WATER RESEARCH COMMISSION

ANNUAL REPORT 2010/11

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Annual Report 2010/11
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VISION & MISSION

Vision

To be a globally recognised leader in providing innovative solutions for sustainable water management to meet the changing needs of society and of the environment.

Mission

The WRC is a dynamic hub for water-centred knowledge, innovation and intellectual capital.

We provide leadership for research and development through the support of knowledge creation, transfer and application.

We engage stakeholders and partners in solving water-related problems which are critical to South Africa's sustainable development and economic growth, and are committed to promoting a better quality of life for all.

CHAIRPERSON'S ADDRESS

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The year under review was a great time of celebration nationally as we enjoyed the spirit of the Soccer World Cup, during which South Africa successfully provided adequate water and sanitation services to many spectators from all over the world. There were also many WRC achievements which I am pleased to report on for the 2010/11 financial year.

Achievements and celebrations

The WRC continued to provide the country with a constant flow of knowledge. In the year under review the WRC finalised 76 research projects and published 109 reports. A strength of the WRC is that it funds far and wide; over 300 organisations were involved in projects throughout the country. Students are supported through research projects, to develop student research capacity and provide a new generation of researchers. It is great to see that our water research efforts are being acknowledged internationally. The Vaalharts Water User Association received an international award for decreasing water losses from the largest irrigation scheme in South Africa. The system implemented at Vaalharts was developed with funding mainly from the WRC. The WRC and DWA worked closely together to evaluate the final Wastewater Risk Abatement Plan. It is pleasing to see that this is one of the first initiatives worldwide to put in place a guideline to plan for and apply a risk-based approach to raise and sustain wastewater performance.

The International Year of Biodiversity in 2010 was celebrated in partnership with SANBI and the Departments of Water and Environmental Affairs. The CEO, Dr Kfir, presented the memorial lecture at the annual Excellence in Water Research Awards in October 2010. The presentation 'In search for water wisdom – from research to application: A tribute to South Africa's water sector' was enjoyed by all. A special publication has been written, to be launched in September 2011, to mark the celebration of 40 years of the WRC.

Relevance

Research funded by the WRC remains committed to nationally relevant topics. Water research needs and priorities captured in the strategic research plan took into account Ministerial flagship projects and priorities, Government's outcomes and national needs, the research and development strategy of other government departments, consultation with stakeholders and the latest developments in science and technology. WRC staff have been involved with important national interventions such as those on climate change and acid mine drainage. In collaboration with DWA the position paper on water, as a potential item on the Conference of the Parties agenda during COP16, was drafted. The WRC also formed part of the team of experts that provided inputs to the acid main drainage assessment and recommendations to deal with this issue. This was based on both past and ongoing research.

The WRC funds research related to the entire water cycle, thus addressing key issues relating to human health, the economy and the environment. WRC research addressed the needs of society; standards and guidelines for optimising municipal bills were developed, user-friendly guides were published for the use of grey-water for food production and research addressed small-scale irrigation farmers and the use of water, showing how yields can be significantly improved. We are a step closer towards protecting our precious natural resources through research completed on methods for determining the environmental water requirements of non-perennial rivers. In another project adaptive management strategies and models have been identified for the protection of groundwater resources. Measures to address deteriorating water quality remain important; completed research has recommended the removal of phosphates from detergents in order to reduce eutrophication, particularly in important dams.

Innovation

The WRC provided new knowledge to advance our country's economic growth through tools to combat water scarcity and improve productivity. Innovative solutions and designs are continually being sought to ensure water saving; an example from the year under review is the development of a pour-flush toilet. A first in Africa is the development, in collaboration with the CSIR, of the Sanitation Technology Demonstration Centre. This displays various existing and new sanitation technology options and is an example of knowledge dissemination through practical and visual information. A research scoping study has shown the future potential for hydropower by retrofitting hydropower generation facilities at existing dams to utilise untapped energy.

Collaboration

New research partnerships have been formed locally and internationally. The WRC shows leadership through these networks in coordinating research efforts. Collaboration has grown, with a Memorandum of Understanding with Eskom to fund and undertake research linked to sustainable water management and energy generation. The research needs of local government have been strengthened through collaboration with SALGA. Many proposals were submitted for funding for research starting in 2011; however, sufficient funds were not available to support all of the proposals submitted and leverage funding and collaborative efforts are therefore important. Funding needs to grow to address the many water challenges in our country, as issues of water scarcity, energy and food security are intensifying. In particular, there is a need to build and strengthen research capacity and infrastructure.

Knowledge sharing

The WRC invests in a range of tools to ensure effective transfer of information and technology. The *Water Wheel* magazine is an outstanding publication that provides a dissemination tool for research outputs, in a popular format for all to understand. The first 'new-look' *Water Wheel* issue in May 2010 was very well received by readers. A DVD on the water cycle was produced as an introduction to the fundamentals of water resource management. The brochures advertising all of the research reports published on various topics (e.g. sanitation, water and health, groundwater and climate change) have also proven to be very popular. Technical and policy briefs were also published during the year under review. A measure of research excellence is the number of peer-reviewed research outputs (i.e. journal articles, books, conference proceedings) arising from WRC-funded projects. A publication tool has been developed so that an auditable record of these outputs can be provided in the future.

Governance

Governance practices and procedures, particularly reporting requirements as required by the Public Finance Management Act and Treasury Regulations, are growing, and the Board has put emphasis on addressing these. Compliance to King III ensures that the WRC follows best-practice in terms of corporate governance. A gap analysis was completed to identify those areas that still need to be addressed. The Board approved the WRC Intellectual Property Management Policy and we are proud that the WRC is one of the first organisations in South Africa to have aligned itself with the new Intellectual Property Rights Act (No. 51 of 2008).

Appreciation

In conclusion, I would like to thank the Minister of Water and Environmental Affairs for her support, leadership and strategic guidance in the water sector. Board members are thanked for their inputs and diligent support during the year under review. On behalf of the Board, I also wish to thank the management and staff of the WRC for their achievements during the past year. The important role that WRC research managers and directors have in promoting, leading and coordinating water research is recognised. Expertise is developed over many years and their dedication to the sector and work within the WRC is commended. Lastly we express our sincere gratitude and appreciation to the committed water researchers throughout the country. We count on your continuing support as we work together to provide excellent research, new water knowledge and innovation.

Prof JB Adams
Chairperson of the Board

Photo by Dirk Roux

HIGHLIGHTS 2010/11

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During the year under review, the WRC remained committed to its mandate and strived towards supporting the water sector and all its relevant institutions and partners. This was achieved by providing knowledge through research aligned to the Governmental, and more specifically the Department of Water Affairs' (DWA), overarching objective of economic growth and sustainability. The WRC has led and coordinated a wide range of research projects, addressing medium- to long-term challenges facing South Africa. This included research and strategic partnerships addressing issues of regional and international priority. The WRC, through its research, aimed to address its overarching objectives, with a special emphasis on water issues that could positively impact on the quality of life of all South Africans. During 2010/11 these objectives addressed socio-economic issues as well as environmental sustainability and human health. Research conducted in this regard included aspects of both resource quality and quantity, with special emphasis on mitigation and adaptation to climate change. Another key research area addressed the development and refinement of technologies and policies for various water uses, aiming, among others, to make access to water and sanitation a reality for all. Other key research areas during 2010/11 included food security, sustainable groundwater utilisation, integrated water resource management, irrigation efficiency, biodiversity protection and capacity building. A handful of highlights and achievements of the year under review are listed on page 14-23.

The WRC has identified four impact areas which serve as its overarching objectives and support its mission of making a difference through knowledge creation. These four areas are directly linked to the national objectives of economic growth and sustainability and address key national priorities. The aim is to link the solutions to water issues relating to an overall improved quality of life for all South Africans. This has been achieved, during 2010/11, in numerous cases where the WRC, by transferring water-centred knowledge, has directly or indirectly had a positive impact on issues related to water and society, water and the economy as well as environmental sustainability and human health.

PROTECTING OUR WATER RESOURCES

Predicting the effects of climate change

A WRC study completed in 2010/11 investigated the potential effects of climate change on second-order impacts, i.e., ecological flow indicators and water temperature parameters. This was achieved by downscaling output data from a broad-scale general circulation model (GCM) and then using the results as input data into the daily time-step ACRU hydrological model (an agro-hydrological modelling system), thus simulating the impacts of climate change on selected eco-hydrological indicators at a fine spatial scale. The study made a number of recommendations which have already been taken into account in new climate change projects commissioned by the WRC, including the need to reduce the uncertainties associated with model projections into the distant future, and incorporation of land-use information in the hydrological model.

Exploring groundwater potential

A significant portion of sub-Saharan Africa is underlain by basement aquifers. These types of aquifers are considered to be of minor importance in hydrological terms, but nevertheless provide water for millions of people on the continent. The development and management of groundwater resources in these types of terrain presents water managers with a complex problem. A recent WRC study brought together various contributions from across Southern Africa and provides an excellent holistic knowledge resource for the benefit of the sub-continent as a whole. Several management strategies and models are proposed for the effective management of groundwater in basement terrains. In most instances, there is a lack of information that has been derived from collected data and

from which management policies and schemes can be developed. The study clearly indicated that, in order to protect groundwater resources and to generate additional supplies of water in circumstances of scarcity, effective management will have to rely on adaptive management strategies.

Reserve determination for non-perennial rivers

The determination of the ecological Reserve, also referred to as environmental water requirements or environmental flows, is key for a healthy river. The Reserve is part of the national water resource within each water management area that is 'set aside' to provide for basic human needs and to sustain healthy aquatic ecosystems. The hydrology of non-perennial rivers differs from that of perennial rivers, being much more variable in time and space, creating high levels of disturbance for stream communities. Previous WRC research has revealed the need for different Reserve determination approaches for perennial and non-perennial systems; standard hydrological models cannot be applied along the entire hydrological spectrum from perennial to episodic. Of particular importance is the need to consider the changing relevance of groundwater in relation to surface water in systems of differing non-perenniality. A WRC study completed in 2010/11 identified which existing methods are potentially suitable for use in non-perennial rivers. A prototype methodology for determining the environmental water requirements for non-perennial rivers was developed, comprising 11 phases and 28 activities. The method acknowledges and captures the most essential characteristics of non-perennial rivers, and provides as its output a description of the expected status of key biophysical and socio-economic indicators under a range of possible future flow management options.

Combating eutrophication

Phosphate contained in powdered laundry detergents contributes to the phosphate load of wastewater streams and ultimately effluents. The compounding effect of the apparent failure to reach the legislated 1 mg/ℓ effluent phosphate concentration standard is eutrophication of water resources. A recent study investigated the positive and negative consequences associated with the introduction of zero-phosphate (zero-PO_4) powdered

laundry detergents into the South African market. The project estimated the impact detergent phosphates are having on the phosphate loading and efficacy of wastewater treatment plants as well as the frequency and severity of algal blooms in strategic storage reservoirs. Based on the figures calculated, it is suggested that the total phosphorus loading at storage reservoirs could be reduced significantly by eliminating detergent phosphorus. The environmental benefits of a lower nutrient load have been shown to be significant enough to support the proposal to remove phosphates from detergents. Elimination of detergent phosphates will undoubtedly assist many facilities in achieving better effluent phosphate concentrations and in the long-run improve the health of our water resources.

Mini water temperature loggers

WRC research has led to the successful refinement of a prototype design for a mini water temperature logger. The outcome has been a small, robust data logger, with associated peripherals including software, which has proved its worth under testing. With its small size it will easily be hidden under the rocks or surface of rivers and other water resources. Instrument configuration and data download is accomplished wirelessly using a simple hand-held device. In the past South Africa has relied heavily on data loggers imported from the USA – a locally-produced temperature logger will be of economic value to researchers and the Departments of Water and Environmental Affairs, as climate change warrants constant monitoring of fluctuations of water temperatures and salts. The design of the loggers has incorporated retro-add capabilities that will enable other measurements to be incorporated into the same physical dimensions. Currently an upgraded version, which incorporates additional measurement of electrical conductivity, is being designed and tested. Although per-unit costing is dependent on future build volumes and demand, it is evident that the loggers will be significantly cheaper than any other product currently on the market.

Sediment yield prediction for Southern Africa

As anthropogenic actions increase, so do the impacts of these activities on water availability, e.g., reservoir silting and reduced catchment water yields. Silting or sediment yield is more pronounced in water-scarce countries such as South Africa, which has hundreds of dams that have had their capacities impacted by silting. A WRC study completed in 2010/11 developed a sediment yield determination methodology for Southern Africa, by revising current procedures and guidelines for the prediction of sediment yields from ungauged catchments. The resulting catchment erosion and sediment yield modelling methods can be applied in temporal and spatial analyses of sediment yields within a catchment, from a point scale to a catchment scale – where the results will be essential for the detailed design and management of water resources, particularly in the identification of critical erosion areas and sediment sources and the formulation of catchment management strategies. The sediment yield map, demarcating ten relatively homogeneous sediment yield regions across Southern Africa, was revised to incorporate the following sediment yield prediction methods: probabilistic, empirical and mathematical modelling. From the results it was possible to determine which method had the best performance in each of the regions.

SERVING SOCIETY

Improving the municipal billing system

The domestic bills sent out by municipalities to consumers on a monthly basis are a key interface between local government and citizens and are a critical component of service delivery. As such, municipal bills offer a unique opportunity for municipalities to inform, educate and influence their consumers. Municipal bills are also the ideal vehicle for a municipality to build consumer trust and to establish its communication as clear, accurate and customer-friendly. A recent WRC study assessed current South African municipal bills against local and international regulations and guidelines, conducted a survey of current municipal bill practices, and undertook a critical analysis of a representative sample of bills. The study demonstrated that simple changes can significantly increase consumer understanding of municipal accounts and trust based on the correctness of the account.

Standards or guidelines for optimising municipal bills were developed based on the findings of the study. In addition, a tool developed as part of the project enables municipalities to benchmark their bills. The tool translates qualitative criteria into measurable categories from which an index score can be calculated. These assessment categories determine an 'ideal' municipal bill that is easy to understand and user-friendly; adheres to policy and legislation; provides enough information to ensure client satisfaction and bill validity; and creates a platform from which water conservation and water management issues can be addressed in a manner that will impact on consumer behaviour.

Achieving gender equity in the water sector

A recently concluded study evaluated women's participation and representation, or lack thereof, in areas of decision-making and leadership within the water sector. The study set out to gain an understanding of how women in the water sector have achieved positions of seniority and leadership, and to explore the lessons that can be drawn from their experiences. Overall, the South African water sector has done well to advance gender equity and to narrow remaining gender gaps. This is evidenced by legislation and a policy environment that addresses the progression of women, and is indicated by the number of women with decision-making power who influence and impact the strategies and structures that make up the sector. From the experiences and lessons shared, the study distilled a set of criteria for women to achieve career success in the water sector.

Offering support to smallholder irrigation farming

The WRC, together with the Universities of Fort Hare, Kwa-Zulu-Natal, Zululand, and Pretoria, as well as Zakhe Agricultural Training Institute, investigated the success of small-scale irrigation schemes in two case studies – Zanyokwe Irrigation Scheme (ZIS) which uses sprinkler irrigation and Tugela Ferry Irrigation Scheme (TFIS) which uses a short-furrow irrigation system. This action research aimed to develop and implement technologies and knowledge useful for farmers to improve their livelihoods and those of surrounding communities. An audit of the in-field irrigation infrastructure revealed that both ZIS and TFIS were experiencing a number of infrastructural problems. The findings of these agronomic studies clearly indicated that it is possible to significantly improve yields to near-potential levels by simply improving crop husbandry practices.

SUPPORTING THE ECONOMY

Exploring energy saving and production through hydropower

A high-level scoping investigation into the potential of energy saving and production through hydropower – specifically, in the supply of water through pressurized conduits – has revealed a great opportunity for South Africa. Hydropower contributes only 3% of global energy consumption which is only a fraction of its potential. Africa is the most underdeveloped continent with regard to hydropower generation with only 6% of the estimated potential exploited. In this scoping study the emphasis was on the potential for power generation by retrofitting hydropower generation facilities at existing dams and utilising the untapped energy on the supply side of storage reservoirs in water distribution systems, where the excess heads are normally dissipated across control valves.

Greywater reticulation for reuse

A joint pilot study funded by the WRC, and conducted by the Universities of Witwatersrand, Johannesburg and Cape Town, is proving that reuse of grey-water can be an effective way of saving our high-quality water. A dual grey- and drinking water reticulation system is a system consisting of separate pipes that supply grey-water (for toilet flushing only in this project) and drinking water to the end user. The first dual grey- and drinking water reticulation system for high-density urban buildings was successfully piloted at the School of Civil and Environmental Engineering (Hillman Block) at the University of the Witwatersrand, collecting its grey-water from 13 hand-basins and conveying it to a 200-litre tank. Financially constrained municipalities could use this concept to provide unserved communities with drinking water systems, since the costs of the system will be reduced due to the reduced demand for drinking water resulting from grey-water reuse. A further benefit is the reduced effluent discharges to the environment.

Wastewater Risk Abatement Plan

In December 2010, a review team consisting of experienced wastewater professionals evaluated the final Wastewater Risk Abatement Plan (W2RAP), jointly developed by the DWA and the WRC, and provided comment for improvement. Though the approach on which the plan is based is not new, it draws on many of the principles and concepts from other risk management approaches, in particular the Water Safety Plan, the multi-barrier approach and Hazard Analysis and Critical Control Points (HACCP). The W2RAP is amongst the first initiatives world-wide that put in place a guideline to plan for and apply a risk-based approach to raise and sustain wastewater performance. The W2RAP outlines a systematic and transparent approach to ensure consistent compliance and good practice for rendering wastewater services (reticulation, treatment and scientific services). It focuses on public health and natural resource protection and addresses the most eminent hazards, risks and controls that may apply along the value chain. Emphasis is on wastewater planning and management, not on testing, with documentation and communication being a key component of the process. Prototype trials have been undertaken by the City of Cape Town, Nelson Mandela Bay and eThekwini Municipality. The final document is expected to be launched at the Water Quality Conference to be held by DWA in June 2011.

Achieving efficient irrigation water use

The WRC has recognised the increasing importance of the efficient use of water by the irrigation sector, particularly given the current context of significant economic and population growth, coupled with climate change. A recently completed WRC-funded study investigated the needs of irrigation water users as well as the organisations that are responsible for water management at different levels. Guidelines were compiled, to be applied by both water users and regulatory authorities, for improved irrigation water management in all its facets –

from the point of dam wall release to that of root zone application. Further developments have included a user-friendly computer-based model, packaged with supporting material aimed at helping water users, irrigation organisations, the irrigation industry and policy makers to achieve an understanding of the potential for efficient irrigation water use across all levels of water management.

PRIORITISING THE HEALTH OF WATER USERS

Designing a pour-flush toilet

A WRC-funded study developed a prototype for a pour-flush toilet designed to respond to the needs of households in the South African context. Pour-flush designs offer the benefits of flushing excreta past a water seal while not requiring connection to reticulated water or sewerage systems. A pour-flush pedestal was produced which externally looks very much like a normal pedestal. Internally, the pedestal does not have the bowl associated with full-flush toilets, but is more funnel shaped. The bowl connects to a water trap made from 63 mm PVC pipe fittings.

Sanitation Technology Demonstration Centre

Knowledge of sanitation technologies has been found to not be effectively transferred through guidelines. Guidelines and reports have more meaning for technical practitioners; key decision makers rarely have a good understanding of the reality of the technology and its benefits. The WRC, in collaboration with the CSIR, initiated and funded the development of the Sanitation Technology Demonstration Centre, which is the first of its kind in South Africa and the continent. The centre, located at the CSIR Built Environment Building in Pretoria, displays various sanitation technology options and is open to the public. The aim of the centre is to provide practical and visual information on various sanitation technologies that support sustainable human settlements. People visiting the centre will get first-hand information on existing and new sanitation technologies, demonstrated by full-scale examples. The target audience for the centre includes the general public, learners, government officials, municipal councillors, non-governmental organisations (NGOs), technical professionals and the private sector.

Safeguarding drinking water quality

South African studies have shown that in non-metropolitan communities with adequate water supply services drinking-water quality is often poor. While effective water treatment is accepted as necessary, the need for monitoring and management of water quality from raw water supply to point-of-use is less recognised and often superficially performed. A WRC project developed a simple and user-friendly system based on a set of standardised, active sheets (analogous to log-sheets) to be filled in by operations and management staff. The sheets are in electronic format, but are also available as hard copies for plants without computers. It is possible to enter all categories of information that require immediate action or storage for later manipulation and use, such as flows, levels, qualities, chemicals, assets, human resources, finances, stock, maintenance schedules, etc. This operational information tool is also aligned with the WRC manual and training aids for sustainable operation and maintenance of small water treatment plants, fits into present municipal systems, and is integrated with DWA information systems, such as the Drinking Water Quality Framework and Management, and eWQMS (Emanti Management's Water Quality Management System). Training aids, comprising interactive media and posters indicating step-by-step processes for using the tool, are available on CD as well as from the Technical Assistance Centre (TAC) website.

Safe use of grey-water for food production

The potential contribution of household and urban food gardens to food security is limited by a shortage of water

to supplement rainfall. A study funded by the WRC indicates that grey-water may help to overcome this limitation by providing a dependable source of water that is under the control of the household gardener. Although more than half of indoor household water use can normally be intercepted as grey-water, potential users are uncertain about the risks and local authorities are uncertain about what their approach should be. Two products were generated to help guide the wise use of grey-water: a user-friendly guide and a supporting technical background document capturing the scientific information on which the guide is based. It is envisaged that the outcomes of this project will provide municipalities, NGOs and householders with greater certainty about how to minimise the health risks and optimise the benefits associated with the use of grey-water in urban food gardens.

ACCOLADES

Celebrating excellence in water research

The WRC, together with the Water Institute of Southern Africa (WISA) and the CSIR, presented the annual Excellence in Water Research Awards on 20 October 2010. The WRC CEO, Rivka Kfir, presented the memorial lecture entitled: 'In search for water wisdom – from research to application: A tribute to South Africa's water sector'. The WISA, WRC and CSIR hosted this special awards evening in acknowledgment of focused, productive and multidisciplinary research dedicated to the growth and intellect of the respective research disciplines, betterment of science and – ultimately – in service of our rainbow South Africa. As part of the evening's events, two distinguished young scientists, Ms Sarashree Traci Reddy and Dr Tobias George Barnard, were awarded the Excellence in Water Research Awards for young scientists.

Recognising the successful application of innovative research

At the 61st International Executive Council meeting of the International Commission on Irrigation and Drainage (ICID) held on 15 October in Yogyakarta, Indonesia, the WatSave Innovative Water Management Award 2010 was presented to Mr Kobus Harbron, Chief Water Control Officer of the Vaalharts Water User Association. Harbron was nominated for the award by the South African National Committee on Irrigation and Drainage (SANCID), for his outstanding achievements in saving water through improved 'Water distribution management at Vaalharts Water'. The Vaalharts Irrigation Scheme, at over 2900 ha, is the largest irrigation scheme in South Africa – adoption of a computerised water administration system using digitised and electronically-imported flow data saved 17.5 million m^3 of water in a single year, by decreasing water losses from 32% to 26.7%. The system implemented at Vaalharts is the Water Administration System (WAS) developed by Dr Nico Benadé, with funding mainly from the WRC, to provide irrigation schemes with decision support for effective and efficient water management. This is the second time that WAS and South Africa's efforts to achieve water savings in irrigation have received international recognition, as Dr Benadé's innovative work in developing WAS was recognised by ICID in 2006. The WAS program assists water user associations to manage their water accounts as well as their water supply to clients through rivers, canal networks and pipelines.

EXECUTIVE REPORT

EXECUTIVE REPORT

The Board of the WRC submits this report to the South African Parliament through the Minister of Water and Environmental Affairs. The report is compiled in accordance with the requirements of the Public Finance Management Act (PFMA) and forms part of the audited financial statements of the Water Research Commission (WRC) for the period 01 April 2010 to 31 March 2011. The report addresses corporate governance practices and structures, the mandate and core business of the WRC, the WRC's achievements and progress made against the WRC's key performance areas and targets.

During 2010/11, core changes in government leadership positions and other environmental dynamics that are directly related to the functioning of the water sector were evident. Locally and globally, issues of water scarcity have been intensifying in the light of challenges such as climate change, energy and food security. Adaptation and mitigation technologies and strategies continue to challenge both scientists and decision makers. South Africa, being a semi-arid country, is facing a future where the governance and management of the country's scarce water resource and its uses are becoming critical to the country's economic growth and the wellbeing of all its citizens. Knowledge and understanding provides for good decision-making, good planning and appropriate control. Although the country has a rich knowledge base regarding its water resources, disseminating this knowledge, and building capacity to utilise it, is essential for sustainable development.

Capacity building remains a major challenge for South Africa and is affecting both governance and management structures. The need to build and strengthen research capacity is another key challenge as future research will provide the country with the knowledge required to address the problems of the future. The role of the WRC is to provide the country with knowledge, tools and technologies.

During 2010/11, the WRC remained committed to its Mandate and Mission and continued to function as a water-centred knowledge hub, providing South Africa with knowledge in support of decision-making, policy development and implementation, and making available a range of methodologies, technologies and assessment tools aimed at improving the management of water resources and services. The knowledge developed through the support of the WRC, if appropriately utilised, will allow for the sustainability of South Africa's water resources and will support the building of a country where water is a key driver for economic growth and development. The WRC continues to provide the country with a knowledge framework that can be used to ensure safe drinking water and sanitation for all; sufficient quantity of water for various allocated uses, promoting a healthy environment and economic growth; sustainable infrastructure for water resource management and water and sanitation services; effective water management policies and systems; and adaptive and mitigating strategies to face the challenges of climate change.

Knowledge provided by the WRC during the year under review will further equip South Africa with better understanding, improved competencies and stronger capacity to address future issues regarding water quantity, quality and accessibility. Special emphasis was placed on alignment of the research with the framework of the Department of Water Affairs addressing water for growth and sustainable economic development. During the year, progress was achieved against the organisation's strategic plan, which strongly reflected the key needs and objectives of the Government of South Africa and the water sector, as articulated by the Minister of Water and Environmental Affairs, its shareholder, and the strategic plan of the Department of Water Affairs. The WRC also supported many government core initiatives and strategic policy frameworks. Emphasis was given to both capacity building through research and to improving knowledge dissemination mechanisms. Functioning as a 'hub' for water-centred knowledge, the WRC links various players within the water sector by working through local and global partnerships. The WRC provides novel (whilst practical) ways of packaging knowledge and creating knowledge-based products which can form the basis for new water resource and water service management practices for the water sector and the community at large. During the year under review, the WRC continued to strengthen water research in the African continent in support of the New Partnership for Africa's Development (NEPAD), and to strengthen the position of South Africa's water research within a number of global networks and initiatives.

MEMBERS OF THE BOARD

Prof JB Adams
Chairperson
(Nelson Mandela Metropolitan University)

Dr TPE Auf der Hyde
(Department of Science and Technology)

Mr P Cross
(Independent Consultant)

Ms ZB Mathenjwa
(Gabsie's Business Solutions)

Mr AN Mhlongo
(Nala Mhlongo and Associates)

Ms D Ndaba
(Independent Consultant)

Mr M Sirenya
(Viwe Consulting Services)

Mr Trevor Balzer
(Department of Water Affairs)

Dr Rivka Kfir
Ex officio
(Water Research Commission)

MANDATE

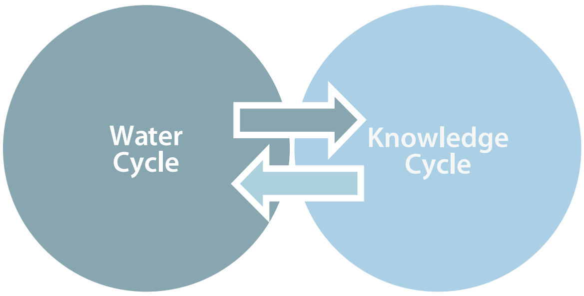
The WRC is listed as a national public entity in Schedule 3A of the PFMA.

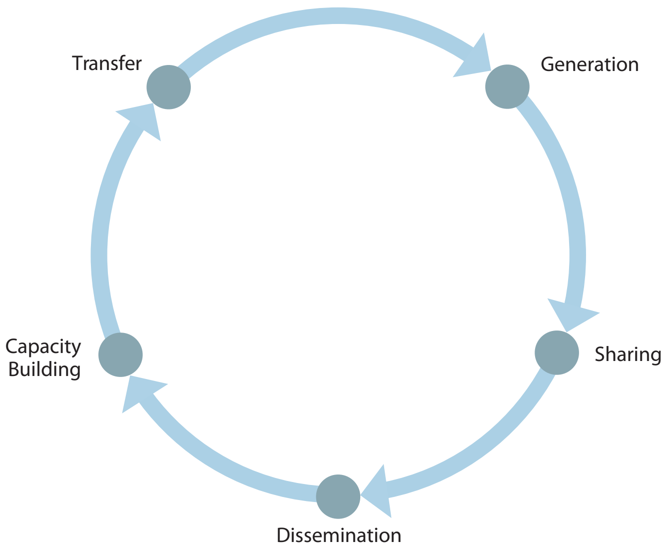
The **Mandate** of the WRC (Water Research Act, Act No. 34 of 1971) highlights the following functions to be carried out by the organisation:

- Promoting co-ordination, co-operation and communication in the area of water research and development
- Establishing water research needs and priorities
- Stimulating and funding water research according to priority
- Promoting effective transfer of information and technology
- Enhancing knowledge and capacity building within the water sector

The **Mandate** of the WRC clearly links the organisation to both the water and knowledge cycle as illustrated below. The WRC serves as South Africa's water-centred knowledge hub providing the nation with knowledge for sustaining its most precious resource, i.e. water.

The Mandate states the WRC's role in coordinating and leading the five building blocks of the knowledge cycle from knowledge generation to dissemination and transfer.





GOVERNANCE

Governance framework

The WRC, under the proficient leadership of its shareholder, the Minister of Water and Environmental Affairs, and the strategic direction set by its Board, continued to manage its strategic and operational affairs within a sound corporate governance framework. The WRC aims to comply strictly with both the Water Research Act and the Public Finance Management Act (PFMA), Treasury Regulations and all other relevant legislation. The corporate governance framework provided the organisation and its leadership with integrity, accountability and transparency.

The Board of the WRC led the organisation with a clear governance framework and oversight, ensuring sound management, compliance and control practices. The Board and its various committees provided effective structures for strategically guiding the WRC throughout the year under review.

During 2010/11 the Board has further addressed issues related to Board functions, duties and roles, and all related issues covered by the King III report *(King Report on Governance for South Africa and the King Code of Governance Principles)* on corporate governance. A number of Board committees further refined the respective terms of reference which were approved by the Board. A number of the WRC's operational policies were further improved and a number of new policies were developed during the course of the year. The Board of the WRC adhered to its Board Charter which includes a Board code of ethics.

Risk management

The management of the WRC have developed a risk policy which was approved by the Board on 24 March 2011 and formed part of the risk management framework that also includes a risk management strategy, risk management implementation plan, risk assessment, risks identified and mitigating actions planned. During the year under review, the Board re-assessed the organisation's risk environment and identified strategic and operational risks. The WRC developed and implemented its strategic and operational plan based on the risk areas identified. The risk plan included risk-mitigating strategies and actions and also set the basis for many of the organisation's performance objectives. The risks identified and the risk management framework were approved by the Board of the WRC and were also used to set the internal audit plans.

An advisory, external auditing firm, KPMG, was appointed by the Board of the WRC as an internal auditor and undertook an internal audit of the organisation in terms of an audit plan. The audit plan was reviewed and recommended for approval by the Audit Committee of the Board, and thereafter approved by the Board of the WRC. The audit addressed financial and other strategic risk areas. The outcomes of the audit indicated significant improvements in many of the WRC's operational practices. One of the key performance objectives of the WRC included providing feedback on the level to which management had addressed the issues identified by the internal audit in the previous year. The audit results and the WRC management's response, as well as a description of the successful and planned actions intended to bring about further improvements, were reviewed and approved by the Audit Committee and the Board.

Values

- Service orientation
- Care for people, society and the environment
- Fairness to all
- Dedication to quality
- Integrity and ethical behaviour
- Respect for human and individual rights
- Innovation and learning

Governance structures

During the year under review the WRC operated under the leadership of its Board, which is appointed by the Minister of Water and Environmental Affairs. The Board Members are all independent Non-Executives with the exception of the Chief Executive Officer and Director-General of the Department of Water Affairs, who are Ex Officio members. The current Board Members (with the exception of the two Ex Officio members) are appointed for a period of three years, ending on 31 May 2011. However, the current Board's term has been extended by the Minister until 30 September 2011 to oversee the appointment of a new CEO.

Board Members as from 31 July 2008

Prof JB Adams (Chairperson)
Mr M Sirenya (Vice-Chairperson)
Dr TPE Auf der Heyde
Mr P Cross
Dr DSS Lushaba (Resigned May 2010)
Ms ZB Mathenjwa
Dr DJ Merrey (Resigned December 2010)
Mr N Mhlongo (Appointed from October 2010)
Mr DP Naidoo (Resigned January 2011)
Ms D Ndaba

Ex Officio Members:

Dr R Kfir (CEO: WRC)
Ms P Yako (Director-General: Department of Water Affairs until July 2009, pending an investigation which continued into the year under review)
Ms N Ngele (Acting Director-General: Department of Water Affairs, until November 2010, on special leave pending an investigation)
Mr T Balzer (Acting Director-General: Department of Water Affairs, from November 2010)
Mr MP Nepfumbada represented the Director-General and Acting Director-General at a number of meetings.

On 3 November 2010, Minister BP Sonjica was replaced with Minister Edna Molewa, who was appointed as the new Minister of Water and Environmental Affairs.

Ms Jansen and Ms Lutchman served as Board Committee Secretaries during the period under review.

Role of the Board

The role of the Board is to provide leadership and governance to the organisation, overseeing that the WRC is true to its Mandate and Mission by:

- Promoting the creation, dissemination, sharing and application of water-centred knowledge
- Optimally using available resources (achieving the best return on investment)
- Striving to be financially sustainable and viable
- Promoting the relevance and effectiveness of water-centred knowledge, *inter alia*, through feedback from external reviews to be conducted periodically, at least every five years, at the discretion of the Board
- Taking cognisance of the short-, medium- and long-term research needs of the water sector
- Taking into account national and provincial policies, objectives and developments
- Acting in a transparent and fair manner

Board meetings held during 2010/11

26 May 2010
16 September 2010
01 December 2010 (Board Strategic Planning)
02 December 2010 (Board Strategic Planning)
24 March 2011

Board Committee Secretaries

26 May 2010	Ms A Jansen
16 September 2010	Ms A Jansen
01 December 2010	Ms R Lutchman
02 December 2010	Ms R Lutchman
24 March 2011	Ms A Jansen

Executive Committee of the Board (ExCo)

Members	
Prof JB Adams	(Chairperson)
Dr DSS Lushaba	(Resigned May 2010)
Mr DP Naidoo	(Resigned January 2011)
Mr M Sirenya	
Ms D Ndaba	
Dr R Kfir	(CEO: WRC)
WRC (in attendance)	
Mr N Patel	(Chief Financial Officer: WRC)
Meetings	
25 May 2010:	ExCo
Committee Secretary	
25 May 2010:	Ms A Jansen

Terms of Reference of ExCo:
The ExCo role is defined by the Board as a special committee addressing strategic tasks delegated from time to time to the committee by the Board, in accordance to needs and requests. This includes the specific delegated task of approval of financial year-end statements and the Executive Report.

