- severe weather warnings;
- real-time and historical forecasting products;
- short-term weather forecasts (up to three days);
- selected monthly and seasonal weather predictions, particularly to rural communities;
- general weather forecasts for the media;
- selected weather forecasting information for tourism in neighbouring countries; and
- information and services for countries in southern Africa, in accordance with obligations as a Regional Specialised Meteorological Centre (RSMC).

Timely severe weather warnings and advisories were extended to neighbouring countries such as Mozambique. Increased radio broadcasts and interviews were conducted in various languages - English, Xhosa, Afrikaans, Ndebele, Tshi-Venda, Sotho and (to a smaller extent) Seswati.

#### Accurate weather forecasting

Several severe weather events were accurately predicted and warnings issued to the public and disaster management centres. These included forecasts of heavy storms in the Cape Peninsula area, gale-force wind warnings, forecasts of heavy rains, flooding, fire warnings and hail. Warnings were sent by means of advanced cellphone technology to all affected areas.

#### Seasonal predictions for the southern African region

Timely climatic and seasonal predictions were issued, to contribute to better planning and safety of lives and property for South Africa and neighbouring countries.

Two seasonal advisories were issued in October 2002 and January 2003 and distributed to the various weather and climate sensitive management structures in the country, advising on the expected dry summer season ahead.

The 6<sup>th</sup> Southern African Regional Climate Outlook Forum (SARCOF6) and its subsequent update forum were held in Harare, Zimbabwe. The South African Weather Service actively participated in the development of a consensus seasonal outlook for the SADC region.

### MARINE FORECASTING

The marine weather forecasting services of the South African Weather Service were delivered for the first time by a new group of specialist marine forecasters. Activities ranged from daily Safety of Life at Sea (SOLAS) Convention forecasts to specific products such as those issued to the 'SA Agulhas' in support of the rescue operation involving personnel on the German research vessel 'Magdalena Oldendorff'. This ship was trapped in the Antarctica pack ice from June to December 2002.

In the case of the 'Magdalena Oldendorff' forecasts, contact was made with the Antarctic Mesoscale Prediction System (AMPS) development group at the National Centre for Atmospheric Research (NCAR), and this model proved invaluable in providing the crucial forecasts for helicopter operations during the very limited daylight of the Antarctic mid-winter. This model was also used extensively in support of the annual South African National Antarctic Expedition (SANAE) relief cruise later in the year.

Commercial forecasts were supplied on an ad hoc basis to various clients during the year, for example the tug 'Fairplay XI', towing a large barge around the South African coast through waters renowned for their treacherous wave conditions. A special prediction was sent to PetroSA on 24 May 2002 warning of long period, high energy swell which could cause the oil rigs on the Agulhas Bank to go into resonance. They were able to unlatch their subsea equipment in good time and avoid costly damage. The heavy swell late in May 2002, which also resulted in considerable coastal damage in the south-western Cape, was well-predicted by the wave models, 3 days in advance of the event.

A large number of hindcasts were prepared for marine court enquiries, ranging from cases of heavy weather cargo damage to the events surrounding the loss of a large cargo vessel, the 'C. Tashin', which sank west of Walvis Bay in August 2002.

A member of the South African Weather Service continued to serve on the Management Committee of the Joint Technical Commission for Oceanography and Marine Meteorology of the WMO and the International Oceanographic Commission (IOC) - representing the WMO RA-1 Region (Africa region).

## AVIATION METEOROLOGICAL CENTRE

As the Aviation Meteorological Authority, the South African Weather Service ensured that it complied with the meteorological standards and service requirements of the International Civil Aviation Organization (ICAO), keeping in mind the requirements as prescribed by various regulations. Where possible, additional services requested by aviation users were introduced. Regular discussions, aimed at improved service delivery, were held with various national aeronautical service providers.

With few exceptions all the regional offices of the South African Weather Service are located on aerodromes for the prime purpose of providing aviation meteorological services. Consultants, employed to determine the cost incurred by the Weather Service in providing aviation services, determined that, with the exception of the Aviation Weather Centre where the activities are solely aviation related, 60% of all activities are geared to providing the core aviation meteorological service. To the extent that other sections of the South African Weather Service support this function, it was established that 30% of all Weather Service personnel are involved in providing core aviation services.

Aviation Weather Services are estimated to generate approximately 30% of the total Weather Service revenue. However, as user charges only came into effect on 29 November 2002, the estimated revenue from this source was significantly less and thus improvements requiring capital expenditure had to be postponed to a following financial year.

Apart from standard civil aviation services, the South African Weather Service assisted with the drawing up of aviation meteorological standards, the preparation of aviation accident reports, aviation meteorological training and the provision of specialist aviation-related forecasts.

### Support from Meteorological Systems to aviation meteorology

The Meteorological Systems (METSYS) division of the Weather Service rendered a crucial aviation specific service at the major airports in South Africa on a 24-hour basis through the maintenance and repair of aviation weather equipment.

### International aviation meteorology

The Weather Service continued its active involvement in the activities of both the ICAO Meteorological Division and the WMO's Commission for Aeronautical Meteorology, regionally and internationally. This would ensure that the services provided meet international standards and afforded South Africa the opportunity to be directly involved in the decision making process, which would enhance the international standing of the South African Weather Service and ensure that the aims of NEPAD are considered.

## PREDICTION RESEARCH AND DEVELOPMENT

With the aim to improve the forecasts of the South African Weather Service, Prediction Research and Development supported forecasting services on all forecasting time scales, ranging from forecasts for the next day to forecasts for the coming season. This was done through research and the development of weather and climate model systems, application systems and techniques, and user interaction. An important aspect was the enhancement of national and international partnerships, which broadened the research base.

A great deal of attention was paid to developing researchers and maintaining an environment that fosters scientific excellence. Various in-house training initiatives were arranged, two staff members obtained their doctorate degrees and another completed an MSc degree. Three new black female researchers joined the research group in 2003 following their university graduation in meteorology.

Key achievements included the upgrading of the operational 48-km grid resolution Eta Numerical Weather Prediction (NWP) system, which is the main model used in weather forecasting operations, as well as the implementation of an experimental mesoscale NWP model with a 5-km horizontal grid resolution over Cape Town. One of the important future steps will include the replacement of the current operational regional Eta NWP model with the improved higher resolution 32-km model. Another highlight was the installation of a

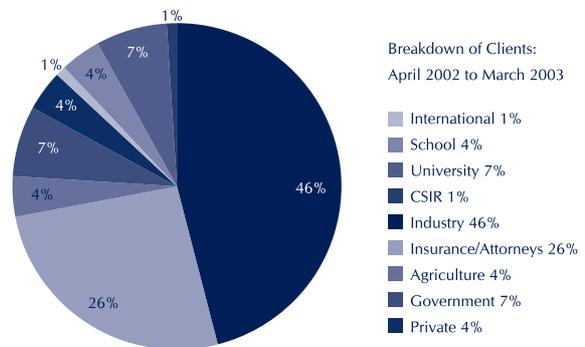
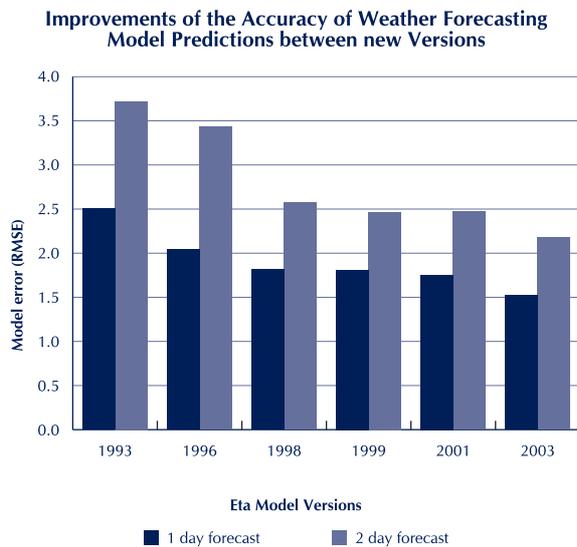
regional climate model in the organisation, following a successful training workshop in Italy attended by one of our young black female scientists.

Prediction Research and Development embarked on a number of externally funded projects, one being a three-year project on seasonal prediction development funded by the WRC. This project aims to improve the seasonal prediction capabilities of the organisation by developing and testing new modern seasonal prediction techniques for southern Africa. It involves active research collaboration with a number of research institutes in South Africa and internationally.

The following publications were published and sold together with previously published ones that are still available:

- Daily Weather Bulletin (monthly)
- Climate Summary for Southern Africa (monthly)
- Climate of South Africa – Surface Winds (WS43)

The Geographic Information System (GIS) was, after implementation, used operationally to visually present rainfall data on the Weather Service webpage ([www.weathersa.co.za](http://www.weathersa.co.za)).



## CLIMATE SYSTEMS

### OBSERVATIONS AND REGIONAL WEATHER OFFICES

The network of observational instruments and platforms was maintained and was supported by a climate database and continuous quality control.

The observational cornerstone of the South African Weather Service includes:

- 21 Regional Weather Offices
- 11 Upper-air Stations
- Weather Offices at Gough and Marion Islands and the Vesles Base in Antarctica
- Cape Point Global Atmosphere Watch Laboratory
- 120 Automatic Weather Stations
- 132 Climate Stations
- 1600 Rainfall Stations
- 30 Sea-Surface Temperature Stations
- 30 Voluntary Observing Ships
- 40 Weather Buoys in the South Atlantic and southern Indian Oceans.

## CLIMATE INFORMATION AND PUBLICATION SERVICES

The Climate Information and Publication Services (CLIPS) provided quality-controlled climate data and related information (Information Office) mainly as commercial services; near real-time weather data and related information, both in electronic as well as in printed format (Climos Office) mainly as public good services; and also managed the printing and distribution of all scientific publications as well as weather and climate information for educational purposes (Publications Office).

A total number of 11 438 enquiries were answered by the Information Office, of which 23% related to lightning.

**Support from Regional Weather Offices**

Regional weather offices maintained climate data collection, forecasting and climate information service operations despite the squeeze on their budgets by the end of 2002. In particular, the cut in the upper-air programme still hampered a full service to aviation.

These offices participated actively in transformation workshops and meetings at Head Office, extending their own programmes for Disaster Management and taking over the weather business at Koeberg.

