

ANNUAL REPORT 2015/16



Research and
Development for a
SUSTAINABLE
FUTURE

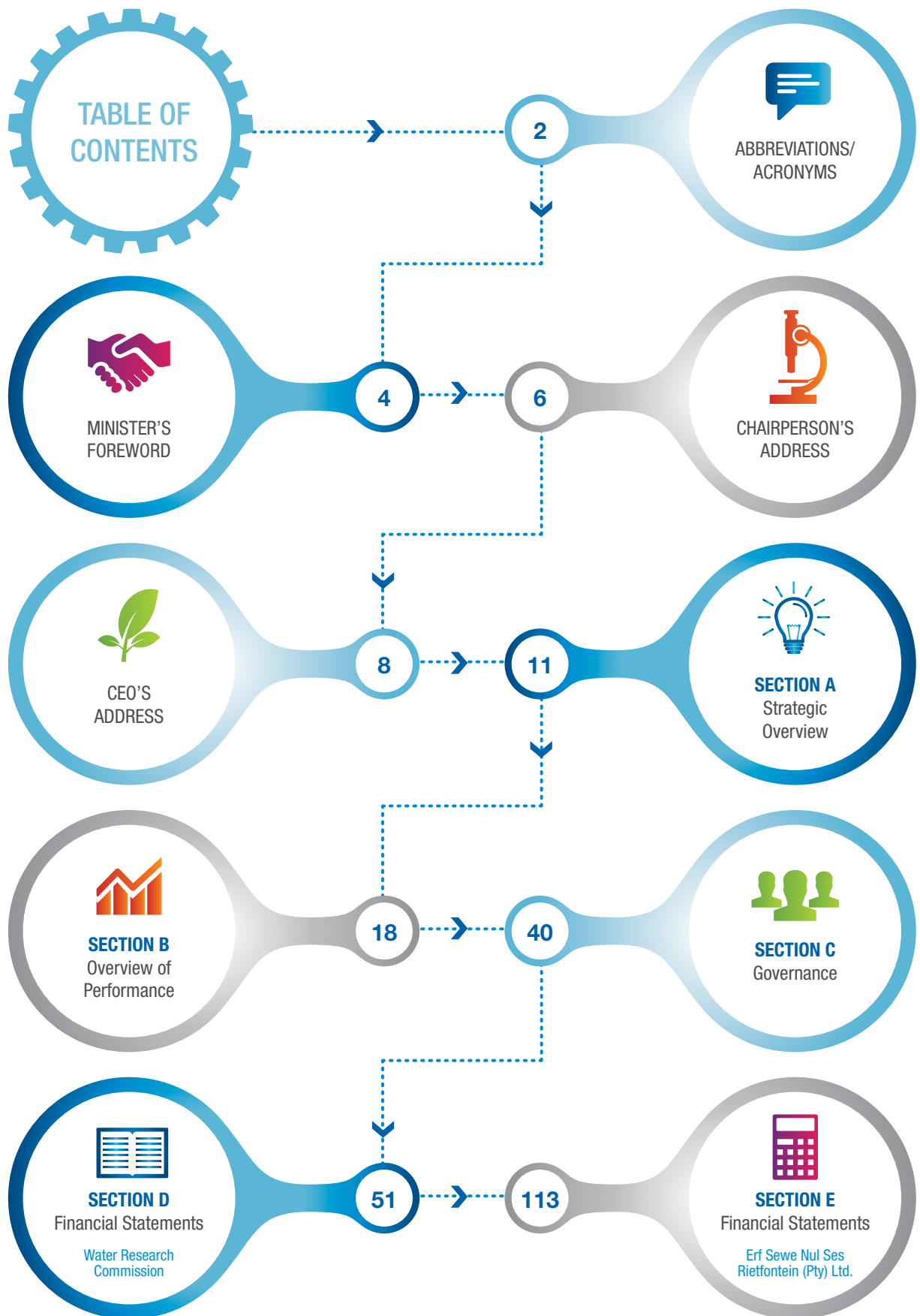


WATER
RESEARCH
COMMISSION



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Abbreviations/Acronyms

AFRWG	African Regional Working Group
AGSA	Auditor-General of South Africa
BBBEE	Broad Based Black Economic Empowerment
CEO	Chief Executive Officer
CFO	Chief Financial Officer
CMA	Catchment Management Agency
CSIR	Council for Scientific and Industrial Research
DST	Department of Science and Technology
DAFF	Department of Agriculture, Forestry and Fisheries
DEA	Department of Environmental Affairs
DHS	Department of Human Settlements
DMS	Department of Mineral Resources
DoA	Delegation of Authority
DoF	Department of Finance
DPE	Department of Public Enterprises
DST	Department of Science and Technology
DWS	Department of Water and Sanitation
EDC	Endocrine disrupting compound
FO	Forward Osmosis
FAO	Food and Agriculture Organisation
GWP	Global Water Partnership
HCD	Human capital development
HDI	Historically disadvantaged institution
I&I	Innovation and Impact
ICID	International Commission on Irrigation and Drainage
IWRM	Integrated water resource management
KSA	Key Strategic Area
LIFT	Leaders Innovation Forum for Technology
MEC	Member of Executive Council
MOA	Memorandum of Agreement
MOU	Memorandum of Understanding
MTEF	Medium Term Expenditure Framework
NATSURV	National Industrial Water and Wastewater Surveys
NDP	National Development Plan

NGP	New Growth Path
NIRESA	Network on Irrigation Research and Extension for Smallholder Agriculture
NPC	National Planning Commission
NWA	National Water Act
NWRS 2	National Water Resource Strategy Two
PDI	Previously disadvantaged individual
PDP	Personal development plan
PFMA	Public Finance Management Act
PPC	Parliamentary Portfolio Committee
R&D	Research and Development
RDI	Research, Development and Innovation
SADC	Southern African Development Community
SALGA	South African Local Government Association
SASTEP	South African Sanitation Technology Demonstration Programme
SMME	Small Medium and Micro Enterprises
SCM	Supply Chain Management
SDG	Sustainable Development Goal
S&T	Science and Technology
TIA	Technology Innovation Agency
TR	Treasury Regulations
UNDP	United Nations Development Programme
UNESCO	United Nations Educational, Scientific and Cultural Organisations
UP	University of Pretoria
WADER	Water Technologies Demonstration (Programme)
WaterKCAP	Water Knowledge and Capacity Building Programme
WEF	Water-energy-food
WERF	Water Environment Research Foundation
WRA	Water Research Act
WRC	Water Research Commission
WRL	Water Research Levy
WSA	Water Services Act
WSI	Water Services Institution
WSLG	Water Sector Leadership Group
YWP	Young Water Professionals



Minister's Foreword

Nomvula Mokonyane, Minister of Water and Sanitation

If we were to one day reflect on the history of the South African water and sanitation sector, 2015/16 would stand out as a watershed year.

It is the year the sector came face-to-face with one of the strongest El Niño events on record, resulting in significant impacts on agricultural production, food security and the availability of water to our people. While the effect of this climate phenomenon has weakened, its legacy remains, as it has once again reminded us of South Africa's precarious situation with regards to water.

South Africa has always been a water-scarce country. The country's semi-arid climate, high evaporation rates and topography have all conspired to make us one of the most parched countries in the world. Water is central to every part of South Africa's development, and plays a critical role in the upliftment of our communities.

South Africa has overcome its lack of water with the development of a vibrant, resourceful and innovative water sector, led in its knowledge-seeking endeavours by the Water Research Commission (WRC). The research undertaken by the WRC and its network of partners and experts provides a sound platform from which the Department of Water and Sanitation can make policy decisions to the benefit of the entire nation.

With urbanisation and population growth comes the realisation that no 'business as usual' pathway will get us to our ultimate goal of providing sustainable services to the entire population and ensuring a vibrant and growing economy. What is required is a strong injection of new knowledge-based solutions.

In my first engagements with the WRC I set out three tasks for the institution:

- To, in partnership with the relevant government departments and the broader research and development community, facilitate more rapid pathways from the laboratory to changes in the everyday water and sanitation fortunes of people on the ground;
- To, in this process, help develop a more robust water industry with higher participation in the water sector of the marginalised groups in the country, in particular women and the youth; as a result of inclusion mechanisms aimed at this; and
- To organise for South Africa to take our rightful place as an important international partner to ensure the realisation of the water and sanitation goals of not only this country but also those of Africa, the global South and the world as a whole.

I am pleased to report that, over the past financial year, the WRC has made significant strides towards achieving these goals.


One of the highlights of the year was the Sanitation Indaba, which took place on 14 and 15 May 2015 in Durban. This event, opened by Deputy President Cyril Ramaphosa, saw the practical demonstration of cutting-edge sanitation technologies that can be implemented in South Africa; and provided an engagement space for communities on the feasibility of technology implementation as it pertains to their contexts.

The Indaba highlighted the progress of the Sanitation Innovation Challenge, which aims to appraise innovative sanitation technologies for the market. Other sanitation programmes which are linked to the Government's plan of achieving sustainable sanitation coverage include the faecal sludge management programme in Africa, known as the Sanitation Research Fund for Africa Project.

This was followed on 31 March 2015 by the National Women in Water Consultative Conference, held in Pretoria. This conference saw the launch of the three-year Women in Water Programme. The programme comprises a mentorship programme, a 'women in water business incubator' and a 'women in water forum'. The scope of the programme covers all women-owned businesses that are competent and excellent in the provision of services.

The WRC further continues to provide new solutions to the sector through the Water Technologies Demonstration (WADER) Programme. Acting as an innovation intermediary, the Programme's mission is to facilitate high-level, collaborative technology demonstrators from the public and private sector to maximise the potential of the water innovation value chain. During the year the WADER Water Accelerator was launched to promote the early adoption of promising technologies in the water and sanitation fields.

As its main stakeholder, the Department will continue to work together with the WRC to provide integrated solutions to the complex, inter-disciplinary problems facing the water sector and promote investment in knowledge creation, transfer and dissemination in strategic research areas.



Water is central to every part of South Africa's development, and plays a critical role in the upliftment of our communities.

Thanks goes to WRC CEO, Dhesigen Naidoo, and his team for their hard work and commitment in ensuring that the Commission remains at the cutting edge of water-related research in South Africa.



Nomvula Mokonyane
Minister of Water and Sanitation



Chairperson's Address

Dr Nozibele Mjoli, Chairperson of the Board

On behalf of the WRC Board, it gives me great pleasure to report on the activities and performance of the Commission during 2015/16.

Our priority as an organisation is to ensure that the investment in water research contributes to the achievement of social and economic goals of South Africa. During the 2015/16 financial year, South Africa has experienced one of its worst droughts in decades, with many towns and communities experiencing severe water shortages. The agricultural sector has suffered major economic losses due to the shortage of water for crops and livestock. It is expected that the extreme weather events will become more frequent in future due to the impacts of climate change. Semi-arid countries such as South Africa are especially vulnerable to climate change impacts such as, an increasing in frequency of droughts and floods.

The WRC has a track record of more than 40 years in leading water research; therefore, it is well-positioned to play a central role in providing South Africa with innovative and sustainable solutions for responding to the water challenges that are threatening the achievement of social and economic development goals of our country.

During 2015/16 there was a minimal increase in the WRC revenue from water research levies; this could be attributed to the decrease in water consumption due to the severe

drought and water restrictions measures implemented by municipalities to conserve the limited water resources. However, the WRC financial sustainability was not affected as the organisation has achieved a significant increase in its leverage income.