Remuneration Committee of the Board

Members	
Prof JB Adams	(Chairperson)
Dr DSS Lushaba	(Resigned May 2010)
Mr DP Naidoo	(Resigned January 2011)
Mr M Sirenya	
Ms D Ndaba	
WRC (in attendance)	
Ms R Lutchman	
Meetings	
26 May 2010	
Committee Secretary	
26 May 2010:	Ms A Jansen

Terms of Reference of the Remuneration Committee:
- Establish a tool for the evaluation of the performance of the organisation and the CEO
- Assess the performance of the organisation and the CEO using the above-mentioned tool
- Determine performance bonuses for the CEO and the organisation based on the outcome of the performance assessment and other criteria

Human Resources Committee of the Board (HR Committee)

Members	
Dr DSS Lushaba	(Chairperson; resigned May 2010)
Ms D Ndaba	(Chairperson as from August 2010)
Dr TPE Auf der Heyde	
Adv D Block	(Co-opted as from June 2010)
Ms ZB Mathenjwa	
Dr R Kfir	(CEO: WRC)
Mr M Sirenya	(Attended the HR Committee Meeting on 23 February 2011 as a Board Member on request of the Chairperson of the Board)
WRC (in attendance)	
Ms R Lutchman	
Committee Secretary	
31 August 2010:	Ms A Jansen
23 February 2011:	Ms A Jansen
Meetings	
31 August 2010	
23 February 2011	

Terms of Reference of the HR Committee

This committee provides strategic direction to the WRC in all HR-related matters and recommends for Board approval various HR policies and procedures, with specific terms of reference addressing:

- WRC compliance with all HR-related Acts (legislation) and possible applications for exemption deemed necessary in the interests of enhancing the WRC's performance
- HR policies and practices in the WRC
- HR plans (e.g. training and skill development) and budgets
- Amendments to the conditions of employment and remuneration structure
- The WRC's performance management system
- Job level assessment system, policy and procedures
- The strategic structure and composition of Top Management
- Transformation and employment equity plans
- Internal Climate/Culture Studies with emphasis on leadership issues
- Performance of HR to the strategic execution of the WRC

Audit and Risk Committee of the Board

Members	
Mr M Sirenya	(Chairperson)
Mr P Cross	
Dr DSS Lushaba	(Resigned May 2010)
Ms RNM Maphumulo	(Co-opted from February 2009)
Mr N Mhlongo	(Member from October 2010)
Mr DP Naidoo	(Resigned January 2011)
Ms D Ndaba	
Dr R Kfir	(CEO: WRC)
WRC (in attendance)	
Mr N Patel	(Chief Financial Officer: WRC)
Ms R Lutchman	
Committee Secretary	
25 May 2010:	Ms A Jansen
27 July 2010:	Ms A Jansen
31 August 2010:	Ms A Jansen
23 February 2011:	Ms A Jansen (No quorum on 23 February 2011; meeting was reconvened on 07 March 2011)
07 March 2011:	Ms A Jansen
Office of the Auditor-General of South Africa (AGSA)	
25 May 2010:	Mr JR Aguma (AGSA); Mr D Fouche (Gobodo)
27 July 2010:	Mr JR Aguma (AGSA); Mr R Gouws (AGSA); Mr D Simpson (Gobodo); Mr M Musasiwa (Gobodo)
31 August 2010:	No representative present
23 February 2011:	Mr JR Aguma (AGSA); Ms NO Mutwanamba (AGSA); Mr D Fouche (Gobodo)
07 March 2011:	Mr JR Aguma (AGSA); Mr NO Mutwanamba (AGSA); Mr D Simpson (Gobodo)
KPMG	
25 May 2010:	Ms Y Small; Mr R Govender
27 July 2010:	Mr R Govender
31 August 2010:	Mr R Govender
23 February 2011:	Mr P Lalla; Ms Y Small
07 March 2011:	Mr P Lalla; Ms Y Small
Meetings	
25 May 2010:	Audit Committee
27 July 2010:	Audit Committee
31 August 2010:	Audit Committee
23 February 2011:	Audit Committee
07 March 2011:	Audit Committee

Audit and Risk Committee of the Board

Terms of Reference of the Audit and Risk Committee:

Internal Control

In order to consider the effectiveness of internal control over annual financial reporting, including information technology and security, the Audit Committee:

- Evaluate the process by which management is setting the appropriate 'control culture' by communicating the importance of internal control and the management of risk to employees, and ensuring that all employees have an understanding of their roles and responsibilities
- Develop an understanding of the scope of the internal and external auditors' review of internal control over financial reporting, and obtain reports on significant findings and recommendations, together with management's responses
- Establish whether internal control recommendations made by internal and external auditors have been implemented by management
- Consider what procedures management applies in relation to the security of computer systems and applications, and the contingency plans for processing transactions in the event of a systems breakdown, to ensure the adequate protection of the financial and other records

Financial Reporting – General

In preparation for a review of the annual financial statements, the Audit Committee:

- Gain an understanding of the current areas of greatest business/operational risk and financial risk and consider whether management is managing these effectively
- Consider, together with the internal and external auditors, any fraud, illegal acts, deficiency in internal control or other similar issues that have arisen during the financial year under review
- Take note of significant accounting and reporting issues, including recent professional and regulatory pronouncements, and understand their impact on the financial statements
- Obtain information from management and the internal and external auditors on significant risks and exposures identified, and the actions taken by management to protect the organisation

Financial Reporting – Annual Financial Statements

In order to ensure compliance with section 55 of the PFMA, the Audit Committee:

- Review, together with management and the external auditors, the financial statements and the results of the external audit, including the impact on the financial statements of any difficulties encountered
- Review the annual financial statements and determine whether they are complete and consistent with the information known to Committee members, assess whether the financial statements reflect appropriate accounting principles (as set out in section 55(2)(a) and (b) of the PFMA)
- Review any material adjustments made as a result of the audit
- Ensure that the following matters are disclosed in the Annual Report:
  - the names of the Audit Committee members;
  - whether or not the Audit Committee has adopted a formal Charter and has satisfied its responsibilities during the year under review, in terms of its Charter; and
  - comments on the effectiveness of internal control, its evaluation of the Annual Financial Statements and any other matter required by law or regulation

Internal Audit

In order to gauge the adequacy of the internal audit function as part of the overall risk management, the Audit Committee:

- Review and approve, together with management and the internal auditors, the internal audit plans and activities for the period under review, review the budgeted internal audit fee in relation to the services provided and recommend the fee for approval by the Board
- Assess the effectiveness of the internal audit function and ensure that no unjustified restrictions or limitations are placed upon the internal auditors

Audit and Risk Committee of the Board

- Meet separately with the internal auditors to discuss any matters that the Committee or auditors believe should be discussed privately
- Ensure that significant findings and recommendations made by the internal auditors are received and discussed by the Committee on a timely basis
- Ensure that management responds appropriately to recommendations by the internal auditors
- Exercise discretion and give direction to management on differences of opinion between WRC Executive and auditors
- Report to the relevant executive authority and the Auditor-General (Treasury Regulation 27.1.8) should a report from the internal auditors (or any other source) to the Audit Committee implicate any member(s) of the Board of the WRC in fraud, corruption or gross negligence. The chairperson of the Audit Committee shall report this promptly to the relevant executive authority and the Auditor-General (Treasury Regulation 27.1.8).
- Recommend to the Board the appointment and/or reappointment of an internal auditor

External Audit

To assess the effectiveness of the external audit process, the Audit Committee:

- Review, for the purpose of a recommendation for approval to the Board, the external auditors' proposed audit plan, including the co-ordination of their audit with procedures carried out by the internal auditors, and the budgeted external audit fee
- Consider the independence of the external auditors, in the light of the range of services provided, in the context of all consulting services provided to the WRC
- Meet separately with the external auditors to discuss any matters that the Committee or auditors believe should be discussed privately
- Ensure that significant findings and recommendations by the external auditors are received by the Committee and discussed on a timely basis
- Ensure that management responds timeously and appropriately to recommendations made by the external auditors
- Review the performance of the external auditors, including regularity and compliance, to ensure that the WRC receives the best possible service and value for money. The Audit Committee should consider the audit approach adopted, the management letters issued, the audit fee, the quality of audit personnel engaged on the audit and the timely and satisfactory completion of the audit. Make recommendations to the Board regarding their reappointment or dismissal, except in the case of the Auditor-General

The Audit Committee, notwithstanding, acknowledges the right of the external auditors to perform external audits and to make decisions relating to the audit arising from the legislative mandate of the Auditor-General.

Compliance with Laws and Regulations

It is the duty of the Board to ensure compliance with all laws and regulations relating to the WRC. To ensure compliance, the Audit Committee:

- Review the effectiveness of the system for monitoring compliance with laws and regulations and the results of management's investigation and follow-up (including disciplinary action) of any instances of non-compliance
- Review changes in the laws and regulations by obtaining regular updates from management
- Review the findings of any examinations by regulatory bodies, and any auditor observations made during the relevant audits
- Be satisfied that all regulatory compliance matters have been considered in the preparation of the financial statements

Reporting Responsibilities

It is the responsibility of the Audit Committee to report and make appropriate recommendations to the Board of the WRC for approval, including the following:

- Report on the effectiveness of internal controls of the WRC
- Report on the effectiveness of the risk management process
- Ensure that open channels of communication exist between internal auditors, the external auditors and the Board of the WRC

Audit and Risk Committee of the Board

- Ensure that the Board of the WRC is aware of matters which may significantly impact the financial condition or affairs of the business
- Communicate any concerns it deems necessary to the Board of the WRC, the executive authority (the Minister of Water and Environment Affairs) and the Auditor-General (Treasury Regulation 27.1.9)

Compliance with the Code of Ethics and Business Conduct

In ensuring compliance with the Code of Ethics and Business Conduct of the WRC, the Audit Committee:

- Ensure that the Code of Ethics and Business Conduct is in written format and that arrangements are made for all employees to be made aware of it
- Evaluate whether management is setting the appropriate 'tone at the top' by communicating the importance of the Code of Ethics and Business Conduct and the guidelines for acceptable behaviour
- Review the process used by management to monitor compliance with the Code of Ethics and Business Conduct
- Obtain regular updates from management regarding compliance with the Code of Ethics and Business Conduct

Other Responsibilities

- Perform such other activities related to this ToR as are requested by the Board of the WRC
- If necessary, institute and oversee special investigations
- Review and assess the adequacy of the Audit Committee Charter on a regular basis, requesting approval from the Board of the WRC of proposed changes
- Evaluate the Committee's and individual members' performance on an annual basis. The results of the evaluation shall be made available to the Board

Finance Committee

Members and meeting dates are the same as the **Audit and Risk Committee of the Board**. The Finance Committee was appointed to assist the Board in carrying out its compliance responsibilities in terms of the PFMA. The responsibilities of the Finance Committee are as follows:

Budgets

- Review and evaluate budgeting systems, policies and procedures
- Review the budget for the current financial year to be submitted for approval to the Board
- Analyse and review individual amounts projected in the budget
- Periodically review and evaluate variance analyses comparing actual amounts with budgeted amounts

Financial Reporting – General

- Review and evaluate the financial policies and procedures
- Review and evaluate, quarterly, the procedures for the management of debtor balances to ensure that they are effectively managed
- Review and evaluate bad debts to be written off
- Review and evaluate the policy regarding investments on a regular basis to ensure that they are effectively managed
- Review and evaluate the investment schedule

Financial Reporting – Annual Financial Statements

- Review the annual financial statements paying particular attention to complex and unusual transactions
- Focus on judgmental areas, for example, those involving the valuation of assets and liabilities and other contingencies and commitments
- Consider changes in accounting policies or their application, the reasons for changes, the effects of the changes on the current and future annual financial statements, and the external auditor's view on these
- Review significant accounting and reporting issues, including recent professional and regulatory pronouncements, and understanding their impact on the annual financial statements

Finance Committee

Financial Reporting – Annual Financial Statements (continued)
- Review the possible impact of the significant risks identified in the process of risk assessment and management on the annual financial statements
- Review any legal matters which could significantly impact on the annual financial statements

Compliance with Laws and Regulations
- Review and evaluate compliance with the Public Finance Management Act (No. 1 of 1999)
- Review and evaluate compliance with other applicable legislation

Other Responsibilities
- Review and evaluate major financial and operational system changes
- Review and evaluate the overall effectiveness of the procurement process as well as any material procurement transactions
- Review and evaluate the restructuring of business processes
- Review and evaluate the extent to which the WRC complies with Corporate Governance principles

Risk Committee

Members and meeting dates are the same as the **Audit and Risk Committee of the Board**. The responsibilities of the Risk Committee are as follows:

Risk Management and Fraud Prevention
- Evaluate, on an annual basis, the adequacy and effectiveness of the risk management processes followed by the WRC and evaluate the strategy for managing these risks effectively
- The Risk Committee shall provide an assurance function in respect of the integrated risk management of the WRC and, in order to be informed of the enterprise-wide risk exposure of the WRC, the Accounting Officer or his/her delegate shall refer the Risk Committee to any significant risk issues identified by the WRC, including the following matters:
  - the overall risk management processes of the WRC;
  - the typical risks inherent to the functions and activities of the WRC, as well as the management and control of such risks;
  - areas where there has been a major change in the risk factors; and
  - details of the action plans of management to control the level of risk
- The Risk Committee shall review the fraud prevention framework and related strategies of the WRC in order to direct the internal and external audit efforts and priorities and to assist the Accounting Officer or his/her delegate to determine the skills required to improve controls and to manage fraud-related risks
- The Risk Committee shall evaluate the effectiveness of the monitoring systems pertaining to fraud-related risks and the results of management's investigation and follow-up of alleged fraud and other matters, and shall review and comment on, where appropriate, cases of alleged fraud and related matters, when these are referred to it by the Accounting Officer or his/her delegate

Research Policy and Strategy (RPS) Committee of the Board

Members	
Mr DP Naidoo	(Chairperson; resigned January 2011)
Mr P Cross	(Chairperson as from February 2011)
Acting DG of Department of Water Affairs	
Prof JB Adams	
Dr TPE Auf der Heyde	
Ms ZB Mathenjwa	
Dr DJ Merrey	(Resigned December 2010)
Dr R Kfir	(CEO: WRC)
Mr M Sirenya	(Invited)
WRC (in attendance)	
Dr H Snyman	
Committee Secretary	
01 September 2010:	Ms A Jansen
01 November 2010:	Dr H Snyman
02 November 2010:	Dr H Snyman
16 February 2011:	Ms A Jansen
Meetings	
01 September 2010	(RPS Committee)
01 November 2010	(*Extended RPS Committee)
02 November 2010	(*Extended RPS Committee)
16 February 2011	(RPS Committee)

* Extended refers to meetings open to all Board members

Terms of Reference of the RPS Committee

- Review and advise on the alignment of research goals and plans with national policy and priorities and the mission of the WRC
- Advise the Board on compliance with the Water Research Act and other relevant legislation governing the use of public funds for research and development
- Advise on overall research priorities of the WRC
- Advise on capacity-building initiatives, including the support of students through WRC research projects
- Advise, review and monitor the development and effectiveness of the implementation of the WRC's research management policies, procedures and practices
- Advise on procedures guiding the development of annual business plans for the WRC and each of the KSAs
- Advise on procedures governing research funding allocation and the evaluation of research outcomes
- Advise on policies and procedures regarding knowledge dissemination and application
- Review KSA business plans and provide the Board with a recommendation for approval (with special emphasis on KSA research portfolios)
- Evaluate the outputs, outcomes and impact of WRC-funded research
- Review and monitor the WRC's drive to transform the South African water-centred knowledge base, i.e., research capacity building
- Monitor the scope and effectiveness of the internal audit function and the ethical conduct of the WRC from the research management perspective

Business Address:
Marumati Building, 491 18th Avenue,
Rietfontein Pretoria 0084

Postal Address:
Private Bag X03,
Gezina 0031

ACHIEVEMENTS

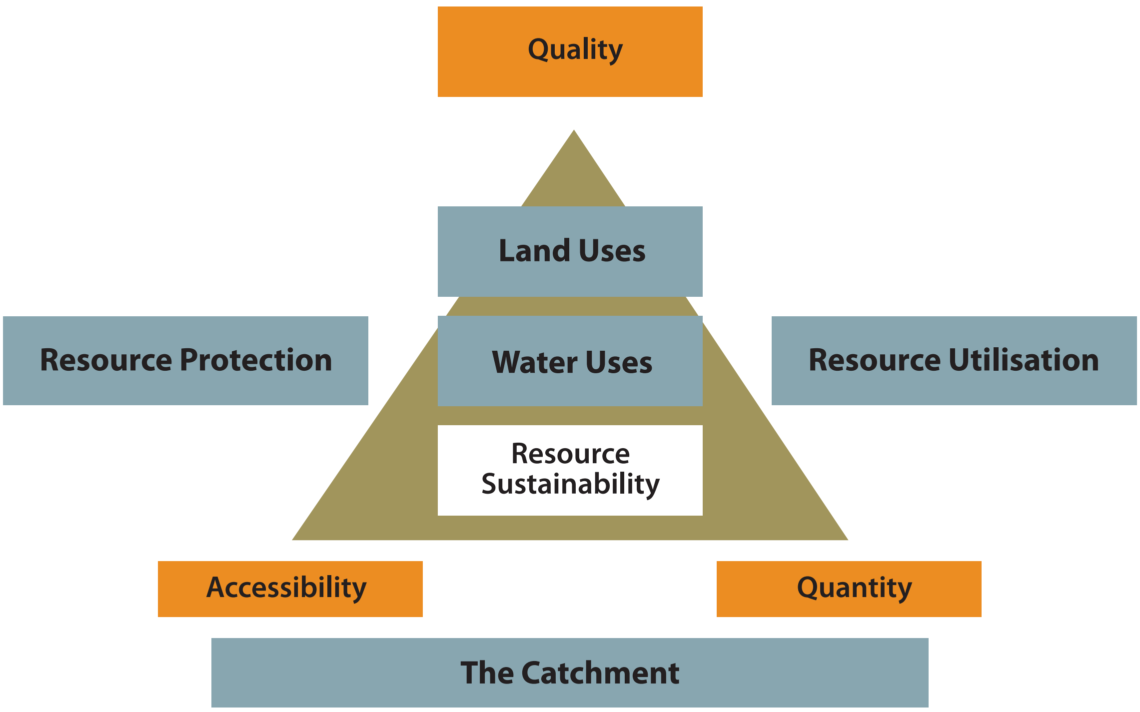
During 2010/11 the WRC continued to serve South Africa's Government, reporting through its Board to the Minister of Water and Environmental Affairs, its shareholder, and the Department of Water Affairs (DWA). Knowledge created through the WRC funds strongly supports DWA's overarching objective, i.e., water for economic growth and sustainable development.

INVESTING IN THE CREATION OF WATER-CENTRED KNOWLEDGE

Investing in the creation and sharing of knowledge

During 2010/11, the WRC continued to support the water sector and all its relevant institutions and partners. This was achieved by providing the sector with knowledge aimed at informing decision-making processes, improving monitoring and assessment tools, and making available a range of new and improved technologies related to water resource management, improved use of water in agriculture and the provision of water and sanitation services. The WRC continued to address the issue of climate change and the linked phenomena of extreme events. Research funded by the WRC will support the development of adaptive and mitigating strategies which will ensure the future sustainability of the country's water resources and services.

As the WRC aims to provide appropriate knowledge to further improve South Africa's ability and capacity to govern and manage its water resources, its research portfolio has to continue to incorporate various water uses in relation to applied land uses, with emphasis on issues of water quality, quantity and accessibility. Research projects will also focus on resource protection and its sustainability. The research portfolio for 2010/11 was set on the basis of the WRC's strategic plan. The schematic presentation



Water Resource Management	• Water resource assessment and planning • Management of natural and human-induced impacts on water resources • Water resource protection • Water resource institutional arrangements
Water-Linked Ecosystems	• Ecosystem processes • Ecosystem management and utilisation • Ecosystem rehabilitation
Water Use and Waste Management	• Water services - Institutional and management issues • Water supply and treatment technology • Sustainable municipal wastewater and sanitation • Industrial and mine-water management • Sanitation, health and hygiene • WaterSmart fund
Water Utilisation in Agriculture	• Water utilisation for food and fibre production • Water utilisation for fuelwood and timber production • Water utilisation for poverty reduction and wealth creation in agriculture • Resource protection and reclamation in agriculture

above provided the frame for the research addressed during the year under review. The WRC continued to invest in the creation of knowledge via its four main key strategic areas (KSAs). These areas include: **Water Resource Management, Water-Linked Ecosystems, Water Use** and **Waste Management, and Water Utilisation in Agriculture.** In general, the portfolio as planned for the year under review was well-received by the various stakeholders. These research KSAs are supported by the Water-Centred Knowledge KSA. This structure continued to form the core operating framework for WRC-funded R&D and was further consolidated during the year.

Water Resource Management - The water cycle plays a key role in the chemical, physical and biological processes that sustain ecosystems and influence Earth's climate and associated global change. Clouds, water vapour, and precipitation alter heating and cooling of Earth's surface and atmosphere which, in turn, affect global circulation and precipitation patterns. Hydrological data from atmospheric, surface, and subsurface stations are critical to the development of more accurate predictions of water distribution and availability, cloud formation and precipitation in a changing climate. The Water Resource Management KSA carries out a variety of studies, workshops, and meetings and publishes numerous reports on science-policy issues related to most aspects dealing with the water cycle and its impact on the management, protection, use, control, administration and sharing of water resources. The KSA continued to follow pertinent developments taking place

nationally and internationally with regards to water resources. It also continued to lead the understanding of 'wicked problems', offering a safe space for experimenting and learning to address the numerous challenges faced in water resource management. In so doing, the KSA has provided guidance for policy implementation and the development of policy instruments in areas of: water resource assessments, such as WR2005; water quality, focusing on environmental health and endocrine disrupting compounds; groundwater potential and closing the gap between surface water and groundwater assessments models; and the management of common property resources, enforcement and compliance.

Water-Linked Ecosystems - Research in this KSA put strong emphasis on the creation of knowledge aimed at protection and ensuring the utilisation and sustainable management of water-linked ecosystems in our water-scarce country during a time of demographic and climate change. Research portfolios within this KSA promote critical issues about conservation of aquatic ecosystems in order to provide the knowledge for their sustainable functioning in terms of national legislation, commitments to international conventions, and the ongoing provision of goods and services which ecosystems deliver. The research in this KSA develops the understanding of the ecological processes underlying the delivery of goods and services and provides the know-ledge to sustainably manage, protect and utilise aquatic ecosystems. Three main research areas were addressed during 2010/11: ecosystem processes, i.e., the biophysical processes, form and function of ecosystems; ecosystem management and utilisation, including issues such as the ecological Reserve and ecosystem health; and ecosystem rehabilitation, including rehabilitation and restoration of processes, form and function of estuaries, rivers and wetlands.

Water Use and Waste Management - During the year under review, this KSA focused mainly on research for the domestic, industrial and mining water sectors. The aim was to proactively and effectively lead and support the advancement of technology, science, management and policy relevant to water supply, waste and effluent man-

agement, for these sectors. The KSA continued to support studies on appropriate technologies for improving the quality and quantity of our water supplies for domestic use, with a focus on water supply and treatment technology serving urban, rural, large and small systems. Greater emphasis has been put on aspects related to energy efficiency and generation in the supply of services, reuse and beneficiation from water supply and wastewater treatment, as well as adaptation and mitigation strategies at a water services level to deal with future challenges associated with climate change. Waste and effluent, as well as reuse technologies that can support and improve management in the municipal, mining and industrial sectors, were also addressed, and innovative, integrated solutions for water and waste management in the industrial and mining sectors were studied. The research areas included water services (institutional and management issues); water supply and treatment technology; sustainable municipal wastewater and sanitation, industrial and mine-water management; sanitation and hygiene education, and the WaterSmart Fund which supports the demonstration and development of innovative solutions.

Water Utilisation in Agriculture - Research carried out in this KSA aimed at increasing household food security and improving the livelihoods of people at farming, community and regional levels, through efficient and sustainable utilisation and development of water resources in agricul-

ture. More specifically, this research focused on increased biological, technical and economic efficiency of water use, the reduction of poverty through water-based agricultural activities, increases in profitability of water-based farming systems, and the sustainable use of water resources through protection and restoration practices. All agricultural sub-sectors are addressed including irrigated and dryland agriculture; woodlands and forestry; grasslands and livestock watering; aquaculture and inland freshwater fisheries. During 2010/11 emphasis was placed, through new projects, on quantification of water use and the nutrient content of economically important food crops in diets of the rural poor; assessment of the potential of small and large storage dams for inland freshwater fisheries to produce fish for food security in rural areas; promotion of the efficient conservation of water resources and water inputs within food-value chains for emerging farmers as part of land and water allocation reform projects; developing technical and financial standards for drainage of irrigated land with high water tables and salinity levels; determination of the magnitude of pollution by agricultural chemicals and the potential risks for human health and the environment; developing guidelines for rainwater harvesting; and livestock production on natural grasslands for generation of biogas as renewable energy. This research output will support development and application of approaches, models, techniques, practices and guidelines for efficient and beneficial agricultural water management.

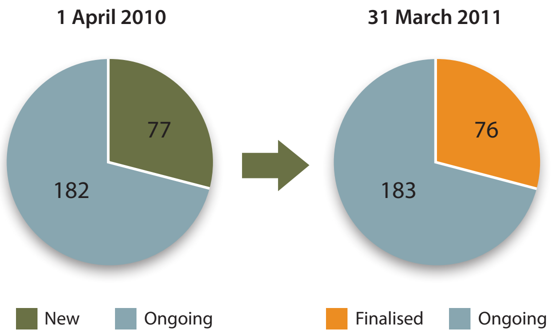
Supporting research projects

During the year under review, the WRC managed 328 research projects at various stages of project life cycle, of which about 79% (259 projects) were active projects and the balance were mostly projects that have been finalised and in the process of being financially closed.

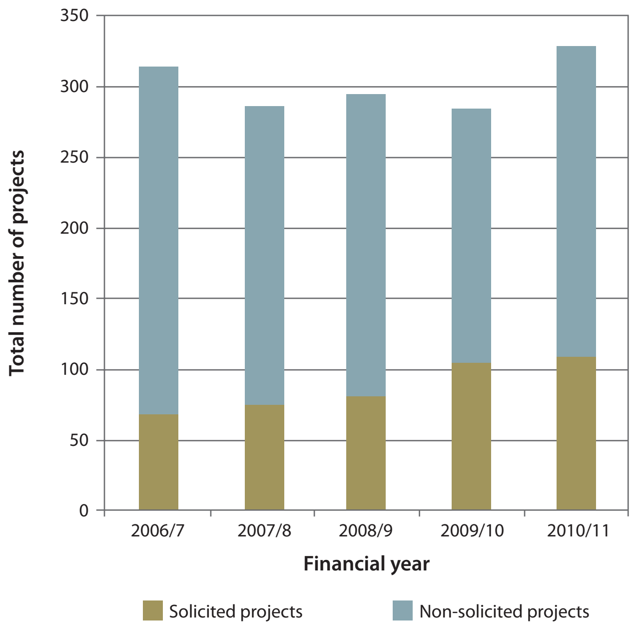
Financial year	2010/11	2009/10
Total no. of projects	328	284
No. of active projects	259	227
No. of new projects	77	62
No. of finalised projects	76	57
No. of solicited projects	109	105

The figures below represent a comparison between the number of active projects (259) at the beginning and end of the financial year. In the year under review (as in the previous financial year), the number of finalised projects (76) was very similar to the number of new projects initiated at the beginning of the financial year (77), providing a steady throughput of knowledge to the sector. The WRC published about 109 research reports and products in this period.

The various funding streams included both non-solicited projects, accommodating projects within the broad research strategy of each KSA, and solicited projects, where research projects are developed in accordance with clear terms of reference, aimed at solving specific problems. About 33% of the total number of projects are solicited projects.

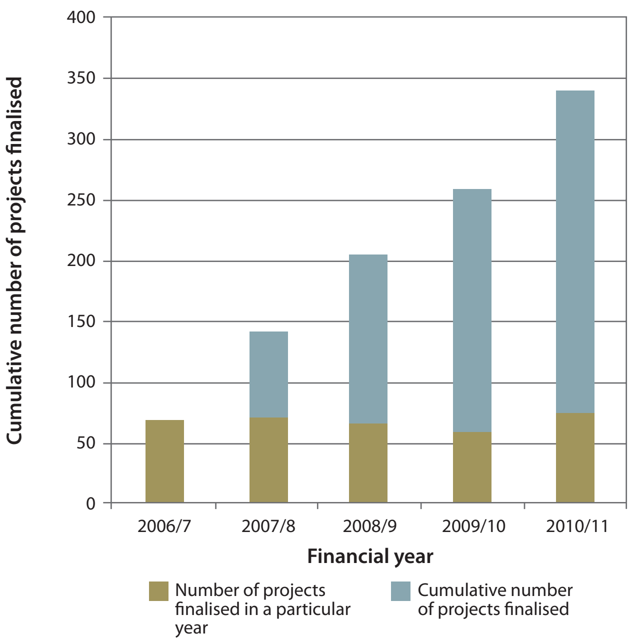


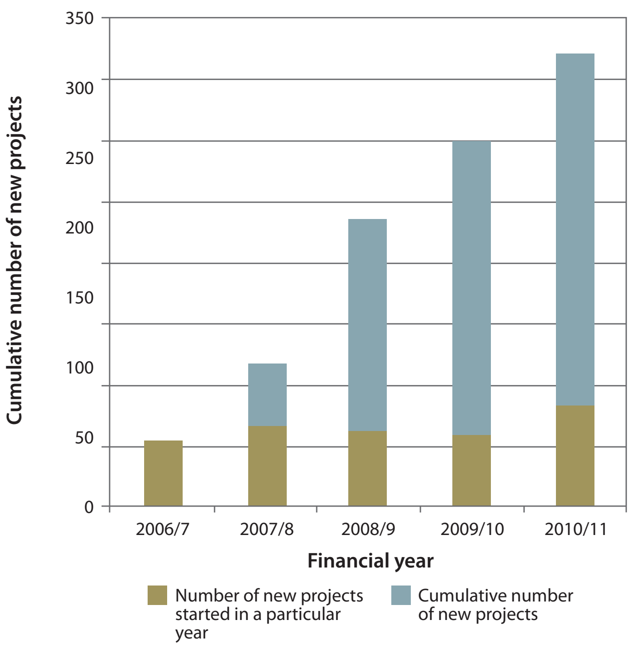
The figure below provides a schematic representation of the total number of research projects per annum for the past five years. The average number of projects remains around 300 and there is a clear trend of an increase in solicited projects, reaching 109 projects for the year under review. The increase in number of solicited projects is due to both a strategic drive by the various KSAs and the multi-year nature of such projects. Solicited research projects are mostly long-term, consortia-based, and address multi-faceted issues, often calling for more than one research discipline and a substantial budget.



During the past five years the WRC has finalised 338 research projects (see figure below) indicating a significant contribution to knowledge in the water sector. An average number of

68 projects were finalised per year, over the past five years. Over the same five-year period 324 new projects (see figure below) were initiated, ensuring the continuous contribution of new knowledge to the sector. An average number of 65 new projects were started per year, for the past five years.

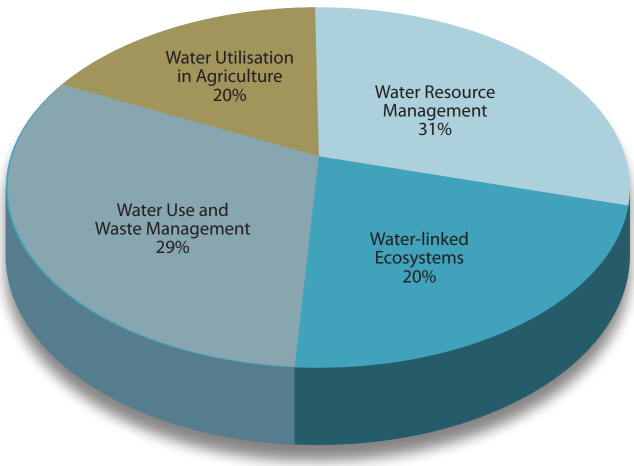




During the year under review the WRC significantly improved the use of its newly-developed fund management system, with several new report functionalities implemented. Closer, more intensified interaction between the KSAs and Finance resulted in significant enhancement of the functionality and use of the fund management system. A new report which quantifies deliverable payment against the project budget and reflects project balances, which can easily be verified against the financial system, is one such example.

Utilisation of funds by the various KSAs

The percentage utilisation of research project funds by the KSAs during 2010/11 indicates that about 51% (in comparison with about 46% for 2009/10) was invested in projects that focused on water resources (including water-linked ecosystems) and about 49% (compared with 54% for 2009/10) on projects that focused on water utilisation (including effluent treatment and management, as well as agriculture). This is based on the actual amount paid out as well as accrued for research projects during the financial year under review. The allocation of about 50% of the fund to issues related to resource management and 50% to issues related to water utilisation is a strategic allocation based on the medium- to long-term needs for research.



Distribution of research project funds among KSAs – Planned vs. utilised funds (2009/10 data in brackets)

KSA	Planned % allocation of funds	% of fund utilised for research projects
Water Resource Management	28 (27)	31 (26)
Water-Linked Ecosystems	13 (15)	20 (20)
Water Use and Waste Mngmnt	36 (37)	29 (34)
Water Utilisation in Agriculture	23 (21)	20 (20)

The actual utilisation of funds (as a percentage of total funds) by the KSAs closely agrees with the planned allocation, and the deviations observed do not exceed 7%. The overall investment in research projects (knowledge creation) was about R83.8 m. This is similar to what was reported in the previous year, with only a slight decrease of 3% (R86.7 m. during 2009/10).

Total investment in the support of knowledge creation, sharing and dissemination amounted to R110.7 m. This represents a decrease of 4% from the previous year (R115.8 m. total investment was reported in 2009/10). This investment includes about R2.6 m. for the Water Information Network (WIN-SA), R3.2 m. for the Framework for Education and Training in Water (FETWater), and other income leveraged for projects during the year under review. Both the investments in research projects and in research support, expressed as a percentage of total expenditure, were close to the set budgeted ratios and almost identical to that of previous years. The ratio addressing funding of the creation of new knowledge (research projects only) is 62%, equal to that for 2009/10 and the planned ratio of 62%. The ratio for research support is 73%, compared to 74% in 2009/10, and is equal to the planned ratio of 73%.

Research funding - Business efficiency indicators (budgeted and actual)

	10/11 (budgeted*)	10/11 (actual)	09/10 (actual)
Research project funding as % of total expenditure**	62%	62%	62%
Research support (research projects and support and technology transfer) as % of total expenditure	73%	73%	74%

** Not including transfer of unutilised research funds*
*** Expenditure does not include provisions for bad debts and leave, bad debt write-offs, pension valuations and non-cash amounts*

Leveraging income for the creation, sharing and dissemination of water-centred knowledge

During the year under review the WRC continued to leverage levy income by striving to obtain funds from other sources to support water research. During 2010/11 this drive had been fairly successful but substantial amounts were rolled over to 2011/12. The WRC income originating from sources other than the levy for 2010/11 amounted to R14.8 m. Leveraged income included funds allocated to a number of KSAs for direct support of research projects and funds provided for capacity building, knowledge sharing and dissemination (e.g. WIN-SA and FETWater). Leveraged income was obtained from both local and international sources, where the main source of income was due to support by various government departments for specific research and other knowledge-sharing projects. Sources of income other than the levy for 2010/11 amount to about 13% of the total income.