Regional office support and initiative were crucial in many activities such as World Meteorological Day, the Comrades Marathon, the Two Oceans and Argus races, at the World Cup Cricket venues and smaller events such as the Billabong International Surfing Competition, the Great Train Race and the Grahamstown Science Festival. Most offices also made provision for school tours and awareness talks, especially to visitors from disadvantaged communities.

The needs of continued transformation and capacity building were served by using external funding to send one of the designated personnel in Climate Systems to the National Climate Data Centre in the United States and another on a six-month training course at the Egyptian Academy for Meteorological Studies. Internal training for new and serving climatologists was supported by internal funding. A programme was run to evaluate and award certificates to Observers and identify personnel for further training.

**CLIMATE DATA MANAGEMENT**

With Norwegian donor support, a new database was implemented and the full climate data set made available for selected climate stations, going back to 1860. Extensive quality control was carried out on the 2000/2001 data and manuals. An updated wind data publication was released and a new publication on climatic regions was compiled.

**GLOBAL ATMOSPHERE WATCH**

Specialist atmospheric trace gas monitoring activities continued at the GAW laboratory at Cape Point. Connected to the Cape Point laboratory, the regional

GAW programme is supported by a Baseline Surface Radiation Network (BSRN) station at De Aar and two ozone monitoring stations at Irene and Springbok. The national UV-B real time network succeeded in creating awareness, especially among schools. Damage to a person's skin and eyes, resulting from sunburn, lasts for the rest of his/her life.

The latest addition to the Climate Change monitoring programme occurred with the establishment of the first surface ozone monitoring station at SANAE Antarctica. Two successful international Quality Assurance Data Audits revealed the GAW data to be of world class.

Highlighting one of Climate Systems' major achievements was the contribution made to the WSSD. The Cape Town Weather Office and the Cape Point GAW Laboratory, the latter of which was celebrating 25 years of monitoring, brought the importance of weather and climate change, sustained monitoring and information to the fore, as part of the official proceedings and events linked to the Johannesburg WSSD.

**METSYS**

Scientific and technical operations of the South African Weather Service were supported by METSYS.

**RADAR NETWORK**

The National Weather Radar Network (NWRN), an integral part of short-term weather forecasting and warning activities, was again maintained on a shoestring budget during the course of 2002. Down-time was kept to a minimum due to extraordinary efforts by the personnel involved. This network was also used to provide services to the hydrological and agricultural sectors and was made accessible via the website to the general public.

The radar network further supported a number of research projects, including projects to provide new, improved precipitation products for a wider audience of users by using a combination of radar, satellite and surface observations of precipitation.

The South African Weather Service took possession of the Russian-built MRL5 radar of the WRC. This radar, located 25 km north-west of Bethlehem, was transferred to the Weather Service at a ceremony held in March 2003. Work on re-locating the Bethlehem radar to Umtata was in progress.

**Assisting southern African countries with radar technology**

It is not only in South Africa that radar maintenance was conducted. Technologists and scientists from METSYS demonstrated their involvement in NEPAD initiatives by providing services to various African countries. Examples include the leadership and technical expertise shared with Mozambique in assessing its infrastructure as well as giving input to the specifications of new radars to be acquired by that country.

The South African Weather Service assisted the Botswana Meteorological Service with the commissioning of its weather radar near Gaborone, operational since November 2002.

**AUTOMATIC WEATHER STATIONS FOR AFRICA**

A network of five AWS's was deployed in Tanzania as part of the WMO/Tanzanian Meteorological Service AWS project. This event was preceded by major upgrades to the AWS, a re-design and inclusion of cellphone technology for data communication, software upgrades, as well as an operator's manual. Staff members of the Tanzanian Meteorological Service were trained.

The Lesotho Meteorological Service also acquired an AWS, representing the first AWS to be sold on a commercial basis.

**Cellular phone technology for more effective data transfer**

The cellphone upgrade to AWS's in the South African network was expanded during 2002, resulting in most systems being converted to the new technology. This conversion to cellphone communications for AWS data has resulted in a significant saving in the data communications costs to the Weather Service, as well as in more reliable data collection and less down time on equipment.

**UTILISING THE AIRCRAFT FACILITY – COOPERATION WITH THE UNITED ARAB EMIRATES**

An important development during the past year was the establishment of a contract between the Department of Water in the UAE and the South African Weather Service/Wits University group to conduct a feasibility study for the potential of cloud seeding in that country. Aircraft of the Weather Service, with their unique capabilities, were utilized for scientific purposes. METSYS provided technical and management expertise on the systems being used on the airborne platforms.

This project was expected to continue until April 2003 but the Weather Service was requested to also participate in the UAE summer campaign, which lasted until October 2003. The Weather Service looks forward to a longer term relationship with the UAE.

**Conclusion of the South African rainfall enhancement programme**

The final reports, completed during this report period, concluded that the South African Rainfall Enhancement Programme, which ended in 2000, could be considered as a viable option to enhance the water supply to South Africa. Based on this result, prominent institutions in South Africa will consider funding operational rainfall enhancement projects in the near future.

The expertise in rainfall enhancement technologies of the South African Weather Service was further demonstrated when a member of METSYS was requested by the WMO to conduct an investigation into rainfall enhancement activities in Burkina Faso. This investigation was successfully completed towards the end of the report period.

**A cheaper alternative to Global Positioning System radiosondes**

Impressive progress towards the development of a cheaper alternative to the current Global Positioning System (GPS) radiosonde programme was achieved. The Glidersonde project, which aims to mount upper-air sensors on recoverable platforms, received a major injection with the development of a new airframe. Weaknesses in the original glider frame were largely eliminated. Field tests on the glidersonde were envisaged for the winter of 2003 at Bethlehem, Free State.

**Versatile powersondes to do airborne measurements**

The miniature research airframe, the powersonde, was further developed to improve the versatility of its ability to do airborne sampling. This system will be ideal for utilisation in field programmes as well as in pollution monitoring campaigns, by performing regular profiles of the lower and middle atmospheric layers.

The South African Weather Service was also approached to admit visiting scientists to forecaster upgrading courses.

The graphs below reflect the number of university students with bursaries in meteorology trained between 1991 and 2003.

**TRAINING, AWARENESS AND SKILLS DEVELOPMENT**

**METEOROLOGICAL TRAINING**

This was the first year that five Observer students were awarded bursaries to study for the observer course. Private students were also admitted to the course for the first time.

The BSc bridging course, for BSc students with mathematics and physical sciences (but without meteorology) as major subjects was continued. Fifteen bursaries were awarded.

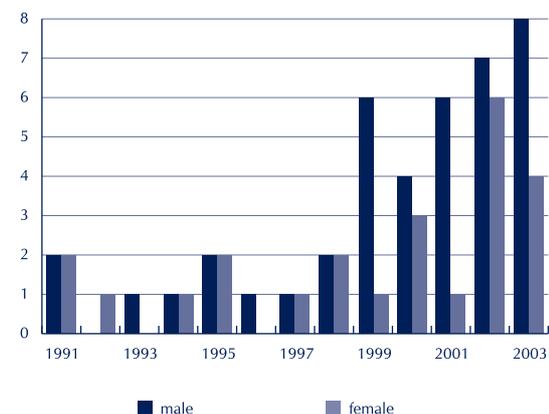
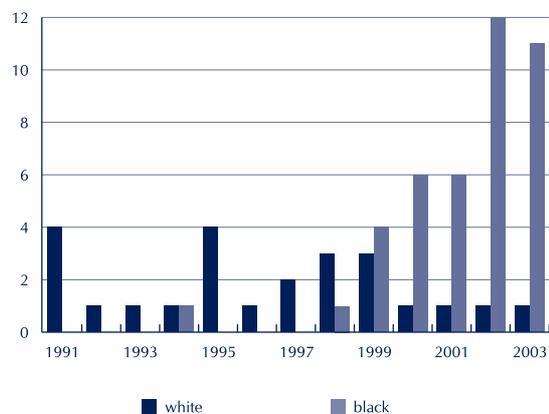
As the Technikon course was in the process of being phased out, only the Higher Diploma course was active.

Thirteen bursaries were awarded for BSc students to study for a BSc Honours degree in Meteorology, in partnership with different universities. Seven students took the forecasting course, two the numerical weather forecasting course and four the climatological course.

Continuous training programmes were planned and started for meteorological personnel. The meteorological training for the island teams (Marion and Gough) continued as usual.

A questionnaire was developed by the Scientific Training Group in conjunction with the WMO to assess the training and library facilities available in Africa. Twelve questionnaires were returned, the results of which were reported to the WMO.

Two operational forecasters from Mozambique were trained during the last part of 2002. They were introduced to the operational environment and received training to enhance their forecasting skills.



**Outreach projects: Weather Awareness Training**

The South African Weather Service, in collaboration with the National Department of Agriculture and the Agricultural Research Council (ARC), was engaged in an awareness/outreach project to empower agricultural extension officers in the interpretation, understanding and usage of weather and climate forecasts in agriculture.

The aim was to equip extension officers to advise farmers, especially subsistence and emerging farmers throughout the country, with daily agricultural planning and decision making.

Agriculture in South Africa is an industry highly dependent on weather and climate behaviour for the adequacy of food supplies. Being a vast and relatively dry country with variable rainfall regimes, accurate information required for planting, fertilising and harvesting times is of the utmost importance to ensure optimally profitable production.

A total number of 4 training workshops were conducted in 4 provinces, namely Mpumalanga, the Limpopo Province, the Free State and the Eastern Cape.

The South African Weather Service is also a member of the National Agro-Meteorological Committee which meets on a bi-monthly basis to issue an advisory based on the seasonal outlook. This committee, established in December 2002, concluded a partnership with the Ramaano Mbulaheni Training Centre in Limpopo to further build capacity in the understanding and interpretation of weather and climate forecasts.

### SKILLS DEVELOPMENT

Steps were taken to register the South African Weather Service with the Transport Education and Training Authority (TETA) as required by the South African Qualifications Authority (SAQA) on 1 December 2003.

Training was provided to employees, and bursaries were awarded as part of the human resource management social responsibility of the South African Weather Service.

- Thirty employees were awarded part-time bursaries, of whom seventeen were males and thirteen were females.
- Seven employees attended short courses.
- Seventeen students (six female and eleven males) from various institutions were awarded BSc (hons) degree bursaries.
- Five grade twelve students from previously disadvantaged communities were awarded bursaries to study as weather observers. Four of them were females and one male. All passed and were employed by the South African Weather Service.

- Although the National Higher Diploma in Meteorology is being phased out at Technikon Pretoria, three students who had already started with this course and were awarded bursaries in this regard have successfully completed their courses.
- Some Information Technology (IT) personnel completed the A+, N+, and Java programming courses.