The WRC successfully complied with all directives issued by the Minister of Water and Sanitation; these included the organisation of the Sanitation Indaba and Women in Water Consultative Conference. The Minister of Water & Sanitation also appointed the WRC to implement the Women in Water Empowerment Programme.

The WRC has continued to strengthen and build new international research partnerships to accelerate innovation in the water and sanitation sector. These included the Bill Melinda Gates Foundation and Global Water Research Coalition. It has also signed new partnership agreements with international water organisations such as the United States Water Environment Research Foundation, The Dutch Watercycle Research Institute and the Indian Centre for Science and Environment. All these initiatives have enhanced the profile of the WRC as a significant global player in the water sector.

During the year under review, the WRC added a new branch to its organisational structure, namely, Impact and Innovation, which will focus on scaling-up and commercialisation of

selected research products. As part of this new focus, the WRC is strengthening its partnerships with national organisations such as various government departments (including the Departments of Water and Sanitation, Science and Technology, Agriculture, Forestry and Fisheries and Environmental Affairs) and industry players such as Eskom and Sasol.

The extension of the research agenda to include innovation and impacts requires new revenue streams. The WRC must be bold in seeking new partners who can inject more investments in taking the WRC research products to commercialisation in order to contribute to social and economic development in South Africa.

In response to the severe drought experienced by South Africa during 2015/16, the WRC has initiated several projects such as the description and quantification of drought shocks in South African industries, development of coping and adaptation strategies for agricultural water use during drought periods. It has also developed a research agenda for promoting drought tolerant underutilised, indigenous and traditional crops, a mobile application for extreme drought events and current and future drought coping and adaptation strategies.

The WRC has continued to ensure that its corporate strategy was aligned with the national government outcomes. The organisation supported the development and piloting of innovative sanitation technologies which use less water and require low maintenance. The WRC supported the development of a decision support tool for wastewater

treatment technology selection which will guide water services institutions in selecting appropriate wastewater treatment technologies for both new developments and upgrades. It also supported the empowerment of women in water and land use by investigating the empowerment of women through water use security, land use security and knowledge generation towards sustainable rural livelihoods.

The WRC continued to invest in building competent water sector professionals and also promoted gender and racial diversity in research projects it funds. It recognises that innovation and development of sustainable solutions to the water and sanitation challenges faced by South Africa require diverse knowledge and innovative solutions from everyone.



The WRC continued to invest in building competent water sector professionals and also promoted gender and racial diversity in research projects it funds.

I wish to thank the Minister of Water and Sanitation, Deputy Minister and officials of the Department of Water and Sanitation for their support. We are grateful for leadership and strategic direction provided to the WRC by the previous Board members whose term of office ended on 31 January 2016. I wish to express my sincere gratitude to the members of the Board, WRC executive management, staff, stakeholders, international and national partners for their commitment and support for the WRC.



Dr Nozibele Mjoli
Chairperson of the Board



CEO's Address

Dhesigen Naidoo, WRC CEO

The global community had to confront some of the conventional wisdom and dominant trends in the wake of the reality bites of some of the crispest challenges facing us in all of our time on Earth. Water security, according to the World Economic Forum, is one of the highest risk factors to the global economy.

Water challenges also confront us as we strive to eliminate inequality, poverty and hunger. The Sustainable Development Goals (SDGs), signed into being by heads of state on 25 September 2015, are aimed at the ambitious goal of ushering in a world where the basic needs of all human beings are met in a sustainable manner. Among the 17 goals is a stand-alone goal for water and sanitation – SDG 6 – which has the target of achieving by 2030 universal access to safe water and dignified sanitation for all human beings on Earth.

In South Africa, we have made considerable progress in extending services to the previously unserved. It is now up to the sector to achieve the last mile connections amid the complexity of ensuring the sustainability of the interventions. This all has to be achieved in an environment of increasing resource scarcity. At no time has this point been clearer than this past year, with large parts of South Africa suffering from a severe drought, made worse by one of the strongest El Niño events ever recorded.

South Africa has always been a water-scarce country, and our ability to thrive has traditionally depended on our water ingenuity. From ancient hunter-gatherers using ostrich eggs for water capture, and the storage and transport innovations of ancient times, to becoming the world's foremost nation in the field of water transfer technology and inter-basin plumbing, we have enjoyed world leadership. We again have this opportunity – this time around through smart water purification, supply diversification and heralding a sanitation revolution characterised by no- and low-water sanitation solutions.

When heavy wheels need to be turned in low power environments, gears are the answer. Science and technology are among those gears. In South Africa we already have many of the technological solutions at laboratory scale. We need now to rapidly increase our investments in moving them to market-ready products that can be used on the ground to increase our water security.

The WRC realises this and remains the largest funder of water-related research in South Africa, currently funding around 65% of all water-related research in the country. During 2015/16 the WRC initiated 90 new research projects, while completing 90 in an ongoing portfolio of over 300. This tradition of investing in sound and relevant research form the roots of the WRC Knowledge Tree.

The WRC Knowledge Tree (Figure 1) aims to:

- Inform policy- and decision-making;
- Contribute to sustainable development solutions;
- Develop products and services for the real economy;
- Actively contribute to human capital development;
- Directly empower communities; and
- Enable the national transformation project.

In addition, the WRC has begun to shift to bigger investments in the 'impact' domain. The shift of emphasis towards realising higher impact is being guided towards several principles, including shortening the innovation value chain, better knowledge management, innovative resource mobilisation, and increasing the internationalisation of South African water and sanitation science and technology.

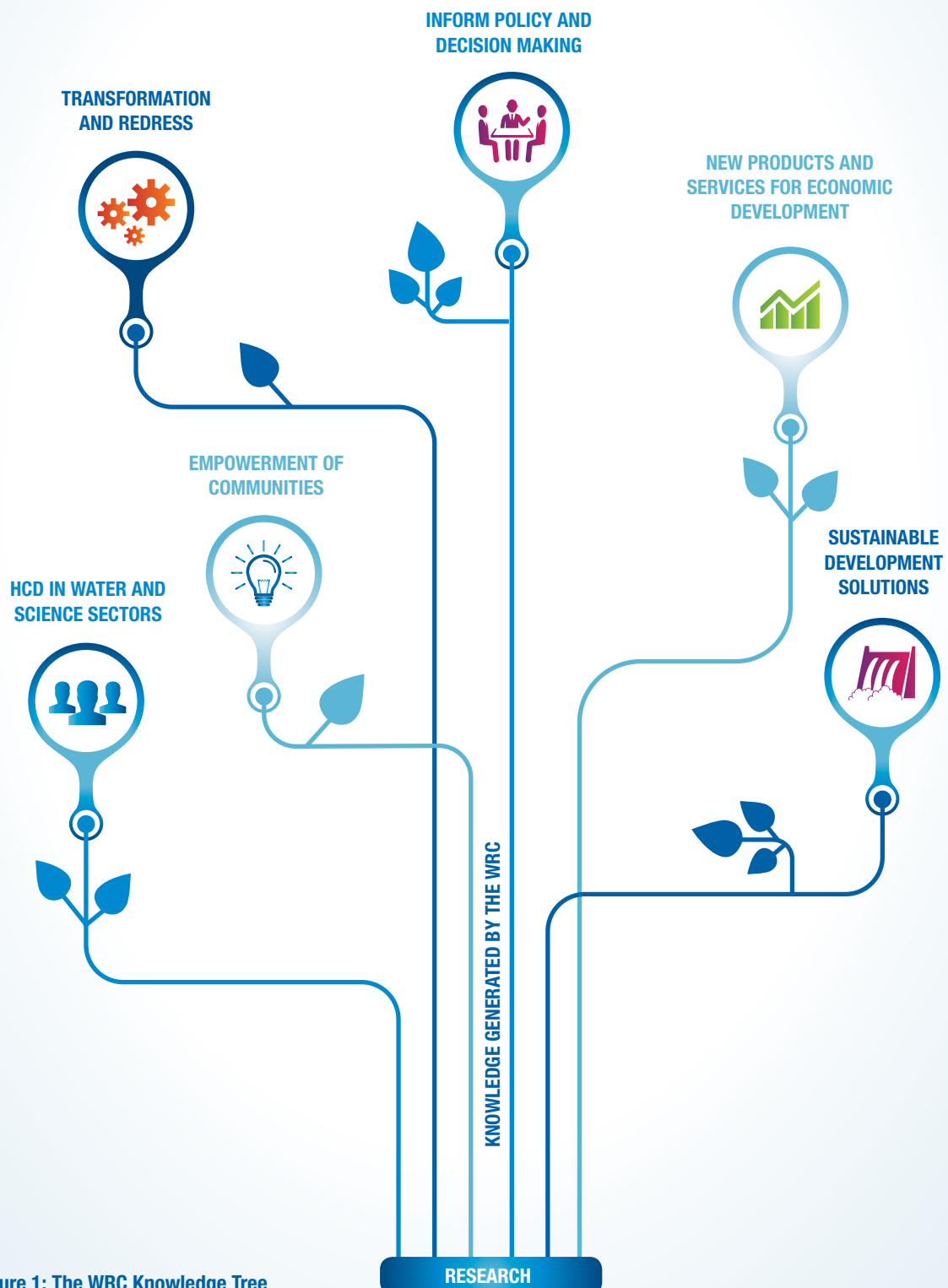


Figure 1: The WRC Knowledge Tree

This is being achieved through instruments such as the Water Technologies Demonstration Programme (WADER) – a collaborative programme with the Department of Science and Technology (DST). WADER pulls together the applied research, development and commercialisation stages of the water innovation continuum, thereby bridging the gap between water research and the market. Acting as an innovation intermediary, the programme’s mission is to facilitate high-level, collaborative technology demonstrators to maximise the potential of the water innovation value chain.

During 2015/16, WADER launched the Water Accelerator – aimed at the early adoption of promising technologies. Through a series of open calls for water technologies innovative water and sanitation technologies were identified, evaluated and showcased to various interested parties. One of these technologies, the AquaTrip device, which detects leaks and plumbing failures (similar to an electricity trip switch), is already being tested in a number of schools.

The WRC has long since recognised the need to develop a skilled pool of talent in the water sector in order for the successful integration of research, development and innovation in the development of society. The Commission continues to invest in the training of post-graduate students. During the year under review, 492 Masters and PhD students participated in WRC projects. The WRC also remains committed to the national transformation agenda. This past year, 50 project leaders were from designated groups, while historically-disadvantaged organisations participated in 18 projects. Furthermore, 24 WRC research projects were led by small, medium and micro enterprises.

As a global water research leader, the WRC continues to seek partnerships in knowledge and technological exchange for the benefit of South Africa’s people. During 2015/16, memoranda of understanding were signed with the Water Cycle Research Institute of The Netherlands, the Centre for Science and Environment of India, and the US Water Environment Research Foundation. The WRC also continued its leadership roles in organisations such as the International Commission on Irrigation and Drainage.

The past financial year saw the appointment of a new WRC Board led by Chair, Dr Nozibele Mjoli. We thank the former Board, particularly Chair, Barbara Schreiner, for their dedication and strong leadership, both in-house and within the water sector. We look forward to the strategic direction and inspirational guidance to be provided by the new WRC Board.



In conclusion, I wish to thank the Minister of Water and Sanitation, Nomvula Mokonyane, and her Deputy Minister, Pamela Tshwete, for their interest in, and support of, the WRC during the year. The WRC also remains indebted to the water sector at large – decision-makers, practitioners and researchers – for their continuous commitment, support, valuable feedback and active participation in the implementation of the WRC’s strategy. Finally, thanks the WRC management team and staff for their commitment and hard work as we continue to serve the nation.