Income indicators

Indicator	2010/11 Budget	2010/11 Year-end (actual)
Levies as % of total income	86%	86%
Other sources of income as % of total income	14%	14%
Leveraged income as a % of other income*	76%	75%

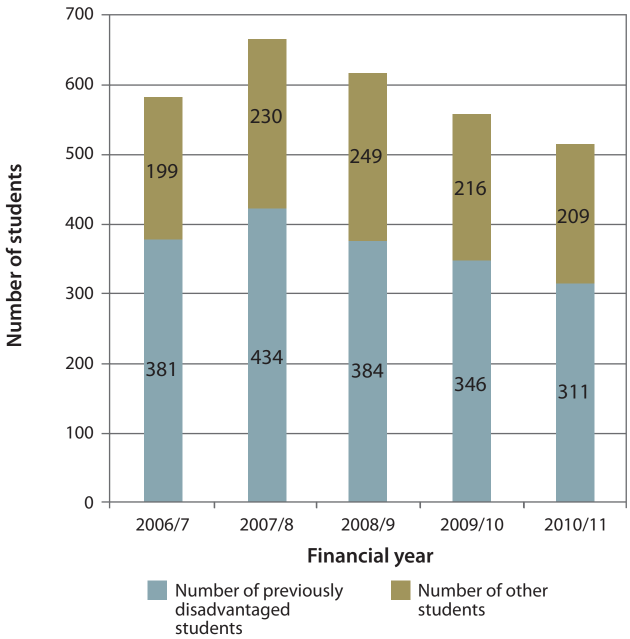
** Leveraged income includes all other income with the exception of interest received*

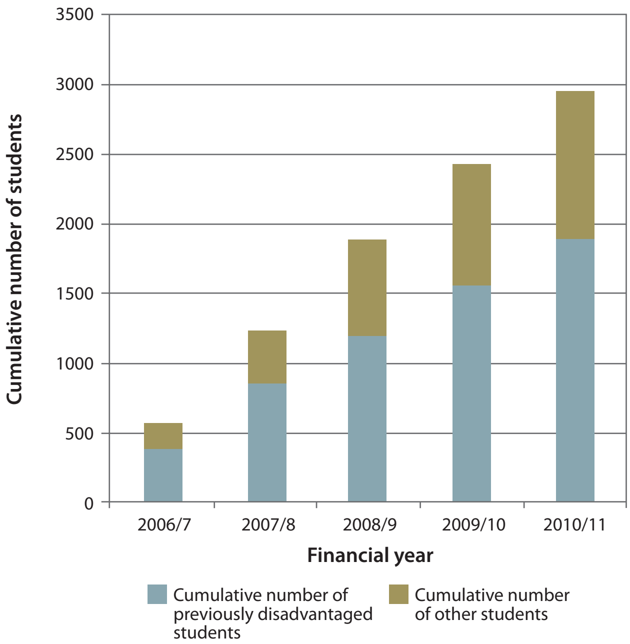
BUILDING CAPACITY

The WRC aims at providing South Africa with future researchers as well as a source of skilled human capital for other institutions within the water sector. This is done by encouraging project leaders to include students on their projects, enabling them to participate in water research through the various projects supported by the WRC. During the year under review, the WRC continued to place strong emphasis on building research capacity in South Africa as well as supporting a number of related capacity-building initiatives in Africa. In many areas of research supported by the WRC, it is evident that students who participated in earlier WRC projects are now leading WRC-funded research projects and serving as members of steering committees as well as reviewers of new proposals.

Capacity building trends

The figure below represents the number of students and the number of historically disadvantaged students for the past five financial years, i.e. from 2006/07 to 2010/11. The trend could be perceived as a slight decline in student numbers over the past 5 years. However, this could also be attributed to an improvement of WRC processes and tools for ensuring a high level of accuracy of accounting for capacity building, i.e. student numbers. In the year under review 60% of the students were previously disadvantaged.

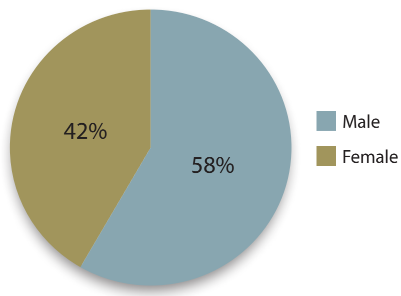


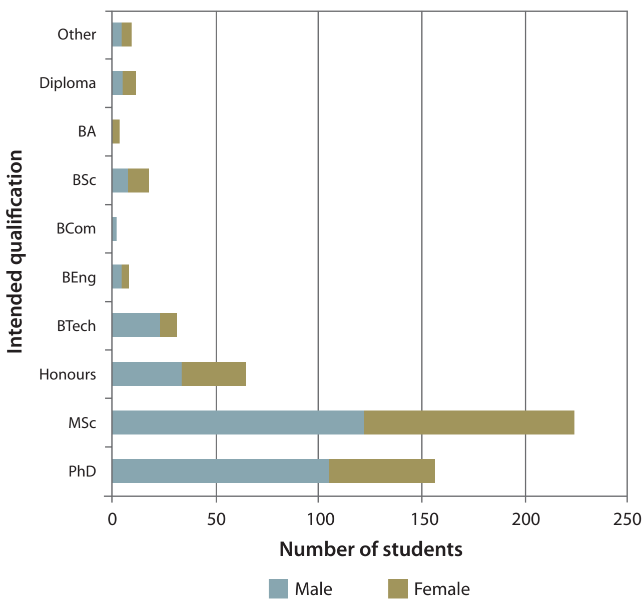


The figure below indicates the cumulative number of students involved in WRC-funded projects over the past five years, using 2006/07 as the baseline. About 3 000 students, of which 63% were historically disadvantaged, were involved in WRC projects over the past five years.

Student demographics

During the year under review, the WRC gathered demographic data for the students working on WRC-funded projects. Of the 520 students supported by WRC-funded projects in 2010/11, 311 or 60% are from disadvantaged backgrounds. Of these historically disadvantaged students, the majority, 261, are Black, and 50 are Indian or Coloured. About 2% of the total number of students originated from countries outside the African continent.





The figure above shows the gender balance, which is close to a 50/50 distribution, although there is still room for improvement. Of the total number of students 58% were male and 42% were females. The bulk of the students are working towards Masters or PhD degrees, which naturally have a large research component. It is encouraging to note that the Universities of Technology are contributing significantly to research activity in the water sector. This is evident in the number of students studying towards a Bachelor of Technology (B.Tech) and diplomas.

Capacity building by lead organisations in 2010/11

The table below reflects the number of students involved in WRC projects, as reported for the various lead organisations contracted by the WRC, in the 2010/11 financial year.

Contract lead organisation	No. of historically disadvantaged students	Total no. of students
African Remediation Technology	1	1
Agricultural Research Council	2	5
ATL-hydro	3	6
Aquagreen Consulting	1	4
ASSET Research	0	5
Association for Water and Rural Development (AWARD)	1	1
BioAssets Consultants	0	4
Cape Peninsula University of Technology	17	22
Centre for Environmental Economics and Policy in Africa	3	3
Corporate Research Consultancy	1	1
Council for Scientific and Industrial Research	21	32
Counterpoint Development	0	1
CPH Water	0	1
DH Environmental Consulting CC	0	2
Durban University of Technology	3	3
Emanti Management	4	5
Freshwater Consulting Group	0	2
Golder Associates Africa (Pty.) Ltd.	7	7
Groundwater Africa	0	1
Hlathi Development Services	1	1
Hydrosoft Institute	1	1
Institute for Groundwater Studies (UFS)	8	11
Institute of Natural Resources	2	2
IWR Water Resources (Pty.) Ltd	1	1
Jeffares & Green (Pty.) Ltd.	1	2
Nelson Mandela Metropolitan University	3	10
Nemai Consulting	2	2
Ninham Shand Consulting Engineers	2	7
North-West University, Potchefstroom Campus	2	11
Partners in Development (PID)	4	4
Pegasys Strategy and Development (Pty.) Ltd.	0	1
Pegram and Associates (Pty.) Ltd.	6	8
Prime Africa Consultants (previously CIC International)	6	7
Re-Solve Consultancy	1	1
Rhodes University	20	28

Contract lead organisation	No. of historically disadvantaged students	Total no. of students
Sigma Beta	4	8
South African Weather Service	2	3
SSI Engineers and Environmental Consultants (Pty.) Ltd.	4	5
Sustento Development Services	0	1
Tshwane University of Technology	12	12
Umgeni Water	7	7
Umvoto Africa	4	5
University of Cape Town	10	32
University of Fort Hare	11	11
University of Johannesburg	1	5
University of KwaZulu-Natal (all campuses)	26	55
University of Limpopo	3	5
University of Pretoria	17	27
University of South Africa	2	5
University of Stellenbosch	23	51
University of the Free State	19	34
University of the Western Cape	21	26
University of the Witwatersrand	5	7
University of Venda	14	15
Virtual Consulting	0	1
WRP Consulting Engineers	2	2
TOTAL	**311**	**520**

Capacity building initiatives

In addition to its support for the training of students, the WRC has initiated and supported a number of national capacity building initiatives. These include support to national and local government as well as the development of new training material for different levels of learners and for academic institutions. Examples of such initiatives are given below.

Strategic meetings with capacity building organisations

As the main funder of water research in the country, the WRC's relationship with the water research community is crucial for its effective operation. During 2010/11 the WRC put emphasis on meeting with as many universities as possible, to discuss their challenges and their current and future contributions to water research. The WRC representatives visited research organisations in the country and had informal discussions with the research directors/Deputy Vice-Chancellor for Research and senior researchers. Meetings were held with:

Tshwane University of Technology	(14 July 2010)
Cape Peninsula University of Technology	(21 July 2010)
University of the Western Cape	(21 July 2010)
University of Stellenbosch	(22 July 2010)
University of Cape Town	(22 July 2010)
University of KwaZulu-Natal	(23 August 2010)
Durban University of Technology	(23 August 2010)
Mangosuthu University of Technology	(25 August 2010)
University of Zululand	(25 August 2010)
University of Pretoria	(20 October 2010)
Rhodes University	(21 October 2010)
University of Fort Hare	(22 October 2010)
North-West University	(25 October 2010)

Other capacity building activities

WRC 101 for project leaders

The WRC developed an informative one-day course for aspiring and new project leaders, to increase their understanding of the WRC research cycle, research priorities and fund allocation. During 2010/11, participants were guided on how to prepare a comprehensive proposal, with tips provided as to how to improve the chances of success, as well as guiding principles on how to manage the technical, administrative and financial aspects of a WRC project. The course also includes information on contractual and financial audit requirements. The WRC 101 courses were held on 3 May 2010 in Kempton Park, on 14 June 2010 in Cape Town and on 21 June 2010 in Durban.

South African Youth Water Prize

The WRC continues to support the *South African Youth Water Prize* (SAYWP). The WRC Intellectual Property Manager and Knowledge Dissemination Officer served on the adjudicating panel of the annual national SAYWP schools competition, held at Leriba Lodge, Centurion, on 4 June 2010. The WRC also exhibited the WRC school-based material at this event.

Training Courses for the Department of Water Affairs

The WRC presented a course on 'Water economics and governance in South Africa: Basic issues and operational tools' to staff of DWA at DWA's Roodeplaat Training Centre. A WRC Director presented a case study on 'Development and financing of irrigation schemes' and the available WRC guidelines on the revitalisation of smallholder irrigation schemes were explained.

In addition, the WRC presented a two-day course, on 24 and 25 June 2010, at the DWA Roodeplaat Training Centre, for DWA personnel who are tasked with training the regional offices on the South African Sludge Guidelines developed by the WRC and DWA. The course focused on the correct implementation of the sludge guidelines.

The Framework for Education and Training in Water (FETWater)

During the year under review, the WRC continued to support FETWater. This national capacity-building initiative is aimed at the development of competencies and capacity regarding water resource management. FETWater is a joint UNESCO, Belgian and South African programme, which is currently in its second phase. Phase I of this programme was successfully completed under the custodianship of the WRC.

Water Information Network – WIN-SA

The WRC continued to serve as the implementing agent for DWA for the Water Information Network (WIN-SA). WIN-SA is aimed at knowledge sharing and capacity building for local government, in recognition of the critical importance of competence at local government level.

ENHANCING KNOWLEDGE DISSEMINATION

The WRC is continuously searching for, improving and testing new mechanisms and tools that support effective knowledge sharing, dissemination and transfer. During 2010/11 the WRC produced numerous research and technology transfer reports, and many workshops and knowledge sharing events were held. The WRC further focused on improving its electronic dissemination tools and enhanced existing mechanisms for knowledge dissemination and sharing.

During 2010/11 the WRC finalised 76 research projects and published 109 research reports, which were distributed widely within the water sector. In addition to publishing research reports, the WRC also developed 31 research briefs including 3 special policy briefs.

Book launch

The WRC formally launched a special publication entitled *The Journey of Mma Tshepo Khumbane* during an event held to celebrate the International Year of Biodiversity, on 17 September 2010 at the Tswaing Meteorite Crater Museum.

Knowledge sharing events and workshops

The WRC held a number of knowledge sharing events including technical field visits and technical workshops aimed at enhancing knowledge transfer. Examples are:

WRC technical visit – eThekwini

The research management team of the WRC undertook a technical visit to eThekwini on 23 April 2010. The purpose of the visit, in addition to strengthening research cooperation between the eThekwini Metro and the WRC, was to improve the understanding of the research managers and knowledge dissemination staff of the WRC regarding collaborative research projects carried out in eThekwini.

WRC internal open day - ERWAT

WRC staff members visited the waste treatment works and laboratories of the East Rand Water Care Company (ERWAT) on 7 July 2010. ERWAT is the only regionalised commercial wastewater management company in South Africa, which provides bulk wastewater conveyance and wastewater treatment services for 2000 industries and more than 3.5 million people who have access to sanitation services. Staff also visited the laboratories, which provide the water industry with a wide variety of services in the fields of chemical and microbiological analysis, as well as expert advice on water-related problems.

Technical workshops

A number of technical workshops were held by the various key strategic areas of the WRC. Many of these were in collaboration with strategic partners in order to enhance research impact and knowledge uptake. Some of the workshops aimed at knowledge sharing and transfer (training), while other workshops were aimed at developing terms of reference (ToRs) for future solicited research projects. The following are examples:

1. A workshop on *Water Governance Decentralisation in Africa: A Framework for Reform Process and Performance Analysis* was hosted by the WRC to launch a collaborative project with the World Bank, the University of Pretoria and the University of Riverside, California, on 12 April 2010 at the University of Pretoria
2. A workshop on the *Ecology and Status of the Lower Mfolozi and Msunduzi Rivers* was held in St Lucia, KwaZulu-Natal, 2-5 May 2010
3. A workshop addressing the direction and scope of future weather modification R&D and implementation activities regarding weather modification in South Africa was hosted by the WRC, in collaboration with the South African Weather Service (SAWS), on 5 May 2010, Pretoria
4. A workshop on *Science-Driven Policy* was held in collaboration with CSIR and the University of Pretoria on 10 May 2010, Pretoria
5. A workshop addressing wetland conservation targets was hosted by the WRC on 25 May 2010, Pretoria
6. A workshop on exploring fundamentals of water quality modelling was organised by the WRC in collaboration with DWA on 8 July 2010, Pretoria
7. A workshop on *Incorporating Climate Change Modelling Scenarios into Water Resource Planning* was hosted by the WRC on 15 July 2010, Pretoria
8. A workshop on *Infrastructure Asset Management, Operation and Maintenance* was co-hosted by the WRC, WIN-SA, DWA, and the Northern Cape Department of Cooperative Governance, Human Settlement and Traditional Affairs, 8 April 2010, Kimberley
9. A workshop addressing *Planning and Refocusing the Shared Rivers Initiative* was held by the WRC on 26 July 2010, Pretoria
10. The WRC hosted a strategic workshop on the future scope of research on *Mine Water and Industrial Water Use* on 2 August 2010, Pretoria
11. A workshop on *Mining in the Waterberg*, held on 24 August 2010 at Liphalale Exxaro, addressed regional opening strategies for the avoidance of acid mine drainage generation in the region
12. A workshop to prepare for *Phase II of the Shared Rivers Initiative*, was held on 9 September 2010, Pretoria
13. A seminar in celebration of the *International Year of Biodiversity* was co-hosted by the WRC, South African National Biodiversity Institute (SANBI), Ditsong Museums, Department of Environmental Affairs (DEA) and DWA , on 17 September 2010 at the Tswaing Meteorite Crater Museum north of Pretoria
14. The WRC held a mini-symposium on the topic 'Opportunities for more productive water use and household food security in South Africa' during the *3rd African Association of Agricultural Economists and the 48th Agricultural Economics Association of South Africa Conference* held in Cape Town, 19-23 September 2010
15. The WRC hosted a TECHNEAU workshop on *Water Reclamation in Southern Africa: Monitoring Systems and Risk Assessment*, 12-13 October 2010, Pretoria
16. The WRC hosted a TECHNEAU workshop on *Risk Management of Drinking Water Systems in Southern Africa*, 18-19 October 2010, Pretoria
17. *A Groundwater Governance* workshop was held in partnership with the World Bank on 8 November 2010 in Pretoria
18. The WRC co-hosted a workshop with DWA on the *Wastewater Risk Abatement Plan* on 8 December 2010
19. A workshop on *Urine Diversion* was co-hosted by the WRC, eThekwini Municipality and the University of KwaZulu-Natal, 15-16 February 2011, Durban
20. The WRC co-hosted an *Anaerobic Digestion* workshop with the University of KwaZulu-Natal, on 17 February 2011, Pretoria

Workshops on the development of terms of reference for solicited research projects

Empowerment of women through water use and land tenure security

The WRC hosted a workshop for the development of terms of reference for a new solicited research project on the empowerment of women through water use and land tenure security, on 6 May 2010, which was attended by 10 experts representing the University of KwaZulu-Natal, National African Farmers Union, Department of Agriculture, Forestry and Fisheries, University of Fort Hare, Farmer Support Group, Afrosearch, North West University and Mvula Trust. Inputs were made to formulate the draft terms of reference for two new solicited research projects on this topic.

Present ecological state of rivers

The WRC hosted a workshop for 20 participants which informed a terms of reference for a project on the present ecological state of rivers in South Africa, on 12 April 2010 at the WRC, Pretoria. The aim was to bring together all stakeholders and researchers that are involved in the assessment of river health in order to assist the DWA with

streamlining information and data that are used in the water resource classification and allocation process.

Biomimicry and constructed wetlands

The WRC hosted a workshop on biomimicry and constructed wetlands on 18 May 2010, Pretoria. The aim was to explore knowledge on natural wetlands for the development of novel approaches to the design of constructed/artificial wetlands for the treatment of wastewater, using the principles of biomimicry. The workshop brought together researchers working on both natural and constructed wetlands and the discussions assisted in finalising the terms of reference for a solicited project.

Other knowledge sharing events

WISA 2010

The WRC featured strongly at the biennial conference and exhibition of the Water Institute of Southern Africa (WISA), themed '2010 – A time to reflect', held at the Durban ICC, 18-22 April 2010. The WRC exhibition stand, which combined traditional report distribution with electronic searches for material, was well received. Training and demonstration of the WRC's fund management system was also available at the exhibition stand.

The WRC hosted a number of workshops at *WISA 2010*. These included:

- *Groundwater – Surface Water Interactions*, which aimed to bring together all the relevant disciplines with the aim of developing a project to study groundwater – surface water interactions in an integrated manner
- The WRC hosted two workshops on water quality: The first was on emerging contaminants that could have an influence on drinking water quality, and was used to develop the terms of reference for two solicited research projects on this topic. The workshop was well attended by young researchers and stakeholders. The second workshop was on resource water quality, and aimed to provide a sense of the complexity of resource water quality and management at a catchment level and to identify new stakeholders and researchers in this field.
- A WRC director organised and facilitated a workshop for the WISA Branch and Division Chairs, aimed at improving the impact and effectiveness of WISA, in particular through membership quality growth, career-based training and capacity building, creating excitement about the brand, and improving visibility and effectiveness
- The WRC co-hosted a workshop with Digby Wells and Associates on *Cleaner Production in the Mining Industry*.
- The WRC co-hosted a workshop with the WISA Oxidation and Disinfection Division on Oxidation and *Disinfection of Drinking Water*, attended by delegates from the chemical and water treatment industries
- The WRC co-hosted a workshop with the South African Young Water Professionals on *Transdisciplinary Issues in the Water Sector*
- The WRC, in partnership with CSIR, hosted a workshop on *Franchising of Water Services O&M*, which was used to share the outcomes of WRC research, as well share lessons and experiences of the ongoing pilot project in the Eastern Cape on school sanitation. The WRC and the World Water Council convened a workshop on *Water for Growth and Development in Africa – Understanding and Addressing Policy Complexities*. The proceedings of the workshop will be shared with SADC as input to their draft on 'benefit sharing in transboundary rivers'.

WRC staff also presented papers and chaired sessions:

- A Director presented a paper on 'South African Sludge Management Guidelines – Innovation and Impact' and chaired a session on environmental aspects of sludge management
- A Director chaired the Dutch Partnership meeting hosted by Ambassador R Vos and the Dutch Embassy
- A Research Manager made a presentation as part of a workshop on understanding and dealing with the impact of climate change on water resource quality; the workshop was an awareness-raising initiative organised by the WRC
- A Research Manager chaired a workshop on *The adoption of green drop criteria for package plants in South Africa*
- A Research Manager presented at the WISA Small Wastewater Treatment Division meeting on gaps and challenges for small wastewater treatment works and the vision and objectives of the newly-formed WISA Division
- A Research Manager presented the paper 'Biosorption and bioaccumulation of copper and lead by *Phanaerochaete chrysosporium* and *Pleurotus ostreatus*'
- A Research Manager presented a paper on 'Energy Efficiency in the water industry: a compendium of best practices and case studies'

New and improved knowledge-dissemination mechanisms

Improved knowledge dissemination calls for the WRC to continuously enhance existing mechanisms and to search for new innovative mechanisms, in addition to using established dissemination channels such as open days, workshops, research reports, technology transfer reports, publications such as *The Water Wheel, Water SA* and the *Knowledge Review*, and the media. During the 2010/11 financial year such new and enhanced mechanisms included:

Briefing notes

This knowledge tool attempts to communicate, in a clear and brief format, the outcome of various research studies to the water sector, with special emphasis on non-technical professionals, policy and decision makers. To this end, a few years ago the WRC initiated the production of 1-2 page briefing notes – short communiqués highlighting research outcomes and sharing pertinent messages and recommendations. Another 31 briefs were produced during the year under review (for easy reference, the number in brackets refers to the report number; all briefs and reports are available electronically on the WRC website – www.wrc.org.za):

Technical briefs:

1. Water use of indigenous tree species (1567/1/08)
2. Assessing the impact of research into rainwater harvesting (TT 444/08)
3. The basement aquifers of southern Africa (TT 428/09)
4. Incorporating community-based procurement in the operation and maintenance of basic services (1714/1/09)
5. Technology in strategic asset management: Existing and future needs (1785/1/09)

6. Refining tools for evaporation monitoring (1567/1/08)
7. Acceptance of membrane technology among rural consumers (1529/1/09)
8. Water quality and cage aquaculture (1461/1/08)
9. WR 2005 study (TT380-382/08)
10. Impact of introducing zero-phosphate detergents (TT446/10)
11. Water use of biofuel crops (1772/1/09)
12. Licensing of streamflow reduction activities (1428/1/09)
13. Conceptualising groundwater flow and storage within the TMG Aquifer (1419/1/09)
14. Standards for municipal invoices (1664/1/09)
15. Eutrophication research impact study (TT 461/10)
16. Reticulated sewerage infrastructure (1671/1/08)
17. Guidelines and training aids for small water treatment plants (1559/1/09)
18. EDCs in drinking water – protecting human health (1749/1/09)
19. Evaluating passive mine-water treatment (16231/1/10)

Policy briefs:

1. Assessing the impact of research into rainwater harvesting (TT 444/08)
2. Technology in strategic asset management: Existing and future needs (1785/1/09)
3. Eutrophication research impact study (TT 461/10)
4. Standards for municipal invoices (1664/1/09)
5. Exploring the economic value of water in the Greater Letaba River catchment (989/1/08)
6. SHAPE model for sustainable service delivery (1664/1/09)
7. EDCs in drinking water – protecting human health (Report No: 1749/1/09)
8. Wetland management in South Africa (KV 253/10)

Special policy briefs (not printed):

1. Meeting the ecological Reserve in rivers of the Lowveld (K5/1711)
2. Fish rehabilitation at Rondegat River (K8/922)
3. Research on wetland management in SA (KV 235/10)

Ministerial brief:

1. DDT for malaria control: Environmental and human health risk (1674/1/09)

Other new or improved knowledge dissemination and sharing mechanisms

During 2010/11 the availability of the latest studies published by the WRC was reported in the WISA newsletter, starting with *WISA Members Newsletter No.095* published in May 2010, with the aim of maximising awareness within the water sector. The WIN-SA newsletter is also currently being used to disseminate information about new WRC research reports and to advertise new technologies. The editorial and layout team of *The Water Wheel* completed a redesign of the magazine in 2010/11. The first'new-look' issue (May/June 2010) was well received by readers, generating several additional complimentary citations.

A DVD on the water cycle was produced as an introduction to the fundamentals of water resource management. The aim is for this video presentation to act as a general base for further elaborations of other aspects such as water use, water protection, water assessments, etc. Seven thousand (7 000) copies of the DVD entitled *Water is Life, a South African Journey* were distributed with the January/February 2011 edition of *The Water Wheel*. Another DVD was produced entitled *Water from Stone,* which focuses on the role of groundwater in the hydrological cycle.

Exhibitions:

As part of its knowledge sharing and dissemination activities the WRC participated in a number of exhibitions at conferences, symposia and workshops, using these to disseminate information in the form of reports and other publications. Exhibitions in which the WRC participated included:

- *The Budget Vote*, 15 April 2010, Cape Town
- *WISA 2010*, 18-22 April 2010, Durban
- *Western Cape Provincial Government Drought Indaba*, 24-25 May 2010, George
- *South African Women in Engineering*, 22 July 2010, Cape Town
- *AGRI SA Water Conference*, 11 August 2010, Kempton Park
- *International Society of Limnology (SIL) Conference*, 15-20 August 2010, Cape Town
- *WASTECON Conference 2010*, 4-8 October 2010, Kempton Park
- *Water and Poverty Alleviation - A Dialogue for Action*, 11-13 October 2010, Durban
- *IMESA Conference*, 27-29 October 2010, East London
- *Local Climate Solutions for Africa 2011, ICLEI Congress,* 27 February - 3 March 2011, Cape Town
- *UN World Water Day 2011,* 20-22 March 2011, Cape Town

Selected publications by WRC staff

BACKEBERG GR (2010). Improving rural livelihoods with rainwater harvesting and conservation on communal croplands in South Africa: Opportunities and obstacles. In: Behl RK, Merbach W, Meliczek H and Kaetsch C

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SNYMAN HG (2010). Minimising land use based water pollution through sustainable wastewater sludge management practices – South African case study. *Proc. Stockholm World Water Week 2010,* 5-11 September 2010, Stockholm, Sweden.

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INNOVATIONS AND KNOWLEDGE APPLICATION

The WRC supports the protection and transfer of innovative methods and technologies that may result from WRC-funded research, where and if required. Some technologies, processes and products require commercial involvement in order to make them publicly available and some academic organisations have required WRC support in this regard.

New innovations

Map of stable isotopes in tap water

Creating a map of stable isotopes in tap water across South Africa, for hydrological, ecological and forensic applications, is a first for South Africa. It is innovative in that it provides a link between water resource management, ecology, global climate change and forensics. The research is technically supported by Purdue University in the USA.

Early detection of environmental pollutants

The ongoing project entitled 'Pollution-induced *in-vivo* lipid autoxidation in fish and the subsequent development of pansteatitis in crocodiles' intends to find complementary, non-sacrificial parameters that may be used, together with existing indexes, to allow for accurate, sensitive and early detection of more chronic, sub-lethal pollution episodes, before bio-magnification and mortalities of organisms at the top of the food chain occur. A link between pollution-induced *in-vivo* lipid autoxidation in fish and the subsequent development of pansteatitis in crocodiles has not previously been elucidated.

Guidelines for improved irrigation water management from dam wall release to root zone

The research project on 'Standards and guidelines for improved efficiency of irrigation water use from dam wall release to root zone application' has contributed to innovative knowledge. The report promotes an investigative approach to improving efficiency, rather than relying on water accounting alone. The guidelines developed aim at improving irrigation water management from dam wall release to root zone application and will assist both water users and authorities to achieve a better understanding of how irrigation water management can be improved. This in turn will result in building human capacity, allowing targeted investments to be made with lower social and environmental costs.

New patents

The following two new patent applications were filed. Neither of these has been granted and both are still being prosecuted.

Remote data collection

This invention relates to remote data collection. In particularly, the invention aims to address the requirement to install a remote data logger in a location where data is to be collected and intermittently to retrieve the logged data. The invention includes a data recorder and a monitoring system. A South African patent application for this invention was filed on 22 July 2010.

A membrane bioreactor

This invention relates to an immersed membrane bioreactor, and to a method for treating water. Existing membrane bioreactors have the disadvantage that they are damaged when dried, due to a change in the polymers from which they are manufactured. The membranes are also subject to damage when not handled carefully, i.e. by scouring or scratching. Existing membranes also require periodical chemical cleaning. This invention aims to address some of these shortcomings. A South African patent application for this invention was filed on 25 June 2010.

Alignment with the IPR Act

The Intellectual Property Rights from Publicly Financed Research and Development Act (No. 51 of 2008) (IPR Act) was passed to meet the growing need to effectively protect and commercialise intellectual property (IP) emanating from publicly-funded research. The WRC implemented interim guiding principles with regard to the WRC's position on intellectual property management in the period leading up to 2 August 2010, when the IPR Regulations became effective. The Regulations clearly articulate the processes which publicly-financed institutions should adhere to when dealing with the protection, management and commercialisation of intellectual property generated by such institutions. In particular, the regulations clearly emphasise the need to obtain statutory protection and ownership of intellectual property by publicly-financed institutions. In this regard, a WRC Intellectual Property Management Policy was developed, which was approved by the Board.

LEADING WATER-CENTRED KNOWLEDGE

The WRC serves South Africa as its water-centred knowledge hub. This requires the WRC's staff members to lead, facilitate and contribute to various national, African and global initiatives, networks and other activities that contribute to both knowledge generation and its dissemination and transfer.

National initiatives

Strategic membership in key national networks/ projects

The WRC is a patron member of the Water Institute of Southern Africa (WISA), a member of the Water Sector Leadership Group, National Science and Technology Forum (NSTF), Committee of Heads of Organisations of Research and Technology (COHORT), International Water Association – South Africa (IWA-SA) and the Academy of Science of South Africa (ASSAf). The WRC is the Secretariat for the UNESCO International Hydrological Programme National South Africa Committee. The WRC leads and manages the Network on Irrigation Research and Extension for Smallholder Agriculture (NIRESA). The WRC is a founding Member of the Country Water Partnership and serves as the focal point for Ramsar's Scientific and Technical Review Panel (STRP).

Individual leadership positions

Staff members continue to undertake various leadership positions. These positions include:
Board and Council members of WISA, member of the Boards of Ecolink (an environmental NGO), Water Research Node of Monash South Africa (Advisory Board member), Institute of Water Research (IWR) (Rhodes University) and the Sci-Bono Discovery Centre. Staff members served on the Executive Committee representing the Science Council Sector of the National Science and Technology Forum (NSTF) (until August 2010), the South African Committee for the International Association of Hydrological Sciences (SANCIAHS), the Steering Committee of the Working for Water Research Advisory Panel, the Department of Science and Technology Nanotechnology Innovation Centre Advisory Board, the Executive of COHORT and the Executive Committee of IWA-SA.

Bilateral agreements, strategic partnerships and collaboration

Bilateral agreement with Eskom

Recognising the strategic link between sustainable water management and energy generation, the WRC and Eskom have agreed to enter into a strategic research partnership through the signing of a Memorandum of Agreement and the formation of a Joint Research Committee. By entering into this partnership the entities will ensure improved project integration and funding of mutually beneficial water research projects addressing topics such as: climate change; water resource availability and accessibility; water quality; operation and maintenance; water conservation and water demand management; technology development and appropriate technology; excess water and acid mine drainage; residue management (ash, brine and sludge management); ecosystems and remediation; and groundwater impact as well as vulnerability and remediation. The partnership aims at expanding the research capacity pool of the sector, encouraging skills transfer, mentoring and coaching through the centres of excellence and identifying skills shortages which require focused interventions. Eskom and the WRC will also join hands in implementing research findings, from laboratory to demonstration plant level. The official signing of the Memorandum of Agreement took place at Megawatt Park, Sunninghill, on 11 November 2010, by Dr Steve Lennon, Eskom's Divisional Executive Corporate Services, and Dr Rivka Kfir, Chief Executive of the Water Research Commission.

Collaboration with SANParks

The WRC held strategic discussions with South African National Parks (SANParks) on collaborative research, with special emphasis given to water quality research. Discussions addressed research on rivers in the Kruger National Park and neighbouring areas/countries, with water quality research identified as a key topic due to the crocodile deaths in the park. It was agreed that the WRC and SANParks should work together to establish mechanisms for stronger collaboration.

Collaboration with the South African Local Government Association (SALGA)

Realising the importance of supporting local government in terms of its knowledge needs, the WRC further strengthened its relationship with SALGA in the year under review. An effective partnership with SALGA will enhance municipal performance and contribute to achieving national outcomes. The WRC received letters of intent to partner with SALGA from the CEO of SALGA, and negotiated a new mechanism through which the WRC can support research needs for local government with SALGA. Two strategic workshops resulted in the identification of research needs for local government. Priority research topics were highlighted, which will be included in the WRC 2011/12 research cycle. Other collaborative initiatives included the revival of the BenchMarking Initiative and building awareness and knowledge on integrated water resource management (IWRM) for local government. By invitation from SALGA, a presentation was done on 'IWRM and Local Government' on 8 June 2010 in the Matlosana Municipality (Klerksdorp). This is considered as a key initiative, building a WRC/SALGA partnership with regard to IWRM. In addition, other topics related to local government and water resource management such as climate change, groundwater, catchment management agencies (CMAs), water infrastructure and development are also under discussion as possible topics for future collaboration.

Climate change

The WRC supports Government in many aspects related to climate change. A staff member of the WRC is a member of the national climate change negotiating team (responsible for water-related climate issues and research) of the National Climate Change Committee (coordinated by the Department of Environmental Affairs) and a member of the Steering Committee for the Risk and Vulnerability Atlas (coordinated by the Department of Science and Technology) as well as the Chairperson of the National Climate Change Task Team for Water hosted by DWA. WRC representation at COP16 – the 16th session of the UN Conference of the Parties to the United Nations Framework Convention on Climate Change (UNFCCC), held in Mexico from 29 November to 10 December 2010 – contributed to negotiations and discussions around strategies to prioritise adaptation issues (finance and technological) with regard to required support for vulnerable African countries. South Africa's specific needs include capacity building, integration of climate scenarios into policy implementation and practice and reducing climate model uncertainties. The WRC in collaboration with the DWA also drafted the position paper on water as a potential item on the Conference of the Parties agenda during COP16, in support of and in response to a directive by the Minister of Water and Environmental Affairs.
On 6 May 2010 the WRC, on invitation, advised the (then) Minister's advisor, Ms Cornelia September on future strategic repositioning of the DWA with regards to challenges associated with climate change, i.e. what the Department should embark upon immediately and what could be done in the medium- to long-term, including development and implementation of the climate change sector response strategy. The WRC, represented by the Research Manager championing climate change research, made inputs to the Green Paper on Climate Change in Parliament, Cape Town, on 3 March 2011.

In addition, on 29 June 2010, the WRC initiated discussions on joint projects with the Department of Agriculture, Forestry and Fisheries' climate change unit, on climate change related mitigation research. This is considered to be a breakthrough, with potential for long-term partnership. Initial discussions focused on the conceptualisation of a collaborative project for addressing the problem of quantification of carbon stocks in forests. This will enhance the understanding of the link between forest degradation and climate change.

Other collaborative initiatives related to climate change included workshop discussions, on 26 October 2010, with the South African Weather Service (SAWS), on various climate-related information and tools (such as forecasts, climate data and model scenarios) and the exploration of potential future collaboration between WRC and SAWS. The collaboration is aimed at complementing each of the organisation's research initiatives and avoiding duplication whilst identifying and addressing the research gaps. The WRC is also collaborating with the Development Bank of Southern Africa on the subject. The WRC provided critical inputs to a discussion on the climate change developments affecting DBSA on 24 November 2010.