PART 3

INTERNATIONAL RELATIONS AND THE  
WORLD SUMMIT ON SUSTAINABLE DEVELOPMENT

## INTERNATIONAL RELATIONS

The South African Weather Service maintained its seat in the WMO's 36-member Executive Council. This required an active role by the South African Permanent Representative and CEO of the Weather Service in the development of the international meteorological community. In addition to this, the WMO highlighted the strategic role of the South African Weather Service in the region and the continent, in terms of restoring meteorology and promoting capacity building and technology transfer. The South African Weather Service made distinct contributions to these areas by providing specialised training courses to staff and students from a number of African countries. In addition, the Weather Service dispatched expert IT personnel to various SADC countries to restore data and communications links, thus assisting in the maintenance of the regional observation network.

The South African Weather Service's hosting of side events during the WSSD, in partnership with the WMO, provided a number of opportunities to further enhance the organisation's international relations. A number of Permanent Representatives (heads of national meteorological services), especially from Africa, honoured some of the events with their presence. Top WMO personnel, including the Secretary-General Prof G.O.P. Obasi, attended these side events, focusing on the role of meteorology in sustainable development.

The WMO continued to finance the travel and subsistence expenses of Weather Service personnel to international meetings and training workshops. The attendance of these meetings by black and young personnel of the organisation was encouraged in line with the organisation's transformation agenda.

The Weather Service furthermore hosted two successful international workshops. The first, sponsored through the WMO, aimed to develop a Numerical Weather Prediction strategy for African countries that will build the capacity of other national meteorological services in Africa in the field of numerical weather prediction. The second was a training workshop on the use of climate models and involved meteorologists from various SADC countries. The expertise and advanced NWP systems of the South African Weather Service put it into a leadership role in this field in Africa.

The close interaction with the WMO has resulted in the South African Weather Service being tasked to assist surrounding countries with meteorological infrastructure development. The activities of the South African Weather Service have been limited to the planning of weather radar inspections in Mozambique, Zimbabwe and Nigeria. Future activities and projects of the Weather Service will focus on the establishment of a regional radar network, which would have tremendous benefits to local weather forecasts and sharing of data between regional national weather services. A structured approach will also be embarked upon to match the international activities with the available resources, and also for creating conducive environments for the international marketing of Weather Service products and services.

The Weather Service continued its active involvement in the activities of both the ICAO Meteorological Division and the WMO's Commission for Aeronautical Meteorology, regionally and internationally.

## WORLD SUMMIT ON SUSTAINABLE DEVELOPMENT

With the support of the DEAT, as well as the WMO, the South African Weather Service was given the go-ahead for its arrangements relating to the WSSD.

The WSSD provided an excellent opportunity to showcase the work of the South African Weather Service and the WMO. The opportunity was used to:

- Highlight the importance of Meteorology in Sustainable Development.
- Make key policy makers and influencers aware of the success of the South African Weather Service and the WMO in delivering systems, products and services directly relevant to sustainable development.
- Obtain significant coverage of the key roles of the WMO and the South African Weather Service.
- Make delegates aware of the range of services and benefits provided by the South African Weather Service and the WMO.

# PART 3

## INTERNATIONAL RELATIONS AND THE WORLD SUMMIT ON SUSTAINABLE DEVELOPMENT

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- Bring together scientists, students and the public to focus on meteorological applications geared towards sustainable development.

The Universities of Pretoria, Cape Town, Fort Hare and the Witwatersrand, as well as the meteorological students of the South African Weather Service, were also invited to participate. Most of the staff of the Weather Service volunteered to assist with activities ranging from exhibitions to the transportation of delegates and conference support.

As this was an extraordinary event a great deal of additional procurement had to be done, including land and air transport, accommodation and installations at exhibitions.

The opportunity to properly brand the South African Weather Service and the WMO was maximised. With the support of the WMO and a branding company, a wide range of Weather Service/WMO branded material was provided, including branding through electronic media on big screens.

External communication took the form of media packs and press releases, brochures, internet updates, daily broadcasts on big screens containing video footage, WMO clips, live weather updates, hourly updates and logo animations. Further publicity was obtained through the Summit Radio, media presence at the banquet of the South African Weather Service and the provision of video footage to the SABC.

The South African Weather Service was tasked to plan, coordinate and host parallel events which included the Hydrology Workshop, the joint South African Society for Atmospheric Sciences (SASAS) and African Met. Society conference, as well as the "WMO: Linkages to NEPAD" conference.

Coinciding with the World Summit, the GAW, under the auspices of the South African Weather Service, celebrated 25 years of monitoring atmospheric trace gases. This was effectively linked to the theme of the World Summit with related events.

Exhibitions at the World Summit were held at the Ubuntu village in Sandton, the exhibition for civil society at the NASREC stadium in Soweto, and a WMO exhibition at the Waterdome.

The scientific and technical highlight, of great significance to the scientific operations of the South African Weather Service, was the South African Weather Service-European Space Agency event to mark the launch of the new Meteosat Second Generation Satellite.







PART 4  
CORPORATE SERVICES

## **INFORMATION TECHNOLOGY**

### **UPGRADING OF COMPUTER EQUIPMENT IN THE WEATHER SERVICE**

Most of the old personal computers were replaced during the second half of the year with high quality IBM computers. The number of problems that required IT support reduced dramatically, thereby enabling the computer operators to spend more time on other projects and skills development.

The Forecast Product Generator (FPG), an in-house developed product generator, was implemented in March 2003. Its function is to capture regional and station forecast information for the main regional forecast offices.

Hardware and software for the Meteorological Message Switch System (MMSS) and the Cray SV1 computer were procured. When completed, the upgraded MMSS will ensure faster and more reliable switching of data to and from the countries in southern Africa.

The in-house development of the Meteorological Data Capturing System (MetCap), a system to check various weather observations for data integrity and quality, progressed and was scheduled for implementation later in 2003.

The website of the South African Weather Service, [www.weathersa.co.za](http://www.weathersa.co.za) was maintained and continuously upgraded. Preparations to switch over to a completely re-designed web continued.

### **SADC COUNTRIES:**

#### **DATA COMMUNICATION AND TECHNICAL SUPPORT**

The exchange of data between the South African Weather Service and other meteorological services in southern Africa was further improved by the implementation of direct data lines to Mozambique and Zimbabwe.

Zimbabwe was assisted with the acceptance testing of the MMSS purchased from France.

Tanzania was assisted with the development and installation of a dataflow system.

## **MARKETING AND COMMUNICATIONS**

A brand strategy for the South African Weather Service was developed and steps were taken to identify and grow the organisation's position, pro-actively address branding issues, develop an international branding strategy, gain clear recommendations on corporate identity, help define the brand architecture/structure and create a powerful visual identity.

A pricing model, developed internally, was in use and further guidelines and procedures were developed.

The contract with Cointel on the 082 numbers continued, leading to the generation of revenue for the Weather Service. An additional revenue-earning SMS service, targeted at Vodacom subscribers, was launched in February 2003.

### **LIBRARY**

Information provided by the library supported service delivery. Access was provided to 4300 books, 1095 serial titles and other documents.

### **EXHIBITIONS AND PUBLICITY EVENTS**

The South African Weather Service once again participated at an exhibition at the Nampo Harvest Day in Bothaville, an annual event attracting several thousands of people. With the theme "Marketing the Weather Service to the agricultural community", the event was used to inform the farming community on seasonal forecasts and other weather products and also to raise the profile of the South African Weather Service.

The annual Billabong International Surfing Competition, held at Jeffrey's Bay and attracting national and international competitors, was provided with daily weather forecasts and the expected sea state. Apart from rendering a forecasting service, this opportunity was used to distribute promotional material to create publicity of our weather services and products.

At the annual Bloemfontein Presidential Air Race at Tempe Airport, weather briefings were provided to participants and the opportunity was used to create further publicity for the Weather Service.

Scientific exhibitions and workshops were held at the annual SciFest in Grahamstown, providing a valuable platform for the Weather Service to make school learners aware of the science of meteorology and climatology.

## PROJECT MANAGEMENT

Apart from coordinating and managing the organisation's participation in the WSSD, the Project Office implemented project management and monitoring in the organisation and developed staff in this field. Through project management, horizontal collaboration was promoted between the components. The Project Office had to ensure that all the projects were aligned to the broader organisational business goals and government priorities. In addition, transformation practices in the organisation were also monitored.

The Project Office was furthermore responsible for arranging external travel for personnel of the Weather Service and for coordinating events of the organisation.

## PREPARATIONS FOR THE MOVE TO A NEW HEAD OFFICE BUILDING

The relocation of the South African Weather Service, from the Forum Building, 159 Struben Street, Pretoria to the former SATOUR building in Rigel Avenue South, Erasmusrand, was planned by the Project Office in consultation with senior management of the organisation for final approval of the South African Weather Service Board. The IT division developed contingency plans for the moving of electronic equipment to minimise downtime during the envisaged relocation to Erasmusrand.

## HUMAN RESOURCES MANAGEMENT

### CHANGE MANAGEMENT AND DIVERSITY

The Change and Diversity Management Process, initiated during 2001/2002, continued. A Business Plan for sustained Change Management and Diversity was compiled by Management, the Design Team (with the help of consultants) and other Weather Service personnel.