A handwritten signature in black ink, appearing to read "Dhesigen Naidoo".

Dhesigen Naidoo
WRC CEO

A background image featuring a close-up of a microscope's objective lenses and stage, with a blurred figure of a person in a white lab coat in the background. On the right side, there is a large blue gear partially visible, and a network of smaller blue circles connected by lines, containing icons for a presentation, a lightbulb, a water drop, and a molecular structure.

SECTION A

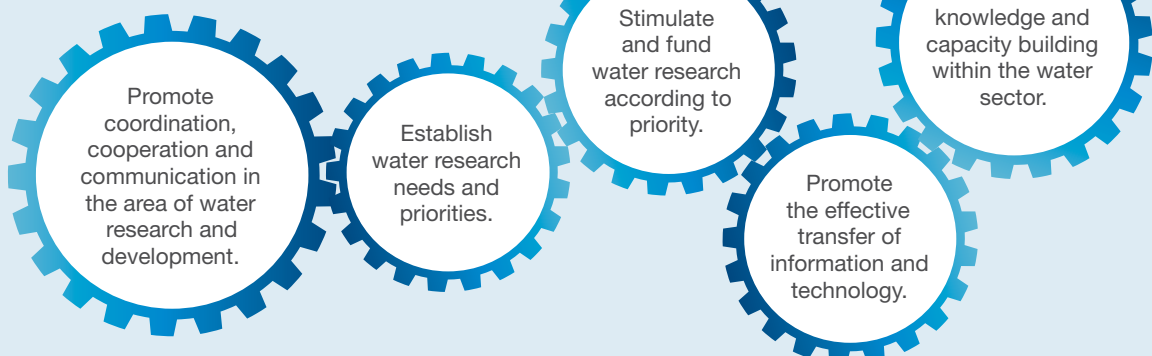
STRATEGIC OVERVIEW

Access to sufficient water of an appropriate quality is necessary for life, for economic growth and for social development. It underpins the well-being and prosperity of South Africa and all of its people. The past financial year emphasised just how important water is to the survival and prosperity of the South African nation. For the South African water science community the challenges are clear – translating research, development and innovation (RDI) into real solutions to address poverty, inequality and unemployment, while applying knowledge solutions to advance opportunities to enable economic growth, improve competitiveness and ensure prosperity. This section provides a strategic overview of the WRC for the 2015/16 period, the fourth year in its current five-year strategic planning cycle.

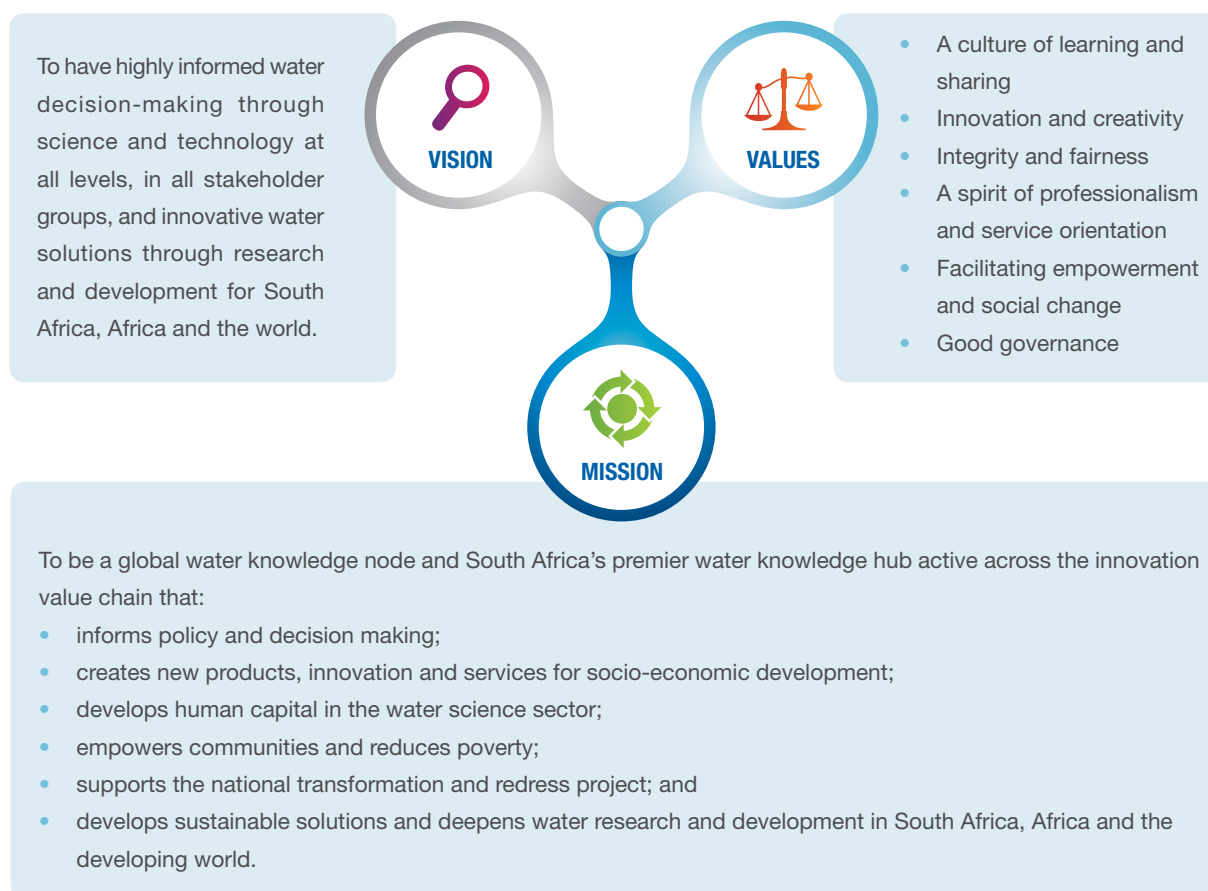
About the WRC

The WRC was established through the Water Research Act (WRA), Act No. 34 of 1971. The WRC operates and accounts for its activities in accordance with the Public Finance Management Act (PFMA), Act No. 1 of 1999 as amended, and is listed as a Schedule 3A public entity.

The primary function of the WRC is to:



The power of knowledge to the people



Strategic outcome-oriented goals

In addition to contributing to several Government Outcomes, the WRC's strategic outcome-orientated goals comprise five impact areas based on the operationalisation of the WRC Knowledge Tree, a fundamental guiding framework and corporate planning tool used by the WRC to define, measure and evaluate research impact.

The WRC strives to achieve as many of the WRC Knowledge Tree impact areas as reasonably possible in the research that it funds. This applies within a research project, to post-project actions, and to follow-on projects. By 2015/16 the Knowledge Tree had been well entrenched in the WRC's activities, with all research proposals articulating objectives of the Knowledge Tree branches.

The WRC's actions are further driven by four core principles:

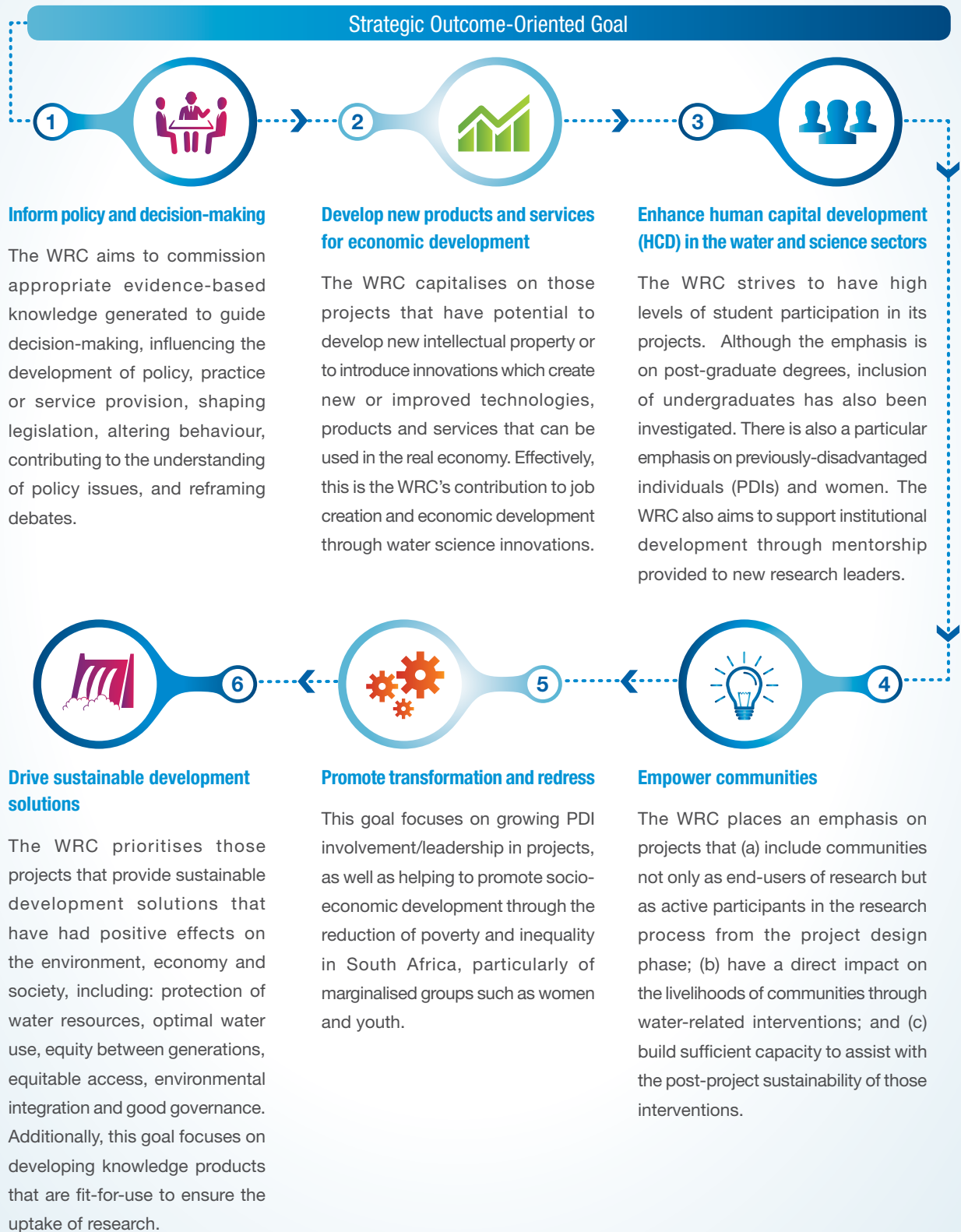
- **Research concentration for accelerated knowledge and solutions development:** This will be done through the development of WRC Lighthouses. These are trans-disciplinary, multi-Key Strategic Area (KSA) and

inter-institutional mega-projects (platforms) that will examine priority water issues across the innovation value chain.

- **A further diversification of the research philosophy:** This will allow the WRC to expand the number of projects in the portfolio that move from the classical independent-observer scientific approach to an action-research paradigm. This entails the broadening of our scope to one that actively involves communities in the research project, and engages key partners to upscale and maintain interventions post-project.
- Several key points of focus will be further enhanced through **elevations in research** during this five-year period; for example, through the development of new WRC Lighthouses, and the broadening of scope of others, while building new research cadres and capability and expanding participation in Centres of Excellence.
- **Elevations in important impact areas:** The WRC is pursuing elevations in several key impact areas through, among others, technology scanning, reverse engineering, and the pursuit of ready-to-use solutions in a plug-and-play mode.