Inter-Ministerial Task Team on Acid Mine Drainage

During 2010/11, a WRC Research Manager represented the WRC on the panel of experts who produced the report of recommendations presented to Parliament and the inter-ministerial task team on acid mine drainage. The team comprised experts from the water sector, institutions of higher learning, the mining sector and independent scientists. The report was envisaged to assist the mining intensive provinces of Gauteng, Mpumalanga, North West and the Free State, as they are perceived as being at risk from the outflow of acidic water from metal or coal mines. The team provided an informed, independent assessment of the situation, and have proposed sustainable, workable and affordable solutions to comprehensively deal with this issue. The report was presented to Cabinet on 22 February 2011. Cabinet accepted the report in its entirety (including all of the recommendations) and allocated R225 m. towards implementing the suggested solutions. The Trans-Caledon Tunnel Authority (TCTA) has been appointed as implementing agent by DWA.

Supporting the National Planning Commission (NPC)

Initial discussions were held on the 'State of Water Resources in South Africa' with Aalia Ismael of the Presidency's Planning Commission, in support of the Advisory Panel meetings. This was followed by the Planning Commission requesting support from the WRC with regard to literature that the WRC has available on two frameworks of research, i.e., water as a natural resource and how it can be used for economic growth and the provision of essential water services to every single South African via local government. In addition, a WRC Research Manager and the CEO were invited by the National Planning Commission (NPC) to a working meeting on 'How to transition to a low carbon, climate resilient economy', held on 15 March 2011 at the Union Buildings, Pretoria. This session formed part of a series of working sessions which the NPC will use to crystallise ideas and make recommendations for inclusion as proposals in the National Development Plan.

The International Year of Biodiversity

The WRC initiated and organised a seminar on 'Celebration of the International Year (2010) of Biodiversity', which took place at the Tswaing Nature Reserve and Heritage Site on 17 September 2010, thus coinciding with 'heritage month'. The WRC led the organising committee which included DWA, DEA, SANBI, and Ditsong Museums of South Africa The seminar was well attended, with Eleanor Mc Gregor, Director: Conservation at the Gauteng Department of Agriculture and Rural Development, delivering the keynote address. The key focus was on how the wetland (a bird sanctuary) can be utilised by the community in a sustainable manner, and on access to and utilisation of the crater and its water by the community, especially for cultural/spiritual purposes. The management of the Tswaing Nature Reserve was tasked with establishing a committee to look at improving management practices for the wetland, including expansion of the protected area of the reserve, to fully incorporate the wetland.

Supporting DWA and other national departments

Supporting the Department of Water Affairs

In addition to being active in many national task teams led by DWA, the WRC acts in some cases as an implementing agent to the DWA, supporting the department with appropriate research projects. Two memoranda of understanding were signed with DWA for two studies which will commence during the 2010/11 financial year with the following titles: 'Policy implementation lag time' and 'The concept of public trusteeship as embedded in the National Water Act of South Africa of 1998'.

Following the meeting between staff of DWA and WRC held on 2 September 2010, regarding oversight of the R&D strategy and business plan for 2010/11 to 2012/13, a discussion was organised with the Department with the aim of explaining how the **Water Administration System (WAS)**, a product of WRC-funded research, can support DWA to implement water loss control and achieve significant water savings in irrigated agriculture. This is particularly important given the target to reduce water losses in agriculture, as spelt out in the performance agreement of the Minister of Water and Environmental Affairs. During a meeting on 22 October 2010 the WAS project leader, Dr Nico Benadé, presented an overview of WAS. At the request of DWA a steering committee will be established to promote the implementation of WAS with the support of DWA.

The WRC is assisting the DWA in the revision of the **National Water Resource Strategy (NWRS)**, in particular the sections that deal with 'Monitoring and Information' and 'Knowledge Research'. A WRC Director attended a workshop entitled Revision of the National Water Resource Strategy on 14 October 2010 and facilitated the session on 'Monitoring and Information' as well as 'Knowledge Research' in association with a representative of the Department. The Department approached the WRC on 3 March 2011 with the formal terms of reference for the task teams contributing to the development of the NWRS-2. The WRC agreed to lead the task team on 'Water and Research'.

The WRC and DWA are collaborating on the subject of **'our understanding of governance' in water to date'** (8 October 2010). Discussions are underway regarding the development of the terms of reference of the study.

Planning and refocusing the **Shared Rivers Initiative** is ongoing. The re-designed programme plan is now in place and ready for discussion with key role-players with regards to implementation of the Reserve as defined in the National Water Act (No. 36 of 1998). These key role-players are the National Office of DWA, specifically the Resource Directed Measures Directorate, the Mpumalanga Regional Office of DWA, Inkomati CMA Board and Kruger National Park CEO. The programme has now expanded in scope to cover Mozambique and Swaziland. This is due to the shared benefits emanating from the shared river catchments, as well as the impacts of South Africa on these shared resources. The transboundary component is therefore prominent and donor funding will be sought to address this.

A presentation was given by a WRC Director to DWA Top Management on **'The value of water for economic development'**, 6 September 2010, with an interactive discussion on the issues raised during the presentation. The importance of secure water use entitlements, cost recovery water charges, water measuring and volumetric charging, for DWA to achieve effective water savings with implementation of available technology in future, was emphasised. The Acting Director-General expressed an interest in further rounds of discussion.

The WRC supports the DWA initiative on **Institutional Realignment.** In addition to directly supporting the initiative regarding water research and the WRC (see below), staff members of the WRC serve on two other working groups, i.e., the Bulk Water Supply (Water Boards) and Local Government working groups.

Strategic discussions with DWA, North West Regional Office, were held on how the WRC can manage and steer the review and scientific evaluation of the **Harties Metsi a me** project, as per request from parliament. The review will be jointly funded by the two parties.

Supporting the Department of Science and Technology

The WRC continues to support Department of Science and Technology's (DST) nanotechnology platform, whereby the Water Nanotechnology Strategy and Centre was established through a collaborative effort of MINTEK, WRC and DST.

The WRC supports the development of the Research Information Management System (RIMS) developed by the DST which has the potential to deliver auditable information on publications and intellectual property emanating from

WRC-funded research from and publicly-funded research institutions (universities and science councils). The WRC is currently working with the DST and the development team to ensure that the WRC is a potential output user. The RIMS system could be a useful tool for the WRC in the future and the WRC is therefore involved at this early stage of development stage to ensure that the organisation's needs are addressed during the development stage.

The WRC participated in DST-initiated discussions on industrial wastewater management in South Africa and the establishment of a Centre of Competence (28 January 2011). The WRC is playing a strategic role in partnering with DST on further addressing of this issue, through future workshop and consultation processes with key stakeholders in the sector. The aim is to provide the country with a framework for the establishment of a Centre of Competence.

Supporting the Department of Agriculture, Forestry and Fisheries

In addition to specific discussion with the Department of Agriculture, Forestry and Fisheries (DAFF) addressing climate change (see above), Dr EM Mogajane, the Deputy Director-General of DAFF, requested a WRC Director to give a presentation to the CEO Steering Committee on the findings of a WRC project entitled 'Quantitative investigation into the link between irrigation water quality and food safety' during a meeting held on 26 July 2010. The request was to focus on the outcome of the research project with special attention to advice for both industry and government. During the discussions it was emphasised that urgent steps should be taken to prevent contamination of irrigation water at source due to non-functional sewage works and lack of sanitation in informal settlements. For this purpose inter-departmental coordination and governance is essential, biomonitoring and reporting of water pollution is required, and awareness campaigns amongst producers and consumers should receive attention. It was decided that the CEO Steering Committee will appoint a working group to engage with local municipalities in order to take action to prevent this increasing problem of contamination of water with pathogenic micro-organisms, which are a threat to food safety.
The WRC also contributed to the strategic plan of the National Department of Agriculture on flood management, 13-14 October, Emperors Palace.

Strategic positioning

A number of initiatives were supported and undertaken by the WRC during 2010/11.

Interaction with Parliamentary Portfolio Committee

- The WRC had the following interactions with the Minister of Water and Environmental Affairs and the Parliamentary Portfolio Committee on Water and Environmental Affairs.
  - The Chairperson of the Board of the WRC, the CEO, Director: Human Resources and Administration and the Knowledge Dissemination Officer attended the Budget Vote Speech by the Minister of Water and Environmental Affairs on 15 April 2010.
  - A WRC researcher, together with the DWA, briefed the members of the Portfolio Committee on Water and Environmental Affairs on eutrophication linked to the Harties Metsi a me Remediation Project. A briefing session was held on 21 July 2010 at the offices of the DWA in Cape Town.
  - The WRC Knowledge Dissemination Officer attended a briefing session held at OR Tambo Airport on 27 July 2010 as part of the oversight visits held by the members of the Portfolio Committee on Water and Environmental Affairs. This was done to ascertain the levels of acid mine drainage and its subsequent impact on groundwater, rivers and dams.
  - Two Research Managers, accompanied by the Knowledge Dissemination Officer, made presentations to the Portfolio Committee on Water and Environmental Affairs on groundwater and acid mine drainage related research during the acid mine drainage briefing at Parliament on 21 July 2010.
  - The Chairperson of the Board, CEO, Chief Financial Officer, Director: Human Resources and Administration and Knowledge Dissemination Officer briefed the Portfolio Committee on Water and Environmental Affairs on the WRC 2009/10 Annual Report on 10 November 2010 in Parliament, Cape Town.
  - The WRC Board Chairperson, CEO and Knowledge Dissemination Officer were invited to Parliament on 15 February 2011 to brief the Portfolio Committee on Water and Environmental Affairs about the WRC's involvement in solving the country's problems and also to state the challenges that the Commission faces. The WRC provided the Chairperson of the Committee with further material about the organisation including a detailed overview of all WRC projects.
  - A WRC Research Manager together with the Knowledge Dissemination Officer made inputs to the *Green Paper on Climate Change* in Parliament, Cape Town, 3 March 2011.

Communication strategy

During the year under review the WRC developed a communication strategy that includes specific strategic objectives for enhancing uptake of knowledge created via WRC-funded projects, and which included a plan of action for the next three years. The communication strategy was informed by a detailed stakeholder survey as well as other strategic feedback and information (e.g. the WRC scenario studies). The survey was facilitated by an external party and included 462 individuals from central and local government, water institutions, industry, the farming community, the research community, NGOs and the media. The objective of the survey was to determine how effectively the WRC fulfils its role and achieves its vision and mission. It explored the nature and strength of relationship of stakeholders with the WRC and obtained perceptions about the WRC's image, structure, people, processes and output, as well as reasons for these perceptions.

The survey found an overwhelming positive response to the WRC with direct correlation between familiarity (exposure) of each stakeholder grouping with the WRC and its perceptions about the WRC. Stakeholders indicated that the WRC:

"is a necessary organisation to ensure SA has enough quality water now and in future"
"makes a difference to the quality of life or ordinary South Africans"
"is globally recognised as a leader in water research"

Supporting water research in Africa

In Africa, the WRC supports and leads activities that are aimed at building water-centred knowledge. Key leadership positions and initiatives include:

Leadership positions in continental initiatives

- A WRC Research Manager serves as the coordinator and manager of the Southern Region office of the TIGER Initiative (see below)
- A WRC Research Manager is an advisor to a project funded by GTZ, the German Development Agency, on 'Groundwater knowledge sharing and cooperation in SADC'
- A WRC Director is the Deputy Chairperson of the Steering Committee for the Network of African Science Academies (NASAC) Water Programme
- A WRC Director is a member of Ramsar's Scientific and Technical Review Panel (STRP) representing the African Region
- A WRC Research Manager is a member of the evaluation team of the UNEP-IWMI (United Nations Environment Programme – International Water Management Institute) wetlands projects in Africa
- Two WRC Research Managers are founders and members of the African Water and Sanitation Network
- A WRC Research Manager is the Editor of *Sanitation Matters*
- A WRC Director is a Member of the Advisory Board of the International Centre for Water Economics and Governance in Africa (IWEGA)
- A WRC Research Manager is the Chairperson of the Southern African Regional Irrigation Association (SARIA)
- A WRC Research Manager is a Founding Member of the IWA Water Safety Plan Network: Africa
- A Research Manager was elected as Task Leader for South Africa and Work Package 5 Leader for African partners, Kenya, Ethiopia, Morocco and Burkina Faso, as part of the EU-CLARA project
- A Research Manager is the Chairperson of the *2nd SA Young Water Professionals Regional Conference 2011*

Other key continental initiatives

TIGER Initiative - Southern African Regional Capacity Building Centre

The WRC supports the TIGER Initiative (a European Space Agency initiative), a UNESCO-IHP (International Hydrological Programme) supported programme that is aimed at assisting African countries to overcome problems faced in the collection, analysis and dissemination of water-related geo-information, by exploiting the advantages of earth observation technology. The WRC has been hosting the Southern Africa regional centre of the TIGER Initiative since December 2009. The initiative is aimed at supporting the African continent to access and use earth observation satellite data and information made available by space agencies (such as the European Space Agency and the Canadian Space Agency) in management of their water resources. An agreement between the WRC and the International Institute for Geo-Information Science and Earth Observation (ITC), of The Netherlands has been entered into in this regard. A WRC Research Manager, who coordinates the TIGER activities including capacity building (i.e. organizing training workshops and courses) for aquatic scientists involved in TIGER projects, also manages the centre. On 7 April 2010 a meeting was convened to analyse user requirements and access satellite information to support ongoing TIGER research projects undertaken in South Africa, Namibia and Zambia. A meeting was held with SADC Water Division in Gaborone on 19 January 2011, mainly to discuss the collaborative potential between SADC, TIGER and the WRC.

Integrated water resource management (IWRM) study tour

The WRC, on behalf of the United Nations Environment Programme (UNEP) in Sudan, hosted a delegation of technical water professionals from the Darfur region, western Sudan, from 16 to 31 May 2010. The delegation of water professionals engaged in a technical tour around South Africa aimed at sharing South African research knowledge on water issues relevant to Darfur conditions. The tour also aimed at fostering working relationships with Darfur within the context of NEPAD and for the purpose of sharing capacity in water research in the continent. The purpose of the tour was to provide decision makers within Darfur the opportunity to develop a vision for how integrated water resource management (IWRM) could be implemented in Darfur, by seeing how IWRM influences planning and management in South Africa. As a follow-up, the WRC, under the auspices of UNEP, hosted another study tour for a Parliamentary delegation from Sudan, from 31 October to 7 November 2010. This 17-member delegation consisted of senior decision-makers in the Sudanese Government and associated organisations, including Federal Ministers and Directors-General, mainly from the Darfur states. The visit was funded by UNEP, as part of a three-year programme which aims to assist the people of Sudan to achieve peace, recovery and development on an environmentally sustainable basis.

Inter-Academy Programme for Water (IAP) / Network of African Science Academies (NASAC) Water Programme

The WRC continues to represent the Academy of Science of South Africa (ASSAf) in discussions addressing the development of capacity for managing water resources by the Inter-Academy Programme (IAP) for Water. An African Academy-led programme on water has been initiated within the Network of African Science Academies (NASAC). The WRC was invited by ASSAf to make a presentation on the South African water situation at the NASAC Water Programme Workshop in Nairobi, 2-3 August 2010. At this workshop the WRC was appointed as co-chair of the NASAC Water Programme.

Establishing the NEPAD Network of Centres of Excellence in Water Science and Technology

Southern African Network: The WRC continues to support the NEPAD programme on the African Network of Centres of Excellence in Water Science and Technology. A WRC Director assisted in two workshops of the founding members of the Southern Africa Network of Centres of Excellence in Water Science and Technology, aimed at developing the business plan for the region. The South African Department of Science and Technology has made R3 m. available over the next 3 years which will be used to fund the Secretariat. The Joint Research Centre (JRC) of the European Commission has also dedicated funds towards the development of the Southern and West African Networks. The WRC has been tasked to assist the NEPAD Office of Science and Technology (OST) to expand the Southern African Network to include more Southern African countries, as the South African involvement is currently disproportionally high. The Bill and Melinda Gates Foundation contracted the WRC to perform this task.

West African Network: The establishment of the West African Network of Centres of Excellence in Water Science and Technology started in 2009. A member of the IRD, and a WRC Director visited research institutions in West Africa, which included a visit to Benin and Nigeria, during the year under review. The Université Cheikh Anta Diop's Department of 'Qualité et Usages de l'Eau' was formally designated as the NEPAD Agency's Coordinating Hub on Water Science for West Africa. This formally establishes the West African Network of Centres of Excellence in Water Science and Technology. The inaugural meeting of the West African Network was held in Dakar at the Université Cheikh Anta Diop on 3-4 November 2010. The WRC assisted in the development of the work programme and priorities for the network activities. The establishment of the West African NEPAD regional network is indeed a highlight for the WRC.

Southern African Regional Irrigation Association (SARIA)

The Southern African Regional Irrigation Association (SARIA) was established during the *Micro 2000 Conference* which was held in South Africa during October 2000. This initiative was taken by the South African National Committee on Irrigation and Drainage (SANCID) in order to encourage SADC countries to form working groups and later establish national committees to join the International Committee on Irrigation and Drainage (ICID). The members of SARIA meet annually, in South Africa, with funding support provided by the Department of Agriculture, Forestry and Fisheries. Apart from the Steering Committee meetings, workshops or symposia on mutually interesting topics were also held, with presentations by members of SARIA from all 14 SADC countries. These meetings and discussions were organised under the leadership of a WRC Research Manager with support from SARIA members.

Supporting the 3rd African Water Week, Addis Ababa

The WRC was requested to assist in the development of the technical programme for a session at the 3rd Africa Water Week held in Addis Ababa, Ethiopia, from 22-26 November 2010, on the themes of 'Institution building and capacity development for implementing the African Water Vision 2025' and 'Science institutions and capacity building for managing Africa's water resources' A WRC Director presented a paper on: 'Establishing and sustaining the NEPAD Network of Centres of Excellence for Water Science and Technologies in Africa' and represented the WRC at this event.

WRC / Ramsar Africa Wetlands Workshop

A WRC Director organised the first workshop of the Ramsar Scientific and Technical Review Panel (STRP) National Focal Points (NFPs) in Africa, held in South Africa from 29 November to 3 December 2010. The workshop was attended by all African countries that are Ramsar member states, with 40 African countries represented at this historic workshop. The event was supported by the Ramsar Secretariat, the Governments of Switzerland and Tanzania, the South African Department of Environmental Affairs and the WRC.

Global initiatives

The WRC continues to strengthen global partnerships and alliances and to develop new partnerships with the aim of linking South Africa's research community and the water sector to international water-centred knowledge. While many of the global leadership positions are ongoing, a number of new positions and initiatives were created in 2010/11.

Members of staff of the WRC continue to serve in global **leadership positions** as follows:

- The CEO serves on the Governing Council and the Programme Committee of the International Water Association (IWA)
- The CEO serves as a Board Member of the Global Water Research Coalition (GWRC)
- A Director is the Chairperson of the Basins Working Group of the University of the United Nations and the Global Environment Facility (GEF) Initiative known as International Waters and Science
- A Director is an Advisory Board Member for the EU FP7: Adaptive and integrated tools and strategies on natural resource management
- A Director is a reviewer for the 'Africa 2050, Water for Growth and Development' World Water Council report
- A Research Manager is a member of the volunteer network Global Water Watch
- A Director serves on the Advisory Committee of the IWA Global Development Agency
- A Director serves on the IWA Specialist Group on Sludge Management Governing Board
- A Director serves as Chairperson of the Task Force on Financing Water for Agriculture at the International Commission for Irrigation and Drainage (ICID)
- A Research Manager is the Vice-Chairperson of the ICID African Regional Working Group
- A Research Manager is the founder and member of the management committee of the International Water Associations Nanotechnology Specialist Group, and a research manager was appointed to the Scientific Programme Committee of the *IWA Nano and Water Conference*
- A Director serves on the Technical Programme Committee of the *IWA Development Conference,* Malaysia 2011
- A Director was appointed to the Planning Committee of the *IWA Resilience Conference*, Australia 2012
- A Director was appointed to the IWA Task Force on Water Quality and Health
- A Research Manager was elected as the Chairperson of the IWA Specialist Groundwater Group
- The CEO is a member of the World Bank Task Force on Innovation (by invitation)

Global networks and partnerships

Brazil - Africa Partnership

A WRC Director gave a presentation entitled 'The role of the Water Research Commission of South Africa in the water sector' at the Brazil-Africa and Americas Scientific Meeting on Water, 13-17 September 2010, São Carlos, Brazil. Representatives from countries in South America as well as invited African states attended the meeting (Brazil, Mexico, Argentina, Angola, Zimbabwe, Mali, Senegal, Kenya). Because of the strategic role the WRC currently plays on the continent of Africa and the appreciation for the model of the WRC as a water research institution, the WRC was requested to share its strategic and business model with participants at the meeting. Common challenges, strengths, and opportunities were identified on both continents and for all countries. This culminated in the writing of a São Carlos declaration statement, which indicates that the two continents are faced with similar challenges and the scientists of the two continents (invited institutions) are committed to working together to solve these challenges.

World Water Council

A workshop was co-convened by the WRC and the World Water Council on *Water for Growth and Development in Africa – Understanding and Addressing Policy Complexities*. The WRC is a member of the World Water Council and this workshop is considered a strategic joint venture which could bring about other collaborations with the Council. Talks are already underway for a second initiative aiming at establishing an African Water Parliamentarians Network which would engage with other regional networks in preparation for the next *World Water Forum*.

The Global Water Research Coalition (GWRC)

The WRC is an active member of the Global Water Research Coalition (GWRC). The WRC is currently collaborating with members of the GWRC in research programmes addressing: the role and removal of pharmaceuticals, the influence of endocrine disrupting compounds (EDCs) on the thyroid, and other EDC functions (neurological, etc.); and known, new and emerging microbial pathogens, studying the occurrence of pathogens in source water, with a special focus on the occurrence of enteric viruses.
The WRC also continues to collaborate with members of the GWRC on the programme on 'Energy efficiency in the water industry: A compendium of tools, best practices and case studies'. The objective of this research study is to develop a compendium of best practice in the energy-efficient design and operation of water industry assets. Through detailed examination of current best practice and technologies, the study has identified promising developments and future opportunities to help deliver: incremental improvements in energy efficiency through optimisation of existing assets and operations; and more substantial improvements in energy efficiency from the adoption of novel (but proven at full-scale) technologies. The first report of this initiative was made available in June 2010.

The WRC takes part in the new GWRC project 'Brine handling in desalination', which started in September 2010, and the 'Water Footprinting' initiative. The WRC hosted a successful Board and planning meeting of the GWRC from 3-5 November 2010 which included a visit to Rand Water.

IWA strategic relationship

The Executive Committee of IWA-SA and WISA met on 22 June 2010 to discuss the future of the strategic relationship between WISA and the IWA-SA. It was decided in the interest of the South African water sector that IWA-SA and WISA explore ways of incorporating the IWA Executive Committee as part of WISA governance, structure and activities. This approach will facilitate a global conduit for WISA and its members, whilst improving coordination of IWA-SA activities for the benefit of all South African members of IWA and WISA. The President of the IWA, Dr Glen Daigger, President and Chairman of the Board of the IWA, and Mr Paul Reiter, Executive Director () visited the WRC on 20 October 2010 to discuss the IWA-SA/WISA relationship. The CEO of the WRC also made a presentation on the role of the WRC on this occasion.

WERF - USA

The WRC is taking part in a new initiative coordinated by the Water Environment Research Foundation (WERF), USA, called the 'Next Generation of Used Water, which entails assessing the sustainability of current water management practices, identifying those that are projected to be least sustainable over the next 20 years, and defining a new vision for conveying, treating, and reusing water that would address the shortcomings. A scoping exercise is underway through tele-conferencing towards establishing a status-quo state of knowledge. The outcome from the process will be the development of a research strategy which will guide partners towards this concept of 'New Water'.

EU-FP7

The WRC is a partner member in the EU-FP7 research programme CLARA: Capacity-linked water supply and sanitation improvement for Africa's peri-urban and rural areas. The WRC is one of 16 global partners involved in the project. The project was launched on 10 March in Arba Minch, Ethiopia.

UNESCO International Hydrological Programme (IHP)

The IHP is UNESCO's international scientific cooperative programme in water research, water resource management, education and capacity-building, and the only broad-based science programme of the UN system in this area. A WRC Research Manager attended the 44th Bureau meeting of the Secretariat of the National UNESCO IHP in Delft on 5-9 May 2010, during which progress with Secretariat activities was reported on.

Collaboration with the UNESCO Chair in Water Economics and Transboundary Water Governance

Prof Quentin Grafton from the UNESCO Chair in Water Economics and Transboundary Water Governance visited the WRC and met with three Directors and the CEO to discuss future collaboration at project and institutional levels. The WRC participated, by invitation, in the Water Governance in Southern Africa workshop organised by the UNESCO Chair in Water Economics and Transboundary Water Governance, based at the Australian National University (ANU). The aim of the workshop was to explore potential partnerships between Southern Africa and ANU on water governance. The workshop was followed by a number of other bilateral meetings with AusAid and the Australian National Water Commission. A joint proposal submission will be made to AusAid in this field which will ensure the creation of postgraduate opportunities for the participating institutions.

The Global Environment Facility

The WRC hosted the second review meeting of the Global Environment Facility (GEF) International Waters (IW) Science Assessment, 13-15 October 2010, in Durban. The meeting was attended by both the River Basins and the Lakes Working Groups. The aim of the meeting was the finalisation of both the Synopsis and Analyses reports of the R5 bn. worth of GEF-funded projects of the past 10 years. These reports were in preparation for the final synthesis report across all five Working themes, which was developed in Bonn in December 2010.

Collaboration with The Netherlands

The CEO was invited by the South Africa-Netherlands Research Programme on Alternatives in Development (SANPAD) to present a paper on 'Water research funded by the WRC' at a high-level workshop which took place at the South African Embassy in The Hague, 5-8 December 2010. SANPAD was established in 1997 through a bilateral agreement between the Governments of South Africa and The Netherlands.

UN World Water Day 2011 and National Water Week 20 – 25 March 2011

The WRC supported the *UN World Water Day 2011* by exhibiting at an event held at the International Convention Centre, Cape Town, from 20-22 March The event was a collaboration between UN-Water, the African Minister's Council on Water (AMCOW), the United Nations Secretary General's Advisory Board on Water and Sanitation (UNSGAB) and the United Nations Human Settlements Programme (UN-HABIT). The WRC CEO participated in a panel discussion on 'Water in Southern Africa' on 21 March, which formed part of the Cape Town event and was held to launch of the CSIR report entitled *A CSIR Perspective on Water in South Africa. World Water Day* is celebrated annually to highlight the importance of freshwater and the importance of sustainable management of freshwater resources. This year, UN-Water chose the theme '*Water and urbanization*' under the slogan '*Water for cities: Responding to the urban challenge*'.

ORGANISATIONAL GOALS AND OBJECTIVES (KEY PERFORMANCE AREAS)

The WRC has identified five key performance areas:

- Stakeholder relationships
- Financial perspectives
- Learning and innovation
- Internal processes
- Organisational transformation

The WRC continued to use these key performance areas (KPAs), which were developed with the aim of continuously directing the organisation toward excellent performance. The areas include input and output indicators which are assessed and revised annually.

Customer/stakeholder relationships

This KPA addresses the WRC leadership and positioning activities and provides feedback regarding relevance. One of the objectives of this KPA is to enhance the standing of the WRC nationally, in Africa and globally.

GOAL/OBJECTIVES	INDICATORS	EXCELLENCE TARGET	PERFORMANCE
Leadership in local affairs • National initiatives • Public appreciation	National initiatives of key importance to the water, S&T and other related national sectors where the WRC plays a significant role	8 national initiatives	'Excellence' target met
	Strategic positioning initiatives aimed to position the WRC	4 meetings - 2 with DWA Portfolio Committees and 2 with other Portfolio Committees	'Excellence' target met
	Feedback from stakeholder survey and citations	A communication strategy based on stakeholder survey 5 citations	'Excellence' target met 'Excellence' target met
Leadership in external affairs	African leadership (key strategic activities in Africa where the WRC plays a significant role)	5 African initiatives	'Excellence' target met
• Regional (Africa) • Global	International player (activities such as global partnerships, participation in global projects, etc.)	8 global initiatives	'Excellence' target met

Financial perspectives

The objective of this KPA is to improve the financial practices, management and performance of the WRC. This is translated into a number of quantitative indicators addressing growth and sustainability and effective management of funds.

GOALS/OBJECTIVES	INDICATORS	EXCELLENCE TARGET	PERFORMANCE
Improved financial performance	Income growth (income growth is measured as meeting the budgetary target of R17.3 m.)	Meet budget target in full (revised budget)	'Very good' target of 75% met. Leverage income amounts to R14.8 m.
	Research ratio (measured as research funding and support as percentage of total income)	73% (revised budget)	Target met. Actual ratio was 73%
	Cash-flow management (measured against availability of cash for effective operation)	R25 m.	'Excellence' target met
Effective financial management	High-quality budget planning and reporting (measured as the percentage deviation between actual and budget at year-end)	10%	'Excellence' target met. Actual deviation was 7%
	Audit results (measured as a percentage of the previous year's internal audit queries addressed and an unqualified vs. qualified external audit)	70% (internal audit) Unqualified report (external audit)	'Excellence' target met. 78% of the 2009/10 internal audit findings were fully addressed
	Efficiency of recoveries (measured as the percentage of projects older than 3 years fully finalised)	100%	The 'Good' target of 70% was not met only 56% was achieved
	Roll-over of research funds (measured as the deviation from the budgetary figure for roll-over of research project funds)	20%	Target was exceeded by 1%

Learning and innovation

This KPA aimed to further improve the level of innovation and support the commercialisation of intellectual property (IP), enhance the WRC's contribution towards building the water-centred knowledge base in South Africa (emphasising capacity building), and improve various knowledge-sharing activities. The issue of building the knowledge base (capacity building) and the application, transfer, sharing and dissemination of water-centred knowledge continued to be of great importance to the relevance of the WRC.

GOALS/OBJECTIVES	INDICATORS	EXCELLENCE TARGET	PERFORMANCE
Improved commercial-isation of IP	Number of innovations The number of new patents	3 new innovations 2 new patents	'Excellence' target met 'Excellence' target met
Improved contribution towards capacity building (knowledge base)	Number of students supported by the WRC research portfolio as well as the percentage of the total made up by historically disadvantaged students	400 students, 60% of whom are Black	'Excellence' target met
	Analysis of student demo-graphics	A baseline of race, gender and country of origin determined	'Excellence' target met
	Strategic capacity building interventions (strategic meetings with capacity building organisations)	8 meetings	'Excellence' target met
Knowledge sharing and scientific leadership	The number of knowledge-sharing events organised by the WRC	2 events and 20 workshops	
	A new publication tool	Tool fully developed and tested	'Excellence' target met

Internal processes

During 2010/11 the WRC continued to develop business processes and systems to support its core operation. Functional operation, management practices and performance management were addressed.

GOALS/OBJECTIVES	INDICATORS	EXCELLENCE TARGET	PERFORMANCE
Functional excellence	Fund Management (FMS) and Financial Systems are linked	All (100%) subsistence and travel (S&T) and deliverable claims processed on FMS	The 'Good' target of 70% was not met only 50% was achieved
	FMS used as a strategic and operational tool for managing research projects	Full use of FMS for research projects management decisions	'Excellence' target met
	FMS use expanded to the management of research short-term studies (consultancies)	Modules developed and tested	'Excellence' target met
Management excellence	Implementation of a 'business excellence' drive (improved internal and external processes)	3 completed improvement projects	'Excellence' target met
	Organisation's compliance – extent of compliance as reported by audits	80% compliance (100% compliance to PFMA)	'Excellence' target met
Performance Management	Effective use of KPIs	100% of staff evaluated against quantitative KPIs	'Excellence' target met

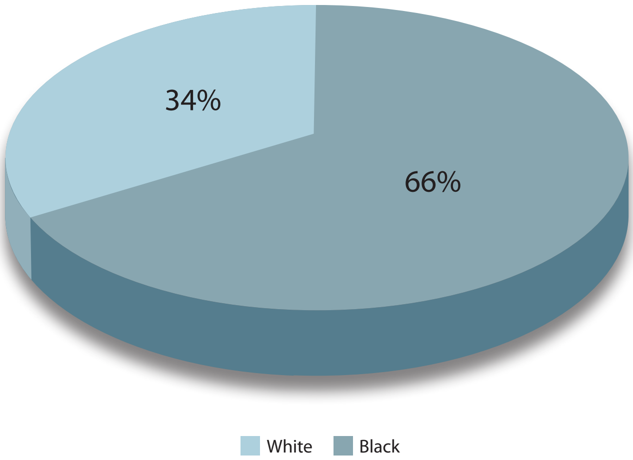
Organisational transformation

This KPA addresses organisational transformation and was focused on the enhancement of effective leadership and culture, an improved level of staff competence and accelerated equity and redress.

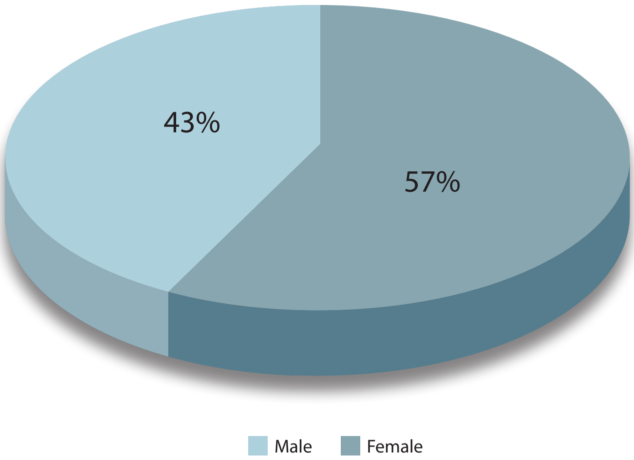
GOALS/OBJECTIVES	INDICATORS	EXCELLENCE TARGET	PERFORMANCE
Effective leadership and culture	The gap between vision and current reality (culture survey) Improved CoE and benefits	20% deviation New CoE submitted to the Minister	'Excellence' target not met. Met the 'very good' target of 25% deviation 'Excellence' target met
Improved competence levels	Training and HR plan updated and implemented	Detailed training and HR plans developed and fully met	'Excellence' target met
Accelerated equity and redress	Meeting targets of EE plan measured against percentage of new appointments	90% of new appointments meet EE requirements	'Very good' target of 80% met
	Improved ratio of BBBEE suppliers	80% of BBBEE suppliers	'Excellence' target met

HUMAN RESOURCES

Staff composition by race



Staff composition by gender



Improved levels of staff competence

The skills development plan for the 2010/11 financial year was well implemented with the WRC receiving a refund from the SETA.

Accelerated equity and redress

Meeting employment equity plan targets

The report measuring progress against the employment equity plan indicates that the WRC has not only met but even exceeded the set employment equity targets for the year under review. During 2010/11 the WRC appointed a number of new employees, against relevant vacancies. For 2010/11 the WRC filled the following positions: Research Manager, PA - Office of the CEO; Coordinator and Cleaner.

WRC support for staff education and training

Investment in excellence and effective leadership culture

The commitment to performance excellence continued into 2010/11. The Pacific Institute conducted a full organisational and cultural survey (OCI) in 2009/10 and, based on the results of the survey, each KSA undertook a Group Styles Inventory (GSI) The WRC engaged the Pacific Institute (TPI) to undertake an assessment for measuring and monitoring group performance – this enables teams to take a targeted look at what is contributing to or detracting from their success. 'Bushfire Survival Situation' simulation sessions were also held. This is an interactive exercise which, when used in conjunction with the GSI, helps the organisation to understand and practice the behaviours and skills that contribute to effective group problem solving and decision-making.

Most new employees attended the *Investment in Excellence course* and the WRC supported 8 staff members in their studies.

BOARD APPROVAL

The Annual financial statements of the WRC and wholly-owned company for the year ended 31 March 2011, which appear on pages 75 to 151 of this report, were approved by the WRC Board at its meeting held on 27 July 2011. The Board is of the opinion that the WRC is financially sound and operates as a going concern.