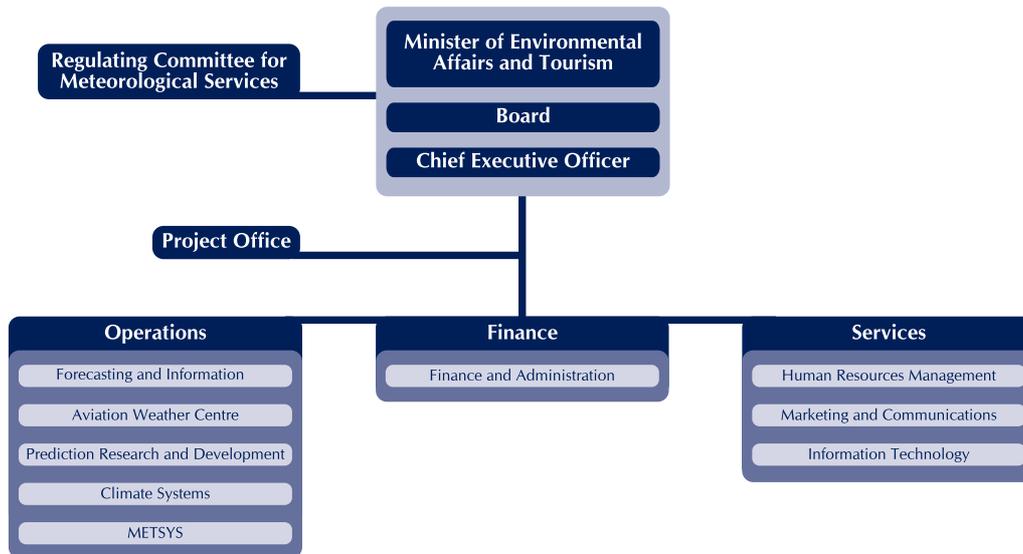
Based on a broad scope of information relating to policies, management styles, operational issues, finance and staffing, other transformation and change related issues, the following key priority issues were identified:

- Finalisation of policies and procedures
- Promotion of internal communication and transparency
- Finalisation of the organisational structure
- Management style/leadership to be enhanced through ongoing training and leadership development
- Career pathing, addressing six priority areas to retain personnel
- Employee contracts to all personnel in accordance with the South African Weather Service Act
- Introduction of a new, suitable Performance Appraisal Management System
- Market-related salaries
- Finance and logistics, focusing on proper and transparent policies and procedures, with decentralisation measures identified as a possible solution
- Fast tracking and the implementation of a workable mentorship programme
- Addressing the lack of capacity to generate income or maintain present services in order to ensure that the organisation is a self-sustaining entity
- Operational issues, including insurance, organisational and personnel liabilities, as well as the promotion of the Meteorological Renaissance in the organisation
- Resolution of historical labour issues
- Promotion of a tolerant and understanding environment to improve the organisational culture
- Recognition and promotion of science as the Core Business of the Weather Service

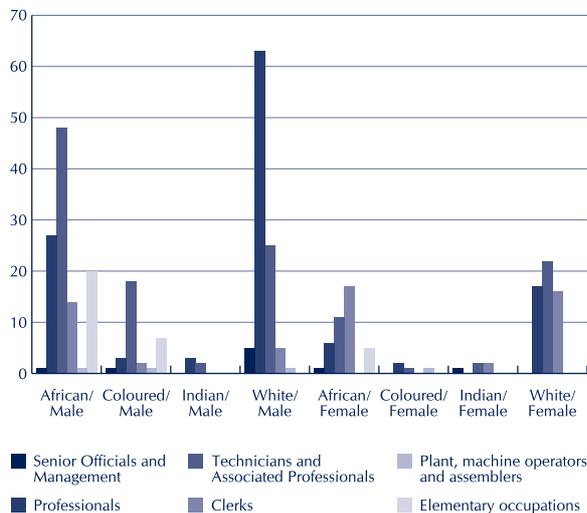
### RECRUITMENT AND EQUITY

The aim of the Employment Equity Programme was to establish norms, measures and guidelines regarding recruitment in order to ensure an effective recruitment programme. It is a comprehensive planning process adopted by the employer to identify and eliminate discrimination in the organisation's procedures and policies in order to minimise discriminatory laws and practices leading to inequalities in employment, occupation and income within the workplace. Furthermore a policy on Human Resource Provisioning was compiled and forwarded to the Board for approval.

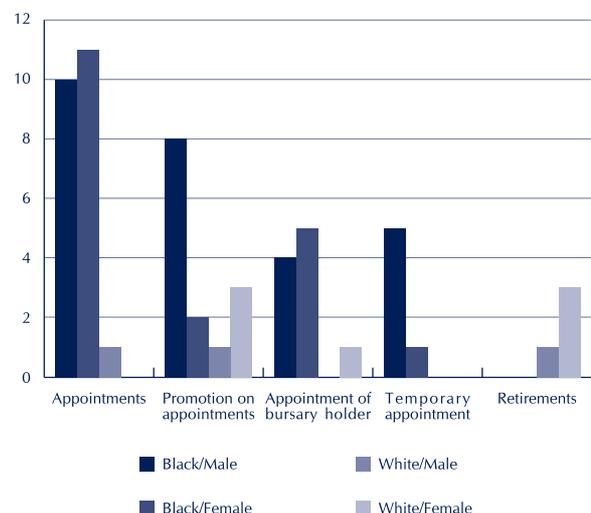
### ORGANISATIONAL STRUCTURE



### WORKFORCE PROFILE

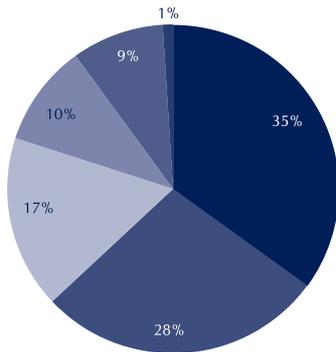


### AFFIRMATIVE ACTION, RECRUITMENT, PROMOTIONS AND TERMINATION OF SERVICES



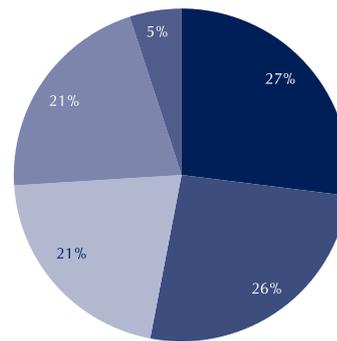
## PERFORMANCE MANAGEMENT

Employees' performance was continuously evaluated and the following is a breakdown of merit awards and notches awarded to employees:



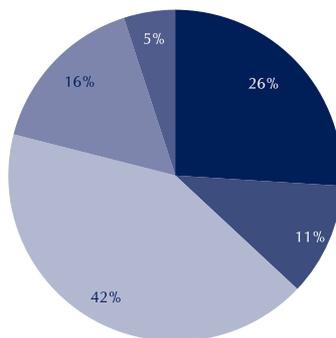
Category A Merit Awards by Race & Gender

- White Male 35%
- White Female 28%
- Black Male 17%
- Black Female 10%
- Coloured Male 9%
- Indian Female 1%



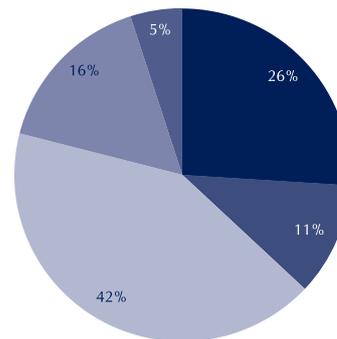
Third Notch Statistics by Race and Gender

- White Male 27%
- White Female 26%
- Black Male 21%
- Black Female 21%
- Coloured Male 5%



Category B Merit Awards by Race & Gender

- White Male 26%
- White Female 11%
- Black Male 42%
- Black Female 16%
- Coloured Male 5%



Second Notch Statistics by Race and Gender

- White Male 26%
- White Female 11%
- Black Male 42%
- Black Female 16%
- Coloured Male 5%

## COLLECTIVE AGREEMENTS, DISPUTES AND DISCIPLINARY STEPS

Four major agreements were concluded, namely the establishment of the Bargaining Forum for the Weather Service, the 2002/2003 9% salary increment, the 2003/2004 8% salary increment, and eighteen policies. Ten disputes concerning alleged unfair discrimination, unfair dismissal and voluntary severance packages were received, of which eight cases were finalised. Employees not satisfied with the outcomes referred some of them to the Commission for Conciliation, Mediation and Arbitration (CCMA). The other cases were still in the process of being resolved. Nine disciplinary enquiries were received, of which five were finalised. Two of the cases were referred to the CCMA by affected employees.





PART 5

AUDIT REPORTS, FINANCIAL STATEMENTS AND OTHER  
FINANCIAL INFORMATION

  
**P A R T 5 - C O N T E N T S**  
**A U D I T R E P O R T S , F I N A N C I A L S T A T E M E N T S A N D O T H E R**  
**F I N A N C I A L I N F O R M A T I O N**

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<b>SECTION</b>	<b>PAGE</b>
Report of the Risk and Audit Committee	34
Report of the Auditor-General	35
Approval by the CEO and Chairperson of the Board	37
Accounting Authority Report	38
 <b>FINANCIAL STATEMENTS:</b>	
Balance Sheet at 31 March 2003	39
Income Statement for the year ended 31 March 2003	40
Statement of Changes in Equity for the year ended 31 March 2003	41
Cash Flow Statement for the year ended 31 March 2003	42
Notes to the Annual Financial Statements for the year ended 31 March 2003	44
Materiality Framework Statement	58

## REPORT OF THE RISK AND AUDIT COMMITTEE FOR THE YEAR ENDED 31 MARCH 2003

We are pleased to present our report for the financial year ended 31 March 2003.

### AUDIT COMMITTEE MEMBERS AND ATTENDANCE

The Audit Committee consists of the members listed hereunder and should meet at least four times per annum as per its approved terms of reference. During the current year eight meetings were held.

Name of member	No. of meetings attended
Mr VP Maluleke	8
Dr J M Matjila	7
Mr D Nadison	5
Ms L Sangweni-Siddo	5

### AUDIT COMMITTEE RESPONSIBILITY

The Audit Committee reports that it has complied with its responsibility arising from section 38 (1) (a) of the PFMA and Treasury Regulation 3.1.13. The Audit Committee Terms of Reference was inadequate. The Audit Committee has since the balance sheet date of 31 March 2003 revised and adopted appropriate formal terms of reference as its audit committee charter, has regulated its affairs in compliance with this charter and has discharged all its responsibilities contained therein.

### THE EFFECTIVENESS OF INTERNAL CONTROL

Based on the various reports of the internal auditors and the report of the independent auditors on the annual financial statement, the Audit Committee is of the opinion that no significant or material non-compliance with prescribed policies and procedures occurred. The Audit Committee has also since the balance sheet date of 31 March 2003 appointed PriceWaterhouseCoopers as internal auditors of the South African Weather Service.

### **The quality of monthly and quarterly reports submitted in terms of the Act**

The Audit Committee is satisfied with the content and quality of the reports prepared by the Chief Financial Officer.

### EVALUATION OF FINANCIAL STATEMENTS

The Audit Committee has

- reviewed and discussed with the external auditors and the Chief Financial Officer the audited annual financial statement to be included in the annual report.

The Audit Committee concurs and accepts the conclusion of the external auditors and has noted the emphasis of matter on the annual financial statements and is of the opinion that the audited annual financial statement be accepted and read together with the report of the independent auditors.