The WRC, therefore, continues to focus on the development of its impact narrative that provides a pathway from research to impact. This entails a continuous review of current actions and activities as well as the identification of new actions that will ensure impact realisation.

Figure 2: The WRC's strategic outcome-orientated goals



Legislative and other mandates

The WRC serves as the research and development (R&D) partner of the sector leader, the Department of Water and Sanitation (DWS), and provides the sector with knowledge and capacity to ensure sustainable management of water resources and enhance water services.

Constitutional mandate

The WRC is bound by the Bill of Rights contained within the Constitution that is applicable to all laws. In the execution of its mandate, the WRC upholds several key principles of the Bill of Rights, most notably section 27.1.b that gives everyone the right to have sufficient access to water. The WRC regards the ready availability of water knowledge and understanding as critically important to the adoption of effective and innovative strategies for equitable water service provision, management and use. It also has the pivotal role of being the knowledge partner to the respective implementing agents in the realisation of the Bill of Rights.

Additionally, section 16 of the Constitution, which addresses freedom of expression, including the right to academic freedom and freedom of scientific research, also applies to the work of the WRC.

Legislative mandates

The WRC is governed by the Water Research Act (WRA), Act No. 34 of 1971, which outlines the purpose and mandated objectives of the organisation. The WRC also operates and accounts for its activities in accordance with the Public Finance Management Act (PFMA), Act No. 1 of 1999, and is listed as a national public entity in Schedule 3A of this Act.

The mandated objectives of the WRC are also in accordance with the requirements of the policies of the DWS for the Water Services Act (Act No. 108 of 1997) and the National Water Act (Act No. 36 of 1998). Key legislative frameworks and their applicability to the WRC are highlighted below.

Water Research Act (Act No. 34 of 1971 as amended)

The principal aim of the WRA is to provide for the promotion of research in connection with water affairs. The Act requires the establishment of the WRC and the Water Research Fund, and sets the framework within which the WRC operates. It also provides for the establishment of the WRC as a Schedule 3A public entity, thereby requiring

compliance with the PFMA Act (Act No. 1 of 1999) and Treasury Regulations.

The WRC's mandate, as set out in this Act, highlights the following functions to be carried out by the organisation:

- Promote co-ordination, co-operation and communication in the area of water research and development
- Establish water research needs and priorities
- Stimulate and fund water research according to priority
- Promote the effective transfer of information and technology
- Enhance knowledge and capacity building within the water sector

National Water Act (Act No. 36 of 1998)

The objective of the National Water Act (NWA) is to ensure that South Africa's water resources are protected, used, developed, conserved, managed, and controlled in a sustainable and equitable manner, for the benefit of all persons. The NWA also provides for the pricing strategy for water use charges, the primary mechanism for the calculation of a charge, payable by some or all raw water users, that is also set for research purposes by the WRC. The role of the WRC is to align its funding priorities with those key national water challenges articulated in the NWA, and to help solve water-related problems which are critical to South Africa's sustainable development and economic growth.

Water Services Act (Act No. 108 of 1997)

The objective of the Water Services Act (WSA) is to provide for the right of access to basic water supply and basic sanitation by setting national standards and norms. Section 156, read in conjunction with Part B of Schedule 4 of the Constitution of the Republic of South Africa (Act No. 108 of 1996), vests in the Executive Authority the responsibility to support and strengthen the capacity of municipalities to manage their own affairs, to exercise their powers and to perform their functions. Again, the applicability of the WSA to the WRC rests in the WRC's duty to respond to water supply and sanitation needs with research and development that helps to address those needs.

Planned legislative mandates

All three Acts are being revised, and have a strong possibility of being amended in a manner that strengthens the WRC mandate.

Review of the water-related legislation

The Department of Water and Sanitation is currently reviewing the NWA, the WSA and the Water Research Act, 1971 (Act No. 34 of 1971).

While the National Water Act provides a legal framework for the progressive realisation of the right to access to sufficient water, the Act is under review to ensure that there is equity in the allocation of water, to improve water resource management and to streamline regulatory processes. In turn, the Water Services Act is being reviewed to improve the provision of water services to ensure alignment with the provisions of the Municipal Systems Act, 2000 (Act No. 32 of 2000) and the Municipal Finance Management Act, 2003 (Act No. 56 of 2003).

The revised policy positions necessitate the consolidation of the NWA and WSA into one piece of legislation that will govern the entire water value chain covering water supply and sanitation services as well as water resource infrastructure. This consolidation will not only allow for managing water across the value chain but will also enhance cooperative governance and set clear institutional roles and responsibilities with commonly agreed targets for water delivery.

Water Research Amendment Bill

Addressing current and future water knowledge gaps and the way in which these are currently prioritised in the South African context demands the evolution of the regulatory and governance structures of research institutions. The purpose of the Water Research Amendment Bill, 2013, is to:

- Amend the WRA so as to insert certain definitions and substitute others;
- Effect certain textual improvements and name changes;
- Provide for the appointment of members of the Board and the CEO in line with other public entities in the water sector and current practice of Corporate Governance;
- Regulate the governance of the Water Research Council (Water Research Commission in the current Act)
- Align the Act with applicable legislation, such as the NWA, WSA and the Public Finance Management Act, 1999; and to
- Provide for matters incidental hereto.

While the new clauses in the Amendment Bill do not legislate for a change in the relationship between the DWS as the shareholder department and the WRC as a public entity, the process of developing the draft Bill has created a discussion

space enabling these two public sector partners to draw closer together and iron out the modalities of governance, cooperation and the complementarity of roles.

Policy mandate

The WRC will continue to support DWS in its call for mainstreaming of water and sanitation as the basis to enable and catalyse economic growth and sustainable development. The WRC is therefore actively involved in key DWS initiatives, including the legislative and policy review and the institutional realignment programme, as well as the implementation of the National Water Resource Strategy 2 (NWRS-2).

Specifically, the WRC's five-year strategy is designed to support the further refinement and implementation of NWRS-2, together with DWS and associated departmental plans for water services and sanitation. This is closely followed by the water-related components of the President-led National Infrastructure Plan and its associated 18 Strategic Integrated Projects (SIPS), the Department of Environmental Affairs-led Climate Change Response Strategy and the Department of Science and Technology's 10-year Innovation Plan, as well as the broader South African sustainable development agenda.

A third layer addresses the water-related components of the other core development strategies for these five years, for example, in the areas of local government, agriculture (including forestry), rural development, mineral resource development, the spatial development plans, and water-related enterprise development. The outcomes of our research projects provide scientific knowledge which informs initiatives such as the water pricing strategy and water infrastructure management.

Alignment of WRC activities to NWRS-2

The National Water Resource Strategy 2 (NWRS-2) calls for a much larger contribution from R&D to empower the implementation of the Strategy. In addition, the Strategy also engages the further development of water sciences in South Africa. One of the key deliverables that the NWRS-2 emphasises is the Sector Research and Innovation (R&I) Strategy.

In support of this, it is incumbent upon the WRC to coordinate the development of the National Water R&D Plan, with the latter also emphasised in the Water Research

Amendment Bill. Some of the additional research knowledge contributions that the NWRS-2 requires from the WRC include:

- Desalination of seawater
- Job creation
- Mining, energy and manufacturing industries
- Awareness and communication
- Research and development
- Scenarios, climate change modelling and water availability
- Hydraulic fracturing and coal-bed methane extraction

These areas call on the WRC to collaborate with the DWS and other Government departments such as the Department of Trade and Industry, Department of Economic Development, Department of Environmental Affairs, Department of Human Settlements, and Department of Mineral Resources, as well as other sector partners such as Eskom, Rand Water and Sasol, to develop appropriate technologies and support the development of relevant centres of excellence in several of the fields of research described above.

In this regard, the WRC, together with the DST, has completed a consultative process and developed the Ten-Year Water Research, Development, and Innovation/Deployment (RDI) Roadmap that provides a sector-defined, needs-driven research agenda that caters for the public sector (utilities, municipalities), private industry, agriculture, and environmental protection. The Roadmap is a high-level planning tool that facilitates and guides refocusing of research, reprioritisation of funds, synergising of existing initiatives and ring-fencing of new resources in order to facilitate a more optimal water innovation system. The Roadmap has

been endorsed by DWS as the implementation plan for the R&D chapter of NWRS-2.

Organisational environment

The primary functions of the WRC have always been to fund and steer the water research agenda in South Africa, and to effectively disseminate and communicate research findings. Administrative activities are carried out to ensure compliance with regulatory requirements and to provide an enabling environment for research management. However, in recent years the WRC has been increasingly called upon to not only develop new knowledge in the water and sanitation science and technology domain, but also to support and further develop human capacity and skill as well as lead technology, product and industry development.

This not only necessitated an expanded mandate but also a suitable organisational structure capable of handling these added responsibilities. In 2015, the WRC re-engineered its operations and structure to address challenges faced by the water and science sectors and the country.

As such, two core teams have been developed:

1. **Research and development** – which focuses on the generation of new knowledge as well as the mechanisms needed to support this, including human capital development and skills development
2. **Impact and Innovation** – which entails a redefined focus on technology, product and industry development, business development and innovation realisation on the one hand, and enabling mechanisms such as knowledge dissemination, communication and marketing on the other.