These statements are signed on behalf of the WRC by:

Prof JB Adams
WRC Board Chairperson

Dr R Kfir
WRC Chief Executive Officer

WATER RESEARCH COMMISSION
CONSOLIDATED ANNUAL FINANCIAL STATEMENTS
FOR THE YEAR ENDED 31 MARCH 2011

REPORT OF THE AUDITOR-GENERAL

REPORT OF THE AUDITOR-GENERAL TO PARLIAMENT ON THE CONSOLIDATED AND SEPARATE FINANCIAL STATEMENTS OF THE WATER RESEARCH COMMISSION FOR THE YEAR ENDED 31 MARCH 2011

REPORT ON THE SEPARATE AND CONSOLIDATED FINANCIAL STATEMENTS

Introduction

I have audited the accompanying consolidated and separate financial statements of the Water Research Commission, which comprise the consolidated and separate statement of financial position as at 31 March 2011, and the consolidated and separate statement of financial performance, statement of changes in net assets and cash flow statement for the year then ended, a summary of significant accounting policies and other explanatory information, as set out on pages 79 to 125.

Accounting authority's responsibility for the consolidated financial statements

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

Auditor-General's responsibility

As required by section 188 of the Constitution of the Republic of South Africa, 1996 (Act No. 108 of 1996), section 4 of the Public Audit Act of South Africa, 2004 (Act No. 25 of 2004) (PAA), and section 14 of the Water Research Act of South Africa, 1971 (Act No. 34 of 1971), my responsibility is to express an opinion on these consolidated and separate financial statements based on my audit.

I conducted my audit in accordance with International Standards on Auditing and General Notice *1111 of 2010* issued in *Government Gazette 33872 of 15 December 2010*. Those standards require that I comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the consolidated and separate financial statements are free from material misstatement.

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

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

Opinion

In my opinion, the consolidated and separate financial statements present fairly, in all material respects, the financial position of the Water Research Commission and its subsidiary as at 31 March 2011, and their financial performance and cash flows for the year then ended in accordance with South African Standards of Generally Recognised Accounting Practice (SA Standards of GRAP) and the requirements of the Public Finance Management Act of South Africa, 1999 (Act No. 1 of 1999) and the Companies Act of South Africa.

Emphasis of matters

I draw attention to the matters below. My opinion is not modified in respect of these matters:

Restatement of corresponding figures

As disclosed in note 27 to the financial statements, the corresponding figures for 31 March 2010 have been restated as a result of errors discovered during 2011 in the financial statements of the Water Research Commission at, and for the year ended, 31 March 2010.

Additional matters

I draw attention to the matters below. My opinion is not modified in respect of these matters:

Unaudited supplementary schedules

The supplementary information set out on pages 126 to 127 does not form part of the financial statements and is presented as additional information. I have not audited these schedules and, accordingly, I do not express an opinion thereon.

REPORT ON OTHER LEGAL AND REGULATORY REQUIREMENTS

In accordance with the PAA and in terms of *General notice 1111 of 2010*, issued in *Government Gazette 33872 of 15 December 2010*, I include below my findings on the annual performance report as set out on pages 66 to 71 and material non-compliance with laws and regulations applicable to the public entity.

Predetermined objectives

No matters to report.

Compliance with laws and regulations

Strategic planning and performance management

To date, the executive authority of the Water Research Commission did not approve the 2010/11 strategic plan submitted by the accounting authority as required by TR 30.1.1

INTERNAL CONTROL

In accordance with the PAA and in terms of *General notice 1111 of 2010*, issued in *Government Gazette 33872 of 15 December 2010*, I considered internal control relevant to my audit, but not for the purpose of expressing an opinion on the effectiveness of internal control. The matters reported below are limited to the significant deficiencies that resulted in the basis for opinion, the findings on the annual performance report and the findings on compliance with laws and regulations included in this report.

Leadership

No matters to report.

Financial and performance management

The financial statements contained material misstatements that were corrected as a result of the audit.

Governance

No matters to report.

OTHER REPORTS

Investigations

An investigation was conducted by an independent consulting firm on request of the entity. The investigation was initiated based on the allegation of possible misconduct by an employee whom approved invoices for payments before deliverables were received. The investigation resulted in the dismissal of the employee and the case is currently in arbitration.

Auditor-General

Auditor-General
Pretoria
31 July 2011

AUDITOR-GENERAL
SOUTH AFRICA
Auditing to build public confidence

REPORT OF THE AUDIT COMMITTEE

REPORT OF THE AUDIT COMMITTEE REQUIRED BY TREASURY REGULATIONS 27.1.7 AND 27.1.10 OF THE PUBLIC FINANCE MANAGEMENT ACT, ACT 1 OF 1999, AS AMENDED BY ACT 29 OF 1999

The Audit Committee reports that it has adopted formal terms of reference as its Audit Committee Charter and that it has discharged all of its responsibilities for the year, in compliance with the charter.

The Audit Committee is satisfied that an adequate system of internal control is in place to reduce significant risks faced by the organisation to an acceptable level, and that these controls have been effective during the period under review. The system is designed to manage, rather that eliminate the risk of failure and to maximise opportunities to achieve business objectives. This can provide only reasonable but not absolute assurance.

The Audit Committee has evaluated the Annual Financial Statements of the WRC group for the year ended 31 March 2011 and based on the information provided to the Audit Committee considers that it complies, in all material respects with the requirements of the various Acts governing disclosure and reporting on the Annual Financial Statements. The Audit Committee therefore recommends the adoption of the Annual Financial Statements by the Board of the WRC.

M Sirenya

Mr M Sirenya
Chairperson

Statement of Financial Position

Water Research Commission Consolidated Annual Financial Statements for the year ended 31 March 2011

		Group		WRC	
Figures in Rand	**Note(s)**	**2011**	**2010**	**2011**	**2010**
Assets					
Current Assets					
Loans to group	6	-	-	1,020,000	1,020,000
Operating lease asset		32,059	20,436	-	-
Trade and other receivables	10	20,092,804	37,759,193	20,652,751	38,132,372
Trade and other receivables - exchange transactions	10	7,402	24,835	-	-
Cash and cash equivalents	11	96,758,201	68,944,252	95,074,551	67,410,029
		116,890,466	**106,748,716**	**116,747,302**	**106,562,401**
Non-Current Assets					
Property, plant and equipment	3	11,840,833	11,917,199	3,149,311	3,225,677
Intangible assets	4	2,433,518	2,606,094	2,433,518	2,606,094
Investments in controlled entities	5	-	-	755,939	755,939
Loans to group	6	-	-	15,880,003	14,568,801
Other financial assets	7	6,594,108	48,742,815	6,594,108	48,742,815
		20,868,459	**63,266,108**	**28,812,879**	**69,899,326**
Total Assets		**137,758,925**	**170,014,824**	**145,560,181**	**176,461,727**
Liabilities					
Current Liabilities					
Finance lease obligation	12	569,102	421,847	569,102	421,847
Trade and other payables	14	38,301,860	34,568,007	38,300,979	34,582,903
Trade and other payables - non-exchange transactions	14	27,397	23,912	-	-
Accruals - leave and bonus	13	2,941,756	2,610,438	2,941,756	2,610,438
		41,40,115	**37,624,204**	**41,811,837**	**37,615,188**
Non-Current Liabilities					
Finance lease obligation	12	746,909	814,474	746,909	814,474
Operating lease liability		-	-	162,978	-
Retirement benefit obligation	9	3,954,648	32,793,530	3,954,648	32,793,530
		4,701,557	**33,608,004**	**4,864,535**	**33,608,004**
Total Liabilities		**46,541,672**	**71,232,208**	**46,676,372**	**71,223,192**
Net Assets		**91,217,253**	**98,782,616**	**98,883,809**	**105,238,535**
Net Assets					
Reserves					
Revaluation reserve		24,403,948	22,349,339	24,403,948	22,349,339
Accumulated surplus		66,813,305	76,433,277	74,479,861	82,889,196
Total Net Assets		**91,217,253**	**98,782,616**	**98,883,809**	**105,238,535**

Statement of Financial Performance

Water Research Commission Consolidated Annual Financial Statements for the year ended 31 March 2011

		Group		WRC	
Figures in Rand	**Note(s)**	**2011**	**2010**	**2011**	**2010**
Revenue	16	152,665,434	152,100,971	152,262,062	151,743,565
Other income		1,518,941	1,946,855	1,911,653	2,254,151
Operating expenses		(167,404,452)	(158,710,157)	(168,507,081)	(159,901,125)
Operating deficit	**17**	**(13,220,077)**	**(4,662,331)**	**(14,333,366)**	**(5,903,409)**
Investment revenue	18	4,725,270	4,353,175	6,170,638	5,880,794
Finance costs	19	(1,125,166)	(1,164,908)	(246,604)	(1,164,908)
Deficit for the year		**(9,619,973)**	**(1,474,064)**	**(8,409,332)**	**(1,187,523)**

Statement of Changes in Net Assets

Water Research Commission Consolidated Annual Financial Statements for the year ended 31 March 2011

Figures in Rand	Revaluation reserve	Accumulated surplus	Total net assets
Group			
Balance at 01 April 2009	**21,237,357**	**77,907,340**	**99,144,697**
Changes in net assets			
Fair value of available-for-sale financial assets	1,111,982	-	1,111,982
Net income (losses) recognised directly in net assets	1,111,982	-	1,111,982
Deficit for the year	-	(1,474,064)	(1,474,064)
Total recognised income and expenses for the year	1,111,982	(1,474,064)	(362,082)
Total changes	1,111,982	(1,474,064)	(362,082)
Balance at 01 April 2010 as restated (refer note 27)	**22,349,339**	**76,433,276**	**98,782,615**
Changes in net assets			
Fair value of available-for-sale financial assets	2,054,609	-	2,054,609
Net income (losses) recognised directly in net assets	2,054,609	-	2,054,609
Deficit for the year	-	(9,619,973)	(9,619,973)
Total recognised income and expenses for the year	2,054,609	(9,619,973)	(7,565,364)
Total changes	2,054,609	(9,619,973)	(7,565,364)
Balance at 31 March 2011	**24,403,948**	**66,813,303**	**91,217,251**
Note(s)			
WRC			
Balance at 01 April 2009 as restated (refer note 27)	**21,237,357**	**84,076,719**	**105,314,076**
Changes in net assets			
Fair value of available-for-sale financial assets	1,111,982	-	1,111,982
Net income (losses) recognised directly in net assets	1,111,982	-	1,111,982
Deficit for the year	-	(1,187,523)	(1,187,523)
Total recognised income and expenses for the year restated	1,111,982	(1,187,523)	(75,541)
Total changes	1,111,982	(1,187,523)	(75,541)
Balance at 01 April 2010 as restated (refer note 27)	**22,349,339**	**82,889,196**	**105,238,535**
Changes in net assets			
Fair value of available-for-sale financial assets	2,054,609	-	2,054,609
Net income (losses) recognised directly in net assets	2,054,609	-	2,054,609
Deficit for the year	-	(8,409,332)	(8,409,332)
Total recognised income and expenses for the year	2,054,609	(8,409,332)	(6,354,723)
Total changes	2,054,609	(8,409,332)	(6,354,723)
Balance at 31 March 2011	**24,403,948**	**74,479,864**	**98,883,812**

Cash Flow Statement

Water Research Commission Consolidated Annual Financial Statements for the year ended 31 March 2011

		Group		WRC	
Figures in Rand	**Note(s)**	**2011**	**2010**	**2011**	**2010**
Cash flows from operating activities					
Receipts					
Cash receipts from customers		171,973,790	154,510,964	171,815,094	151,881,174
Interest income		3,376,088	4,353,175	5,703,973	5,156,789
		175,349,878	158,864,139	177,519,067	157,037,963
Payments					
Cash paid to suppliers and employees		(190,751,022)	(150,539,882)	(191,758,436)	(149,270,353)
Finance costs		(246,604)	(1,027,120)	(246,604)	(1,027,120)
		(190,997,626)	(151,567,002)	(192,005,040)	(150,297,473)
Net cash flows from operating activities	**22**	**(15,647,748)**	**7,297,137**	**(14,485,973)**	**6,740,490**
Cash flows from investing activities					
Purchase of property, plant and equipment	3	(716,364)	(1,056,824)	(716,364)	(1,056,824)
Purchase of other intangible assets	4	(104,945)	(1,166,547)	(104,945)	(1,166,547)
Repayments on loans advanced to group		-	-	(1,311,202)	215,935
Proceeds from sale of financial assets		44,203,316	292,978	44,203,316	92,978
Purchase of retirement benefits		-	(19,138)	-	-
Net cash flows from investing activities		**43,382,007**	**(1,949,531)**	**42,070,805**	**(1,714,458)**
Cash flows from financing activities					
Finance lease movement - payments		79,690	(856,115)	79,690	(856,115)
Finance lease liability increase		-	871,793	-	871,793
Net cash flows from financing activities		**79,690**	**15,678**	**79,690**	**15,678**
Net increase/(decrease) in cash and cash equivalents		**27,813,949**	**5,363,284**	**27,664,522**	**5,041,710**
Cash and cash equivalents at the beginning of the year		68,944,252	63,580,968	67,410,029	62,368,319
Cash and cash equivalents at the end of the year	**11**	**96,758,201**	**68,944,252**	**95,074,551**	**67,410,029**

Accounting Policies

Water Research Commission Consolidated Annual Financial Statements for the year ended 31 March 2011

1. Presentation of Annual Financial Statements

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

These annual financial statements have been prepared on an accrual basis of accounting and are in accordance with historical cost convention unless specified otherwise. They are presented in South African Rand.

A summary of the significant accounting policies, which have been consistently applied, are disclosed below.

These accounting policies are consistent with the previous period.

1.1 Consolidation

Basis of consolidation

Consolidated annual financial statements are the annual financial statements of the group presented as those of a single entity.

The consolidated annual financial statements incorporate the annual financial statements of the parent entity and all subsidiary, including special purpose entities, which are controlled by the parent entity.

Control exists when the parent entity has the power to govern the financial and operating policies of another entity so as to obtain benefits from its activities.

The results of subsidiaries are included in the consolidated annual financial statements from the effective date of acquisition or date when control commences to the effective date of disposal or date when control ceases. The difference between the proceeds from the disposal of the subsidiary and its carrying amount as of the date of disposal, including the cumulative amount of any exchange differences that relate to the subsidiary recognised in net assets in accordance with the Standard of GRAP on The Effects of Changes in Foreign Exchange Rates, is recognised in the consolidated statement of financial performance as the surplus or deficit on the disposal of the subsidiary.

An investment in an entity is accounted for in accordance with the Standard of GRAP on Financial Instruments: Recognition and Measurement from the date that it ceases to be a subsidiary, unless it becomes an associate or a joint subsidiary, in which case it is accounted for as such. The carrying amount of the investment at the date that the entity ceases to be a subsidiary is regarded as cost on initial measurement of a financial asset in accordance with the Standard of GRAP on Financial Instruments: Recognition and Measurement.

The annual financial statements of the parent entity and its subsidiaries used in the preparation of the consolidated annual financial statements are prepared as of the same reporting date.

When the reporting dates of the parent entity and a subsidiary are different, the subsidiary prepares, for consolidation purposes, additional annual financial statements as of the same date as the parent entity unless it is impracticable to do so. When the annual financial statements of a subsidiary used in the preparation of consolidated annual financial statements are prepared as of a reporting date different from that of the parent entity, adjustments are made for the effects of significant transactions or events that occur between that date and the date of the parent entity's annual financial statements. In any case, the difference between the reporting date of the subsidiary and that of the parent entity shall be no more than three months. The length of the reporting periods and any difference in the reporting dates is the same from period to period.

Adjustments are made when necessary to the annual financial statements of the subsidiaries to bring their accounting policies in line with those of the parent entity.

All intra-entity transactions, balances, revenues and expenses are eliminated in full on consolidation.

Minority interests in the net assets of the group are identified and recognised separately from the parent entity's interest therein, and are recognised within net assets. Losses applicable to the minority in a consolidated subsidiary may exceed the minority interest in the subsidiary's net assets. The excess, and any further losses applicable to the minority, are allocated against the majority interest except to the extent that the minority has a binding obligation to, and is able to, make an additional investment to cover the losses. If the subsidiary subsequently reports surpluses, such surpluses are allocated to the majority interest until the minority's share of losses previously absorbed by the majority has been recovered.

Minority interests in the surplus or deficit of the economic entity is separately disclosed.

1.2 Significant judgements and sources of estimation uncertainty

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

Trade receivables / Held to maturity investments and/or loans and receivables

The group assesses its trade receivables, held to maturity investments and loans and receivables for impairment at the end of each reporting period. In determining whether an impairment loss should be recorded in surplus or deficit, the entity makes judgements as to whether there is observable data indicating a measurable decrease in the estimated future cash flows from a financial asset.

The impairment for trade receivables, held to maturity investments and loans and receivables is calculated on a portfolio basis, based on historical loss ratios, adjusted for national and industry-specific economic conditions and other indicators present at the reporting date that correlate with defaults on the portfolio. These annual loss ratios are applied to loan balances in the portfolio and scaled to the estimated loss emergence period.

Available-for-sale financial assets

The determination of the impairment of available-for-sale financial asset require significant judgment. In making this judgment, the group evaluates, among other factors, the duration and extent to which the fair value of an investment is less than its cost; and the financial health of and near-term business outlook for the investee, including factors such as industry and sector performance, changes in technology and operational and financing cash flow.

Fair value estimation

The fair value of financial instruments traded in active markets (such as trading and available-for-sale securities) is based on quoted market prices at the end of the reporting period. The quoted market price used for financial assets held by the group is the current bid price.

The fair value of financial instruments that are not traded in an active market (for example, over-the-counter derivatives) is determined by using valuation techniques. The group uses a variety of methods and makes assumptions that are based on market conditions existing at the end of each reporting period. Quoted market prices or dealer quotes for similar instruments are used for long-term debt. Other techniques, such as estimated discounted cash flows, are used to determine fair value for the remaining financial instruments. The fair value of interest rate swaps is calculated as the present value of the estimated future cash flows. The fair value of forward foreign exchange contracts is determined using quoted forward exchange rates at the end of the reporting period.

The carrying value less impairment provision of trade receivables and payables are assumed to approximate their fair values. The fair value of financial liabilities for disclosure purposes is estimated by discounting the future contractual cash flows at the current market interest rate that is available to the group for similar financial instruments.

Impairment testing

The recoverable amounts of cash-generating units and individual assets have been determined based on the higher of value-in-use calculations and fair values less costs to sell. These calculations require the use of estimates and assumptions. It is reasonably possible that the key assumptions may change which may then impact our estimations and may then require a material adjustment to the carrying value of goodwill and tangible assets.

The group reviews and tests the carrying value of assets when events or changes in circumstances suggest that the carrying amount may not be recoverable. In addition, goodwill is tested on an annual basis for impairment. Assets are grouped at the lowest level for which identifiable cash flows are largely independent of cash flows of other assets and liabilities. If there are indications that impairment may have occurred, estimates are prepared of expected future cash flows for each group of assets. Expected future cash flows used to determine the value in use of goodwill and tangible assets are inherently uncertain and could materially change over time.

Useful lives and residual values

The entity re-assess the useful lives and residual values of property, plant and equipment on an annual basis. In re-assessing the useful lives and residual values of property, plant and equipment management considers the condition and use of the individual assets, to determine the remaining period over which the asset can and will be used.

Post retirement benefits

The present value of the post retirement obligation depends on a number of factors that are determined on an actuarial basis using a number of assumptions. The assumptions used in determining the net cost (income) include the discount rate. Any changes in these assumptions will impact on the carrying amount of post retirement obligations.

The group determines the appropriate discount rate at the end of each year. This is the interest rate that should be used to determine the present value of estimated future cash outflows expected to be required to settle the pension obligations. In determining the appropriate discount rate, the group considers the interest rates of high-quality corporate bonds that are denominated in the currency in which the benefits will be paid, and that have terms to maturity approximating the terms of the related pension liability.

Other key assumptions for pension obligations are based on current market conditions. Additional information is disclosed in Note 9.

Effective interest rate

The group used the prime interest rate to discount future cash flows.

Allowance for doubtful debts

On debtors an impairment loss is recognised in surplus and deficit when there is objective evidence that it is impaired. The impairment is measured as the difference between the debtors carrying amount and the present value of estimated future cash flows discounted at the effective interest rate, computed at initial recognition.

1.3 Property, plant and equipment

Property, plant and equipment are tangible non-current assets (including infrastructure assets) that are held for use in the production or supply of goods or services, rental to others, or for administrative purposes, and are expected to be used during more than one year. Items of property, plant and equipment are initially recognised as assets on acquisition date and are initially recorded at cost. The cost of an item of property, plant and equipment is the purchase price and other costs attributable to bring the asset to the location and condition necessary for it to be capable of operating in the manner intended by the entity. Trade discounts and rebates are deducted in arriving at the cost. The cost, if any, also includes the necessary costs of dismantling and removing the asset and restoring the site on which it is located.

The cost of an item of property, plant and equipment is recognised as an asset when:

- it is probable that future economic benefits associated with the item will flow to the entity; and
- the cost of the item can be measured reliably.

Where an asset is acquired by the entity for no or nominal consideration (i.e. a non-exchange transaction), the cost is deemed to be equal to the fair value of that asset on the date acquired.

Major spare parts and servicing equipment qualify as property, plant and equipment when the entity expects to use them during more than one period. Similarly, if the major spare parts and servicing equipment can be used only in connection with an item of property, plant and equipment, they are accounted for as property, plant and equipment.

Property, plant and equipment are carried at cost less accumulated depreciation and any impairment losses.

Where the entity replaces parts of an asset, it derecognises the part of the asset being replaced and capitalises the new component. Subsequent expenditure incurred on an asset is capitalised when it increases the capacity or future economic benefits associated with the asset.

Depreciation is calculated on the depreciable amount, using the straight-line method over the estimated useful lives of the assets. Assets held under finance leases are depreciated over their expected useful lives on the same basis as owned assets or, where shorter, the term of the relevant lease. Components of assets that are significant in relation to the whole asset and that have different useful lives are depreciated separately. Depreciation commences when the asset is ready for its intended use. The annual depreciation rates are based on the following estimated average asset lives:

Item	Average useful life
Furniture and fixtures	12 - 37 years
Office equipment	4 - 37 years
IT equipment	5 - 16 years
Finance lease asset	Years according to the lease term

Motor vehicles are depreciated on a pro rata basis calculated on the basis of kilometers travelled annually as a proportion of the expected useful life of the vehicle.

The residual value, useful life and the depreciation method of each asset are reviewed at each financial period-end and any changes are recognised as a change in accounting estimate in the Statement of Financial Performance.

The entity tests for impairment where there is an indication that an asset may be impaired. An assessment of whether there is an indication of possible impairment is done at each reporting date. Where the carrying amount of an item of property, plant and equipment is greater than the estimated recoverable amount (or recoverable service amount), it is written down immediately to its recoverable amount (or recoverable service amount) and an impairment loss is charged to the Statement of Financial Performance.

A previously recognised impairment loss is reversed when there is an indication that it may no longer exist or may have decreased, however not to an amount higher than the carrying amount that would have been determined (net of depreciation) had no impairment been recognised in prior years.

An item of property, plant and equipment is derecognised when the asset is disposed of or when there are no further economic benefits or service potential expected from the use of the asset. The gain or loss arising on the disposal or retirement of an item of property, plant and equipment is determined as the difference between the sales proceeds and the carrying value and is included in surplus or deficit when the item is derecognised.

Buildings are not currently depreciated as the residual value is estimated to be higher than the carrying value. The depreciation charge is zero when the residual value is estimated to be higher than the carrying amount. The residual value and the useful life of each asset are reviewed at each financial period.

1.4 Intangible assets

An asset is identified as an intangible asset when it:
- is capable of being separated or divided from an entity and sold, transferred, licensed, rented or exchanged, either individually or together with a related contract, assets or liability; or
- arises from contractual rights or other legal rights, regardless whether those rights are transferable or separate from the group or from other rights and obligations.

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

Intangible assets are initially recognised at cost.

An intangible asset acquired at no or nominal cost, the cost shall be its fair value as at the date of acquisition.

Expenditure on research (or on the research phase of an internal project) is recognised as an expense when it is incurred.

An intangible asset arising from development (or from the development phase of an internal project) is recognised when:
- it is technically feasible to complete the asset so that it will be available for use or sale.
- there is an intention to complete and use or sell it.
- there is an ability to use or sell it.
- it will generate probable future economic benefits or service potential.
- there are available technical, financial and other resources to complete the development and to use or sell the asset.
- the expenditure attributable to the asset during its development can be measured reliably.

Intangible assets are carried at cost less any accumulated amortisation and any impairment losses.

An intangible asset is regarded as having an indefinite useful life when, based on all relevant factors, there is no foreseeable limit to the period over which the asset is expected to generate net cash inflows or service potential. Amortisation is not provided for these intangible assets, but they are tested for impairment annually and whenever there is an indication that the asset may be impaired. For all other intangible assets amortisation is provided on a straight line basis over their useful life.

The amortisation period and the amortisation method for intangible assets are reviewed at each reporting date.

Reassessing the useful life of an intangible asset with a finite useful life after it was classified as indefinite is an indicator that the asset may be impaired. As a result the asset is tested for impairment and the remaining carrying amount is amortised over its useful life.

Internally generated brands, mastheads, publishing titles, customer lists and items similar in substance are not recognised as intangible assets.

Amortisation is provided to write down the intangible assets, on a straight line basis, to their residual values as follows:

Item	Useful life
Computer software, other	10 years

1.5 Investments in controlled entities

Group annual financial statements

The group annual financial statements include those of the parent entity and its subsidiaries. The revenue and expenses of the subsidiaries are included from the effective date of acquisition.

On acquisition the group recognises the subsidiary's identifiable assets, liabilities and contingent liabilities at fair value, except for assets classified as held-for-sale, which are recognised at fair value less costs to sell.

Consolidated annual financial statements

The consolidated financial statements incorporate the financial statements of Water Research Commision and its wholly owned subsidiary. The results of the subsidiary are included from the effective date of aquisition.

WRC annual financial statements

In the entity's separate annual financial statements, investments in investments in controlled entities are carried at cost less any accumulated impairment.

The cost of an investment in subsidiary is the aggregate of:

- the fair value, at the date of exchange, of assets given, liabilities incurred or assumed, and equity instruments issued by the entity; plus
- any costs directly attributable to the purchase of the subsidiary.

An adjustment to the cost of a business combination contingent on future events is included in the cost of the combination if the adjustment is probable and can be measured reliably.

1.6 Financial instruments

Classification

The group classifies financial assets and financial liabilities into the following categories:

- Financial assets at fair value through surplus or deficit - designated
- Loans and receivables
- Financial liabilities at fair value through surplus or deficit - designated

Classification depends on the purpose for which the financial instruments were obtained / incurred and takes place at initial recognition. Classification is re-assessed on an annual basis, except for derivatives and financial assets designated as at fair value through surplus or deficit, which shall not be classified out of the fair value through surplus or deficit category.

Initial recognition and measurement

Financial instruments are recognised initially when the group becomes a party to the contractual provisions of the instruments.

The group classifies financial instruments, or their component parts, on initial recognition as a financial asset, a financial liability or an equity instrument in accordance with the substance of the contractual arrangement.

Financial instruments are measured initially at fair value, except for equity investments for which a fair value is not determinable, which are measured at cost and are classified as available-for-sale financial assets.

For financial instruments which are not at fair value through surplus or deficit, transaction costs are included in the initial measurement of the instrument.

Transaction costs on financial instruments at fair value through surplus or deficit are recognised in surplus or deficit.

Subsequent measurement

Financial instruments at fair value through surplus or deficit are subsequently measured at fair value, with gains and losses arising from changes in fair value being included in surplus or deficit for the period.

Net gains or losses on the financial instruments at fair value through surplus or deficit dividends and interest.

Dividend income is recognised in surplus or deficit as part of other income when the group's right to receive payment is established.

Loans and receivables are subsequently measured at amortised cost, using the effective interest method, less accumulated impairment losses.

Fair value determination

The fair values of quoted investments are based on current bid prices. If the market for a financial asset is not active (and for unlisted securities), the group establishes fair value by using valuation techniques. These include the use of recent arm's length transactions, reference to other instruments that are substantially the same, discounted cash flow analysis, and option pricing models making maximum use of market inputs and relying as little as possible on entity-specific inputs.

Impairment of financial assets

At each end of the reporting period the group assesses all financial assets, other than those at fair value through surplus or deficit, to determine whether there is objective evidence that a financial asset or group of financial assets have been impaired.

For amounts due to the group, significant financial difficulties of the debtor, probability that the debtor will enter bankruptcy and default of payments are all considered indicators of impairment.

In the case of equity securities classified as available-for-sale, a significant or prolonged decline in the fair value of the security below its cost is considered an indicator of impairment. If any such evidence exists for available-for-sale financial assets, the cumulative loss – measured as the difference between the acquisition cost and current fair value, less any impairment loss on that financial asset previously recognised in surplus or deficit – is removed from equity as a reclassification adjustment and recognised in surplus or deficit.

Impairment losses are recognised in surplus or deficit.

Impairment losses are reversed when an increase in the financial asset's recoverable amount can be related objectively to an event occurring after the impairment was recognised, subject to the restriction that the carrying amount of the financial asset at the date that the impairment is reversed shall not exceed what the carrying amount would have been had the impairment not been recognised.

Reversals of impairment losses are recognised in surplus or deficit except for equity investments classified as available-for-sale.

Impairment losses are also not subsequently reversed for available-for-sale equity investments which are held at cost because fair value was not determinable.

Where financial assets are impaired through use of an allowance account, the amount of the loss is recognised in surplus or deficit within operating expenses. When such assets are written off, the write off is made against the relevant allowance account. Subsequent recoveries of amounts previously written off are credited against operating expenses.

Financial instruments designated as available-for-sale

These financial assets are non-derivatives that are either designated in this category or not classified elsewhere. These other financial assets include investments made by the Water Research Commission invested in Old Mutual and Momentum Wealth.

Investments are recognised and derecognised on a trade date basis where the purchase or sale of an investment is under a contract whose terms require delivery of the investment within the timeframe established by the market concerned.

These investments are measured initially and subsequently at fair value. Gains and losses arising from changes in fair value are recognised directly in net assets until the security is disposed of or is determined to be impaired.

Loans to (from) group

These include loans to subsidiaries and are recognised initially at fair value plus direct transaction costs.

Subsequently these loans are measured at amortised cost using the effective interest rate method, less any impairment loss recognised to reflect irrecoverable amounts.

On loans receivable an impairment loss is recognised in surplus or deficit when there is objective evidence that it is impaired. The impairment is measured as the difference between the investment's carrying amount and the present value of estimated future cash flows discounted at the effective interest rate computed at initial recognition.

Impairment losses are reversed in subsequent periods when an increase in the investment's recoverable amount can be related objectively to an event occurring after the impairment was recognised, subject to the restriction that the carrying amount of the investment at the date the impairment is reversed shall not exceed what the amortised cost would have been had the impairment not been recognised.

Loans to group entities are categorised as loans and receivables.

Loans to shareholders, directors, managers and employees

These financial assets are classified as loans and receivables.

Trade and other receivables

Trade receivables are measured at initial recognition at fair value, and are subsequently measured at amortised cost using the effective interest rate method. Appropriate allowances for estimated irrecoverable amounts are recognised in surplus or deficit when there is objective evidence that the asset is impaired. Significant financial difficulties of the debtor, probability that the debtor will enter bankruptcy or financial reorganisation, and default or delinquency in payments (more than 30 days overdue) are considered indicators that the trade receivable is impaired. The allowance recognised is measured as the difference between the asset's carrying amount and the present value of estimated future cash flows discounted at the effective interest rate computed at initial recognition.

The carrying amount of the asset is reduced through the use of an allowance account, and the amount of the deficit is recognised in surplus or deficit within operating expenses. When a trade receivable is uncollectible, it is written off against the allowance account for trade receivables. Subsequent recoveries of amounts previously written off are credited against operating expenses in surplus or deficit.

Trade and other receivables are classified as loans and receivables.

Trade and other payables

Trade payables are initially measured at fair value, and are subsequently measured at amortised cost, using the effective interest rate method.

Cash and cash equivalents

Cash and cash equivalents comprise cash on hand and demand deposits, and other short-term highly liquid investments that are readily convertible to a known amount of cash and are subject to an insignificant risk of changes in value. These are initially and subsequently recorded at fair value.

Derecognition

Financial assets

A financial asset (or, where applicable a part of a financial asset or part of a group of similar financial assets) is derecognised where:

- the rights to receive cash flows from the asset have expired;
- the group retains the right to receive cash flows from the asset, but has assumed an obligation to pay them in full without material delay to a third party under a 'pass-through' arrangement; or
- the group has transferred its rights to receive cash flows from the asset and either
  - has transferred substantially all the risks and rewards of the asset, or
  - has neither transferred nor retained substantially all the risks and rewards of the asset, but has transferred control of the asset.

Where the group has transferred its rights to receive cash flows from an asset and has neither transferred nor retained substantially all the risks and rewards of the asset nor transferred control of the asset, the asset is recognised to the extent of the group's continuing involvement in the asset. Continuing involvement that takes the form of a guarantee over the transferred asset is measured at the lower of the original carrying amount of the asset and the maximum amount of consideration that the group could be required to repay. Where continuing involvement takes the form of a written and/or purchased option (including a cash-settled option or similar provision) on the transferred asset, the extent of the group's continuing involvement is the amount of the transferred asset that the group may repurchase, except that in the case of a written put option (including a cash-settled option or similar provision) on an asset measured at fair value, the extent of the group's continuing involvement is limited to the lower of the fair value of the transferred asset and the option exercise price.

Financial liabilities

A financial liability is derecognised when the obligation under the liability is discharged, cancelled or expires. Where an existing financial liability is replaced by another from the same lender on substantially different terms, or the terms of an existing liability are substantially modified, such an exchange or modification is treated as a derecognition of the original liability and the recognition of a new liability, and the difference in the respective carrying amounts is recognised in surplus or deficit.

Impairment of financial assets

The group assesses at each statement of financial position date whether a financial asset or group of financial assets is impaired.

Assets are carried at amortised cost.

If there is objective evidence that an impairment loss on loans and receivables carried at amortised cost has been incurred, the amount of the loss is measured as the difference between the asset's carrying amount and the present value of estimated future cash flows (excluding future credit losses that have not been incurred) discounted at the financial asset's original effective interest rate (i.e. the effective interest rate computed at initial recognition). The carrying amount of the asset shall be reduced either directly or through the use of an allowance account. The amount of the loss shall be recognised in surplus or deficit. The group first assesses whether objective evidence of impairment exists individually for financial assets that are individually significant, and individually or collectively for financial assets that are not individually significant. If it is determined that no objective evidence of impairment exists for an individually assessed financial asset, whether significant or not, the asset is included in a group of financial assets with similar credit risk characteristics and that group of financial assets is collectively assessed for impairment. Assets that are individually assessed for impairment and for which an impairment loss is or continues to be recognised are not included in a collective assessment of impairment.

1.7 Leases

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

Finance leases - lessee

Finance leases are recognised as assets and liabilities in the statement of financial position at amounts equal to the fair value of the leased property or, if lower, the present value of the minimum lease payments. The corresponding liability to the lessor is included in the statement of financial position as a finance lease obligation.

The discount rate used in calculating the present value of the minimum lease payments is the interest rate on debt owing to the state.

Minimum lease payments are apportioned between the finance charge and reduction of the outstanding liability. The finance charge is allocated to each period during the lease term so as to produce a constant periodic rate of interest on the remaining balance of the liability.

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

Operating leases - lessee

Operating lease payments are recognised as an expense on a straight-line basis over the lease term. The difference between the amounts recognised as an expense and the contractual payments are recognised as an operating lease asset or liability.

1.8 Impairment of cash-generating assets

Cash-generating assets are those assets held by the group with the primary objective of generating a commercial return. When an asset is deployed in a manner consistent with that adopted by a profit-orientated entity, it generates a commercial return.

Impairment is a loss in the future economic benefits or service potential of an asset, over and above the systematic recognition of the loss of the asset's future economic benefits or service potential through depreciation (amortisation).

Carrying amount is the amount at which an asset is recognised in the statement of financial position after deducting any accumulated depreciation and accumulated impairment losses thereon.