**VP Maluleke**  
**Chairperson of the Audit Committee**  
**5 June 2004**

**REPORT OF THE AUDITOR-  
GENERAL TO PARLIAMENT ON  
THE FINANCIAL STATEMENTS  
OF THE SOUTH AFRICAN  
WEATHER SERVICE FOR THE  
YEAR ENDED 31 MARCH 2003**



**1. AUDIT ASSIGNMENT**

The financial statements as set out on page 39 to 57, for the year ended 31 March 2003, have been audited in terms of section 188 of the Constitution of the Republic of South Africa, 1996 (Act No. 108 of 1996), read with sections 3 and 5 of the Auditor-General Act, 1995 (Act No. 12 of 1995). These financial statements, the maintenance of effective control measures and compliance with relevant laws and regulations are the responsibility of the board. My responsibility is to express an opinion on these financial statements, based on the audit.

**2. NATURE AND SCOPE**

The audit was conducted in accordance with Statements of South African Auditing Standards. Those standards require that I plan and perform the audit to obtain reasonable assurance that the financial statements are free of material misstatement.

An audit includes:

- examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements,
- assessing the accounting principles used and significant estimates made by management, and
- evaluating the overall financial statement presentation.

Furthermore, an audit includes an examination, on a test basis, of evidence supporting compliance in all material respects with the relevant laws and regulations, which came to my attention and are applicable to financial matters.

I believe that the audit provides a reasonable basis for my opinion.

**3. AUDIT OPINION**

In my opinion, the financial statements fairly present, in all material respects, the financial position of the South African Weather Service at 31 March 2003 and the

results of its operations and cash flows for the year then ended, in accordance with generally accepted accounting practice and in the manner required by the Public Finance Management Act, 1999 (Act No. 1 of 1999) (PFMA).

**4. EMPHASIS OF MATTER**

Without qualifying the audit opinion expressed above, attention is drawn to the following matters:

**4.1 Bank reconciliation**

The bank reconciliation at 31 March 2003 was inspected and reconciling items were verified for validity. Documentation supporting a reconciling item between the bank balance and the cash book amounting to R55 338 could not be obtained, resulting in an unexplained difference of the said amount. A submission was made to the board to write off the difference and the board requested further investigation.

**4.2 Finance lease agreement**

In terms of paragraph 32.2.3(b) of the Treasury Regulations leases for public entities listed in schedule 3A may only be entered into through the Minister of Finance. The finance lease was not entered into through the Minister of Finance, which resulted in irregular expenditure. Subsequently a submission was made to the Minister for approval.

**4.3 Management control over the data conversion process**

Management controls regarding the conversion process from the old general ledger and fixed asset systems to the new system were inadequate in that no evidence of a formal conversion project plan could be presented for audit purposes and a formal post-implementation review had not been conducted.

**4.4 Internal control weaknesses**

Weaknesses in the internal control environment included the following:

- Monthly debtors reconciliations were not prepared and authorised.

- VAT reconciliations for April 2002 and June 2002 were not prepared and those prepared were not authorised.
- A number of policy documents had been in draft format since the establishment of the South African Weather Service and were not yet formally approved.
- Policy documents for all relevant functions and sections were not yet drafted.
- A written agreement/service level agreement with a contractor amounting to R7 million was lacking.
- Supporting documents were not readily available.
- Copies of personnel records were not kept in the event of employees being transferred to other departments and two personnel files were misplaced during the move from one building to the other.

Management indicated that the weaknesses in internal controls were being addressed. This will be followed up during the 2003/2004 regularity audit.

#### **4.5 Audit committee**

In terms of paragraph 27.1.6 of the Treasury Regulations the audit committee must operate according to written terms of reference, which must deal adequately with its membership, authority and responsibilities. Adequate terms of reference for the audit committee did not exist for the financial year under review. Furthermore, adequate minutes of meetings were not available to confirm whether it fulfilled its responsibilities for the year as set out in paragraph 27.1.8 of the Treasury Regulations.

#### **4.6 Internal audit**

In terms of paragraph 3.2.6 of the Treasury Regulations, an internal audit must be conducted in accordance with the standards set by the Institute of Internal Auditors. The internal audit work could not be evaluated against these standards as no audit plan and working papers were available. Accordingly, no reliance was placed on the internal audit section. The entity took corrective steps by appointing new internal auditors towards the end of 2003.

#### **4.7 Delegations of authority**

Written delegations of authority in terms of the Public Finance Management Act did not exist for the financial year under review. Subsequently written delegations of authority were approved by the board.

#### **4.8 Land transferred by the minister**

The minister transferred the remainder of part 264 of Garsfontein 374JR (Waterkloof Heights, Pretoria) to the service for the purpose of constructing a head office building. The property is large enough to accommodate much more than head office, but the service did not have sufficient time to finalise the planned utilisation since the land was only transferred on 12 December 2002.

#### **4.9 Late finalisation of report**

The financial statements were submitted by 31 May 2003 as required by section 55(1)(c)(i) of the Public Finance Management Act. Due to capacity constraints the office commenced with the audit at the beginning of August 2003. These financial statements had to be resubmitted for approval by the accounting authority, as a result of significant changes, mainly due to the values of non current assets not being fair. Furthermore, a number of significant issues had to be followed up and addressed by management before the audit could be finalised. This led to further amendments to the fixed assets disclosure in the financial statements. The final set of financial statements was received by this office on 13 August 2004.

## **5. APPRECIATION**

The assistance rendered by the staff of the South African Weather Service during the audit is sincerely appreciated.

**S Labuschagne**  
*for Auditor-General*

**Pretoria**  
**26 August 2004**

PART 5

AUDIT REPORTS, FINANCIAL STATEMENTS AND OTHER  
FINANCIAL INFORMATION

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**APPROVAL BY THE CEO  
AND CHAIRPERSON OF THE BOARD**

The Board of the South African Weather Service is responsible for the maintenance of adequate accounting records and the preparation and integrity of the annual financial statements and related information. The financial statements have been prepared in accordance with Generally Accepted Accounting Practice.

The Board of the South African Weather Service 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. Nothing has come to the attention of the Board to indicate that any material breakdown in the functioning of these controls, procedures and systems has occurred during the year under review.

The annual financial statements are prepared on a going concern basis. Nothing has come to the attention of the Board to indicate that the South African Weather Service will not remain a going concern for the foreseeable future.

The annual financial statements set out on pages 39 to 57 were approved by the Board on 13 August 2004 and signed on its behalf by:



Chief Executive Officer



Chairperson SAWS Board

## ACCOUNTING AUTHORITY REPORT FOR THE YEAR ENDED 31 MARCH 2003

The Accounting Authority hereby presents its report, which forms part of the audited financial statements of the organisation for the year ended 31 March 2003.

### Nature of business

The South African Weather Service is a statutory organisation governed by the South African Weather Service Act, No 8 of 2001. It is primarily engaged in the provision of weather services on a commercial and public good basis.

### Financial results

Full detail of the financial results for the year under review are set out on pages 39 to 57.

### Gross revenue

Gross revenue increased from R60,8 million in 2002 to R93,6 million in 2003. This represents a 54% increase which is mainly attributed to the following:

- an aviation income of R11,5 million which started in November 2002.
- an increase in government grant of R20,7 million from the previous year.

### Net income from investments and interest

Income from investments increased by R0,426 million. This improvement is mainly attributed to bank cash balances. However, this improvement was offset mainly by finance charges attributed to Cray SV1 Supercomputer Hardware/Software lease.

### Operations

Operations carried out by the South African Weather Service are discussed in detail in chapters 2 – 4 of this report.

### Events subsequent to the balance sheet date

No material events occurred subsequent to the balance sheet date and the date of this report.

### Executive and Senior Managers' interest in contracts

No material contracts involving Executive or Senior Managers' interest were entered into in the current year.

### Board and Committee meetings from 1 April 2002 until 31 March 2003

	Other Respon- sibilities	Board Meeting		Executive Committee		Risk and Audit Committee		Commercial and Finance Committee		Programme Committee		TOTAL
		No	R	No	R	No	R	No	R	No	R	
Brundrit GB	11 638	3	8 707									20 345
Maasdorp L	20 496	6	12 013	6	13 812	4	9 799					56 120
Maluleke VP	26 826	5	22 281	4	5 991	4	4 383					59 481
Maqubela NP	54 125	8	24 807							2	2 742	81 674
Rensburg S	70 274	10	35 252	5	10 228			1	2 523			118 277
Sangweni-Siddo L	2 049	6	13 000	1	672	4	2 076	1	1 764			19 561
Swartz DI	2 049	4	15 166									17 215

### Addresses

Registered office: South African Weather Service, 442 Rigel Avenue South, Erasmusrand, Pretoria, 0181  
Postal Address: Private Bag X097, Pretoria, 0001

### Auditors

The South African Weather Service, as a Public Entity, is audited by the Auditor-General or its nominee.



Sizeka Rensburg  
Chairperson of the Board  
Date: 13 August 2004

**FINANCIAL STATEMENTS:  
BALANCE SHEET AT 31 MARCH 2003**

	Notes	2003 R	2002 R
<b>ASSETS</b>			
<b>Non current assets</b>		<b>65 660 003</b>	<b>42 070 333</b>
Property, plant and equipment	4	47 730 003	24 140 333
Investment property	5	17 930 000	17 930 000
<b>Current assets</b>		<b>17 176 126</b>	<b>9 257 906</b>
Inventories	6	1 012 295	1 226 456
Trade and other receivables	7	9 747 963	2 367 880
Cash and cash equivalents	8	6 415 868	5 663 570
<b>TOTAL ASSETS</b>		<b>82 836 129</b>	<b>51 328 239</b>
<b>EQUITY AND LIABILITIES</b>			
<b>Reserves</b>		<b>56 777 427</b>	<b>33 554 259</b>
Non-distributable reserves		58 339 370	39 841 798
Accumulated profits / (losses)		(1 561 943)	(6 287 539)
<b>Non current liabilities</b>			
Long-term borrowings	9	774 201	-
<b>Current liabilities</b>		<b>25 284 501</b>	<b>17 773 980</b>
Short-term portion of long-term borrowings	9	5 491 577	-
Deferred income	10	-	3 081 863
Trade and other payables	11	19 754 378	14 632 844
Donor funding	12	38 546	59 273
<b>TOTAL EQUITY AND LIABILITIES</b>		<b>82 836 129</b>	<b>51 328 239</b>