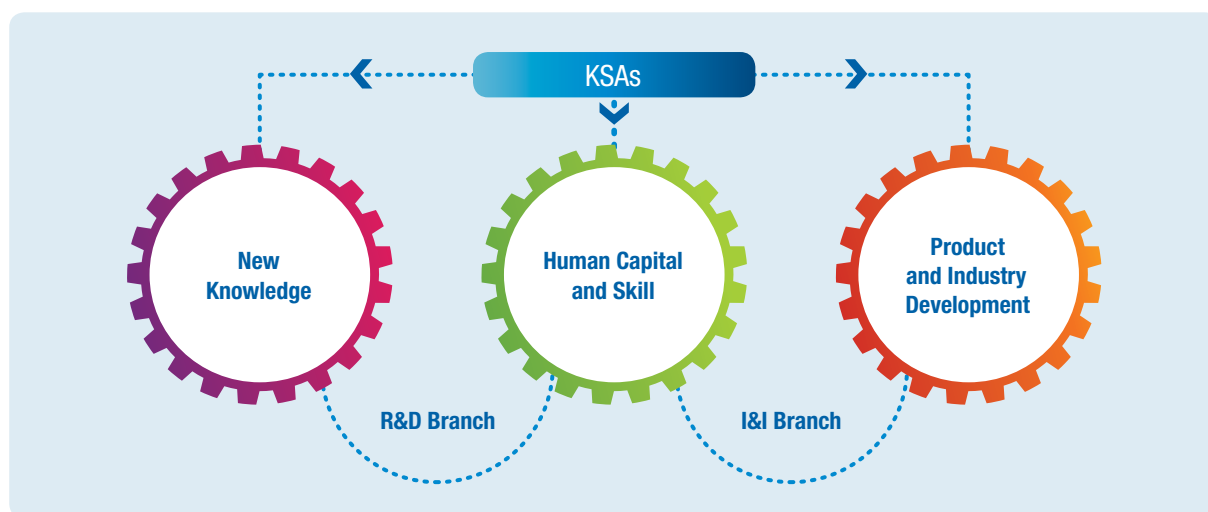


Figure 3: The WRC's reorientation towards innovation and impact

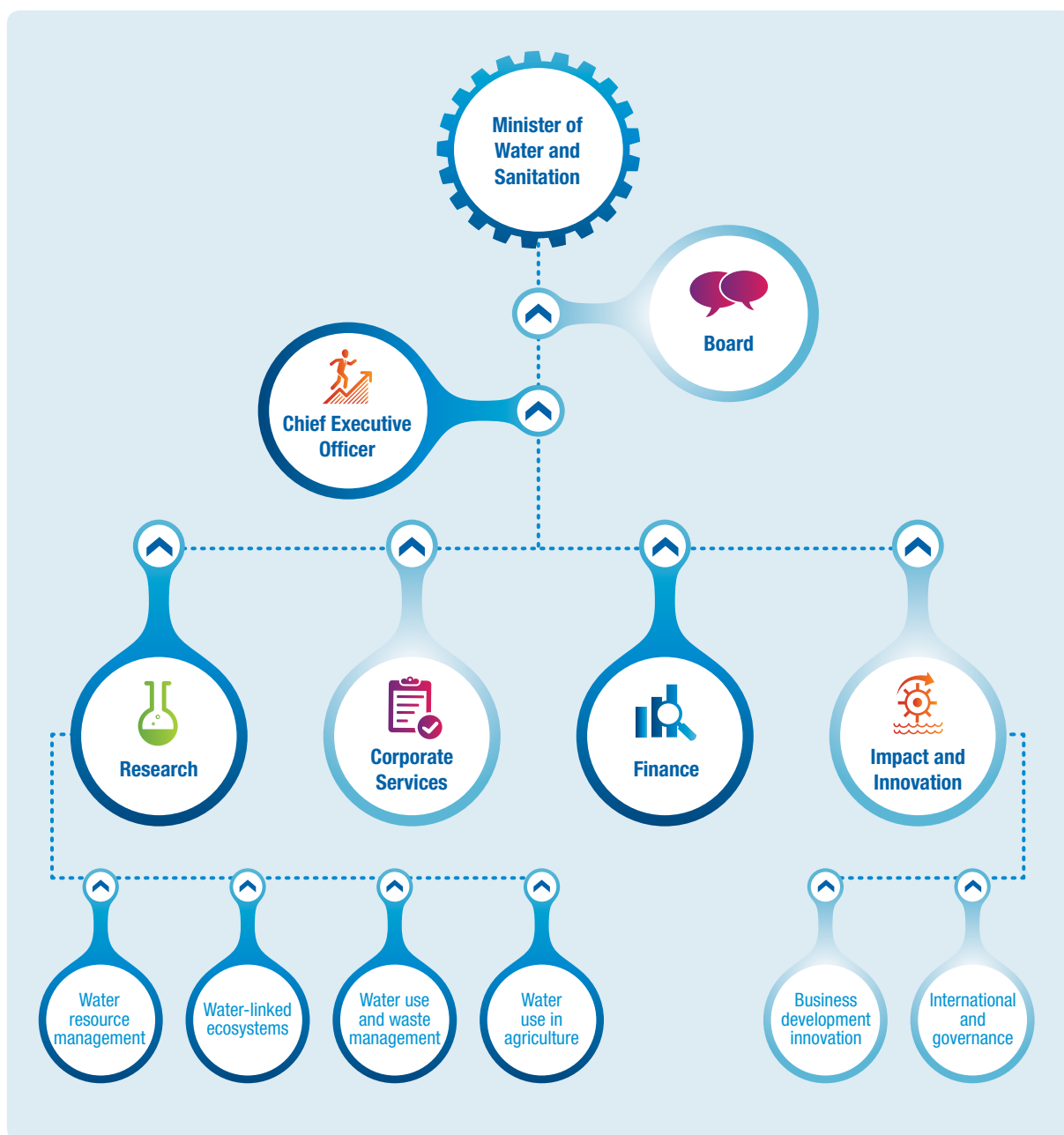


Figure 4: WRC organisational structure

The following structure defines the internal governance framework:

- The Minister of Water and Sanitation is the Executive Authority of the WRC.
- The Department of Water and Sanitation is the shareholder representative.
- The WRC Board is the Accounting Authority of the WRC.
- The Chief Executive Officer (CEO) is the Accounting Officer and an ex-officio member of the WRC Board.
- The Group Executives (GEs), the Chief Financial Officer and the Executive Manager for Corporate Services report directly to the CEO.
- The Executive Managers for Water Resource Management; Water-Linked Ecosystems; Water Use and Wastewater; Water Utilisation in Agriculture; Innovation and Business Development; and Knowledge Dissemination, Marketing and Communications report to the GEs.



SECTION B

PERFORMANCE OVERVIEW

From food and energy security to human and environmental health, it is well recognised that water contributes to improvements in social well-being and inclusive growth. As the world grapples with increasing water scarcity, numerous international bodies have identified water as a priority concern. Global water requirements are projected to be pushed beyond sustainable water supplies by 40% in 2030, while food production, which already accounts for 70% of total water consumption globally, will need to increase by 50% by 2030 as the world population grows and dietary habits change.

While recognising these risks, the world has moved beyond the Millennium Development Goals (MDGs), towards a post-2015 development agenda. Water-related goals have moved past the mere provision of water supply and sanitation towards a more integrated approach that encompasses the supply of basic services, the sustainable management of water resources, improved water governance, water quality and wastewater management, as well as mitigation against water-related disasters.

South Africa is already a water-scarce country. The NWRS-2 underlines the need for effective monitoring and assessment of South Africa's water resources – from source to sink (tap). Drought is a recurrent characteristic feature of the

country's highly-variable climate, and South Africa has entered a dry period. Several studies have indicated that drought frequency, severity and intensity will increase as a result of projected climate change.

The effect and sustainable management of the country's limited water resources is essential for community health, development and cohesion, as well as continued economic activity. R&D, along with innovation, has long since been recognised by Government as holding the key towards ensuring a water-secure future for the country.

The R&D community has an important contribution to make to steer South Africa towards five strategic water-security goals:

- Good and well maintained water infrastructure
- Smart, highly-aware water users
- A sustained pool of highly talented people managing and maintaining the system
- Good partnerships with academic and research entities
- High investments in knowledge-based solutions

South Africa's current water research expenditure is in the ballpark of R300-million a year (Figure 5), which is 2% of the Government portion of R&D spend. This translates to only 0.0069% of GDP.

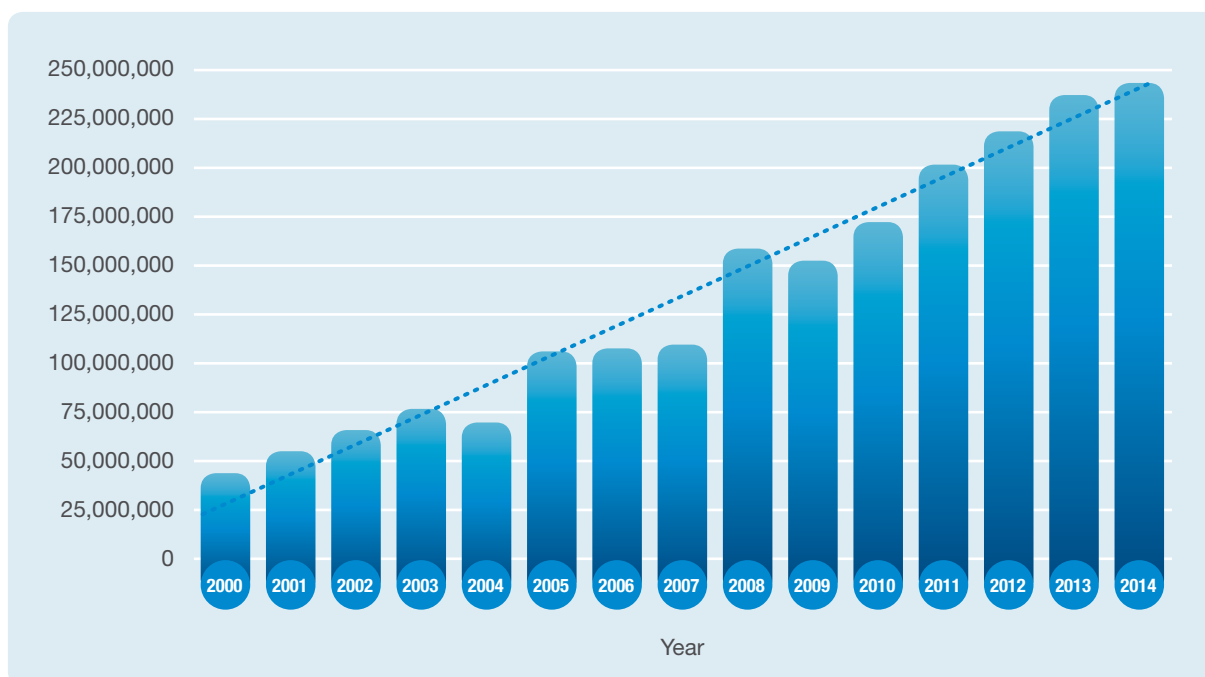


Figure 5: Expenditure on water R&D

Taking into consideration the fact that South Africa is ranked 18th in the world in terms of research outputs, albeit with a limited funding supply, South Africa is punching above its weight in the water and sanitation research domain. The challenge now is to ensure that the research that is funded addressed the cubed challenge of poverty, inequality and unemployment in a very real way.

Performance environment

The WRC's performance environment is created on the premise that the crux of the water and sanitation challenge in South Africa is a capacity and capability challenge. The WRC addresses the three dimensions of this challenge, namely new knowledge, human capital, and technological solutions. The Commission endeavours in its projects to create a high concentration of activities that support each of these dimensions.

Technological innovation, improvements in communication, increased collaboration and international partnerships have enhanced the ability of the WRC to conduct better research, to train students at higher levels, and to organise for better translation of research into products and services for the economy. These improvements, together with new resources, will guarantee the ability of the South African

water RDI community to make a significant difference to South Africa's water fortunes. The following section provides an overview of the WRC's performance during 2015/16.

Informing policy and decision making

Drought portal

The WRC with sector partners launched an online drought portal during the financial year under review. The aim of the portal is to provide water users with helpful information during one of the worst droughts the country has experienced in its history. The portal, www.droughtsa.org.za, contains the latest news around the drought, as well as tips to save water, and guidance documents to use water more efficiently in various sectors. Various resource tools have also been included from the science behind droughts, to water conservation and water demand management, and water treatment and reuse. There is also a FAQ (Frequently Asked Questions) section, which answers questions such as What is a drought?, What causes drought?, When did the drought begin?, What does it mean when a province is declared a disaster area?, among others. South Africa has the capability and tools necessary to manage its scarce water resources effectively. The aim of the drought portal is to bring some of this information together in a single space.

Compendium of two decades of SA water legislation

A WRC project produced, for the first time in South Africa, a Web-enabled compendium of the collated and documented information (oral and written) available in the public domain and State archives, related to the water law review process which led to the development of the White Paper on a National Water Policy (1997) and the National Water Act (Act 36 of 1998) in South Africa. An extensive search for documents, administrative records and various reports in the State Archives, Department of Water, and Parliament was carried out to build the required database. Copies of all documents identified were made and, where necessary, converted into electronic form. What followed was an analytical process to review the available information and identify major departure points from the 1956 Water Law and to identify the main drivers that led to the National Water Act.