A cash-generating unit is the smallest identifiable group of assets held with the primary objective of generating a commercial return that generates cash inflows from continuing use that are largely independent of the cash inflows from other assets or groups of assets.

Costs of disposal are incremental costs directly attributable to the disposal of an asset, excluding finance costs and income tax expense.

Depreciation (Amortisation) is the systematic allocation of the depreciable amount of an asset over its useful life.

Fair value less costs to sell is the amount obtainable from the sale of an asset in an arm's length transaction between knowledgeable, willing parties, less the costs of disposal.

Recoverable amount of an asset or a cash-generating unit is the higher of its fair value less costs to sell and its value in use.

Useful life is either:

- (a) the period of time over which an asset is expected to be used by the group; or
- (b) the number of production or similar units expected to be obtained from the asset by the group.

1.9 Employee benefits

Short-term employee benefits

The cost of short-term employee benefits, (those payable within 12 months after the service is rendered, such as paid vacation leave and sick leave, bonuses, and non-monetary benefits such as medical care), are recognised in the period in which the service is rendered and are not discounted.

The expected cost of compensated absences is recognised as an expense as the employees render services that increase their entitlement or, in the case of non-accumulating absences, when the absence occurs.

The expected cost of surplus sharing and bonus payments is recognised as an expense when there is a legal or constructive obligation to make such payments as a result of past performance.

Defined contribution plans

Payments to defined contribution retirement benefit plans are charged as an expense as they fall due.

Payments made to industry-managed (or state plans) retirement benefit schemes are dealt with as defined contribution plans where the group's obligation under the schemes is equivalent to those arising in a defined contribution retirement benefit plan.

Defined benefit plans

For defined benefit plans the cost of providing the benefits is determined using the projected credit method.

Actuarial valuations are conducted on an annual basis by independent actuaries separately for each plan.

Consideration is given to any event that could impact the funds up to end of the reporting period where the interim valuation is performed at an earlier date.

Past service costs are recognised immediately to the extent that the benefits are already vested, and are otherwise amortised on a straight line basis over the average period until the amended benefits become vested.

To the extent that, at the beginning of the financial period, any cumulative unrecognised actuarial gain or loss exceeds ten percent of the greater of the present value of the projected benefit obligation and the fair value of the plan assets (the corridor), that portion is recognised in surplus or deficit over the expected average remaining service lives of participating employees. Actuarial gains or losses within the corridor are not recognised.

Gains or losses on the curtailment or settlement of a defined benefit plan is recognised when the group is demonstrably committed to curtailment or settlement.

When it is virtually certain that another party will reimburse some or all of the expenditure required to settle a defined benefit obligation, the right to reimbursement is recognised as a separate asset. The asset is measured at fair value. In all other respects, the asset is treated in the same way as plan assets. In surplus or deficit, the expense relating to a defined benefit plan is presented as the net of the amount recognised for a reimbursement.

The amount recognised in the statement of financial position represents the present value of the defined benefit obligation as adjusted for unrecognised actuarial gains and losses and unrecognised past service costs, and reduces by the fair value of plan assets.

Any asset is limited to unrecognised actuarial losses and past service costs, plus the present value of available refunds and reduction in future contributions to the plan.

1.10 Provisions and contingencies

Provisions are recognised when:

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

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

Where the effect of time value of money is material, the amount of a provision is the present value of the expenditures expected to be required to settle the obligation.

The discount rate is a pre-tax rate that reflects current market assessments of the time value of money and the risks specific to the liability.

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

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

Where discounting is used, the carrying amount of a provision increases in each period to reflect the passage of time. This increase is recognised as an interest expense.

A provision is used only for expenditures for which the provision was originally recognised.

Provisions are not recognised for future operating deficits.

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

A constructive obligation to restructure arises only when an entity:

- has a detailed formal plan for the restructuring, identifying at least:
  - the activity/operating unit or part of a activity/operating unit concerned;
  - the principal locations affected;
  - the location, function, and approximate number of employees who will be compensated for services being terminated;
  - the expenditures that will be undertaken; and
  - when the plan will be implemented; and
- has raised a valid expectation in those affected that it will carry out the restructuring by starting to implement that plan or announcing its main features to those affected by it.

A restructuring provision includes only the direct expenditures arising from the restructuring, which are those that are both:
- necessarily entailed by the restructuring; and
- not associated with the ongoing activities of the group

No obligation arises as a consequence of the sale or transfer of an operation until the group is committed to the sale or transfer, that is, there is a binding agreement.

After their initial recognition contingent liabilities recognised in business combinations that are recognised separately are subsequently measured at the higher of:
- the amount that would be recognised as a provision; and
- the amount initially recognised less cumulative amortisation.

Contingent assets and contingent liabilities are not recognised. Contingencies are disclosed in note 24.

1.11 Revenue from exchange transactions

Revenue from the sale of goods is recognised when all the following conditions have been satisfied:
- the company has transferred to the buyer the significant risks and rewards of ownership of the goods;
- the company retains neither continuing managerial involvement to the degree usually associated with ownership nor effective control over the goods sold;
- the amount of revenue can be measured reliably;
- it is probable that the economic benefits associated with the transaction will flow to the company; and
- the costs incurred or to be incurred in respect of the transaction can be measured reliably.

When the outcome of a transaction involving the rendering of services can be estimated reliably, revenue associated with the transaction is recognised by reference to the stage of completion of the transaction at the end of the reporting period. The outcome of a transaction can be estimated reliably when all the following conditions are satisfied:
- the amount of revenue can be measured reliably;
- it is probable that the economic benefits associated with the transaction will flow to the company;
- the stage of completion of the transaction at the end of the reporting period can be measured reliably; and
- the costs incurred for the transaction and the costs to complete the transaction can be measured reliably.

When the outcome of the transaction involving the rendering of services cannot be estimated reliably, revenue shall be recognised only to the extent of the expenses recognised that are recoverable.

Revenue from exchange transactions refers to revenue that accrued to the entity directly in return for services rendered/ goods sold, the value of which approximates the considerations received or receivable.

Revenue is measured at the fair value of the consideration received or receivable and represents the amounts receivable for goods and services provided in the normal course of business, net trade discounts and volume rebates, and value added tax.

1.12 Revenue from non-exchange transactions

Revenue from non-exchange transactions refers to transactions where the entity received revenue from another entity without directly giving approximately equal value in exchange. Revenue from non-exchange transactions is generally recognised to the extent that the related receipt or receivable qualifies for recognition as an asset and there is no liability to repay the amount.

The Department of Water Affairs, Rand Water and Umgeni Water Boards collect levy income. The rate of the levy is approved by the Minister of Water and Environmental Affairs on an annual basis. Revenue recognition of levy income represents amounts received and receivable from the Department of Water Affairs, Rand Water and Umgeni Water Boards. Provision is made for estimated uncollectable levies by way of an impairment charge.

The Water Research Commission received leverage income from various sources which is provided for research. This revenue is recognised in the accounting period in which the research expenditure is incurred.

Interest is recognised, in surplus or deficit, using the effective interest rate method.

Revenue from the recovery of unauthorised, irregular, fruitless and wasteful expenditure is based on legislated procedures, including those set out in the Public Finance Management Act (Act No. 29 of 1999) and is recognised when the recovery thereof from the responsible board members or officials is virtually certain.

1.13 Borrowing costs

It is inappropriate to capitalise borrowing costs when, and only when, there is clear evidence that it is difficult to link the borrowing requirements of an entity directly to the nature of the expenditure to be funded i.e. capital or current.

Borrowing costs are recognised as an expense in the period in which they are incurred.

1.14 Translation of foreign currencies

Foreign currency transactions

A foreign currency transaction is recorded, on initial recognition in Rands, by applying to the foreign currency amount the spot exchange rate between the functional currency and the foreign currency at the date of the transaction.

At each reporting date:

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

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

When a gain or loss on a non-monetary item is recognised directly in net assets, any exchange component of that gain or loss is recognised directly in net assets. When a gain or loss on a non-monetary item is recognised in surplus or deficit, any exchange component of that gain or loss is recognised in surplus or deficit.

Cash flows arising from transactions in a foreign currency are recorded in Rands by applying to the foreign currency amount the exchange rate between the Rand and the foreign currency at the date of the cash flow.

1.15 Research and development expenditure

It is the policy of the Water Research Commission that its management may allow overspending on a project budget in a given year, only if acceptable reasons are given, provided the total contract amount is not exceeded.

1.16 Budget information

Comparision of budget and actual amounts are presented in a separate additional financial statement: Statement of Comparison of Budget and Actual Amounts.

The entity only presents the final budget amounts.

Differences (variances) between the actual amounts and budget amounts are presented.

The financial statements and budget are not presented on the same basis as the financial statements which are prepared on accrual basis and the budget on cash basis of accounting. A reconciliation between the surplus/(deficit) for the period as per Statement of Financial Performance and budgeted surplus/(deficit) is included in the Statement of Comparison of Budget and Actual Amounts.

1.17 Unauthorised, fruitless and wasteful and irregular expenditure

Unauthorised expenditure is expenditure that has not been budgeted, expenditure that is not in terms of the conditions of an allocation received from another sphere of government, entity or organ of state and expenditure in the form of a grant that is not permitted in terms of the Public Finance Management Act (Act No. 29 of 1999). Unauthorised expenditure is accounted for as an expense in the Statement of Financial Performance and where recovered, it is subsequently accounted for as revenue in the Statement of Financial Performance.

Fruitless and wasteful expenditure is expenditure that was made in vain and would have been avoided had reasonable care been exercised. Fruitless and wasteful expenditure is accounted for as expenditure in the Statement of Financial Performance and where recovered, it is subsequently accounted for as revenue in the Statement of Financial Performance.

Irregular expenditure is expenditure that is contrary to the Public Finance Management Act (Act No. 29 of 1999), the State Tender Board Act (Act No. 86 of 1968) or is in contravention of the entity's supply chain management policy. Irregular expenditure excludes unauthorised expenditure. Irregular expenditure is accounted for as expenditure in the Statement of Financial Performance and where recovered, it is subsequently accounted for as revenue in the Statement of Financial Performance.

Notes to the Annual Financial Statements

2. New standards and interpretations

2.1 Standards and interpretations issued, but not yet effective

The group has not applied the following standards and interpretations, which have been published and are mandatory for the group's accounting periods beginning on or after 01 April 2011 or later periods:

GRAP 18: Segment Reporting

Segments are identified by the way in which information is reported to management, both for purposes of assessing performance and making decisions about how future resources will be allocated to the various activities undertaken by the group. The major classifications of activities identified in budget documentation will usually reflect the segments for which an entity reports information to management.

Segment information is either presented based on service or geographical segments. Service segments relate to a distinguishable component of an entity that provides specific outputs or achieves particular operating objectives that are in line with the group's overall mission. Geographical segments relate to specific outputs generated, or particular objectives achieved, by an entity within a particular region.

This Standard has been approved by the Board but its effective date has not yet been determined by the Minister of Finance. The effective date indicated is a provisional date and could change depending on the decision of the Minister of Finance.

Directive 2 - Transitional provisions for public entities, municipal entities and constitutional institutions state that no comparative segment information needs to be presented on initial adoption of this Standard.

Directive 3 - Transitional provisions for high capacity municipalities state that no comparative segment information needs to be presented on initial adoption of the Standard. Where items have not been recognised as a result of transitional provisions under the Standard of GRAP on Property, Plant and Equipment, recognition requirements of this Standard would not apply to such items until the transitional provision in that Standard expires.

Directive 4 – Transitional provisions for medium and low capacity municipalities state that no comparative segment information needs to be presented on initial adoption of the Standard. Where items have not been recognised as a result of transitional provisions under the Standard of GRAP on Property, Plant and Equipment and the Standard of GRAP on Agriculture, the recognition requirements of the Standard would not apply to such items until the transitional provision in that standard expires.

The effective date of the standard is for years beginning on or after 01 April 2011.

The group expects to adopt the standard for the first time in the 2011 annual financial statements.

It is unlikely that the standard will have a material impact on the entity's annual financial statements.

GRAP 25: Employee benefits

The objective of GRAP 25 is to prescribe the accounting and disclosure for employee benefits. The Standard requires a group to recognise:

- a liability when an employee has provided service in exchange for employee benefits to be paid in the future; and
- an expense when a group consumes the economic benefits or service potential arising from service provided by an employee in exchange for employee benefits.

GRAP 25 must be applied by an employer in accounting for all employee benefits, except share based payment transactions.

GRAP 25 defines, amongst others, the following:

- Employee benefits as all forms of consideration given by a group in exchange for service rendered by employees;
- Defined contribution plans as post-employment benefit plans under which a group pays fixed contributions into a separate entity (a fund) and will have no legal or constructive obligation to pay further contributions if the fund does not hold sufficient assets to pay all employee benefits relating to employee service in the current and prior periods;
- Defined benefit plans as post-employment benefit plans other than defined contribution plans;
- Multi-employer plans as defined contribution plans (other than state plans and composite social security programmes) or defined benefit plans (other than state plans) that:
  - pool the assets contributed by various entities that are not under common control; and
  - use those assets to provide benefits to employees of more than one entity, on the basis that contribution and benefit levels are determined without regard to the identity of the group that employs the employees concerned;
- Other long-term employee benefits as employee benefits (other than post-employment benefits and termination benefits) that is not due to be settled within twelve months after the end of the period in which the employees render the related service;
- Post-employment benefits as employee benefits (other than termination benefits) which are payable after the completion of employment;
- Post-employment benefit plans as formal or informal arrangements under which a group provides post-employment benefits for one or more employees;
- Short-term employee benefits as employee benefits (other than termination benefits) that are due to be settled within twelve months after the end of the period in which the employees render the related service;
- State plans as plans other than composite social security programmes established by legislation which operate as if they are multi-employer plans for all entities in economic categories laid down in legislation;
- Termination benefits as employee benefits payable as a result of either:
  - an entity's decision to terminate an employee's employment before the normal retirement date; or
  - an employee's decision to accept voluntary redundancy in exchange for those benefits;
- Vested employee benefits as employee benefits that are not conditional on future employment.

The standard states the recognition, measurement and disclosure requirements of:

- Short-term employee benefits;
  - All short-term employee benefits;
  - Short-term compensated absences;
  - Bonus, incentive and performance related payments;
- Post-employment benefits: Defined contribution plans;
- Other long-term employee benefits;
- Termination benefits.

The standard states, for Post-employment benefits: Distinction between defined contribution plans and defined benefit plans:

- Multi-employer plans;
- Defined benefit plans where the participating entities are under common control;
- State plans;
- Composite social security programmes;
- Insured benefits.

The standard states, for Post-employment benefits: Defined benefit plans, the following requirements:

- Recognition and measurement;
- Presentation;
- Disclosure;
- Accounting for the constructive obligation;
- Statement of financial position;
- Asset recognition ceiling;
- Asset recognition ceiling: When a minimum funding requirement may give rise to a liability;
- Statement of financial performance.

The standard prescribes recognition and measurement for:

- Present value of defined benefit obligations and current service cost:
  - Actuarial valuation method;
  - Attributing benefits to periods of service;
  - Actuarial assumptions;
  - Actuarial assumptions: Discount rate;
  - Actuarial assumptions: Salaries, benefits and medical costs;
  - Actuarial gains and losses;
  - Past service cost.
- Plan assets:
  - Fair value of plan assets;
  - Reimbursements;
  - Return on plan assets.

The standard also deals with Entity combinations and Curtailments and settlements.

This Standard has been approved by the Board but its effective date has not yet been determined by the Minister of Finance. The effective date indicated is a provisional date and could change depending on the decision of the Minister of Finance.

The effective date of the standard is for years beginning on or after 01 April 2011.

The group expects to adopt the standard for the first time in the 2011 annual financial statements.

It is unlikely that the standard will have a material impact on the entity's annual financial statements.

GRAP 104: Financial Instruments

The standard prescribes recognition, measurement, presentation and disclosure requirements for financial instruments. Financial instruments are defined as those contracts that result in a financial asset in one group and a financial liability or residual interest in another group. A key distinguishing factor between financial assets and financial liabilities and other assets and liabilities, is that they are settled in cash or by exchanging financial instruments rather than through the provision of goods or services.

One of the key considerations in initially recognising financial instruments is the distinction, by the issuers of those instruments, between financial assets, financial liabilities and residual interests. Financial assets and financial liabilities are distinguished from residual interests because they involve a contractual right or obligation to receive or pay cash or another financial instrument. Residual interests entitle an group to a portion of another group's net assets in the event of liquidation and, to dividends or similar distributions paid at management's discretion.

In determining whether a financial instrument is a financial asset, financial liability or a residual interest, a group considers the substance of the contract and not just the legal form.

Where a single instrument contains both a liability and a residual interest component, the issuer allocates the instrument into its component parts. The issuer recognises the liability component at its fair value and recognises the residual interest as the difference between the carrying amount of the instrument and the fair value of the liability component. No gain or loss is recognised by separating the instrument into its component parts.

Financial assets and financial liabilities are initially recognised at fair value. Where a group subsequently measures financial assets and financial liabilities at amortised cost or cost, transactions costs are included in the cost of the asset or liability.

The transaction price usually equals the fair value at initial recognition, except in certain circumstances, for example, where interest free credit is granted or where credit is granted at a below market rate of interest.

Concessionary loans are loans either received by or granted to another group on concessionary terms, e.g. at low interest rates and flexible repayment terms. On initial recognition, the fair value of a concessionary loan is the present value of the agreed contractual cash flows, discounted using a market-related rate of interest for a similar transaction. The difference between the proceeds either received or paid and the present value of the contractual cash flows is accounted for as non-exchange revenue by the recipient of a concessionary loan in accordance with Standard of GRAP on Revenue from Non-exchange Revenue Transactions (Taxes and Transfers), and using the Framework for the Preparation and Presentation of Financial Statements (usually as an expense) by the grantor of the loan.

Financial assets and financial liabilities are subsequently measured either at fair value or, amortised cost or cost. A group measures a financial instrument at fair value if it is:

- a derivative;
- a combined instrument designated at fair value, i.e. an instrument that includes a derivative and a non-derivative host contract;
- held-for-trading;
- a non-derivative instrument with fixed or determinable payments that is designated at initial recognition to be measured at fair value;
- an investment in a residual interest for which fair value can be measured reliably; and
- other instruments that do not meet the definition of financial instruments at amortised cost or cost.

Derivatives are measured at fair value. Combined instruments that include a derivative and non-derivative host contract are accounted for as follows:

- Where an embedded derivative is included in a host contract which is a financial instrument within the scope of this Standard, an entity can designate the entire contract to be measured at fair value or, it can account for the host contract and embedded derivative separately using GRAP 104. A group is, however, required to measure the entire instrument at fair value if the fair value of the derivative cannot be measured reliably.
- Where the host contract is not a financial instrument within the scope of this Standard, the host contract and embedded derivative are accounted for separately using GRAP 104 and the relevant Standard of GRAP.

Financial assets and financial liabilities that are non-derivative instruments with fixed or determinable payments, for example deposits with banks, receivables and payables, are measured at amortised cost. At initial recognition, an group can however designate such an instrument to be measured at fair value.

A group can only measure investments in residual interests at cost where the fair value of the interest cannot be determined reliably.

Once a group has classified a financial asset or a financial liability either at fair value or amortised cost or cost, it is only allowed to reclassify such instruments in limited instances.

An entity derecognises a financial asset, or the specifically identified cash flows of an asset, when:

- the cash flows from the asset expire, are settled or waived;
- significant risks and rewards are transferred to another party; or
- despite having retained significant risks and rewards, an group has transferred control of the asset to another group.

A group derecognises a financial liability when the obligation is extinguished. Exchanges of debt instruments between a borrower and a lender are treated as the extinguishment of an existing liability and the recognition of a new financial liability. Where an group modifies the term of an existing financial liability, it is also treated as the extinguishment of an existing liability and the recognition of a new liability.

A group cannot offset financial assets and financial liabilities in the statement of financial position unless a legal right of set-off exists, and the parties intend to settle on a net basis.

GRAP 104 requires extensive disclosures on the significance of financial instruments for an group's statement of financial position and statement of financial performance, as well as the nature and extent of the risks that a group is exposed to as a result of its annual financial statements. Some disclosures, for example the disclosure of fair values for instruments measured at amortised cost or cost and the preparation of a sensitivity analysis, are encouraged rather than required.

GRAP 104 does not prescribe principles for hedge accounting. A group is permitted to apply hedge accounting, as long as the principles in IAS 39 are applied.

This Standard has been approved by the Board but its effective date has not yet been determined by the Minister of Finance. The effective date indicated is a provisional date and could change depending on the decision of the Minister of Finance.

The effective date of the standard is for years beginning on or after 01 April 2011.

The group expects to adopt the standard for the first time in the 2011 annual financial statements.

It is unlikely that the amendment will have a material impact on the entity's annual financial statements.

Notes to the Annual Financial Statements

Water Research Commission Consolidated Annual Financial Statements for the year ended 31 March 2011

Figures in Rand

3. Property, plant and equipment

Group	2011			2010		
	Cost	Accumulated depreciation and accumulated impairment	Carrying value	Cost	Accumulated depreciation and accumulated impairment	Carrying value
Property	8,691,522	-	8,691,522	8,691,522	-	8,691,522
Furniture and fixtures	1,519,399	(373,317)	1,146,082	1,511,144	(333,424)	1,177,720
Motor vehicles	68,975	(49,133)	19,842	68,975	(47,636)	21,339
Office equipment	793,773	(261,802)	531,971	688,267	(203,551)	484,716
IT equipment	4,087,503	(2,636,087)	1,451,416	3,484,901	(1,942,999)	1,541,902
Total	**15,161,172**	**(3,320,339)**	**11,840,833**	**14,444,809**	**(2,527,610)**	**11,917,199**

WRC	2011			2010		
	Cost	Accumulated depreciation and accumulated impairment	Carrying value	Cost	Accumulated depreciation and accumulated impairment	Carrying value
Furniture and fixtures	1,519,399	(373,317)	1,146,082	1,511,144	(333,424)	1,177,720
Motor vehicles	68,975	(49,133)	19,842	68,975	(47,636)	21,339
Office equipment	793,773	(261,802)	531,971	688,267	(203,551)	484,716
IT equipment	4,087,503	(2,636,087)	1,451,416	3,484,901	(1,942,999)	1,541,902
Total	**6,469,650**	**(3,320,339)**	**3,149,311**	**5,753,287**	**(2,527,610)**	**3,225,677**

Reconciliation of property, plant and equipment - Group - 2011

	Opening balance	Additions	Depreciation	Total
Property	8,691,522	-	-	8,691,522
Furniture and fixtures	1,177,720	8,255	(39,893)	1,146,082
Motor vehicles	21,339	-	(1,497)	19,842
Office equipment	484,716	105,506	(58,251)	531,971
IT equipment	1,541,902	602,603	(693,089)	1,451,416
	11,917,199	**716,364**	**(792,730)**	**11,840,833**

Notes to the Annual Financial Statements

Water Research Commission Consolidated Annual Financial Statements for the year ended 31 March 2011

Reconciliation of property, plant and equipment - Group - 2010

	Opening balance	Additions	Disposals	Depreciation	Total
Property	8,691,522	-	-	-	8,691,522
Furniture and fixtures	1,158,049	58,952	-	(39,281)	1,177,720
Motor vehicles	22,788	-	-	(1,449)	21,339
Office equipment	583,594	21,133	(50,792)	(69,219)	484,716
IT equipment	1,299,971	976,739	-	(734,808)	1,541,902
	11,755,924	**1,056,824**	**(50,792)**	**(844,757)**	**11,917,199**

Reconciliation of property, plant and equipment - WRC - 2011

	Opening balance	Additions	Depreciation	Total
Furniture and fixtures	1,177,720	8,255	(39,893)	1,146,082
Motor vehicles	21,339	-	(1,497)	19,842
Office equipment	484,716	105,506	(58,251)	531,971
IT equipment	1,541,902	602,603	(693,089)	1,451,416
	3,225,677	**716,364**	**(792,730)**	**3,149,311**

Reconciliation of property, plant and equipment - WRC - 2010

	Opening balance	Additions	Disposals	Depreciation	Total
Furniture and fixtures	1,158,049	58,952	-	(39,281)	1,177,720
Motor vehicles	22,788	-	-	(1,449)	21,339
Office equipment	583,594	21,133	(50,792)	(69,219)	484,716
IT equipment	1,299,971	976,739	-	(734,808)	1,541,902
	3,064,402	**1,056,824**	**(50,792)**	**(844,757)**	**3,225,677**

Pledged as security

No assets are pledged as security.

Assets subject to finance lease (Net carrying amount)

Figures in Rand	2011	2010	2011	2010
IT equipment	1,196,622	906,057	1,196,622	906,057

Revaluations

The property has been valued at R30,000,000 by Reinertsen International Valuation Services, as an independant valuer, on 31 March 2011.

Notes to the Annual Financial Statements

Water Research Commission Consolidated Annual Financial Statements for the year ended 31 March 2011

Figures in Rand	2011	2010	2011	2010
Other information				
Fair value of property, plant and equipment carried at cost				
Property, plant and equipment	30,000,000	26,700,000	-	-
Details of properties				
Erf 706 Rietfontein, Pretoria, Gauteng				
Terms and conditions				
- Purchase price	615,855	615,855	-	-
- Additions since purchase	8,075,667	8,075,667	-	-
	8,691,522	**8,691,522**	**-**	**-**

Notes to the Annual Financial Statements

Water Research Commission Consolidated Annual Financial Statements for the year ended 31 March 2011

4. Intangible assets

Group	2011			2010		
	Cost	Accumulated depreciation and accumulated impairment	Carrying value	Cost	Accumulated depreciation and accumulated impairment	Carrying value
Computer software	2,977,975	(544,457)	2,433,518	2,873,030	(266,936)	2,606,094
WRC						
Computer software	2,977,975	(544,457)	2,433,518	2,873,030	(266,936)	2,606,094

Reconciliation of intangible assets - Group - 2011

	Opening balance	Additions	Amortisation	Total
Computer software	2,606,094	104,945	(277,521)	2,433,518

Reconciliation of intangible assets - Group - 2010

	Opening balance	Additions	Amortisation	Total
Computer software	1,692,829	1,166,547	(253,282)	2,606,094

Reconciliation of intangible assets - WRC - 2011

	Opening balance	Additions	Amortisation	Total
Computer software	2,606,094	104,945	(277,521)	2,433,518

Reconciliation of intangible assets - WRC - 2010

	Opening balance	Additions	Amortisation	Total
Computer software	1,692,829	1,166,547	(253,282)	2,606,094

Pledged as security

None of the intangible assets are pledged as security.

Notes to the Annual Financial Statements

Water Research Commission Consolidated Annual Financial Statements for the year ended 31 March 2011

5. Investments in controlled entities

Name of company	Held by	% holding 2011	% holding 2010	Carrying amount 2011	Carrying amount 2010
Erf 706 Rietfontein (Proprietary) Limited		100.00 %	100.00 %	755,939	755,939

The carrying amounts of subsidiaries are shown net of impairment losses.

The investment in subsidiary is not pledged as security.

The Commission holds 100% of the shares in Erf 706 Rietfontein (Pty) Ltd, a property company. Erf 706 Rietfontein (Pty) Ltd owns one property which is mainly occupied by the Water Research Commission. As per the valuation performed by Reinertsen Valuation Services, a professional valuer, the open market value of the property is valued at R30,000,000. Management therefore deems the fair value of Erf 706 Rietfontein (Pty) Ltd to be equal to the market value of the property held by Erf 706 Rietfontein (Pty) Ltd less its liabilities.

	Group		WRC	
Figures in Rand	2011	2010	2011	2010

6. Loans to (from) economic entities

Subsidiaries

Erf 706 Rietfontein (Proprietary) Limited The unsecured loan bears interest at a nominal rate of 15% and is repayable in equal monthly instalments of R60,000 by 30 June 2017.	-	-	14,254,571	12,945,082
Erf 706 Rietfontein (Proprietary) Limited The unsecured loan bears interest at prime plus 2% and is repayable within 60 days from receipt of a written demand.	-	-	2,645,432	2,643,719
	-	**-**	**16,900,003**	**15,588,801**
Non-current assets	-	-	15,880,003	14,568,801
Current assets	-	-	1,020,000	1,020,000
	-	**-**	**16,900,003**	**15,588,801**

Credit quality of loans to group

The credit quality of loans to economic entities are of a good quality. The maximum exposure to credit risk at the reporting date is the fair value of the loan mentioned above.

None of the loans to economic entities defaulted in the year under review.

The terms and conditions of the loans were not renegotiated durint the period under review.

Fair value of loans to and from group

The fair value of the loan is determined by calculating the present value of future payments by using a discount rate of 15%.
The entity does not hold any collateral as security.

Notes to the Annual Financial Statements

Water Research Commission Consolidated Annual Financial Statements for the year ended 31 March 2011

6. Loans to (from) economic entities (continued)

Loans to group past due but not impaired

Loans to economic entities were not past due at reporting date.

	Group		WRC	
Figures in Rand	**2011**	**2010**	**2011**	**2010**

7. Other financial assets

Available-for-sale				
Old Mutual	1,662,436	44,155,644	1,662,436	44,155,644
Momentum Wealth	4,931,672	4,587,171	4,931,672	4,587,171
	6,594,108	**48,742,815**	**6,594,108**	**48,742,815**
Non-current assets				
Available-for-sale	6,594,108	48,742,815	6,594,108	48,742,815

The group has not reclassified any financial assets from cost or amortised cost to fair value, or from fair value to cost or amortised cost during the current or prior year.

There were no gains or losses realised on the disposal of held to maturity financial assets in 2011 and 2010, as all the financial assets were disposed of at their redemption date.

8. Financial assets by category

The accounting policies for financial instruments have been applied to the line items below:

Group - 2011	**Loans and receivables**	**Fair value through surplus or deficit - held for trading**	**Fair value through surplus or deficit - designated**	**Available-for-sale**	**Total**
Other financial assets	-	-	-	6,594,108	6,594,108
Trade and other receivables	20,100,206	-	-	-	20,100,206
Cash and cash equivalents	96,758,201	-	-	-	96,758,201
	116,858,407	**-**	**-**	**6,594,108**	**123,452,515**

Notes to the Annual Financial Statements

Water Research Commission Consolidated Annual Financial Statements for the year ended 31 March 2011

Group - 2010	Loans and receivables	Fair value through surplus or deficit - held for trading	Fair value through surplus or deficit - designated	Available-for-sale	Total
Other financial assets	-	-	-	48,742,815	48,742,815
Trade and other receivables	37,784,028	-	-	-	37,784,028
Cash and cash equivalents	68,944,252	-	-	-	68,944,252
	106,728,280	**-**	**-**	**48,742,815**	**155,471,095**

WRC - 2011

	Loans and receivables	Fair value through surplus or deficit - held for trading	Fair value through surplus or deficit - designated	Available-for-sale	Total
Loans to group	16,900,003	-	-	-	16,900,003
Other financial assets	-	-	-	6,594,108	6,594,108
Trade and other receivables	20,652,751	-	-	-	20,652,751
Cash and cash equivalents	95,074,551	-	-	-	95,074,551
	132,627,305	**-**	**-**	**6,594,108**	**139,221,413**

WRC - 2010

	Loans and receivables	Fair value through surplus or deficit - held for trading	Fair value through surplus or deficit - designated	Available-for-sale	Total
Loans to group	15,588,801	-	-	-	15,588,801
Other financial assets	-	-	-	48,742,815	48,742,815
Trade and other receivables	38,132,372	-	-	-	38,132,372
Cash and cash equivalents	67,410,029	-	-	-	67,410,029
	121,131,202	**-**	**-**	**48,742,815**	**169,874,017**

9. Retirement benefits

Pension and Provident funds

The Water Research Commission has pension and provident schemes covering all employees. Until 31 March, 2005 all eligible employees were members of the defined benefit funds administered by ABSA Consultants & Actuaries. As at 01 April, 2005 both the pension fund and provident fund converted to a defined contribution fund, for current employees. The effect of this is that the WRC has no liability other than the defined contributions payable to the fund on a monthly basis. No liability can arise due to adverse market conditions. However, all pensioners remain entitled to their benefits in terms of the old dispensation. (Refer to note 1.9).

The assets of these funds are held in adminstered trust funds separately from the entity's assets. Fund assets primarily consist of investments in Momentum Group Life Limited. The funds are governed by the Pension Funds Act of 1956.

These funds are actuarially valued for financial reporting purposes at annual intervals to determine the liability for the entity. The funds were last actuarially valued on 31 March 2011. At that time all funds were certified by the reporting actuary as being in a sound financial

Notes to the Annual Financial Statements

Water Research Commission Consolidated Annual Financial Statements for the year ended 31 March 2011

9. Retirement benefits (continued)

position, subject to the continuation of their current contribution rates. In arriving at his conclusion, the actuary took into account certain assumptions at reporting date (expressed as weighted averages).

Medical Aid scheme

The Water Research Commission has made provision for a medical aid benefit scheme covering retired members and active employees before 1 April 2008. All eligible employees are members of the defined contribution scheme. The funds are governed by the Medical Schemes Act, 1998 (Act No. 131 of 1998)

These funds are actuarially valued at an interval of not more than three years using the projected unit credit method. No plan assets are held by the entity to fund the obligation. The scheme was last actuarially valued on 31 March 2011. At that time the reporting actuary certified that the vested liability for continuation members will fluctuate depending on the mortality rate of current continuation members and the rate of new retirements over the next few years. The active member liability will be affected by whether the actual withdrawals match those expected and the rate of medical aid inflation. In arriving at his conclusion, the actuary took into account certain assumptions at reporting date (expressed as weighted averages).

The WRC, like many other institutions in South Africa, carries the legal and related financial obligation to subsidise (100% subsidy level) the medical aid benefit of certain of its current and its pensioned employees in retirement. As such, the WRC's post retirement medical aid obligation represents a long dated, uncapped and unfunded liability which, if not proactively managed by the WRC, represents a significant systemic employee benefit and financial risk to the institution.

It is on this basis and in terms of prudent practice, that the management of the WRC initiated a formal strategy in 2008 to manage the long dated, uncapped and unfunded costs and risks associated with its post retirement medical aid liability as follows:

- The WRC, in line with accepted practice, closed the subsidy/benefit to new recruits to the WRC as of 1st April 2008.

- The WRC, in line with industry and employer trends, employed the professional services of an independent consultant and actuary to value the quantum of the liability to fund (i.e. risk ring-fencing) and/or buy-out (i.e. liability capping) the disclosed liability in order to manage the WRC's exposure to the associated costs and risks. In the 2010/2011 financial year the WRC offered voluntary buy-outs to all in-service members. Members that did not accept the buy-out offer and the pensioners already receiving the benefit have had the liability ring fenced and out-sourced to a service provider.

	Group		WRC	
Figures in Rand	**2011**	**2010**	**2011**	**2010**
Carrying value				
Present value of the defined contribution/benefit obligation-partially or wholly funded	(34,126,201)	(38,081,530)	(34,126,201)	(38,081,530)
Fair value of plan assets	30,171,553	5,288,000	30,171,553	5,288,000
	(3,954,648)	**(32,793,530)**	**(3,954,648)**	**(32,793,530)**
Movements for the year - pension fund				
Opening balance	1,297,000	894,000	1,297,000	894,000
Net expense recognised in the statement of financial performance	259,000	403,000	259,000	403,000
	1,556,000	**1,297,000**	**1,556,000**	**1,297,000**
Net expense recognised in the statement of financial performace - pension fund				
Interest cost	389,000	383,000	389,000	383,000
Actuarial (gains) losses	161,000	360,000	161,000	360,000
Expected return on plan assets	(291,000)	(340,000)	(291,000)	(340,000)
	259,000	**403,000**	**259,000**	**403,000**

Notes to the Annual Financial Statements

Water Research Commission Consolidated Annual Financial Statements for the year ended 31 March 2011

	Group		WRC	
Figures in Rand	**2011**	**2010**	**2011**	**2010**

Key assumptions used - pension fund

Assumptions used on last valuation on 31 March 2011.