**INCOME STATEMENT FOR THE YEAR  
ENDED 31 MARCH 2003**

	Notes	2003 R	2002 R
<b>Revenue</b>	<b>13</b>	<b>93 604 947</b>	60 834 068
Selling and administrative expenditure		(2 233 984)	-
Employee costs		(53 101 346)	(41 886 577)
Depreciation		(4 657 874)	-
Other operational expenditure		(35 638 596)	(24 412 524)
Stock adjustments		72 793	(938 167)
<b>Loss from operations</b>	<b>14</b>	<b>(1 954 060)</b>	(6 403 200)
Finance cost	<b>15</b>	(463 097)	(45 840)
Income from investments	<b>16</b>	587 131	161 501
<b>Loss for the year</b>		<b>(1 830 026)</b>	(6 287 539)

**STATEMENT OF CHANGES IN EQUITY FOR THE  
YEAR ENDED 31 MARCH 2003**

	Asset revaluation reserve R	Accumulated profits / (losses) R	Total R
<b>Balance 15 July 2001</b>	-	-	-
Profit for the period as originally stated	-	3 051 378	3 051 378
<b>Balance 31 March 2002</b>	-	<b>3 051 378</b>	<b>3 051 378</b>
Prior year adjustments			
Capped leave provision	-	(8 302 954)	(8 302 954)
Post retirement medical aid provision	-	(1 814 558)	(1 814 558)
Fixed assets adjustment	-	1 716 762	1 716 762
Inventory adjustment	-	(938 167)	(938 167)
Asset revaluation reserve	39 841 798	-	39 841 798
<b>Restated balance 31 March 2002</b>	<b>39 841 798</b>	<b>(6 287 539)</b>	<b>33 554 259</b>
Inventory revaluation reserve expensed	-	3 081 863	3 081 863
Asset revaluation reserve expensed	(3 473 759)	3 473 759	-
Loss for the year	-	(1 830 026)	(1 830 026)
Asset revaluation reserve	21 971 331	-	21 971 331
<b>Balance 31 March 2003</b>	<b>58 339 370</b>	<b>(1 561 943)</b>	<b>56 777 427</b>

The South African Weather Service became a public entity as from 15 July 2001, which led to the establishment of the South African Weather Service Act (Act 8 of 2001). The transfer of fixed assets, post retirement medical aid provision and the leave provision were only approved during December 2002, resulting in the prior year adjustment. The property, plant and equipment revaluation was performed with effective date 1 April 2002. The aircraft and meteorological instruments revaluation was performed with effective date 31 March 2003.

Assets transferred to the South African Weather Service in accordance with the South African Weather Service Act (Act 8 of 2001) were therefore recognized at their fair values. In line with the requirements of Generally Accepted Accounting Practice (GAAP), a non-distributable reserve, equal to the value of the assets, was created in the balance sheet. This revaluation reserve will be recognised and credited to the income statement in line with the depreciation charge expensed, resulting in a nil effect in the income statement.

**CASH FLOW STATEMENT FOR THE YEAR  
ENDED 31 MARCH 2003**

	2003 R	2002 R
<b>CASH FLOW FROM OPERATING ACTIVITIES</b>		
<b>(Loss) for the year</b>	(1 830 026)	(6 287 539)
<b>Adjustment for non cash and other items</b>		
Depreciation	4 657 874	-
Interest received	(587 131)	(161 501)
Interest paid	463 097	45 840
Leave provision	328 505	8 302 954
Post retirement medical aid provision	-	1 814 558
Doubtful debts provision	3 310 785	142 343
Unrealised foreign exchange profit	(252 457)	-
Inventory cost adjustment	(72 793)	938 167
Impairments	1 864 892	-
Profit on disposal of fixed assets	(59 462)	-
<b>Operating profit before working capital changes</b>	<b>7 823 284</b>	<b>4 794 822</b>
<b>Working capital changes</b>	<b>(5 379 155)</b>	<b>2 981 623</b>
Decrease in inventory	286 954	917 241
Increase in accounts receivable	(10 690 868)	(2 510 223)
Increase in accounts payable	5 045 486	4 515 332
(Decrease) / increase in donor funding	(20 727)	59 273
Cash generated from operations	2 444 129	7 776 445
Interest paid	(463 097)	(45 840)
Interest received	587 131	161 501
<b>Net cash inflow from operating activities</b>	<b>2 568 163</b>	<b>7 892 106</b>

**CASH FLOW STATEMENT FOR THE YEAR  
ENDED 31 MARCH 2003**

	Notes	2003 R	2002 R
<b>CASH FLOW FROM INVESTING ACTIVITIES</b>			
Additions to property, plant and equipment		(8 213 195)	(2 228 536)
Proceeds from disposal of property, plant and equipment		131 552	-
<b>Net cash outflow from investing activities</b>		<b>(8 081 643)</b>	<b>(2 228 536)</b>
<b>CASH FLOW FROM FINANCING ACTIVITIES</b>			
Increase in long-term liabilities		774 201	-
Increase in short-term liabilities		5 491 577	-
<b>Net cash inflow from financing activities</b>		<b>6 265 778</b>	<b>-</b>
<b>Net increase in cash and cash equivalents</b>		<b>752 298</b>	<b>5 663 570</b>
Cash and cash equivalents at beginning of year		5 663 570	-
<b>Cash and cash equivalents at end of year</b>	<b>8</b>	<b>6 415 868</b>	<b>5 663 570</b>

**NOTES TO THE ANNUAL FINANCIAL STATEMENTS  
FOR THE YEAR ENDED 31 MARCH 2003**

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**1. PRESENTATION OF FINANCIAL STATEMENTS**

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These financial statements have been prepared on the historical cost basis and are presented in South African Rand since that is the currency in which the majority of the South African Weather Service's transactions are denominated.

**2. ADOPTION OF SOUTH AFRICAN ACCOUNTING STANDARDS**

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In the current year, the South African Weather Service has adopted the following South African Accounting Standards for the first time:

AC 116 (revised)	Employee Benefits
AC 128	Impairment of Assets
AC 133	Financial Instruments: Recognition and measurement
AC 134	Government Assistance
AC 135	Investment Property

Adoption of these Standards has resulted in some changes in the detailed application of the South African Weather Service accounting policies and some modifications to financial statement presentation. However, none of these amendments has affected the results for the current or prior periods.

AC 133 has introduced a comprehensive framework for accounting for all financial instruments. The principal effects of the adoption of AC 133 have been that the investments in securities are now carried at fair value, and that derivative financial instruments have been brought on-balance sheet. At balance sheet date the South African Weather Service did not invest in any securities, and the value of derivative financial instruments amounts to R Nil.

Under AC 134, a grant related to assets is recorded either by setting up a deferred income account in respect of the receipt or by deducting the grant in arriving at the carrying amount of the asset (AC 134.24). The grant is then recognised as income either on a systematic and rational basis over the useful life of the asset, or by way of a reduced depreciation charge over the depreciable asset (AC 134.26-27).

Under AC 135, the South African Weather Service's investment property is accounted for at fair value. Following the adoption of AC 135, gains and losses arising from changes in the fair value of investment property are included in net profit or loss for the period in which they arise.

**3. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES**

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The financial statements have been prepared under the historical cost basis, except for the revaluation of land and buildings.

The financial statements have been prepared in accordance with South African Statements of Generally Accepted Accounting Practice. The principal accounting policies adopted in the preparation of these financial statements are set out below and are consistent in all material respects with those applied in the previous year.

**NOTES TO THE ANNUAL FINANCIAL STATEMENTS (CONTINUED)  
FOR THE YEAR ENDED 31 MARCH 2003****Revenue recognition**

Revenue comprises of fees levied for the supply of weather related information and excludes value-added tax. Revenue from information fees levied is recognised when the information is supplied to the customer.

Interest income is accrued on a time basis, by reference to the principal outstanding and at the interest rate applicable. Project income received is recognised together with the respective expenses in the income statement. Monies received from Donors are recorded as a liability against which expenses are charged, surpluses are either paid back or recognised in the income statement depending on terms of the particular contract.

**Leasing**

Leases are classified as finance leases whenever the terms of the lease transfer substantially all the risks and rewards of ownership to the lessee. All other leases are classified as operating leases.

***The South African Weather Service as a lessee***

Assets held under finance leases are recognised as assets of the South African Weather Service at their fair value at the date of acquisition. The corresponding liability to the lessor is included in the balance sheet as a finance lease obligation. Finance costs, which represent the difference between the total leasing commitments and the fair value of the assets acquired, are charged to the income statement over the term of the relevant lease so as to produce a constant periodic rate of interest on the remaining balance of the obligations for each accounting period.

Rentals payable under operating leases are charged to income on a straight-line basis over the term of the relevant lease.

**Foreign currencies**

Transactions in currencies other than the reporting 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 balance sheet date. Exchange differences arising on the settlement of monetary items or on 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 year under review.

Unrealised gains and losses arising from currency fluctuations are recognised in the income statement.

**Government and other grants**

Government and other grants are accounted when they become receivable as deferred income and recognised on a monthly basis to match the grants with the related costs which they are intended to compensate.

**Taxation**

No provision for taxation was made, as the South African Weather Service is not liable for tax.

## NOTES TO THE ANNUAL FINANCIAL STATEMENTS (CONTINUED) FOR THE YEAR ENDED 31 MARCH 2003

### Property, plant and equipment and depreciation

Assets transferred to the South African Weather Service at 15 July 2001 according to the South African Weather Service Act (Act 8 of 2001) are stated in the balance sheet at their revalued amounts, being the fair value on the basis of their existing use at the date of revaluation, less any subsequent accumulated depreciation. Revaluations are performed with sufficient regularity such that the carrying amount does not differ materially for that which would be determined using fair values at the balance sheet date.

Any revaluation increase arising on the revaluation of land and buildings is credited to the properties 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 income statement to the extent of the decrease previously charged. A decrease in carrying amount arising on the revaluation of land and buildings 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.

On the subsequent sale or retirement of a revalued property, the attributable revaluation surplus remaining in the revaluation reserve is transferred to accumulated profits.

All other items of property, plant and equipment are stated at 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:

	Years
Land and buildings	–
Aircraft	4
Motor vehicles	5
Meteorological instruments	10
Office equipment	3
Computer equipment and software	3
Library books and equipment	3
Furniture and fittings	6
Tools and other equipment	5

Assets held under finance leases are depreciated over their expected useful lives on the same bases as owned assets or, where shorter, the term of the relevant lease.

The gain or loss arising on 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 income.