Decision support tool for wastewater treatment technology selection

The most commonly used wastewater treatment technologies in South Africa include activated sludge, bio/trickling filters, rotating biological reactors, wastewater ponds, septic tanks, and aerobic granular activated sludge. There are various aspects to consider in selecting the appropriate wastewater treatment technology. This includes (but is not limited to) effluent quality standards, operations and maintenance requirements of the technology, financial issues and the capability of the institution to handle the day-to-day operational aspects of the technology. A WRC-project led to the development of a decision support tool for wastewater treatment technology selection. The tool guides water services institutions in selecting appropriate wastewater treatment technology for both new developments and upgrades.



Improving risk governance in the South African water sector

Risk management practices are undertaken in the South African water sector, however, these are often just focused on operational activities related to water quality and quantity. A WRC project, completed during 2015/16, aimed to assess the risk governance practices in the South African water sector or the level of risk governance maturity of water service authorities and water service providers. The final report provides recommendations on how to improve risk governance and integrate it with business functions. In order to benchmark and assess the risk maturity of water service authorities, a risk maturity model was developed. The model contains nine key risk maturity criteria which are further split into 24 components. Each component is scored against five different levels of maturity. The model is designed for self-assessment by using an organisation's internal resources or by using an external assessor. The model has been created in Excel to allow for a wide range of users.

WRC at the forefront of emerging contaminants research



Keynote speaker at the emerging contaminants dialogue, Dr Audrey Levine, Programme Director at the National Research Council, in the USA.

Despite considerable progress in water research undertaken over the past decade, there is increasing concern over the presence of so-called 'emerging contaminants' (ECs) in the environment, as well as their potential human health risk. The WRC has realised that more needs to be done in order to understand, assess and manage the risks associated with ECs in the environment, to advance the science, as well as to communicate with the authorities and the public. The WRC, together with stakeholders in the water sector, met at Protea Hotel, Centurion, on 22 July 2015 to discuss the issue at length and share new research developments, as well as formulate a research strategy on how to tackle the problem at hand in order to improve our understanding of the full potential human and ecosystem health of these contaminants in our water resources. The event titled, *Water and health: Towards development of a national research strategy on emerging*

contaminants, featured special guest speaker, Dr Audrey Levine, a Fulbright Fellow and Programme Director at the National Research Council, in the USA.

Water resources and agricultural chemicals – What is the risk?

Agricultural activity is potentially a source of a number of hazardous chemicals in water resources. Concerns have been expressed that some of the pesticides used in agricultural practice, either through crop spraying and animal disease control, may enter and pollute the rivers and dams that cause detrimental effects in animals and humans that use the water for drinking and recreational purposes. The main objective of this WRC study was to determine the extent and level of contamination by agricultural chemicals in South Africa. Three study areas were selected and water and sediment samples analysed for pesticides. A wide variety of pesticides were detected within all study areas. An Excel-based risk indicator was consequently developed that prioritises pesticide risks to human health via the water pathway, using data on toxicity, quantity of use and environmental mobility. The indicator can be used to identify priority pesticides at a national scale or per crop type. Finally, using pesticide use data and statistics on the distribution of important agricultural crops across the country, it was possible to develop maps providing a spatial overview of the likely distribution of over 200 active ingredients used in crop protection. These maps are the first of their kind for South Africa and have a number of useful applications, particularly in the design of monitoring programmes, identifying priority source areas of pesticides of interest and as input into ecological and human health risk assessments.

Investigating the link between water quality and microbiological safety of food

Fresh produce is important from a national food supply and consumer health point of view while fresh fruit exports constitute a major part of the economy, representing the third-biggest earner of foreign exchange. During 2015/16, the WRC completed a project which investigated the links between water quality and microbiological food safety of fresh, minimally processed and frozen vegetables and fruit. Particular attention was given to specific stages in the food supply chain, from farm at harvest and after harvest, up to retail shelves. Microbial analysis of irrigation water showed that the *E.coli* levels in the irrigation water at the sites tested during the study exceeding government guidelines for crops to be eaten raw. The presence of *E.coli*, hepatitis A viruses, sapoviruses and noroviruses in irrigation water showed contamination from human origin from sewage treatment works that contributed significantly to surface water contamination, posing a potential health risk to the consumer. Processing, such as washing, cooking, blanching, microwaving and freezing, among others, did result in a reduction in microorganism numbers. The effect of irrigation method on the surface contamination of fresh produce was found to be crop dependent and results showed that irrigation methods that do not allow for direct contact of the contaminated water with the edible regions lowered the contamination risk.



Developing new products and services for economic development

Determining the water use and economic value of indigenous trees

With over 1 000 species of indigenous trees in the country, South Africa is extremely rich in natural arboreal diversity. The numerous benefits of indigenous trees and forests, in terms of the goods and services that they offer, are widely recognised. During 2015/16 the WRC completed a study aimed with the objective to measure and model the water use and growth of indigenous trees in different types of tree systems, and to quantify the economic benefits and costs of the biomass production under a range of bio-climatic conditions in South Africa. Additional funding for this project was made available by the Department of Environmental Affairs. Innovative and cutting-edge techniques were applied during the study for sapflow measurements of trees, which are internationally competitive, to measure water use of trees. New knowledge has been created where recognised knowledge gaps exist for cultivation and expansion of indigenous tree forestry. For the first time in South Africa, the water use of indigenous trees has been evaluated in the context of the market potential for wood products. Although there are clearly niche markets for different indigenous woods and products, these have not been fully exploited to date.

Water-energy-food nexus under the spotlight

Delegates from various institutions met on 25 November, 2015, to strengthen the South African research agenda around the interconnections between water, energy and food. While the relationships between these three vital



Speakers at the water-energy-nexus dialogue were WRC CEO, Dhesigen Naidoo, former WRC Executive Manager, Dr Inga Jacobs-Mata, Dr David Tinarwo of the University of Venda, Dr Tafadswa Mabhaudi of the University of KwaZulu-Natal and WRC Group Executive for Impact and Innovation, Dr Mandla Msibi.

commodities are increasingly being recognised their interdependence is not always understood. In order to grow South African knowledge in this arena the WRC created a Water-Energy-Food (WEF) Lighthouse or flagship research programme around this issue. The aim of the dialogue was to raise the profile of the WRC's WEF nexus Lighthouse and to highlight the direction the WRC is taking on this issue; as well as to highlight current activities at the project level. Two important studies were discussed at the dialogue, namely the study focusing on water use of strategic biofuel crops; and the study investigating trade-offs between water use efficiency and renewable energy options for South Africa.

Innovative technology for the treatment of concentrated industrial brines

Mining companies, power producers and oil-from-coal producers currently face major challenges in the management of brines generated by various desalination plants within their facilities as most of their plants are situated inland. This means that the option of discharging the generated brines is not available. Forward osmosis (FO) has emerged as a potential technology that can be used to further concentrate the brines and thus reduce the cost of brine disposal. A WRC study, completed during 2015/16, evaluated the advantages, limitations and feasibility of using FO technology to concentrate various high ionic strength wastewaters; and assessed the fouling characteristics of FO on various high ionic strength industrial streams which are characteristic of having high fouling and/or scaling potential. In this regard, the study provided fundamental understanding of the application of FO for the concentration of high ionic strength wastewaters as well as identifying the limitations associated with such applications, particularly the need for an ideal draw solution and appropriate membrane. The WRC's industrial partners are pursuing further investigations into this innovation.

Determining the water efficiency of our biofuel crops

South Africa is following the international trend of liquid biofuel production, with Government aiming for a 2% blend of biofuels in the national liquid fuel supply (equivalent to an annual production of about 400 million litres of biofuel). A previous WRC study pointed to the need to better understand the water use and yield of biofuel feedstocks, especially given the water-scarce character of South Africa. In addition, a more detailed mapping approach was required to identify feedstock growth areas that considered additional

site factors (not just rainfall and temperature). These recommendations led to the latest six-year study, which was concluded during 2015/16. The study generated important knowledge on selected bioethanol feedstock, including, among others, water use over the growing season, final crop yield and sugar/starch content, water use efficiency (defined as crop yield per unit water use), and biofuel use efficiency. Sugarbeet was shown to be most water use efficient in terms of producing more crop per drop, while grain sorghum is the least sufficient. However, in terms of biofuel use efficiency, yellow maize is the most efficient at producing more biofuel per unit of water consumed by the crop, with soybean regarded as the least efficient. Furthermore, land suitability maps were produced for several biofuel crops. The use of a deterministic-type crop model to derive estimates of attainable yield and water use efficiency at a national scale represents a major contribution to the existing knowledge base on agricultural production potential. Thus, the mapping and crop yield modelling approaches developed for this project are considered unique and innovative.



Improving water and wastewater management in industry



Several decades ago the WRC undertook the first series of National Industrial Water and Wastewater Surveys (NATSURVs) for several sectors. The original NATSURVs measured the water use and effluent generation in a range of industries aimed at identifying areas in which industrial water use and effluent management could be improved. These industries are now being revisited to provide a latter day comparison to determine whether improvements have been made in the area of industrial water management.

During the year under review two NATSURVs were completed, namely for the soft drink industry and the metal finishing industry.

Effectively monitoring waterlogging and salt accumulation on irrigation schemes

The high costs of measuring waterlogging and salt-affected soils on South African irrigation schemes, as well as inconsistencies in data collection and reporting methods, have resulted in incomplete and often contradictory information on the extent and distribution of salt-affected and waterlogged soils. National monitoring of waterlogging and salt accumulation is a high priority, but currently no proven methodology is available to undertake this task. A completed WRC project therefore set out to develop and test a methodological approach to identify, classify and monitor the extent and degree of waterlogging and salt accumulation at farm, irrigation scheme and national level. Three approaches to mapping waterlogged and salt-affected areas were identified as having potential for future application, namely a modelling approach, direct remote sensing method, and indirect remote sensing approach. Testing all of these approaches it was found that, on average, 3.3% of the area on the nine irrigation schemes studied was affected by waterlogging and salt accumulation. This estimated was adjusted to 6.27% by adding abandoned fields. This translates to 94 050 ha of land under irrigation.



Improving rural livelihoods through biogas generation

Energy is seen as central to improved social and economic well-being, and a key factor for relieving poverty, improving human welfare and raising living standards. A WRC project, completed during 2015/16, introduced biogas production from cattle manure for energy generation into selected rural households in KwaZulu-Natal and the Eastern Cape. The project also tested the effectiveness of bioslurry as liquid fertiliser as well as rainwater harvesting to feed the biogas digester, and for domestic use and crop production. Not only has the project enabled people to use a readily available energy source (i.e. biogas), it also introduced an effective waste management technology that cleans the local environment, and improves the health and quality-of-life of participants. The project has made a significant impact in the lives of participating households, who no longer have to walk long distances to collect heavy loads of firewood for their energy requirements. There are also health benefits, such as not breathing in the smoke from wood fires. As most of the households participating in the project were headed by women, it has given them the opportunity to claim a stake in the green economy.

Empowerment of women through water and land use

The WRC has successfully concluded a research project investigating the empowerment of women through water use security, land use security and knowledge generation towards sustainable rural livelihoods. More than 60% of rural households are female-headed. While women in these households are able to make decisions for themselves



rather than being dictated to by men, they do generally have reduced access to resources, a lower uptake of technologies, and increased financial vulnerability. Nearly 90% of rural households surveyed had access to land, with 63% making use of space around the homestead to plant crops. However, less than half of households planted their fields on a regular basis, even though the land was available to them. The intervention strategies that were developed from the research evidence and with participation from farmers are not revolutionary in their individual form, but present an alternative approach to engagement that facilitates multiple parallel avenues of smallholder development. This is expected to initiate synergies within the village resource and social systems, and exploit the niches of smallholder opportunity that have thus far remained largely un-activated in South Africa.