Discount rates used	9.10 %	8.90 %	9.10 %	8.90 %
Expected rate of return on assets	10.30 %	9.90 %	10.30 %	9.90 %
General inflation rate	6.30 %	5.90 %	6.30 %	5.90 %
Expected increase in salaries	7.30 %	6.90 %	7.30 %	6.90 %

The expected rate of return on assets is based on the assumption that the investment returns will exceed general inflation by 4% after allowing for investment related expenses.

Movements for the year - provident fund

Opening balance	646,000	652,000	646,000	652,000
Net expense recognised in the statement of financial performance	(570,000)	166,000	(570,000)	166,000
	76,000	**818,000**	**76,000**	**818,000**

Net expense recognised in the statement of financial performance - provident fund

Interest cost	247,000	190,000	247,000	190,000
Actuarial (gains) losses	(565,000)	197,000	(565,000)	197,000
Expected return on plan assets	(252,000)	(221,000)	(252,000)	(221,000)
	(570,000)	**166,000**	**(570,000)**	**166,000**

Key assumptions used - provident fund

Assumptions used on last valuation on 31 March 2011.

Discount rates used	9.10 %	9.40 %	9.10 %	9.40 %
	10.30 %	9.90 %	10.30 %	9.90 %
	6.30 %	5.90 %	6.30 %	5.90 %
	7.30 %	6.90 %	7.30 %	6.90 %

The expected rate of return on assets is based on the assumption that the investment returns will exceed general inflation by 4% after allowing for investment related expenses.

Notes to the Annual Financial Statements

Water Research Commission Consolidated Annual Financial Statements for the year ended 31 March 2011

9. Retirement benefits (continued)

Figures in Rand	Group 2011	Group 2010	WRC 2011	WRC 2010
Movements for the year - medical aid fund				
Opening balance	30,850,530	27,095,980	30,850,530	27,095,980
Benefits paid	(31,726,865)	(1,202,651)	(31,726,865)	(1,202,651)
Net expense recognised in the statement of financial performance	3,198,983	4,957,201	3,198,983	4,957,201
	2,322,648	**30,850,530**	**2,322,648**	**30,850,530**
Net expense recognised in the statement of financial performance - medical aid fund				
Current service cost	312,420	698,781	312,420	698,781
Interest cost	2,281,872	2,445,926	2,281,872	2,445,926
Actuarial (gains) losses	604,691	1,812,494	604,691	1,812,494
	3,198,983	**4,957,201**	**3,198,983**	**4,957,201**

Key assumptions used - medical aid fund

Assumptions used on last valuation on 31 March 2011.

	Group 2011	Group 2010	WRC 2011	WRC 2010
Retirement age	65	65	65	65
Early retirement age	55	55	55	55
Percentage married on retirement	90.00 %	90.00 %	90.00 %	90.00 %
Investment returns	9.40 %	9.00 %	9.40 %	9.00 %
Medical aid inflation rate	8.40 %	8.20 %	8.40 %	8.20 %

Sensitivity Analysis

The assumptions made in the liability calculation are best estimates of future levels of the various factors. These factors in reality may turn out to be different than the assumed values. In order to illustrate the sensitivity of the results to changes in these inflation, morality and withdrawal assumptions, the liability figure has been recalculated on six additional bases, as outlined in the following table:

Basis	Past service liability (R)	% Change from best estimate
1% gap	27,053,201	
0% gap (medical inflation 0% lower than interest rates)	30,217,100	11.70%
2% gap (medical inflation 0% lower than interest rates)	24,365,236	-9.84%
Mortality 10% lower	28,239,040	4.38%
Mortality 10% higher	26,000,938	-3.89%
Withdrawals 20% lower	27,053,201	0.00%
Withdrawals 20% higher	27,053,201	0.00%

The analysis above shows that the past service liability is most sensitive to a change in the gap between medical inflation and interest rates.

The liability is also sensitive to a change in morality rates, which is most significant at post-retirement ages.

A change in withdrawal rates has an insignificant effect on the liability, as the average age for in service members is within the 45 - 50 age band and withdrawal rates fall to zero after age 50.

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Water Research Commission Consolidated Annual Financial Statements for the year ended 31 March 2011

The following table shows the sensitivity of the interest cost and service cost to a change in the medical inflation rate:

Basis	Interest Cost (R)	% Change from best estimate	Service Cost (R)	% Change from best estimate
1% gap (best estimate)	2,482,913		204,928	
0% gap (medical inflation)				
0% lower than interest rate)	2,783,737	12.12%	241,925	18.05%
2% gap (medical inflation)				
2% lower than interest rates	2,227,424	-10.29%	174,280	-14.96%

The analysis above shows that the sensitivity of the interest cost and service cost to a change in the medical inflation rate is similar to the sensitivity of the past service liability, although service cost is more sensitive.

	Group		WRC	
Figures in Rand	**2011**	**2010**	**2011**	**2010**

10. Trade and other receivables

Water research levies - non-exchange transactions	18,999,417	36,330,272	18,991,038	36,305,437
Computer loans - non-exchange transactions	8,181	18,943	8,181	18,943
Other receivables - non-exchange transactions	1,085,206	1,409,978	1,653,532	1,807,992
Trade receivables - exchange transactions	7,402	24,835	-	-
	20,100,206	**37,784,028**	**20,652,751**	**38,132,372**

Trade and other receivables pledged as security

No trade and other receivables were pledged as security for any financial liability.

Management considers that all the above financial assets are of good credit quality. The maximum exposure to credit risk at the reporting date is the fair value of each class of receivable mentioned above. None of the trade and other receivables defaulted in the year under review.

None of the financial assets that are fully performing have been renegotiated in the last year.

None of the trade and other receivables defaulted in the year under review.

Trade and other receivables past due but not impaired

Group

Trade and other receivables are all considered for impairment. At 31 March 2011, R176,547 (2010: R804,198) were past due but not impaired.

Notes to the Annual Financial Statements

Water Research Commission Consolidated Annual Financial Statements for the year ended 31 March 2011

10. Trade and other receivables (continued)

WRC

Trade and other receivables are all considered for impairment. At 31 March 2011, R168,168 (2010: R798,539) were past due but not impaired.

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

	Group		WRC	
Figures in Rand	**2011**	**2010**	**2011**	**2010**
1 month past due	176,083	6,690,905	167,705	6,685,246
2 months past due	463	5,885,386	463	5,885,386
3 months past due	-	4,217,168	-	4,217,168

Trade and other receivables impaired

Group

As of 31 March 2011, trade and other receivables of R 348,639 (2010: R 768,252) were impaired and provided for.
The amount of the provision was R19,007,896 as of 31 March 2011 (2010: R 18,659,257).

WRC

As of 31 March 2011, trade and other receivables of R300,137 (2010: R768,252) were impaired and provided for.
The amount of the provision was R18,959,394 as of 31 March 2011 (2010: R18,659,257).

The ageing of these loans is as follows:

Current - Gross	19,923,659	21,001,777	20,484,583	21,355,780
1 Month past due - Gross	181,115	7,315,892	172,497	7,310,233
2 Months past due - Gross	480	5,885,459	480	5,885,459
3 Months past due - Gross	19,002,848	22,240,157	18,954,585	22,240,157
Current - Impaired amount	-	(11,208)	-	(11,208)
1 Month past due - Impaired amount	(5,032)	(624,987)	(4,792)	(624,987)
2 Months past due - Impaired amount	(17)	(73)	(17)	(73)
3 Months or more past due - Impaired amount	(19,002,848)	(18,022,989)	(18,954,585)	(18,022,989)

Reconciliation of provision for impairment of trade and other receivables

Opening balance	18,659,257	17,891,005	18,659,257	17,891,005
Provision for impairment	348,639	768,252	300,137	768,252
	19,007,896	**18,659,257**	**18,959,394**	**18,659,257**

The creation and release of provision for impaired receivables have been included in operating expenses in surplus or deficit (note 17). Amounts charged to the allowance account are generally written off when there is no expectation of recovering additional cash.

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

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	Group		WRC	
Figures in Rand	**2011**	**2010**	**2011**	**2010**

11. Cash and cash equivalents

Cash and cash equivalents consist of:

Cash on hand	374	109	374	109
Bank balances	79,770,417	42,229,510	78,086,767	40,695,287
Short-term deposits	16,987,410	26,714,633	16,987,410	26,714,633
	96,758,201	**68,944,252**	**95,074,551**	**67,410,029**

All cash and cash equivalents held by the entity are available for use.

Credit quality of cash at bank and short term deposits, excluding cash on hand

Management considers that all the above cash and cash equivalents categories are of good quality. The maximum exposure to credit risk at the reporting date is the fair value of each class of cash and cash equivalent mentioned above.

The cash and cash equivalents were not pledged as security for any financial liabilities.

	Group		WRC	
Figures in Rand	**2011**	**2010**	**2011**	**2010**

12. Finance lease obligation

Minimum lease payments due				
- within one year	746,718	560,323	746,718	560,323
- in second to fifth year inclusive	883,586	974,026	883,586	974,026
	1,630,304	1,534,349	1,630,304	1,534,349
less: future finance charges	(314,293)	(298,028)	(314,293)	(298,028)
Present value of minimum lease payments	**1,316,011**	**1,236,321**	**1,316,011**	**1,236,321**
Present value of minimum lease payments due				
- within one year	569,102	421,847	569,102	421,847
- in second to fifth year inclusive	746,909	814,474	746,909	814,474
	1,316,011	**1,236,321**	**1,316,011**	**1,236,321**
Non-current liabilities	746,909	814,474	746,909	814,474
Current liabilities	569,102	421,847	569,102	421,847
	1,316,011	**1,236,321**	**1,316,011**	**1,236,321**

It is group policy to lease certain equipment under finance leases.

The average lease term was 3 years and the average effective borrowing rate was 14% (2010: 14%).
Interest rates are fixed at the contract date. All leases have fixed repayments and no arrangements have been entered into for contingent rent.

The group did not default on any interest or capital portions on any of the finance leases.

None of the terms attached to the finance leases were renegotiated in the period under review.

Notes to the Annual Financial Statements

Water Research Commission Consolidated Annual Financial Statements for the year ended 31 March 2011

Figures in Rand

13. Accruals - leave and bonus

Reconciliation of accruals - leave and bonus - Group - 2011

	Opening balance	Additions	Utilising during the year	Total
Accrual for leave	2,352,517	347,967	-	2,700,484
Accrual for bonus	257,921	-	(16,649)	241,272
	2,610,438	**347,967**	**(16,649)**	**2,941,756**

Reconciliation of accruals - leave and bonus - Group - 2010

	Opening balance	Additions	Utilising during the year	Total
Accruals for leave	2,523,237	-	(170,720)	2,352,517
Accruals for bonus	-	257,921	-	257,921
	2,523,237	**257,921**	**(170,720)**	**2,610,438**

Reconciliation of accruals - leave and bonus - WRC - 2011

	Opening balance	Additions	Utilising during the year	Total
Accruals for leave	2,352,517	347,967	-	2,700,484
Accruals for bonus	257,921	-	(16,649)	241,272
	2,610,438	**347,967**	**(16,649)**	**2,941,756**

Reconciliation of accruals - leave and bonus - WRC - 2010

	Opening balance	Additions	Utilising during the year	Total
Accruals for leave	2,523,237	-	(170,720)	2,352,517
Accruals for bonus	-	257,921	-	257,921
	2,523,237	**257,921**	**(170,720)**	**2,610,438**

The leave pay represents the liability in respect of leave outstanding.

The bonus pay represents the liability in respect of bonus to be paid out.

Notes to the Annual Financial Statements

Water Research Commission Consolidated Annual Financial Statements for the year ended 31 March 2011

Figures in Rand	Group 2011	Group 2010	WRC 2011	WRC 2010
14. Trade and other payables				
Trade payables – exchange transactions	38,301,860	34,568,007	38,300,979	34,582,903
Trade and other payables – non-exchange transactions	27,397	23,912	-	-
	38,329,257	**34,591,919**	**38,300,979**	**34,582,903**

The entity did not default on interest or capital on any trade and other payables.

None of the terms attached to the trade and other payables were renegotiated in the period under review.

15. Financial liabilities by category

The accounting policies for financial instruments have been applied to the line items below:

Group - 2011

	Financial liabilities at amortised cost	Total
Trade and other payables	38,329,256	38,329,256
Finance lease obligation	1,316,011	1,316,011
Accruals	2,941,756	2,941,756
	42,587,023	**42,587,023**

Group - 2010

	Financial liabilities at amortised cost	Total
Trade and other payables	34,591,919	34,591,919
Finance lease obligation	1,236,321	1,236,321
Accruals	2,610,438	2,610,438
	38,438,678	**38,438,678**

WRC - 2011

	Financial liabilities at amortised cost	Total
Trade and other payables	38,300,979	38,300,979
Finance lease obligation	1,316,011	1,316,011
Accruals	2,941,756	2,941,756
	42,558,746	**42,558,746**

Notes to the Annual Financial Statements

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15. Financial liabilities by category (continued)

WRC - 2010
Figures in Rand

	Financial liabilities at amortised cost	Total
Trade and other payables	34,582,903	34,582,903
Finance lease obligation	1,236,321	1,236,321
Accruals	2,610,438	2,610,438
	38,429,662	**38,429,662**

Figures in Rand	Group 2011	Group 2010	WRC 2011	WRC 2010
16. Revenue				
Water research levies – non-exchange transactions	137,894,735	132,008,976	137,894,735	132,052,108
Rental income – exchange transactions	395,038	400,538	-	-
Leverage income – non-exchange transactions	14,846,281	19,691,457	14,833,992	19,691,457
Fair value adjustment	(470,620)	-	(466,665)	-
	152,665,434	**152,100,971**	**152,262,062**	**151,743,565**

17. Operating deficit

Operating deficit for the year is stated after accounting for the following:

Operating lease charges

	Group 2011	Group 2010	WRC 2011	WRC 2010
Premises				
• Contractual amounts	162,978	-	2,074,207	1,856,658
Equipment				
• Contractual amounts	174,962	2,831	174,962	2,831
	337,940	**2,831**	**2,249,169**	**1,859,489**
Loss on sale of property, plant and equipment	-	(50,792)	-	(50,792)
Depreciation on property, plant and equipment	1,070,250	1,098,041	1,070,250	1,098,041
Employee costs	32,471,946	33,405,218	32,471,946	33,405,218
Research and development	104,554,448	106,746,169	104,554,448	106,746,169

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	Group		WRC	
Figures in Rand	**2011**	**2010**	**2011**	**2010**

18. Investment revenue

Interest revenue

Listed financial assets	264,174	348,346	264,174	348,346
Loan to subsidiary (financial asset – loan and receivable)	-	-	2,331,201	1,528,070
Bank (financial asset – held for trading)	2,814,307	3,535,434	2,810,991	3,534,983
Interest charged on trade and other receivables (financial asset – loan and receivable)	-	222,780	-	222,780
Interest received relating to extended credit terms provided	470,620	-	466,665	-
Interest received - other	296,500	246,191	296,500	246,191
Computer loans (financial asset – loan and receivable)	1,107	424	1,107	424
	3,846,708	**4,353,175**	**6,170,638**	**5,880,794**

19. Finance costs

Non-current borrowings	-	-	-	-
Trade and other payables	-	1,027,120	-	1,027,120
Financial leases	246,604	137,788	246,604	137,788
	246,604	**1,164,908**	**246,604**	**1,164,908**

20. Taxation

No provision has been made for 2011 tax as the group is exempted from income tax in terms of Section 10(1)(cA)(i) of the Income Tax Act.

21. Auditors' remuneration

Fees	1,339,497	877,398	1,339,497	877,398

Notes to the Annual Financial Statements

Water Research Commission Consolidated Annual Financial Statements for the year ended 31 March 2011

Figures in Rand	Group 2011	Group 2010	WRC 2011	WRC 2010
22. Cash (used in) generated from operations				
Deficit	(9,619,973)	(1,474,064)	(8,409,332)	(1,187,523)
Adjustments for:				
Depreciation and amortisation	1,070,250	1,098,041	1,070,250	1,098,041
Gain on sale of assets and liabilities	-	50,792	-	50,792
Debt impairment	348,638	-	300,137	-
Movements in operating lease assets and accruals	(11,623)	(20,436)	162,978	-
Movements in retirement benefit assets and liabilities	(28,838,882)	4,323,549	(28,838,882)	4,323,549
Movements in provisions	331,318	87,201	331,318	87,201
Effect of prior period error	-	-	-	(724,005)
Changes in working capital:				
Trade and other receivables	17,327,406	(5,693,607)	17,173,145	(5,805,271)
Trade and other payables	3,745,118	8,925,661	3,724,413	8,897,710
	(15,647,748)	**7,297,137**	**(14,485,973)**	**6,740,490**

23. Commitments

Authorised capital expenditure

	Group 2011	Group 2010	WRC 2011	WRC 2010
Already contracted for but not provided for				
• Research	47,199,791	43,849,938	47,199,791	43,849,938

This committed expenditure relates to research cost and will be financed from internal sources.

Operating leases - as lessee (expense)

	Group 2011	Group 2010	WRC 2011	WRC 2010
Minimum lease payments due				
- within one year	-	-	1,735,914	1,653,252
- in second to fifth year inclusive	-	-	5,570,988	7,306,902
	-	**-**	**7,306,902**	**8,960,154**

24. Contingencies

Legal costs of R 50,000 may be incurred on an arbitration case involving a former employee.

Notes to the Annual Financial Statements

Water Research Commission Consolidated Annual Financial Statements for the year ended 31 March 2011

Figures in Rand	Group 2011	Group 2010	WRC 2011	WRC 2010

25. Related parties

Relationships				
Subsidiaries — Refer to note 5				
Related party balances				
16900003				
Erf 706 Rietfontein (Proprietary) Limited			16,900,003	15,588,801
Related party transactions				
Interest paid to (received from) related parties				
Erf 706 Rietfontein (Proprietary) Limited			2,331,200	1,528,071
Rent paid to (received from) related parties				
Erf 706 Rietfontein (Proprietary) Limited			1,911,229	1,856,658
Administration fees paid to (received from) related parties				
Erf 706 Rietfontein (Proprietary) Limited			(392,712)	(361,450)
Municipal expenses paid to related parties				
Erf 706 Rietfontein (Proprietary) Limited			460,121	388,245

Compensation to directors and other key management, refer to note 26.

26. Director's emoluments

Total Director's Emoluments				
Fees for services as directors	430,223	385,448	430,223	385,448
Basic salary	7,970,790	6,994,924	7,970,790	6,994,924
Bonuses and performance payments	642,649	621,971	642,649	621,971
Travel allowance	356,004	530,904	356,004	530,904
	9,399,666	**8,533,247**	**9,399,666**	**8,533,247**

Notes to the Annual Financial Statements

Water Research Commission Consolidated Annual Financial Statements for the year ended 31 March 2011

26. Director's emoluments (continued)

Figures in Rand

Executive

2011	Salary	Bonus and performance payments	Travel allowances	Total
Dr R Kfir - Chief Executive Officer	1,256,539	119,139	80,004	1,455,682
Mr NB Patel - Chief Financial Officer	973,886	76,082	90,000	1,139,968
Dr GR Backeberg	883,812	68,025	-	951,837
Mr JN Bhagwan	980,770	76,620	90,000	1,147,390
Ms E Karar	980,770	76,620	84,000	1,141,390
Ms R Lutchman	953,360	74,478	-	1,027,838
Dr HG Snyman	976,053	76,251	12,000	1,064,304
Dr MS Liphadzi	965,599	75,434	-	1,041,033
	7,970,789	**642,649**	**356,004**	**8,969,442**

2010	Salary	Bonus and performance payments	Travel allowances	Total
Dr R Kfir - Chief Executive Officer	1,108,337	112,395	80,004	1,300,736
Mr NB Patel - Chief Financial Officer	831,029	67,334	90,000	988,363
Dr GR Backeberg	764,091	59,313	59,400	882,804
Mr JN Bhagwan	837,540	67,810	90,000	995,350
Ms E Karar	843,540	67,810	84,000	995,350
Dr SA Mitchell	-	66,761	-	66,761
Ms R Frank	819,117	65,915	82,500	967,532
Dr HG Snyman	878,079	59,057	45,000	982,136
Dr MS Liphadzi	913,191	55,576	-	968,767
	6,994,924	**621,971**	**530,904**	**8,147,799**

Notes to the Annual Financial Statements

Water Research Commission Consolidated Annual Financial Statements for the year ended 31 March 2011

Non-executive

2011

	Fees for services as directors	Total
Prof JB Adams Chairperson	272,223	272,223
Mr DP Naidoo (Resigned January 2011)	24,000	24,000
Mr EPW Cross	18,000	18,000
Ms ZB Mathenjwa	18,000	18,000
Mrs DN Ndaba	32,000	32,000
Mr M Sirenya	34,000	34,000
Dr DJ Merrey (Resigned December 2010)	14,000	14,000
Adv D Block (Co-opted June 2010)	4,000	4,000
Mrs RNM Maphumulo	2,000	2,000
Mr AN Mhlongo (Appointed October 2010)	12,000	12,000
	430,223	**430,223**

2010

	Fees for services as directors	Total
Prof JB Adams Chairperson	257,448	257,448
Mr D Naidoo	26,000	26,000
Mr EPW Cross	18,000	18,000
Dr DSS Lushaba	20,000	20,000
Ms ZB Mathenjwa	12,000	12,000
Mrs DN Ndaba	20,000	20,000
Mr M Sirenya	20,000	20,000
Dr DJ Merrey	12,000	12,000
	385,448	**385,448**

Notes to the Annual Financial Statements

Water Research Commission Consolidated Annual Financial Statements for the year ended 31 March 2011

27. Prior period errors

During prior financial years, the entity did not recognise interest income which was earned but not received on loans granted to the subsidiary. This error has been corrected retrospectively and comparitive figures have been appropriately restated.

The correction of the error(s) results in adjustments as follows:

Statement of financial position	**31/03/2010**	**01/042009**	**31/03/2010**	**01/04/2009**
	R	**R**	**R**	**R**
Impairment of loans to group entity	-	-	528,819	4,503,816
Increase in loans to group entity	-	-	724,009	4,741,269
Trade and other payables	-	-	-	(114,879)
Operating lease asset	20,435	-	-	-
Adjustment against opening accumulated suplus	-	-	9,130,206	-
Increase in equity	20,435	-	10,383,034	9,130,206
Statement of financial performance				
Opening accumulated surplus	-	-	(9,130,206)	-
Increase in investment income	-	-	(724,006)	(4,741,269)
Impairment of loans to group entity	-	-	(528,819)	(4,503,816)
IFRS interest adjustment	-	-	-	114,879
Rental income	(20,435)	-	-	-
Statement of changes in net assets				
Effect of prior period errors on accumulated deficit				
Balance at beginning of the year as previously stated	76,412,841	-	72,506,162	74,946,513
Prior period adjustments	20,435	-	10,383,034	9,130,206
Balance at beginning of the year as restated	**76,433,276**	**-**	**82,889,196**	**84,076,719**

28. Risk management

Liquidity risk

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

The table below analyses the group's financial liabilities and net-settled derivative financial liabilities into relevant maturity groupings based on the remaining period at the statement of financial position to the contractual maturity date. The amounts disclosed in the table are the contractual undiscounted cash flows. Balances due within 12 months equal their carrying balances as the impact of discounting is not significant.

Group

At 31 March 2011	**Less than 1 year**	**Between 1 and 2 years**	**Between 2 and 5 years**	**Over 5 years**
Trade and other payables	38,329,259	-	-	-
Finance leases	746,718	382,927	497,915	-

At 31 March 2010	**Less than 1 year**	**Between 1 and 2 years**	**Between 2 and 5 years**	**Over 5 years**
Trade and other payables	34,591,919	-	-	-
Finance leases	560,323	466,289	507,737	-

WRC

At 31 March 2011	**Less than 1 year**	**Between 1 and 2 years**	**Between 2 and 5 years**	**Over 5 years**
Trade and other payables	38,300,976	-	-	-
Finance leases	746,718	382,927	497,915	-

Notes to the Annual Financial Statements

Water Research Commission Consolidated Annual Financial Statements for the year ended 31 March 2011

At 31 March 2010	Less than 1 year	Between 1 and 2 years	Between 2 and 5 years	Over 5 years
Trade and other payables	34,582,905	-	-	-
Finance leases	560,323	466,289	507,737	-

Interest rate risk

Due to the nature and extent of the Commission's investments, the Commission is not unduly exposed to interest rate risks as at least 80% of the investments are held in trusts.

Company

Deposits attract interest at rates that vary with prime. The entity's policy is to manage interest rate risk so that fluctuations in variable rates do not have a material impact on a surplus (deficit).

At year end, financial instruments exposed to interest rate risk were as follows: Balances with banks and deposits with the Corporation for Public Deposits.

Credit risk

Credit risk consists mainly of cash deposits, cash equivalents, derivative financial instruments and trade debtors. The Water Research Commission only deposits cash with major banks with high quality credit standing and limits exposure to any one counter-party.

Financial assets exposed to credit risk at year end were as follows:

Financial instrument	Group - 2011	Group - 2010	WRC - 2011	WRC - 2010
Deposits with banks	1,800	1,800	1,800	1,800
Corporation for Public Deposits	16,985,610	26,714,633	16,985,610	26,714,633
Computer loans	8,181	18,943	8,181	18,943
Bank Balance	79,770,416	42,229,510	78,086,766	40,695,287

These balances represent the maximum exposure to credit risk.

Foreign exchange risk

The Water Research Commission does not have any foreign account receivables, foreign accounts payables or derivative market instruments.

Price risk

Due to the nature and extent of the Commission's investments, the Commission is not unduly exposed to price risks as investments are held in trusts, cash and deposits.

29. Going concern

The annual financial statements have been prepared on the basis of accounting policies applicable to a going concern. This basis presumes that funds will be available to finance future operations and that the realisation of assets and settlement of liabilities, contingent obligations and commitments will occur in the ordinary course of business.

30. Events after the reporting date

There were no events after reporting date that requires reporting or disclosure in the Annual Financial Statements.

Detailed Statement of Financial Performance

Water Research Commission Consolidated Annual Financial Statements for the year ended 31 March 2011

		Group		WRC	
Figures in Rand	**Note(s)**	**2011**	**2010**	**2011**	**2010**
Revenue					
Water research levies – non-exchange transactions		137,894,735	132,008,976	137,894,735	132,052,108
Rental income – exchange transactions		395,038	400,538	-	-
Leverage income – non-exchange transactions		14,846,281	19,691,457	14,833,992	19,691,457
Fair value adjustment		(470,620)	-	(466,665)	-
	16	**152,665,434**	**152,100,971**	**152,262,062**	**151,743,565**
Other income					
Administration and management fees received		-	-	392,712	361,450
Discount received – non-exchange transactions		4,770	14,067	4,770	14,067
Other income – exchange transactions		1,514,171	1,932,788	1,514,171	1,878,634
Interest received – non-exchange transactions	18	3,846,708	4,353,175	6,170,638	5,880,794
		5,365,649	**6,300,030**	**8,082,291**	**8,134,945**
Expenses (Refer to page 48)		**(167,404,452)**	**(158,710,157)**	**(168,507,081)**	**(159,901,125)**
Operating deficit	17	**(9,373,369)**	**(309,156)**	**(8,162,728)**	**(22,615)**
Finance costs	19	(246,604)	(1,164,908)	(246,604)	(1,164,908)
Deficit for the year		**(9,619,973)**	**(1,474,064)**	**(8,409,332)**	**(1,187,523)**
Operating expenses					
Administration and management fees		(285,923)	(350,389)	(285,923)	(350,389)
Auditors remuneration	21	(1,339,497)	(877,398)	(1,339,497)	(877,398)
Bad debts		(348,638)	(768,252)	(300,137)	(768,252)
Bank charges		(61,446)	(58,406)	(57,061)	(53,815)
Consumables		(13,236)	(23,761)	(13,236)	(23,761)
Current year movement of retirement benefit obligation		(12,454,845)	-	(12,454,845)	-
Depreciation, amortisation and impairments		(1,070,250)	(1,098,041)	(1,070,250)	(1,098,037)
Discretionary fund		(28,404)	(26,381)	(28,404)	(26,381)
Employee costs		(32,471,946)	(33,405,218)	(32,471,946)	(33,405,218)
Entertainment		(189,889)	(223,628)	(189,889)	(223,628)
IT expenses		(1,130,798)	(1,156,615)	(1,130,798)	(1,156,615)
Insurance		(152,909)	(151,054)	(111,200)	(128,576)
Lease rentals on operating lease		(337,940)	(2,831)	(2,249,169)	(1,859,489)
Loss on disposal of assets		-	(50,792)	-	(50,792)
Motor vehicle expenses		(5,114)	(5,692)	(5,114)	(5,692)
Patent registrations		(791,824)	(421,850)	(791,824)	(421,850)
Postage		(207,204)	(180,925)	(207,204)	(180,925)
Price variance		3,007	-	1,569	-
Printing and stationery		(3,788,386)	(5,104,822)	(3,788,386)	(5,104,822)
Professional fees		(1,670,059)	(1,749,369)	(1,670,059)	(1,749,369)
Promotions		(135,493)	(218,203)	(135,493)	(218,203)
Recruitment costs		(393,179)	(81,553)	(393,179)	(81,553)
Repairs and maintenance		(555,549)	(500,987)	(355,326)	(317,002)
Research costs		(104,554,448)	(106,746,169)	(104,554,448)	(106,746,169)
Secretarial fees		(2,080)	(2,378)	-	-
Security		(308,882)	(293,554)	-	-
Staff welfare		(18,268)	(20,989)	(18,268)	(20,989)
Subscriptions		(495,305)	(576,775)	(495,305)	(576,775)
Telephone and fax		(607,584)	(697,914)	(600,057)	(692,346)
Training		(91,520)	(303,360)	(91,520)	(303,360)
Travel – local		(2,634,402)	(2,436,788)	(2,634,402)	(2,436,788)
Travel – overseas		(605,589)	(634,686)	(605,589)	(634,686)
Utilities		(656,852)	(541,377)	(460,121)	(388,245)
		(167,404,452)	**(158,710,157)**	**(168,507,081)**	**(155,397,309)**

Statement of Comparison of Budget and Actual Amounts

Water Research Commission Consolidated Annual Financial Statements for the year ended 31 March 2011

1. Reconciliation between actual amounts on comparable basis and actual amounts in Statement of Financial Performance

Budget on Cash Basis

Net surplus/(deficit) per Statement of Financial Performance	(8,409,332)
Depreciation and amortisation	1,070,250
Levies	2,490,763
Interest received	1,783,604
Leverage	2,472,541
Miscellaneous	(1,253,603)
Sub total	**18,457,777**
Rent	70,863
Electricity	62,312
Telephone & fax	(89,183)
Postal & courrier	(10,947)
Building maintenance	139,663
PC Consumables	(44,533)
PC Software, licences	59,530
S&T Local	188,201
S&T International	(126,484)
WRC Vehicle expenses	(7,048)
Consultancies, Professional	194,873
Entertainment and refreshments	(21,820)
Books, educational material	(8,040)
Membership and subscription	30,611
Promotions and publicity	(42,320)
Printing and publishing, stationary and other	(1,663,318)
Discretionary fund	(30,279)
Patent registrations	291,824
Employee Cost	12,627,876
Recruitment	314,204
Staff training	(147,955)
Research costs	(10,229,037)
Insurance	(81,980)
Collection services	(299,020)
Bank charges	(24,722)
Interest paid	76,604
Audit fees	118,121
Other variances	1,320,662
Net surplus/(deficit) (excluding capital expenditure)	**822,881**

The budget is approved on a cash basis by nature classification. The approved budget covers the fiscal period from 01 April 2010 to 31 March 2011. The budget detail included is only for the Water Research Commission and not for Erf 706 Rietfontein (Proprietary) Limited.

The Financial Statements differ from the budget, which is approved on the cash basis.

The amounts in the financial statements were recast from the accrual basis to the cash basis to be on the same basis as the final approved budget.

A reconciliation between the actual amounts on a comparable basis as presented in the Statement of Comparison of Budget and Actual Amounts and the actual amounts in the Statement of Financial Performance for the period ended 31 March 2011 is presented above. The Financial Statements and budget documents are prepared for the same period.

ERF SEWE-NUL-SES RIETFONTEIN (PTY) LTD CONSOLIDATED FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 MARCH 2011

REPORT OF THE AUDITOR-GENERAL

REPORT OF THE AUDITOR-GENERAL TO PARLIAMENT ON THE FINANCIAL STATEMENTS OF ERF 706 RIETFONTEIN (PTY) LTD FOR THE YEAR ENDED 31 MARCH 2011

REPORT ON THE FINANCIAL STATEMENTS

Introduction

I have audited the accompanying financial statements of the Erf 706 Rietfontein (Pty) Ltd, which comprise the statement of financial position as at 31 March 2011, and the statement of financial performance, statement of changes in net assets and cash flow statement for the year then ended, a summary of significant accounting policies and other explanatory information, as set out on pages 133 to 151.

Accounting authority's responsibility for the financial statements

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

Auditor-General's responsibility

As required by section 188 of the Constitution of the Republic of South Africa, 1996 (Act No. 108 of 1996), section 4 of the Public Audit Act of South Africa, 2004 (Act No. 25 of 2004) (PAA), section and section 14 of the Water Research Act, 1971 (Act No. 34 of 1971) of South Africa, my responsibility is to express an opinion on these financial statements based on my audit.

I conducted my audit in accordance with International Standards on Auditing and *General Notice 1111 of 2010* issued in *Government Gazette 33872 of 15 December 2010*. Those standards require that I comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

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

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

Opinion

In my opinion, the financial statements present fairly, in all material respects, the financial position of the Erf 706 Rietfontein (Pty) Ltd as at 31 March 2011, and its financial performance and cash flows for the year then ended in accordance with South African Standards of Generally Recognised Accounting Practice (SA Standards of GRAP) and the requirements of the Public Finance Management Act of South Africa, 1999 (Act No. 1 of 1999) and the Companies Act of South Africa.

Additional matters

I draw attention to the matters below. My opinion is not modified in respect of these matters:

Unaudited supplementary schedules

The supplementary information set out on page 152 does not form part of the financial statements and is presented as additional information. I have not audited this schedule and, accordingly, I do not express an opinion thereon.

REPORT ON OTHER LEGAL AND REGULATORY REQUIREMENTS

In accordance with the PAA and in terms of *General notice 1111 of 2010*, issued in *Government Gazette 33872 of 15 December 2010*, I include below my findings on the annual performance report as set out on pages 66 to 71 and material non-compliance with laws and regulations applicable to the company.

Predetermined objectives

No matters to report.

Compliance with laws and regulations

No matters to report.

INTERNAL CONTROL

In accordance with the PAA and in terms of *General notice 1111 of 2010*, issued in *Government Gazette 33872 of 15 December 2010*, I considered internal control relevant to my audit, but not for the purpose of expressing an opinion on the effectiveness of internal control. The matters reported below are limited to the significant deficiencies that resulted in the basis for opinion, the findings on the annual performance report and the findings on compliance with laws and regulations included in this report.

No matters to report.

Auditor-General

Auditor-General
Pretoria
31 March 2011

AUDITOR-GENERAL SOUTH AFRICA
Auditing to build public confidence

Financial Statements

Erf Sewe-Nul-Ses Rietfontein (Pty) Ltd

Approval of Financial Statements

The Directors' Report and Financial Statements set out on pages 132 to 152 were approved by the Board of Directors and were signed on its behalf by:

Prof JA Adams
Chairperson

Dr R. Kfir
WRC Chief Executive Officer

GENERAL INFORMATION

Directors:

Dr R Kfir
Prof JA Adams

Registered office:

301 Watko Building
491, 18th Avenue
Rietfontein
Pretoria

Registration number:

1984/003566/07

Main business and purpose

The main business of the company is to own the immovable property known as Erf Rietfontein and in addition and supplementary to the aim of the Water Research Commission (WRC), to place the property at the disposal of the WRC as their main place of business.

Director's Report

General review

(a) To review the business and operations of the company for the above accounting period in general, the directors draw attention to the statements of financial position, financial performance, changes in net assets and cash flows attached, where the business of the company, the results and state of affairs are clearly reflected.