### Investment property

Investment property, which is property held to earn rentals and/or for capital appreciation, is stated at its fair value at the balance sheet date. Gains or losses arising from changes in the fair value of investment property are included in net profit or loss for the period in which they arise.

**NOTES TO THE ANNUAL FINANCIAL STATEMENTS (CONTINUED)  
FOR THE YEAR ENDED 31 MARCH 2003****Inventories**

Inventories are stated at the lower of cost and net realisable value. Net realisable value represents the estimated selling price less all estimated cost to completion and cost to be incurred in marketing, selling and distribution. Inventory consist of consumable goods only and not held for resale. Cost is determined on the following basis:

Consumable goods are valued using the average cost basis.

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

**Impairment**

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

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.

**Financial instruments*****Financial assets***

The group's principal financial assets are bank balances and cash and trade and other receivables.

Trade and other receivables are stated at their nominal value as reduced by appropriate allowances for estimated irrecoverable amounts.

***Financial liabilities and equity instruments***

Financial liabilities and equity instruments are classified according to the substance of the contractual arrangements entered into.

Significant financial liabilities include interest-bearing liabilities and trade and other payables.

Interest-bearing liabilities are recorded at the proceeds received, net of direct issue costs. Finance charges, including premiums payable on settlement or redemption, are accounted for on an accrual basis and are added to the carrying amount of the instrument to the extent that they are not settled in the period in which they arise.

Trade and other payables are stated at their nominal value.

**Provisions**

Provisions 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.

**Post Retirement medical aid contribution**

The South African Weather Service has an obligation to contribute towards retired employee's medical aid funds.

**NOTES TO THE ANNUAL FINANCIAL STATEMENTS (CONTINUED)  
FOR THE YEAR ENDED 31 MARCH 2003**

The amount recognised in the balance sheet represents the value of the defined benefit obligation calculated by multiplying the number of employees over the age of 59 with their respective contributions and expected life span.

**Retirement benefits**

Contributions to the defined contribution plans are charged to the income statement as occurred.

**4. PROPERTY, PLANT AND EQUIPMENT**

<b>Cost or valuation</b>	<b>Opening balance R</b>	<b>Additions R</b>	<b>Disposals R</b>	<b>Impairment Loss/ Reclassify/ Revalue R</b>	<b>Closing balance R</b>
Commercial property	8 960 000	-	-	-	8 960 000
Aircraft	10 400 000	-	-	(687 750)	9 712 250
Motor vehicles	2 021 798	-	(90 113)	-	1 931 685
Meteorological instruments	1 864 892	-	-	19 037 791	20 902 683
Office equipment	157 220	6 797	-	(120 426)	43 591
Computer equipment and software	530 000	7 398 163	-	1 860 025	9 788 188
Library books and equipment	14 668	1 936	-	-	16 604
Furniture and fittings	173 637	802 917	-	-	976 554
Tools and other equipment	18 118	3 382	-	16 799	38 299
	<b>24 140 333</b>	<b>8 213 195</b>	<b>(90 113)</b>	<b>20 106 439</b>	<b>52 369 854</b>

<b>Accumulated depreciation</b>	<b>Opening balance R</b>	<b>Current year R</b>	<b>Disposals R</b>	<b>Reclassify / Revalue R</b>	<b>Closing balance R</b>
Commercial property	-	-	-	-	-
Aircraft	-	2 600 000	-	-	2 600 000
Motor vehicles	-	404 359	(18 023)	-	386 336
Meteorological instruments	-	-	-	-	-
Office equipment	-	11 098	-	-	11 098
Computer equipment and software	-	1 524 652	-	-	1 524 652
Library books and equipment	-	5 456	-	-	5 456
Furniture and fittings	-	105 199	-	-	105 199
Tools and other equipment	-	7 110	-	-	7 110
	<b>-</b>	<b>4 657 874</b>	<b>(18 023)</b>	<b>-</b>	<b>4 639 851</b>

Due to revaluation at 1 April 2002, the breakdown of the opening balance of the current year cannot be disclosed.

**NOTES TO THE ANNUAL FINANCIAL STATEMENTS (CONTINUED)  
FOR THE YEAR ENDED 31 MARCH 2003**

	2003 R	2002 R
<b>4. PROPERTY, PLANT AND EQUIPMENT (continued)</b>		
<b>Net book value</b>		
Commercial property	8 960 000	8 960 000
Aircraft	7 112 250	10 400 000
Motor vehicles	1 545 349	2 021 798
Meteorological instruments	20 902 683	1 864 892
Office equipment	32 493	157 220
Computer equipment and software	8 263 536	530 000
Library books and equipment	11 148	14 668
Furniture and fittings	871 355	173 637
Tools and other equipment	31 189	18 118
	<b>47 730 003</b>	<b>24 140 333</b>

The carrying amount of the computer equipment includes an amount of R7 027 921 in respect of assets held under finance leases.

**5. INVESTMENT PROPERTY**

Fair value of investment property	26 890 000	26 890 000
Less Commercial property (Refer Note 4)	(8 960 000)	(8 960 000)
	<b>17 930 000</b>	<b>17 930 000</b>

CA Young Valuations carried out a valuation for the land in Garsfontein. The valuation was accepted to also reflect the fair value as at 31 March 2003. The title deed to the property has not yet been passed to the name of the South African Weather Service.

Property consultants were requested to value the buildings in Bethlehem and Irene. Careful consideration should be given to the fact that in both Irene and Bethlehem, buildings were transferred without the land they are situated on. The legal position is still outstanding.

**NOTES TO THE ANNUAL FINANCIAL STATEMENTS (CONTINUED)  
FOR THE YEAR ENDED 31 MARCH 2003**

	2003 R	2002 R
<b>6. INVENTORIES</b>		
Consumables and maintenance goods	1 012 295	1 226 456
<b>7. TRADE AND OTHER RECEIVABLES</b>		
Trade receivables	12 361 242	369 757
Less: Provision for doubtful debts	(3 453 128)	(142 343)
Prepayments	261 127	382 034
Other receivables	578 722	1 758 432
	9 747 963	2 367 880

No penalties or interest is charged on these and any long outstanding trade debtor accounts. The carrying amount of trade and other receivables approximate their fair value.

**Doubtful debts provision:**

Opening balance	142 343	-
Provision raised	3 310 785	142 343
Closing balance	3 453 128	142 343

**8. CASH AND CASH EQUIVALENTS**

Bank balances and cash	6 415 868	5 663 570
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Bank balances and cash comprise cash and short-term deposits held by the South African Weather Service. The carrying amounts of these assets approximate their fair value.

Credit risk on liquid funds is limited because the counter parties are banks with high credit ratings, assigned by international credit-rating agencies.

The South African Weather Service has no significant concentration of credit risk, with exposure spread over a large number of counter parties and customers.

**NOTES TO THE ANNUAL FINANCIAL STATEMENTS (CONTINUED)  
FOR THE YEAR ENDED 31 MARCH 2003**

	<b>2003 R</b>	<b>2002 R</b>
<b>9. BORROWINGS</b>		
Long-term lease liability	6 265 778	-
Short-term portion of long-term lease liability	(5 491 577)	-
	774 201	-

**IBM Finance lease:**

Contract commencement date:	31 March 2003
Effective interest:	30.5%
Payment:	12 monthly payments of R532 705 (excluding VAT), in advance, for the period 1 April 2003 to 31 March 2004. No further payments up to 31 March 2005.
Term:	24 months
Other:	VAT of R859 301 is payable on 1 April 2003.

The South African Weather Service has the following options at the end of the term (31 March 2005):

- Return equipment at no additional charge, or
- Renew lease for a further period, or
- Acquire ownership at an amount not exceeding R977 147.63 (excluding VAT).

**RFC Finance lease:**

Contract commencement date:	30 November 2002
Effective interest:	17%
Payment:	24 monthly payments of R7 726 (including VAT), in advance, for the period 30 November 2002 to 31 October 2004.
Term:	24 months

**Present value of minimum lease payments**

Amounts payable under finance leases		
Within one year	6 485 177	-
In the second to fifth year inclusive	1 031 233	-
	7 516 410	-
Less: Future finance charges	(1 250 632)	-
Present value of lease obligations	6 265 778	-
Less: Amount due within 12 months (shown under current liabilities)	(5 491 577)	-
	774 201	-

**NOTES TO THE ANNUAL FINANCIAL STATEMENTS (CONTINUED)  
FOR THE YEAR ENDED 31 MARCH 2003**

	<b>2003</b>	<b>2002</b>
	<b>R</b>	<b>R</b>

**9. BORROWINGS (continued)**

All lease obligations are denominated in Rand.

The fair value of the South African Weather Service's lease obligations approximates their carrying amount.

The South African Weather Service's obligations under finance leases are secured by the lessor's charge over the leased assets. (Refer Note 4)

**10. DEFERRED INCOME**

Deferred income	-	<u>3 081 863</u>
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The South African Weather Service became a public entity as from 15 July 2001, which led to the establishment of the South African Weather Service Act (Act 8 of 2001). The transfer of inventory was only approved during December 2002, resulting in the prior year adjustment.

Inventories transferred to the South African Weather Service in accordance with the South African Weather Service Act (Act 8 of 2001) were therefore recognised at their fair values. In line with the requirements of the GAAP, deferred income, equal to the value of the inventories, was created in the balance sheet. This deferred income was recognised and credited to the income statement in line with the consumption of the inventory, resulting in a nil effect in the income statement.

**11. TRADE AND OTHER PAYABLES**

Trade payables	7 194 998	2 960 419
Other payables	1 763 505	52 822
Sundry accruals	349 858	1 502 091
Post retirement medical aid provision	1 814 558	1 814 558
Capped leave and leave provision	8 631 459	8 302 954
	<u>19 754 378</u>	<u>14 632 844</u>

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 (CONTINUED)  
FOR THE YEAR ENDED 31 MARCH 2003**

	2003 R	2002 R
<b>11. TRADE AND OTHER PAYABLES (continued)</b>		
Spot rates at year-end		
1 USD = R7.889		
1 EUR = R8.609		
<b>Foreign exchange rate exposure:</b>	<b>2003 Foreign Currency</b>	<b>2003 R</b>
Vaisala – USD	USD 9 200	72 579
Vaisala – EUR	EUR 314 955	2 711 448
CLS – EUR	EUR 40 025	344 575
Radar Technology – USD	USD 1 557	12 283
American Meteorological Society – USD	USD 2 822	22 263
Swets Blackwell – USD	USD 2 750	21 695
		3 184 843

**Post retirement medical aid provision:**

The amount for the post retirement medical aid provision was calculated by multiplying the number of employees over the age of 59 with their respective contributions and expected life span.