Science minister launches sanitation technology in the Eastern Cape

Minister of Science and Technology, Naledi Pandor, officially launched a low-flush sanitation system at St Marks Primary School at Cofimvaba, in the Eastern Cape. The alternative sanitation technology, developed by the WRC, uses significantly less water than conventional flush toilets. In addition, there is no complex sewerage network required, making this technology cheaper to install, operate and maintain. The technology has been successfully tested in home and school settings in KwaZulu-Natal and the Western Cape, with another current project of the WRC project building low-flush toilets for schools in Limpopo. A total of 125 units have been constructed in the Eastern Cape.



Schools, plumbing graduates benefit from new water innovation

Twenty Johannesburg schools are benefiting from an innovative new technology, called Aquatrip, which is set to help them identify leaks and save water.

The technology was selected for testing by the Water Technologies Demonstration Programmes (WADER) – a joint programme of the Department of Science & Technology and the WRC. The Aquatrip device, which functions in a similar way to an electricity trip switch, identifies unknown leaks and plumbing failures, including taps, left running, leaking toilets and urinals, etc. The device also identifies and prevents all inadvertent or accidental over-use. Johannesburg Water helped to identify 20 schools where the technology is now being tested on a pilot scale. An exciting part of the initiative is the fact that six plumbing graduates from South West Gauteng College have been brought into the project and have received training on the installation of the device.

Sustainable sanitation technology for all

The Arumloo is an innovative sanitation technology that was selected in response to WADER's inaugural accelerator call published in June 2015. This is a micro flush toilet designed to flush effectively on just one litre of water. This could result in a significant reduction in water consumption (about 45 kl per household per year) compared with a convention six-litre flush toilet, and has the additional benefit of reducing the wastewater treatment burden. The toilet is manufactured from sustainable and biodegradable materials. A project has been launched to demonstrate the efficacy of the technology in schools in Johannesburg. This project will run until the end of February 2017.



Householder's handbook to saving water

On 23 March 2016 the WRC launched the new publication, *How to save water – A householder's handbook*, in Diepsloot, Gauteng. An initiative held in celebration of National Water Week the booklet is aimed at assisting households to save water and reduce water leakages on site. Together with community development works from Ekurhuleni, the WRC went door-to-door to introduce the handbook to residents in the area.

Conserving wetlands for the sake of society

Wetlands are among the Earth's most productive ecosystems. Communities around the world, and in South Africa, are dependent on wetlands for their livelihoods. The WRC studied one of these wetlands, Mbongolwane, to investigate its potential role in generating economic development for the surrounding rural community in a sustainable way. Mbongolwane is a large wetland (around 400 ha) located at the headwaters of the Amatigulu River in the KwaNtuli Tribal Authority, one of 14 tribal authorities located in the uMlalazi Local Municipality, 20 km west of Eshowe, in rural KwaZulu-Natal. The overall aim of the WRC study was to investigate the viability of the Mbongolwane wetland to economically support the local community economically through the sustainable utilisation of natural resources. Among others, the study identified the key interventions required to enhance opportunities available in Mbongolwane; developed value chain opportunities for natural resources or ecosystem services available in the wetland; and developed a fundable business plan for five years for the development of the area. This informed the development of business concepts to support the advancement of selected value chains and ecosystem services associated with the Mbongolwane wetland resource. The study also provided the opportunity for young graduates to engage in community-based field research, greatly developing their capacity as young professionals.

Driving sustainable development solutions

Limiting and mitigating the impact of coal mines on wetlands

Coal-mining remains an economically important activity in South Africa, particularly with regards to the country's current dependence on coal for the generation of electricity. Unfortunately, coal-mining can negatively affect the country's scarce water resources, including wetlands. A multiyear collaborative effort between the WRC, CSIR, the South African National Biodiversity Institute, Working for Wetlands, and the Coaltech Research Association has resulted in an innovative suite of products to limit and mitigate the impact of coal-mining on wetlands. The partnerships has resulted in a range of interactive tools to limit and mitigate the impact of coal mines on South Africa's wetlands. The first tool is the *High risk wetlands atlas and users' guide*. The Atlas guides regulators and miners with regards to high-risk wetlands and associated landscapes. In turn, the *Wetland offsets best practice guideline* has been developed as a practical tool for the consistent application of wetland offsets in South Africa. The third tool is the *Introductory guide to wetland rehabilitation in mining landscapes*, which is structured to provide users with the core principles that should inform planning and decision-making at different phases of wetland rehabilitation.

WRC Research, Development and Innovation (RDI) Symposium

A definite highlight during 2015/16 was the WRC RDI Symposium held at the Birchwood Conference Centre, in Ekurhuleni, on 16-18 September 2015. Held every two years, the symposium aims to find new, innovative ways to solve South Africa's water-related challenges through innovative thinking. The theme for this year's event was 'universal access wherever you are', with the symposium showcasing the most impactful water and sanitation research and technological innovation in South Africa that delves into the different dimensions of access and what it means for the water and sanitation sphere.



National and international water experts together contemplated South Africa's water future at the WRC RDI Symposium.

The symposium served as a vehicle for knowledge exchange between researchers, research providers, policy officers and industry leaders while informing participants of new opportunities to collaborate and derive maximum benefit from available research funds. This year delegates were joined by Board members of the Global Water Research Coalition, of which the WRC is also a member. A particular focus for the symposium was the WaterSmart Zone, a dedicated space in which some of the country's foremost water and sanitation solutions were demonstrated.

First ever comprehensive survey of the state of water research

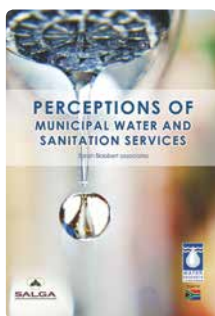
Monitoring and evaluating the various facets of the scientific enterprise is a necessary and integral part of science policy. Rising costs of research and development, coupled with disciplinary claims for financial resources require intelligent allocation of resources, which presuppose knowledge of the activities and performance of the innovation system. During the year under review, the WRC completed the first ever comprehensive survey of the state of water research in South Africa. The investigation provides an overview of the investment in water R&D using the indicators of R&D expenditures for water, bibliometrics of water research in South Africa, patent analysis of water interventions and human resources for water research. Total water R&D spend amounted to R240-million in 2014 (the year of the survey) and seems to be increasing. The study confirmed the WRC as the main funder of water-related research in South Africa. The WRC funds around 65% of all water research in South Africa. It is expected that the outcomes of the study will go a long way towards guiding research and innovation policy in South Africa.



Exploring the cost and operation of water reuse plants

South Africa is generally a water scarce country and water could become the limiting factor in sustaining social and economic development in the region in the future. During the last three decades tremendous development and improvements in the use of membrane technology, both internationally and locally, have taken place. This has allowed the technology to gain popularity in desalination and advanced water reclamation schemes as a means of providing an alternate water resources. During 2015/16 the WRC completed a project that, among others, evaluated on various costs (capital and operating) of existing desalination and reuse plants as a function of the quantity of water produced, as well as the various technologies used. Operational and maintenance challenges experienced are also reported on. Finally the study provided a number of Best Operating Practices to maximise production of desalinated and reclaimed water while at the same time ensuring the sustainability of the technology in terms of cost minimisation.

Latest municipal benchmarking reports and tools launched



On 4 March 2016 the WRC, together with the South African Local Government Association (SALGA) launched three municipal-related reports, namely the 2015 Water Services Municipal Benchmarking Report, Perceptions of Municipal Water and Sanitation Services; and the Wastewater

Technology Guide. The perceptions study, which surveyed the perceptions of urban consumers with regards to their municipal water and sanitation services shows an encouraging high level of satisfaction with regards to drinking water quality. With regards to drinking water quality, 88% of urban South Africans perceived their water to be safe to drink. With regards to service quality, 72% of urban consumers believe that their municipality is competent to deliver a good water and sanitation service.

Developing new tools for aquatic ecosystem health assessment

Estuaries are ecologically and economically important aquatic systems. Microbes are extremely abundant and diverse in aquatic ecosystems such as estuaries, and play critical roles in regulating key biogeochemical cycles, such as the carbon, nitrogen and sulphur cycles. In an

innovative WRC project, next generation sequencing (NGS) and analysis of 16S rRNA sequence technologies were applied for the first time in South Africa in the analysis of aquatic microbial communities in estuaries. The results indicated that the diversity and structure of microbial communities reflect the physico-chemical characteristics of aquatic ecosystems and provide important insight into the functioning of estuarine ecosystems. It is believed that this technology will be useful to water authorities for inclusion and use in their monitoring programmes.

Promoting transformation and redress

Sanitation Indaba

The WRC took a leading role in the organisation and discussions at the Sanitation Indaba, convened by the Minister of Water and Sanitation, Ms Nomvula Mokonyane, on 14 and 15 May 2015, in Durban. The purpose of the Indaba, which attracted close to 500 delegates, was to, among others, showcase the practical demonstration of cutting-edge appropriate sanitation technologies that can be implemented in South Africa and Africa; provide an engagement space for communities on the feasibility of technology implementation as it pertains to their contexts; and pool ideas and experience to accelerate the adoption of world-class advanced technologies. In addition to several discussion platforms the Indaba also featured an interactive exhibition, which showcased several sanitation-related innovations.

The indaba also included a site visit, led by minister Mokonyane, to several sanitation technology demonstration sites in and around eThekweni Municipality. Invited guests were encouraged to participate in a dialogue with community representatives on the feasibility of the technologies demonstrated and their scaling-up potential.



Keynote speakers at the Sanitation Indaba were Executive Mayor of eThekweni Municipality, James Nxumalo, Minister of Water and Sanitation, Nomvula Mokonyane, Deputy President, Cyril Ramaphosa, and KwaZulu-Natal Premier, Edward Senzo Mchunu.

Women in Water consultative conference



Delegates at the Women in Water conference

The WRC played an active role in organising and leading discussions at the National Women in Water Consultative Conference held in Pretoria on 31 August 2015. The main goal of the conference was to empower women in the efficient and equitable management of scarce water resources through their involvement in decision-making, developing technologies and benefiting as water entrepreneurs. Delegates also interrogated the progress made regards gender mainstreaming in the water sector since the dawn of democracy. At this conference the Department of Water and Sanitation (DWS) launched a three-year Women in Water Programme. The programme comprises of a mentorship programme, a women in water business incubator and a women in water forum. The scope of the programme covers all women-owned businesses that are competent and excellent in the provision of services to the Department.



In celebration of the achievements of women in the water sector, the WRC with DWS also launched a new publication, *Amakhosazana Amanzi* – Celebrating our women in water

and sanitation. The publication features the profiles of women leading across the water and sanitation sector, from management to science and research, within communities and as young entrants to the sector. They are but a small reflection of the many women throughout the country who are making waves in the water sector, and are changing the lives of all South Africans for the better. It is hoped that the tales of these women's journeys will serve as an inspiration to future female leaders in water.