(b) The Fourth Schedule to the Companies Act, 1973, requires the Directors to report on any material facts or circumstances which occurred between the accounting date and the date of their report. No such material or circumstances occurred.

Specific matters

(a) The main aim of the company is that of owning immovable property known as Erf 706 Rietfontein, including all permanent improvements, and to use the property for the purpose of promoting the operations of Water Research Commission.

(b) No shares were allotted or issued by the company for the year ending 31 March 2011.

(c) No dividends were paid or declared during the accounting period and we have no recommendation to make in respect of dividends (2010-RNil)

(d) The Directors and certain members of staff of Water Research Commission, for whom an administration fee is paid to the Water Research Commission, managed the business of the company. No third person was involved in managing the company.

(e) The names of Directors are shown below. No changes have taken place in the appointments during the accounting period. The company's secretary is Mr D de Lange.

- Dr R Kfir
- Prof JA Adams

The company is wholly owned by the Water Research Commission.

Statement of Financial Position

Erf Sewe-Nul-Ses Rietfontein (Proprietary) Limited Annual Financial Statements for the year ended 31 March 2011

Figures in Rand	Note(s)	2011	2010
Assets			
Current Assets			
Operating lease asset		195,037	20,437
Trade and other receivables	5	8,383	19,143
Other receivables - non-exchange transactions	5	7,402	10,750
Cash and cash equivalents	6	1,683,650	1,150,294
		1,894,472	**1,200,624**
Non-Current Assets			
Investment property	3	8,691,522	8,691,522
Total Assets		**10,585,994**	**9,892,146**
Liabilities			
Current Liabilities			
Other financial liabilities	8	1,020,000	1,020,000
Trade and other payables	9	550,186	99,985
Other payables - non-exchange transactions	9	27,397	23,912
		1,597,583	**1,143,897**
Non-Current Liabilities			
Other financial liabilities	8	15,880,003	14,568,801
Total Liabilities		**17,477,586**	**15,712,698**
Net Assets		**(6,891,592)**	**(5,820,552)**
Net Assets			
Share capital	7	1	1
Accumulated surplus/(deficit)		(6,891,593)	(5,820,553)
Total Net Assets		**(6,891,592)**	**(5,820,552)**

Statement of Financial Performance

Erf Sewe-Nul-Ses Rietfontein (Proprietary) Limited Annual Financial Statements for the year ended 31 March 2011

Figures in Rand	Note(s)	2011	2010
Revenue	11	2,914,323	2,656,463
Operating expenses		(1,661,433)	(1,415,382)
Operating surplus		**1,252,890**	**1,241,081**
Investment revenue	12	7,271	451
Finance costs	13	(2,331,201)	(1,528,071)
Deficit for the year		**(1,071,040)**	**(286,539)**

Statement of Changes in Net Assets

Erf Sewe-Nul-Ses Rietfontein (Proprietary) Limited Annual Financial Statements for the year ended 31 March 2011

Figures in Rand		Share capital	Accumulated surplus/(deficit)	Total net assets
Balance at 01 April 2009 as restated (refer to note 17)		**1**	**(5,534,014)**	**(5,534,013)**
Changes in net assets				
Deficit for the year		-	(286,539)	(286,539)
Total changes		-	(286,539)	(286,539)
Balance at 01 April 2010 as restated (refer to note 17)		**1**	**(5,820,553)**	**(5,820,552)**
Changes in net assets				
Deficit for the year		-	(1,071,040)	(1,071,040)
Total changes		-	(1,071,040)	(1,071,040)
Balance at 31 March 2011		**1**	**(6,891,593)**	**(6,891,592)**
Note(s)	7			

Cash Flow Statement

Erf Sewe-Nul-Ses Rietfontein (Proprietary) Limited Annual Financial Statements for the year ended 31 March 2011

Figures in Rand	Note(s)	2011	2010
Cash flows from operating activities			
Receipts			
Cash receipts from customers		2,714,979	2,629,790
Interest income		3,316	451
		2,718,295	2,630,241
Payments			
Cash paid to suppliers and employees		(1,164,940)	(1,672,595)
Finance costs		(2,331,201)	(1,528,071)
		(3,496,141)	(3,200,666)
Net cash flows from operating activities	15	**(777,846)**	**(570,425)**
Cash flows from financing activities			
Proceeds / (Repayment) of other financial liabilities		1,311,202	505,217
Repayment of other financial liabilities		-	2,853
Net cash flows from financing activities		**1,311,202**	**508,070**
Net increase/(decrease) in cash and cash equivalents		**533,356**	**(62,355)**
Cash and cash equivalents at the beginning of the year		1,150,294	1,212,649
Cash and cash equivalents at the end of the year	6	**1,683,650**	**1,150,294**

Accounting Policies

Erf Sewe-Nul-Ses Rietfontein (Proprietary) Limited Annual Financial Statements for the year ended 31 March 2011

1. Presentation of Annual Financial Statements

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

These annual financial statements have been prepared on an accrual basis of accounting and are in accordance with historical cost convention unless specified otherwise. They are presented in South African Rand.

A summary of the significant accounting policies, which have been consistently applied, are disclosed below.

These accounting policies are consistent with the previous period.

1.1 Investment property

Investment property is property (land or a building – or part of a building – or both) held to earn rentals or for capital appreciation or both, rather than for:

- use in the production or supply of goods or services or for
- administrative purposes, or
- sale in the ordinary course of operations.

Owner-occupied property is property held for use in the production or supply of goods or services or for administrative purposes.

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

Investment property is initially recognised at cost. Transaction costs are included in the initial measurement.

Where investment property is acquired at no cost or at a nominal cost, its cost is its fair value as at the date of acquisition.

Costs include costs incurred initially and costs incurred subsequently to add to, or to replace a part of, or service a property. If a replacement part is recognised in the carrying amount of the investment property, the carrying amount of the replaced part is derecognised.

Investment property is subsequently carried at cost less accumulated depreciation and impairment losses.
Compensation from third parties for investment property that was impaired, lost or given up is recognised in surplus or deficit when the compensation becomes receivable.

1.2 Financial instruments

Initial recognition and measurement

Financial instruments are recognised initially when the entity becomes a party to the contractual provisions of the instruments.

The entity classifies financial instruments, or their component parts, on initial recognition as a financial asset, a financial liability or an equity instrument in accordance with the substance of the contractual arrangement.

Financial instruments are measured initially at fair value, except for equity investments for which a fair value is not determinable, which are measured at cost and are classified as available-for-sale financial assets.

For financial instruments which are not at fair value through surplus or deficit, transaction costs are included in the initial measurement of the instrument.

Transaction costs on financial instruments at fair value through surplus or deficit are recognised in surplus or deficit.

Accounting Policies

Erf Sewe-Nul-Ses Rietfontein (Proprietary) Limited Annual Financial Statements for the year ended 31 March 2011

1.2 Financial instruments (continued)

Subsequent measurement

Fair value determination

The fair values of quoted investments are based on current bid prices. If the market for a financial asset is not active (and for unlisted securities), the entity establishes fair value by using valuation techniques. These include the use of recent arm's length transactions, reference to other instruments that are substantially the same, discounted cash flow analysis, and option pricing models making maximum use of market inputs and relying as little as possible on entity-specific inputs.

Trade and other receivables

Trade receivables are measured at initial recognition at fair value, and are subsequently measured at amortised cost using the effective interest rate method. Appropriate allowances for estimated irrecoverable amounts are recognised in surplus or deficit when there is objective evidence that the asset is impaired. Significant financial difficulties of the debtor, probability that the debtor will enter bankruptcy or financial reorganisation, and default or delinquency in payments (more than 30 days overdue) are considered indicators that the trade receivable is impaired. The allowance recognised is measured as the difference between the asset's carrying amount and the present value of estimated future cash flows discounted at the effective interest rate computed at initial recognition.

The carrying amount of the asset is reduced through the use of an allowance account, and the amount of the deficit is recognised in surplus or deficit within operating expenses. When a trade receivable is uncollectible, it is written off against the allowance account for trade receivables. Subsequent recoveries of amounts previously written off are credited against operating expenses in surplus or deficit.

Trade and other receivables are classified as loans and receivables.

Trade and other payables

Trade payables are initially measured at fair value, and are subsequently measured at amortised cost, using the effective interest rate method.

Cash and cash equivalents

Cash and cash equivalents comprise cash on hand and demand deposits, and other short-term highly liquid investments that are readily convertible to a known amount of cash and are subject to an insignificant risk of changes in value. These are initially and subsequently recorded at fair value.

1.3 Impairment of cash-generating assets

Cash-generating assets are those assets held by the entity with the primary objective of generating a commercial return. When an asset is deployed in a manner consistent with that adopted by a profit-orientated entity, it generates a commercial return.

Impairment is a loss in the future economic benefits or service potential of an asset, over and above the systematic recognition of the loss of the asset's future economic benefits or service potential through depreciation (amortisation).

Carrying amount is the amount at which an asset is recognised in the statement of financial position after deducting any accumulated depreciation and accumulated impairment losses thereon.

A cash-generating unit is the smallest identifiable group of assets held with the primary objective of generating a commercial return that generates cash inflows from continuing use that are largely independent of the cash inflows from other assets or groups of assets.

Costs of disposal are incremental costs directly attributable to the disposal of an asset, excluding finance costs and income tax expense.

Accounting Policies

Erf Sewe-Nul-Ses Rietfontein (Proprietary) Limited Annual Financial Statements for the year ended 31 March 2011

Depreciation (Amortisation) is the systematic allocation of the depreciable amount of an asset over its useful life.

Fair value less costs to sell is the amount obtainable from the sale of an asset in an arm's length transaction between knowledgeable, willing parties, less the costs of disposal.

Recoverable amount of an asset or a cash-generating unit is the higher of its fair value less costs to sell and its value in use.

Useful life is either:
- (a) the period of time over which an asset is expected to be used by the entity; or
- (b) the number of production or similar units expected to be obtained from the asset by the entity.

1.4 Share capital

An equity instrument is any contract that evidences a residual interest in the assets of an entity after deducting all of its liabilities.

1.5 Revenue from exchange transactions

Revenue is the gross inflow of economic benefits or service potential during the reporting period when those inflows result in an increase in net assets, other than increases relating to contributions from owners.

An exchange transaction is one in which the entity receives assets or services, or has liabilities extinguished, and directly gives approximately equal value (primarily in the form of goods, services or use of assets) to the other party in exchange.

Fair value is the amount for which an asset could be exchanged, or a liability settled, between knowledgeable, willing parties in an arm's length transaction.

Measurement

Revenue is measured at the fair value of the consideration received or receivable, net of trade discounts and volume rebates.

Sale of goods

Revenue from the sale of goods is recognised when all the following conditions have been satisfied:
- the entity has transferred to the purchaser the significant risks and rewards of ownership of the goods;
- the entity retains neither continuing managerial involvement to the degree usually associated with ownership nor effective control over the goods sold;
- the amount of revenue can be measured reliably;
- it is probable that the economic benefits or service potential associated with the transaction will flow to the entity; and
- the costs incurred or to be incurred in respect of the transaction can be measured reliably.

Interest, rental income, royalties and dividends

Revenue arising from the use by others of entity assets yielding interest, royalties and dividends is recognised when:
- It is probable that the economic benefits or service potential associated with the transaction will flow to the entity, and
- The amount of the revenue can be measured reliably.

Interest is recognised, in surplus or deficit, using the effective interest rate method.

Rental income is recognised on the accrual basis in accordance with the substance of the relevant agreements.

Accounting Policies

Erf Sewe-Nul-Ses Rietfontein (Proprietary) Limited Annual Financial Statements for the year ended 31 March 2011

1.6 Borrowing costs

It is inappropriate to capitalise borrowing costs when, and only when, there is clear evidence that it is difficult to link the borrowing requirements of an entity directly to the nature of the expenditure to be funded i.e. capital or current.

Borrowing costs are recognised as an expense in the period in which they are incurred.

1.7 Related parties

The entitiy follows the guidance of IPSAS 20 to identify related party relationships, transactions and balances and the disclosures on those identified.

Notes to the Annual Financial Statements

Erf Sewe-Nul-Ses Rietfontein (Proprietary) Limited Annual Financial Statements for the year ended 31 March 2011

2. New standards and interpretations

2.1 Standards and interpretations issued, but not yet effective

The entity has not applied the following standards and interpretations, which have been published and are mandatory for the entity's accounting periods beginning on or after 01 April 2011 or later periods:

GRAP 18: Segment Reporting

Segments are identified by the way in which information is reported to management, both for purposes of assessing performance and making decisions about how future resources will be allocated to the various activities undertaken by the entity. The major classifications of activities identified in budget documentation will usually reflect the segments for which an entity reports information to management.

Segment information is either presented based on service or geographical segments. Service segments relate to a distinguishable component of an entity that provides specific outputs or achieves particular operating objectives that are in line with the entity's overall mission. Geographical segments relate to specific outputs generated, or particular objectives achieved, by an entity within a particular region.

This Standard has been approved by the Board but its effective date has not yet been determined by the Minister of Finance. The effective date indicated is a provisional date and could change depending on the decision of the Minister of Finance.

Directive 2 – Transitional provisions for public entities, municipal entities and constitutional institutions, states that no comparative segment information need to be presented on initial adoption of this Standard.

Directive 3 – Transitional provisions for high capacity municipalities states that no comparative segment information need to be presented on initial adoption of the Standard. Where items have not been recognised as a result of transitional provisions under the Standard of GRAP on Property, Plant and Equipment, recognition requirements of this Standard would not apply to such items until the transitional provision in that Standard expires.

Directive 4 – Transitional provisions for medium and low capacity municipalities states that no comparative segment information need to be presented on initial adoption of the Standard. Where items have not been recognised as a result of transitional provisions under the Standard of GRAP on Property, Plant and Equipment and the Standard of GRAP on Agriculture, the recognition requirements of the Standard would not apply to such items until the transitional provision in that standard expires.

The effective date of the standard is for years beginning on or after 01 April, 2011.

The entity expects to adopt the standard for the first time in the 2011 annual financial statements.

It is unlikely that the standard will have a material impact on the entity's annual financial statements.

GRAP 25: Employee benefits

The objective of GRAP 25 is to prescribe the accounting and disclosure for employee benefits. The Standard requires an entity to recognise:

- a liability when an employee has provided service in exchange for employee benefits to be paid in the future; and
- an expense when an entity consumes the economic benefits or service potential arising from service provided by an employee in exchange for employee benefits.

GRAP 25 must be applied by an employer in accounting for all employee benefits, except share based payment transactions.

GRAP 25 defines, amongst others, the following:

- Employee benefits as all forms of consideration given by an entity in exchange for service rendered by employees;
- Defined contribution plans as post-employment benefit plans under which an entity pays fixed contributions into a separate entity (a fund) and will have no legal or constructive obligation to pay further contributions if the fund does not hold sufficient assets to pay all employee benefits relating to employee service in the current and prior periods;
- Defined benefit plans as post-employment benefit plans other than defined contribution plans;

Notes to the Annual Financial Statements

Erf Sewe-Nul-Ses Rietfontein (Proprietary) Limited Annual Financial Statements for the year ended 31 March 2011

- Multi-employer plans as defined contribution plans (other than state plans and composite social security programmes) or defined benefit plans (other than state plans) that:
  - pool the assets contributed by various entities that are not under common control; and
  - use those assets to provide benefits to employees of more than one entity, on the basis that contribution and benefit levels are determined without regard to the identity of the entity that employs the employees concerned;
- Other long-term employee benefits as employee benefits (other than post-employment benefits and termination benefits) that is not due to be settled within twelve months after the end of the period in which the employees render the related service;
- Post-employment benefits as employee benefits (other than termination benefits) which are payable after the completion of employment;
- Post-employment benefit plans as formal or informal arrangements under which an entity provides post-employment benefits for one or more employees;
- Short-term employee benefits as employee benefits (other than termination benefits) that are due to be settled within twelve months after the end of the period in which the employees render the related service;
- State plans as plans other than composite social security programmes established by legislation which operate as if they are multi-employer plans for all entities in economic categories laid down in legislation;
- Termination benefits as employee benefits payable as a result of either:
  - an entity's decision to terminate an employee's employment before the normal retirement date; or
  - an employee's decision to accept voluntary redundancy in exchange for those benefits;
- Vested employee benefits as employee benefits that are not conditional on future employment.

The standard states the recognition, measurement and disclosure requirements of:
- Short-term employee benefits;
  - All short-term employee benefits;
  - Short-term compensated absences;
  - Bonus, incentive and performance related payments;
- Post-employment benefits: Defined contribution plans;
- Other long-term employee benefits;
- Termination benefits.

The standard states, for Post-employment benefits: Distinction between defined contribution plans and defined benefit plans:
- Multi-employer plans;
- Defined benefit plans where the participating entities are under common control;
- State plans;
- Composite social security programmes;
- Insured benefits.

The standard states, for Post-employment benefits: Defined benefit plans, the following requirements:
- Recognition and measurement;
- Presentation;
- Disclosure;
- Accounting for the constructive obligation;
- Statement of financial position;
- Asset recognition ceiling;
- Asset recognition ceiling: When a minimum funding requirement may give rise to a liability;
- Statement of financial performance.

The standard prescribes recognition and measurement for:
- Present value of defined benefit obligations and current service cost:
  - Actuarial valuation method;
  - Attributing benefits to periods of service;
  - Actuarial assumptions;
  - Actuarial assumptions: Discount rate;
  - Actuarial assumptions: Salaries, benefits and medical costs;
  - Actuarial gains and losses;
  - Past service cost.
- Plan assets:
  - Fair value of plan assets;
  - Reimbursements;
  - Return on plan assets.

Notes to the Annual Financial Statements

Erf Sewe-Nul-Ses Rietfontein (Proprietary) Limited Annual Financial Statements for the year ended 31 March 2011

2. New standards and interpretations (continued)

The standard also deals with Entity combinations and Curtailments and settlements.

This Standard has been approved by the Board but its effective date has not yet been determined by the Minister of Finance. The effective date indicated is a provisional date and could change depending on the decision of the Minister of Finance.

The effective date of the standard is for years beginning on or after 01 April, 2011.

The entity expects to adopt the standard for the first time in the 2011 annual financial statements.

It is unlikely that the standard will have a material impact on the entity's annual financial statements.

GRAP 104: Financial Instruments

The standard prescribes recognition, measurement, presentation and disclosure requirements for financial instruments. Financial instruments are defined as those contracts that result in a financial asset in one entity and a financial liability or residual interest in another entity. A key distinguishing factor between financial assets and financial liabilities and other assets and liabilities, is that they are settled in cash or by exchanging financial instruments rather than through the provision of goods or services.

One of the key considerations in initially recognising financial instruments is the distinction, by the issuers of those instruments, between financial assets, financial liabilities and residual interests. Financial assets and financial liabilities are distinguished from residual interests because they involve a contractual right or obligation to receive or pay cash or another financial instrument. Residual interests entitle an entity to a portion of another entity's net assets in the event of liquidation and, to dividends or similar distributions paid at management's discretion.

In determining whether a financial instrument is a financial asset, financial liability or a residual interest, an entity considers the substance of the contract and not just the legal form.

Where a single instrument contains both a liability and a residual interest component, the issuer allocates the instrument into its component parts. The issuer recognises the liability component at its fair value and recognises the residual interest as the difference between the carrying amount of the instrument and the fair value of the liability component. No gain or loss is recognised by separating the instrument into its component parts.

Financial assets and financial liabilities are initially recognised at fair value. Where an entity subsequently measures financial assets and financial liabilities at amortised cost or cost, transactions costs are included in the cost of the asset or liability.

The transaction price usually equals the fair value at initial recognition, except in certain circumstances, for example, where interest free credit is granted or where credit is granted at a below market rate of interest.

Concessionary loans are loans either received by or granted to another entity on concessionary terms, e.g. at low interest rates and flexible repayment terms. On initial recognition, the fair value of a concessionary loan is the present value of the agreed contractual cash flows, discounted using a market-related rate of interest for a similar transaction. The difference between the proceeds either received or paid and the present value of the contractual cash flows is accounted for as non-exchange revenue by the recipient of a concessionary loan in accordance with Standard of GRAP on Revenue from Non-exchange Revenue Transactions (Taxes and Transfers), and using the Framework for the Preparation and Presentation of Financial Statements (usually as an expense) by the grantor of the loan.

Financial assets and financial liabilities are subsequently measured either at fair value or, amortised cost or cost. An entity measures a financial instrument at fair value if it is:

- a derivative;
- a combined instrument designated at fair value, i.e. an instrument that includes a derivative and a non-derivative host contract;
- held-for-trading;
- a non-derivative instrument with fixed or determinable payments that is designated at initial recognition to be measured at fair value;
- an investment in a residual interest for which fair value can be measured reliably; and
- other instruments that do not meet the definition of financial instruments at amortised cost or cost.

Notes to the Annual Financial Statements

Erf Sewe-Nul-Ses Rietfontein (Proprietary) Limited Annual Financial Statements for the year ended 31 March 2011

Derivatives are measured at fair value. Combined instruments that include a derivative and non-derivative host contract are accounted for as follows:

- Where an embedded derivative is included in a host contract which is a financial instrument within the scope of this Standard, an entity can designate the entire contract to be measured at fair value or, it can account for the host contract and embedded derivative separately using GRAP 104. An entity is, however, required to measure the entire instrument at fair value if the fair value of the derivative cannot be measured reliably.
- Where the host contract is not a financial instrument within the scope of this Standard, the host contract and embedded derivative are accounted for separately using GRAP 104 and the relevant Standard of GRAP.

Financial assets and financial liabilities that are non-derivative instruments with fixed or determinable payments, for example deposits with banks, receivables and payables, are measured at amortised cost. At initial recognition, an entity can, however, designate such an instrument to be measured at fair value.

An entity can only measure investments in residual interests at cost where the fair value of the interest cannot be determined reliably.

Once an entity has classified a financial asset or a financial liability either at fair value or amortised cost or cost, it is only allowed to reclassify such instruments in limited instances.

An entity derecognises a financial asset, or the specifically identified cash flows of an asset, when:

- the cash flows from the asset expire, are settled or waived;
- significant risks and rewards are transferred to another party; or
- despite having retained significant risks and rewards, an entity has transferred control of the asset to another entity.

An entity derecognises a financial liability when the obligation is extinguished. Exchanges of debt instruments between a borrower and a lender are treated as the extinguishment of an existing liability and the recognition of a new financial liability. Where an entity modifies the term of an existing financial liability, it is also treated as the extinguishment of an existing liability and the recognition of a new liability.

An entity cannot offset financial assets and financial liabilities in the statement of financial position unless a legal right of set-off exists, and the parties intend to settle on a net basis.

GRAP 104 requires extensive disclosures on the significance of financial instruments for an entity's statement of financial position and statement of financial performance, as well as the nature and extent of the risks that an entity is exposed to as a result of its annual financial statements. Some disclosures, for example the disclosure of fair values for instruments measured at amortised cost or cost and the preparation of a sensitivity analysis, are encouraged rather than required.

GRAP 104 does not prescribe principles for hedge accounting. An entity is permitted to apply hedge accounting as long as the principles in IAS 39 are applied.

This Standard has been approved by the Board but its effective date has not yet been determined by the Minister of Finance. The effective date indicated is a provisional date and could change depending on the decision of the Minister of Finance.

The effective date of the standard is for years beginning on or after 01 April, 2011.

The entity expects to adopt the standard for the first time in the 2011 annual financial statements.

It is unlikely that the amendment will have a material impact on the entity's annual financial statements.

Notes to the Annual Financial Statements

Erf Sewe-Nul-Ses Rietfontein (Proprietary) Limited Annual Financial Statements for the year ended 31 March 2011

Figures in Rand		2011			2010	

3. Investment property

	2011			2010		
	Cost	Accumulated depreciation and accumulated impairment	Carrying value	Cost	Accumulated depreciation and accumulated impairment	Carrying value
Investment property	8,691,522	-	8,691,522	8,691,522	-	8,691,522

	2011	2010
Fair value of investment properties	30,000,000	26,700,000

Details of property

ERF 706 RIETFONTEIN, PRETORIA		
- Purchase price	615,855	615,855
- Additions since purchase	8,075,667	8,075,667
	8,691,522	**8,691,522**

Details of valuation

The property has been revalued at R30,000,000 by Reinertsen International Valuation Services, as an independent valuer on 31 March 2011.

Amounts recognised in surplus and deficit for the year.

Rental revenue from investment property	2,402,510	2,214,065
Direct operating expenses from rental generating property	653,367	537,838

4. Financial assets by category

The accounting policies for financial instruments have been applied to the line items below:

2011

	Loans and receivables	Total
Trade and other receivables	15,785	15,785
Cash and cash equivalents	1,683,650	1,683,650
	1,699,435	**1,699,435**

2010

	Loans and receivables	Total
Trade and other receivables	29,893	29,893
Cash and cash equivalents	1,150,294	1,150,294
	1,180,187	**1,180,187**

Notes to the Annual Financial Statements

Erf Sewe-Nul-Ses Rietfontein (Proprietary) Limited Annual Financial Statements for the year ended 31 March 2011

Figures in Rand	2011	2010

5. Trade and other receivables

Trade receivables – exchange transactions	8,383	19,143
Trade receivables – non-exchange transactions	7,402	10,750
	15,785	**29,893**

Trade and other receivables pledged as security

No trade and other receivables were pledged as security for any financial liability.

Credit quality of trade and other receivables

Management considers that all the above financial assets are of good credit quality. The maximum exposure to credit risk at the reporting date is the fair value of each class of receivables mentioned above. None of the trade and other receivables defaulted in the year under review. None of the financial assets that are fully performing have been renegotiated in the last year.

Trade and other receivables past due but not impaired

Trade and other receivables are all considered for impairment. At 31 March 2011, R 8,379 (2010: R -) were past due but not impaired.

1 month past due	8,379	-

Trade and other receivables impaired

As of 31 March 2011, trade and other receivables of R 48,501 (2010: R -) were impaired and provided for.

The amount of the provision was R 48,501 as of 31 March 2011 (2010: R -).

Reconciliation of provision for impairment of trade and other receivables

Provision for impairment	48,501	-

The maximum exposure to credit risk at the reporting date is the fair value of each class of loan mentioned above.

6. Cash and cash equivalents

Cash and cash equivalents consist of:

Bank balances	1,683,650	1,150,294

Credit quality of cash at bank and short term deposits, excluding cash on hand

Management considers that the above cash and cash equivalents category are of good faith. The maximum exposure to credit risk at the reporting date is the fair value of cash and cash equivalents mentioned above.

Cash and cash equivalents pledged as collateral

The cash and cash equivalents was not pledged as security for any financial liabilities.

Notes to the Annual Financial Statements

Erf Sewe-Nul-Ses Rietfontein (Proprietary) Limited Annual Financial Statements for the year ended 31 March 2011

Figures in Rand	2011	2010

7. Share capital

Authorised		
4,000 Ordinary shares of R1 each	4,000	4,000
Issued		
1 Ordinary share of R1 each	1	1

8. Other financial liabilities

Water Research Commission - Held at amortisation cost		
Loan No. 1 The unsecured loan bears interest at 15% (2010 - 15%) and is repayable in equal monthly installments of not less than R60,000 a month over 15 years.	14,254,571	12,945,082
Loan Nr. 2 The unsecured loan bears interest at prime plus 2% with no fixed terms of repayment.	2,645,432	2,643,719
	16,900,003	**15,588,801**
Non-current liabilities		
At amortised cost	15,880,003	15,588,801
Current liabilities		
At amortised cost	1,020,000	1,020,000
	16,900,003	**15,588,801**

9. Trade and other payables

Trade payables – exchange transactions	550,186	99,985
Trade payables – non-exchange transactions	27,397	23,912
	577,583	**123,897**

The entity did not default on interest or capital on any trade and other payables.

None of the terms attached to the trade and other payables were renegotiated in the period under review.

10. Financial liabilities by category

The accounting policies for financial instruments have been applied to the line items below:

2011	**Financial liabilities at amortised cost**	**Total**
Loans from group companies	16,900,003	16,900,003
Trade and other payables	577,583	577,583
	17,477,586	**17,477,586**

Notes to the Annual Financial Statements

Erf Sewe-Nul-Ses Rietfontein (Proprietary) Limited Annual Financial Statements for the year ended 31 March 2011

10. Financial liabilities by category (continued)

2010

	Financial liabilities at amortised cost	Total
Loans from group companies	15,588,801	15,588,801
Trade and other payables	123,897	123,897
	15,712,698	**15,712,698**

Figures in Rand

11. Revenue

Municipal expense recoveries - exchange transactions	503,479	431,377
Rental received – exchange transactions	2,402,510	2,214,065
Sundry income – exchange transactions	12,289	11,021
Circular 09/06 adjustment	(3,955)	-
	2,914,323	**2,656,463**

12. Investment revenue

Interest revenue		
Bank	3,316	451
Interest received relating to extended credit terms provided	3,955	-
	7,271	**451**

13. Finance costs

Non-current borrowings	2,331,201	1,528,071

14. Taxation

No provision has been made for 2011 tax as the entity has no taxable income.

15. Cash used in operations

Deficit	(1,071,040)	(286,539)
Adjustments for:		
Debt impairment	48,501	-
Movements in operating lease assets and accruals	(174,600)	(20,437)
Non-cash movement on other financial liabilities	3,485	-
Changes in working capital:		
Trade and other receivables	14,107	(6,236)
Impairment on trade receivables	(48,501)	-
Trade and other payables	450,202	(257,213)
	(777,846)	**(570,425)**

Notes to the Annual Financial Statements

Erf Sewe-Nul-Ses Rietfontein (Proprietary) Limited Annual Financial Statements for the year ended 31 March 2011

Figures in Rand	2011	2010

16. Related parties

Relationships		
Holding company	Water Research Commission	
Related party balances		
Loan accounts - Owing (to) by related parties		
Water Research Commission	16,900,003	15,588,801
Related party transactions		
Interest paid to (received from) related parties		
Water Research Commission	2,331,200	1,528,071
Municipal expenses paid to (received from) related parties		
Water Research Commission	(460,121)	(388,245)
Rent paid to (received from) related parties		
Water Research Commission	(1,911,229)	(1,856,658)
Administration fees paid to (received from) related parties		
Water Research Commission	392,712	361,450

17. Prior period errors

During prior financial years, the entity did not recognize the straight lining of operating leases in accordance with the applicable accounting standards. The error has been corrected retrospectively and comparative figures have been appropriately restated.

The correction of the error(s) results in adjustments as follows:

	2011	2010
Statement of financial position		
Operating lease asset	139,600	(5,694)
Adjustment against opening accumulated deficit	(5,694)	-
Statement of financial performance		
Opening accumulated deficit	5,694	-
Rental income	(139,600)	5,694
Statement of changes in net assets		
Effect of prior period errors on accumulated deficit		
Balance at beginning of the year as previously stated	(5,954,459)	(5,528,320)
Prior period adjustments	133,906	(5,694)
Balance at beginning of the year as restated	**(5,820,553)**	**(5,534,014)**

Notes to the Annual Financial Statements

Erf Sewe-Nul-Ses Rietfontein (Proprietary) Limited Annual Financial Statements for the year ended 31 March 2011

18. Risk management

Liquidity risk

Prudent liquidity risk management implies maintaining sufficient cash and marketable securities, the availability of funding through an adequate amount of committed credit facilities and the ability to close out market positions. Due to the dynamic nature of the underlying businesses, entity treasury maintains flexibility in funding by maintaining availability under committed credit lines.

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

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

The table below analyses the entity's financial liabilities and net-settled derivative financial liabilities into relevant maturity groupings based on the remaining period at the statement of financial position to the contractual maturity date. The amounts disclosed in the table are the contractual undiscounted cash flows. Balances due within 12 months equal their carrying balances as the impact of discounting is not significant.

At 31 March 2011	Less than 1 year	Between 1 and 2 years	Between 2 and 5 years	Over 5 years
Trade and other payables	577,581	-	-	-
Loan no. 1	14,254,571	-	-	-
Loan no. 2	2,645,432	-	-	-

At 31 March 2010	Less than 1 year	Between 1 and 2 years	Between 2 and 5 years	Over 5 years
Trade and other payables	123,893	-	-	-
Loan no. 1	1,351,200	1,521,451	5,814,232	5,199,659
Loan no. 2	337,800	371,580	1,352,923	1,142,464

Interest rate risk

As the entity has no significant interest-bearing assets, the entity's income and operating cash flows are substantially independent of changes in market interest rates.

At 31 March 2011, if interest rates on Rand-denominated borrowings had been 2% higher/lower with all other variables held constant, post-tax surplus for the year would have been R 52,460 (2010: R 311,067) lower/higher, mainly as a result of higher/lower interest expense on floating rate borrowings.

Credit risk

Credit risk consists mainly of cash deposits, cash equivalents, derivative financial instruments and trade debtors. The entity only deposits cash with major banks with high quality credit standing and limits exposure to any one counter-party.

Financial assets exposed to credit risk at year end were as follows:

Financial instrument	2011	2010
ABSA Bank	1,683,650	1,150,294

Notes to the Annual Financial Statements

Erf Sewe-Nul-Ses Rietfontein (Proprietary) Limited Annual Financial Statements for the year ended 31 March 2011

19. Going concern

We draw attention to the fact that at 31 March 2011, the entity had accumulated deficits of R (6,266,794) and that the entity's total liabilities exceed its assets by R (6,266,793).

The annual financial statements have been prepared on the basis of accounting policies applicable to a going concern. This basis presumes that funds will be available to finance future operations and that the realisation of assets and settlement of liabilities, contingent obligations and commitments will occur in the ordinary course of business.

20. Events after the reporting date

There were no events after reporting date that require adjustment to or disclosure in the financial statements.

Detailed Income Statement

Erf Sewe-Nul-Ses Rietfontein (Proprietary) Limited Annual Financial Statements for the year ended 31 March 2011

Figures in Rand	Note(s)	2011	2010
Revenue			
Municipal expense recoveries – exchange transactions		503,479	431,377
Rental income – exchange transactions		2,402,510	2,214,065
Sundry income – exchange transactions		12,289	11,021
Fair value adjustment		(3,955)	-
	11	**2,914,323**	**2,656,463**
Other income			
Interest received	12	7,271	451
Operating expenses			
Administration and management fees		(392,712)	(361,450)
Bad debts		(48,501)	-
Bank charges		(4,385)	(4,591)
Insurance		(41,709)	(22,478)
Municipal services and levies		(653,367)	(537,838)
Price variance		1,438	-
Rent – meter readings		(3,485)	(3,540)
Repairs and maintenance		(200,223)	(183,985)
Secretarial fees		(2,080)	(2,378)
Security		(308,882)	(293,554)
Telephone and fax		(7,527)	(5,568)
		(1,661,433)	**(1,415,382)**
Operating surplus		**1,260,161**	**1,241,532**
Finance costs	13	(2,331,201)	(1,528,071)
Deficit for the year		**(1,071,040)**	**(286,539)**

CHIEF EXECUTIVE OFFICER

Personal Assistant

Director Human Resources & Administration

- Building Manager
- Receptionist
- Cleaners (4)
- Admin Support
- Administrative Coordinator
- IT Manager
- IT Officer
- IT Assistant

Chief Financial Officer

- Group Assistant
- Financial Manager
- Financial Officers (2)

Director Water Resource Management

- Group Assistant
- Research Managers (4)
- Coordinators (2)

Director Water Use & Waste Management

- Group Assistant
- Research Managers (3)
- Coordinators (2)

Director Water-Linked Ecosystems

- Group Assistant
- Research Manager
- Coordinator

Director Water Utilisation in Agriculture

- Group Assistant
- Research Manager
- Coordinator

Director Water-Centred Knowledge

- Group Assistant
- Science Editor
- Intellectual Property Manager
- Design/Multimedia Publisher
- Research Coordinator
- Knowledge Quality Officer
- PR/Events Coordinator
- Public Understanding of Science Officer
- Printing and Publishing Officer
- Printing and Distribution Officer
- Knowledge Dissemination Officer

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WATER
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