**Leave provision:**

Opening balance	8 302 954	-
Provision raised	328 505	8 302 954
Closing balance	8 631 459	8 302 954

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.

**12. DONOR FUNDING**

Donor funds available	38 546	59 273
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**NOTES TO THE ANNUAL FINANCIAL STATEMENTS (CONTINUED)  
FOR THE YEAR ENDED 31 MARCH 2003**

	<b>2003 R</b>	<b>2002 R</b>
<b>13. REVENUE</b>		
An analysis of the South African Weather Service's revenue is as follows:		
Government grants	78 346 000	57 649 465
Aviation income	11 508 582	-
Information fees	2 289 212	1 883 813
Other income	870 425	20 259
Project income	590 728	-
Donations	-	1 280 531
	<b>93 604 947</b>	<b>60 834 068</b>

**14. LOSS FROM OPERATIONS**

**Loss from operations has been arrived at after charging  
(crediting):**

Net foreign exchange (profit) / loss	(565 503)	550 082
Auditor's remuneration	93 476	110 000
Legal fees	450 095	35 944
Bad debt	10 786	142 138
Communication cost refund	(3 549 390)	-
Net profit on disposal of property, plant and equipment	(59 462)	-
Operating lease payments	948 859	1 219 960
Project expenditure	233 113	-
Impairment losses from meteorological instruments	1 864 893	-
<b>Depreciation:</b>		
Aircraft	2 600 000	-
Motor vehicles	404 359	-
Office equipment	11 098	-
Computer equipment and software	1 524 652	-
Library books and equipment	5 456	-
Furniture and fittings	105 199	-
Tools and other equipment	7 110	-
	<b>4 657 874</b>	<b>-</b>

**NOTES TO THE ANNUAL FINANCIAL STATEMENTS (CONTINUED)  
FOR THE YEAR ENDED 31 MARCH 2003**

	<b>2003 R</b>	<b>2002 R</b>
<b>15. IMPAIRMENT LOSSES</b>		
The impairment loss is due to meteorological instruments that were part of the radar assets	<b>1 864 893</b>	-

**16. FINANCE COST**

**Interest paid:**

Interest charges by suppliers	105 176	45 840
Financial leases	357 921	-
	<b>463 097</b>	45 840

**17. INCOME FROM INVESTMENTS**

**Interest received:**

Bank balances and cash	<b>587 131</b>	161 501
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**18. NON-CASH TRANSACTIONS**

Additions to property, plant and equipment during the year amounting to R6 276 884 were financed by new finance leases.

**19. CONTINGENT LIABILITY**

A contingent liability relating to copyright royalties claimed on certain software exists at balance sheet date. The amount and the exposure relating to this liability has as yet not been quantified.

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. There are 59 loans, the amount and exposure relating to this liability is estimated at approximately R956 902.

**20. OPERATING LEASE ARRANGEMENTS**

Amounts payable under operating leases:

Within one year	-	<b>1 081 699</b>
In the second to fifth year inclusive	-	-
	-	<b>1 081 699</b>

**NOTES TO THE ANNUAL FINANCIAL STATEMENTS (CONTINUED)  
FOR THE YEAR ENDED 31 MARCH 2003**

Minimum lease payments	1 081 699	1 390 756
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This lease was entered into by the Department of Environmental Affairs and Tourism, South African Weather Bureau and RFC Finance Close Corporation for 1 Cray SV1 Supercomputer Hardware/Software, commencement date 28 October 1999 for 36 months and expiry date 28 October 2002.

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**21. NON-EXECUTIVE AND EXECUTIVE MEMBERS' REMUNERATION**

Brundrit GB – Board Member	20 345	-
Maasdorp L – Board Member	56 120	-
Maluleke VP – Board Member	59 481	-
Maqubela NP – Board Member	81 674	-
Rensburg S – Board Member	118 276	-
Sangweni-Siddo L – Board Member	19 561	-
Swartz DI – Board Member	17 215	-
Nadison D – CEO resigned November 2002	571 403	-
Kgaga GT – CFO resigned December 2002	350 744	-
Schulze GC – COO	503 725	-
	1 798 544	-

**Executive members' service contracts:**

In order to retain key members of the executive management team, service contracts have been entered into for periods in excess of one year.

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**22. COMPARATIVE FIGURES**

Certain comparative figures have been reclassified to correctly reflect the amounts and disclosure on a basis consistent with the current year.

**NOTES TO THE ANNUAL FINANCIAL STATEMENTS (CONTINUED)  
FOR THE YEAR ENDED 31 MARCH 2003**

**23. PRIOR YEAR ADJUSTMENTS**

The South African Weather Service became a public entity as from 15 July 2001, which led to the establishment of the South African Weather Service Act no. 8 of 2001. The transfer of fixed assets, inventory, post retirement medical aid provision and the leave provision were only approved during December 2002, resulting in the following prior year adjustments:

**Property, plant and equipment (including investment property) – Cost/valuation**

Original balance as at 31 March 2002	511 773
Fixed assets adjustment – assets previously expensed now capitalised	1 716 762
Fixed assets revaluation	39 841 798
Restated balance as at 31 March 2002	<u>42 070 333</u>

**Inventory**

Original balance as at 31 March 2002	(917 240)
Inventory adjustment	(938 167)
Inventory revaluation	3 081 863
Restated balance as at 31 March 2002	<u>1 226 456</u>

The inventory adjustment relates to an income statement account which was incorrectly classified as a balance sheet account in the 31 March 2002 financial statements.

**Current liabilities**

Original balance as at 31 March 2002	4 574 605
Capped leave provision adjustment	8 302 954
Deferred income	3 081 863
Post retirement medical aid provision adjustment	1 814 558
Restated balance as at 31 March 2002	<u>17 773 980</u>



## MATERIALITY FRAMEWORK STATEMENT

Section 28.1.5 – “For purposes of material (section 50(1), 55(2) and 66(1) of the Public Finance Management Act and significant (section 54(2) of the PFMA), the accounting authority must develop and agree a framework of acceptance levels of materiality and significance with the relevant executive authority in consultation with the external auditors.

Statement of Auditing Standard (SAAS) 320.03 defines materiality as follows: “ Information is material if its omission or misstatement could influence the economic decisions of users taken on the basis of the financial statements. Materiality depends on the size of the item or error judged in the particular circumstances of its omission or misstatement. Thus, materiality provides a threshold or cut-off point, rather than being a primary qualitative characteristic which information must have for it to be useful.

The South African Weather Service deals with the framework under two main categories, being the qualitative and quantitative aspects.

### Quantitative aspects

The Auditor-General has provided guidelines, which provide the basis of establishing materiality limits. Using the guidelines, the South African Weather Service has a material amount as being R468 025. This has been determined by applying 0,5% on the gross annual turnover of R93 605 083.

In determining the said materiality value of R468 025, we also took cognisance of the following:

- Nature of the business of the South African Weather Service  
The funding of the South African Weather Service is twofold, by means of a government grant received from the Department of Environmental Affairs and Tourism and through commercial income being generated for weather information provided.  
  
Given the nature of the South African Weather Service to be a revenue-driven organisation, preference is given to gross revenue as basis of defining the level of materiality.
- Statutory and disclosure requirements laid down by the PFMA and its regulations.
- Control and inherent risk associated with the systems of internal control at the South African Weather Service.

### Qualitative Aspects

Materiality is not merely related to the size of the entity and the elements of its financial statements. Obviously, misstatements that are large either individually or in the aggregate may affect a “reasonable” user’s judgement. However, misstatements may also be material on qualitative grounds. These qualitative grounds include amongst others:

- New ventures that the South African Weather Service has entered into.
- Unusual transactions entered into that are not of repetitive nature and are disclosed purely due to the nature of knowledge thereof affecting the decision-making of the user of the financial statements.
- Transactions entered into that could result in reputational risk to the South African Weather Service.
- Any fraudulent or dishonest behaviour of an officer or staff of the South African Weather Service.
- Procedures/processes required by legislation or regulation (e.g. PFMA and the Treasury Regulations).



## LIST OF ABBREVIATIONS

<b>AMPS</b>	- Antarctic Mesoscale Prediction System
<b>ARC</b>	- Agricultural Research Council
<b>AWS</b>	- Automatic Weather Station
<b>BSRN</b>	- Baseline Surface Radiation Network
<b>CCMA</b>	- Commission for Conciliation, Mediation and Arbitration
<b>CEO</b>	- Chief Executive Officer
<b>CLIPS</b>	- Climate Information and Publication Services
<b>DEAT</b>	- Department of Environmental Affairs and Tourism
<b>FPG</b>	- Forecast Product Generator
<b>GAAP</b>	- Generally Accepted Accounting Practice
<b>GAW</b>	- Global Atmosphere Watch
<b>GIS</b>	- Geographic Information System
<b>GPS</b>	- Global Positioning System
<b>ICAO</b>	- International Civil Aviation Organization
<b>IOC</b>	- International Oceanographic Commission
<b>IT</b>	- Information Technology
<b>MetCap</b>	- Meteorological Data Capturing System
<b>METSYS</b>	- Meteorological Systems
<b>MMSS</b>	- Meteorological Message Switch System
<b>NEPAD</b>	- New Partnership for Africa's Development
<b>NCAR</b>	- National Centre for Atmospheric Research
<b>NWP</b>	- Numerical Weather Prediction
<b>NWRN</b>	- National Weather Radar Network
<b>PFMA</b>	- Public Finance Management Act
<b>RSMC</b>	- Regional Specialised Meteorological Centre
<b>SAAS</b>	- Statement of Auditing Standard
<b>SABC</b>	- South African Broadcasting Corporation
<b>SADC</b>	- Southern African Development Community
<b>SANAE</b>	- South African National Antarctic Expedition
<b>SAQA</b>	- South African Qualifications Authority
<b>SARCOF6</b>	- 6 <sup>th</sup> Southern African Regional Climate Outlook Forum
<b>SASAS</b>	- South African Society for Atmospheric Sciences
<b>SAWS</b>	- South African Weather Service
<b>SOLAS</b>	- Safety of Life at Sea
<b>TETA</b>	- Transport Education and Training Authority
<b>UAE</b>	- United Arab Emirates
<b>WMO</b>	- World Meteorological Organization
<b>WRC</b>	- Water Research Commission
<b>WSSD</b>	- World Summit on Sustainable Development