Second Knowledge Tree Awards

During the WRC RDI Symposium the Commission held its Second Knowledge Tree Awards. These awards, named after the WRC's strategic planning approach to research impact, were presented to WRC-funded researchers whose research and innovations have impacted and uplifted the water and sanitation sector in a variety of ways. Awards were given under the categories of transformation and redress, sustainable development solutions, empowerment of communities, informing policy- and decision-making, human capital development and new products and services for economic development. This year's winners were Prof Leslie Petrik and Dr Barbara Tapela from the University of the Western Cape; Prof Geoff Pegram, Prof Albert Modi and Prof Chris Buckley from the University of KwaZulu-Natal (UKZN); Prof Wim van Averbek from the Tshwane University of Technology; Associate Prof Ulrike Rivett and Prof Alison Lewis from the University of Cape Town; Rowena Hay from Umvoto Africa; Prof Olaf Weyl from the South African Institute for Aquatic Biodiversity; Unathi Jack from Emanti; and Marco van Dijk from the University of Pretoria.



WRC Knowledge Tree Award winners.

Gender and water report launched during World Water Week

A new publication, *Gender and water policies in Africa: Synthesis report*, was launched during World Water Week in Stockholm (23-28 August 2015). The publication was compiled with partners the Department of Water and Sanitation, the Global Water Partnership, the African Ministers' Council on Water and the University of Pretoria. A team of researchers under the leadership of Professor Elaine Salo (UP) conducted this investigation in seven African countries of West, North, Central, Southern and East Africa. The findings, however, showed that five countries (14%) out of the total sample of 35 countries had not initiated any gender mainstreaming in governance in general or in the water sector; 12 countries (34%) were in the first stage of gender mainstreaming implementation while 15 countries (43%) were in Stage Two. Only 2 countries (6%), South Africa and Seychelles, were in an advanced stage of gender mainstreaming and showed signs of institutionalising the practice in the water governance sector.

Enhancing human capital development in the water and science sectors

Enlisting citizen scientists through the new miniSASS app

On world water monitoring day, 18 September 2015, WRC joined the Wildlife and Environment Society of South Africa, DST and GroundTruth to launch the miniSASS cellphone App. Developed in partnership with MLab, the App is a Beta version and all present at the launch were encouraged to try it out and contribute to its further development. With the miniSASS App one is immediately able to locate one's nearest stream or river and see what the stream's current river health index is. If the stream does not have a river health index, the App guides the user to develop one



using indicator species (sensitive invertebrates that live in our rivers and streams). miniSASS (or stream assessment scoring system) is a simple tool which can be used by anyone to monitor the health of a river. The miniSASS monitoring system is linked to a Google Earth system which enables anyone to see, at a glance, what the quality of the streams and rivers are. On the map the stream quality is represented by a coloured crab icon, with red indicating a problem and green indicating a healthy, natural system.

Stakeholder engagement – municipal roadshows

In order to enhance knowledge dissemination to key stakeholders at local government level, the WRC launched a series of municipal roadshows in 2015/16. The roadshows aim to communicate WRC research related to municipalities direct with end-users, to disseminate relevant guidelines and tools emanating from WRC research and to engage in strategic partnerships to better understand municipal water research needs. The first roadshow was undertaken in Ekurhuleni Metropolitan Municipality, on the East Rand, on 20 August 2015, and focused on water distribution and distribution systems. The second roadshow was held in uMkhanyakude municipality, in KwaZulu-Natal on 4 September 2015, and focused on unlocking water resources for municipal water supply. A third roadshow was held in Durban on 4 February 2016 and focused on water reuse. The last roadshow was held in Port Elizabeth on 4 March 2016 and focused on drinking water quality. All of the roadshows were well attended and bodes well for cooperation between the WRC and local government in future.

Water science cooperation for human capital development

On 12 June 2015, 70 delegates gathered at a flagship WRC workshop on water science cooperation for human capital development at the University of KwaZulu-Natal (UKZN). The workshop was organised under a WRC research project (K5/2266) in partnership with the Department of Science and Technology, the French Embassy, Institute of Research for Development in France (IRD), and UKZN. The main objective of the dialogue was to share experiences in best management and human capital development practices for water-related WRC research projects and to explore opportunities to strengthen international cooperation in science. Prominent speakers included WRC CEO, Dhesigen Naidoo, Dr Pierre Lemande from the French embassy, Prof Thierry Lebel and Dr Vincent Chaplot of IRD, and Prof Graham Jewitt of UKZN.



World wetlands day outing at Colbyn

The WRC co-hosted a youth event with the Agricultural Research Council at Colbyn wetland, in Pretoria, on 30 January 2016, to mark World Wetlands Day. The day included educational activities for children aged between 6 and 13 and included an early morning bird walk, and an introduction to wetland science. Held annually since 2014, the event has been attracting ever large numbers of children, with the 2016 turnout being the largest yet. The Colbyn wetland includes areas of peatland, a relatively rare occurrence in South African wetlands. The involvement of the WRC in wetland conservation and education initiatives such as this reflects the value of these ecosystems in providing essential natural infrastructure for managing the country's water resources.

Enhancing leadership and uptake of science

New community of practice on water pricing

The WRC with the Stockholm International Water Institute (SIWI) initiated a new community of practice on water pricing during the year under review. There is an increased interest from policymakers in water pricing as a solution to several of the main water challenges. Water pricing is being put forward as a possible solution to break the vicious cycle of low-quality water services and management coupled with low-cost recovery and under-financing. The SIWI-WRC community of practice is aimed at addressing the need for a multidisciplinary relook at how we can reflect scarcity in water prices, while at the same time recognising environmental and social values of water.

Enhancing water technology innovation

During 2015/16 the WRC signed a Memorandum of Agreement (MoA) with the USA's Water Environment Research Foundation (WERF) to enhance water technology innovation in South Africa. The agreement follows the launch of the joint WRC-DST WADER programme last year, aimed at promoting the early adoption of promising technologies and accelerating innovation in the water sector. This programme is now expected to grow further as it collaborates with the WERF-funded Leaders Innovation Forum for Technology (LIFT), which is designed to move innovation into practice. It is expected that South Africa will gain from this partnership as LIFT accelerates water technology demand and adoption, and engages the entire water sector in all phases of the innovation process. This partnership will allow for an exchange of ideas on perspectives on the direction the industry is taking, and high-priority technology topics.



Dr Amit Pramanik of WERF, Dr Henry Roman of DST and Dhesigen Naidoo of the WRC following the signing of the MoA between the organisations.

Working towards irrigation productivity in Africa

Increased agricultural productivity is key to reducing poverty and increasing food security in many countries in Africa. One way of increasing food security is through irrigation both at a large- and small-scale. In sub-Saharan Africa, only 4% of cropland is irrigated. But, unlike many areas of the world, parts of the continent have large untapped reserves of water, which could be unleashed sustainably with some investment. It is with the mandate of improving sustainable irrigation development in Africa that the African Regional Working Group (AFRWG) of the International Commission on Irrigation and Drainage (ICID) was established in 1994. The organisation promotes networking among African countries to support integrated river basin development and management, support training and improve information in

the irrigation and drainage domain. The AFRWG is chaired by the WRC. A highlight for the group has been the adoption of its strategy on capacity building in Africa during 2015/16.

Dutch-South Africa innovation partnership sealed

On 17 November 2015, an agreement was signed between KWR (Watercycle Research Institute, The Netherlands) and the WRC of South Africa at a ceremony held at the Dutch Trade Mission in Johannesburg. The agreement was signed in the presence of several South African Ministers, including the Minister of Water and Sanitation, Nomvula Mokonyane and the Prime Minister of The Netherlands, Mark Rutte. Dr Wim van Vierssen, KWR CEO, and Dhesigen Naidoo, WRC CEO, sealed the agreement. KWR is the initiator and coordinator of Watershare, an international collaboration model for research centres focusing on applied research in the urban water cycle. The newly-forged partnership with KWR grants the WRC membership to the Watershare programme. Watershare is a family of trusted publicly-financed institutes sharing knowledge and experiences in the global water sector. The WRC becomes the fifteenth official member of Watershare. The tools are designed for areas like water quality and health, sustainability, water technology, asset design and management, and water systems. KWR will therefore assist the WRC in extending its understanding on specific topics included in the Watershare suite.



WRC CEO, Dhesigen Naidoo, and KWR CEO, Dr Wim van Vierssen signing the agreement.

Water science cooperation for human capital development

The WRC, together with UNESCO IHP, and the United States Geological Survey (USGS) hosted a three-day training course on groundwater numerical modelling from 1-3 December 2015. The course placed specific emphasis on the systems MODFLOW2006 and ModelMuse. The course is held annually for early career hydro(geo)logists from three countries (South Africa, Botswana and Namibia). The training course is based on theory and hands-on exercise. Presented by Eve Kuniansky and Richard Winston from

the USGS the course formed part of UNESCO's drive to make available open source software under its Hydro Free and FOSS Platform of Experts (HOPE) initiative. This specific course formed part of a three-part course to train the country participants in using MODFLOW and its related tools. The ultimate aim is to train the students on an integrated platform called FREEWAT. FREEWAT will be an open source and public domain GIS integrated modelling environment for the simulation of water quantity and quality in surface water and groundwater with an integrated water management and planning module.



Participants in the three-day groundwater numerical modelling course.

Strengthening water links with India

During the year under review, the WRC formalised a needs-based knowledge partnership for collaborative research, knowledge exchange, dissemination and capacity building with the Centre for Science and Environment (CSE) in Delhi, India. The aim of the collaboration is to strengthen advocacy campaigns and to share lessons in focused research areas of mutual interest. Areas that are being explored include water-sensitive design and planning (rainwater harvesting, decentralised wastewater treatment and faecal sludge management), water-energy issues and climate change, as well as green innovations. CSE is a public interest research organisation based in New Delhi. The Centre was a recipient of the prestigious Stockholm World Water Prize in 2005.



CSE Director-General, Sunita Narain and WRC CEO, Dhesigen Naidoo.

Key performance areas

The WRC's KPAs are based on its strategic context and challenges, as well as specific strategic risk areas as identified by the Board and Management. The performance indicators and targets, which have been developed with output and outcome indicators that incorporate the vision, mission and values, will assist the WRC in serving the country in accordance with its mandate, supporting Government outcomes, and will support the organisation's efforts to achieve excellence. The WRC has three areas of performance as follows:



Performance indicators and national targets



The objective of this KPA is the provision of knowledge that aims to enhance the activities of the water sector in a manner that will support economic growth and sustainable development (including capacity building).

Table 1: Research portfolio performance targets for 2015/16

Objective	Performance indicator	Target	Actual	Variance	Notes on variance
To enhance knowledge through new research	Number of new research projects initiated	81	90	+9	New contracts were initiated as funding became available
To complete and finalise research projects scheduled for the financial year	Number of completed research projects	85	95	+10	There have been increased efforts to address outstanding finalisations
To continuously accommodate students as active participants in WRC projects	The minimum number of students supported on WRC research projects	500	492	-8	The disruption at universities has slightly impacted on student registrations
To increase emphasis on projects that have a direct impact on the lives and livelihoods of communities through water-related interventions	The number of community-based research projects funded by the WRC	9	9	0	No variance
To enhance economic development in communities supporting small, medium and micro enterprises (SMMEs)	The number of WRC projects with SMMEs as lead organisation	19	24	+5	New contracts were initiated where funding became available
To focus on previously disadvantaged individuals by increasing the number of project leaders from designated groups	The number of WRC project leaders from designated groups	45	50	+5	New contracts were initiated where funding became available

Objective	Performance indicator	Target	Actual	Variance	Notes on variance
To enhance the profile of project to promote continuous transformation of the water R&D sector	Number of projects with historically disadvantaged institutions participating in WRC projects	18	18	0	No variance
To increase the number of new innovations/products and services produced from WRC research	The number of new innovations/products and services produced from WRC research	19	20	+1	The WRC achieved one more innovation than anticipated
	The number of demonstrated innovations/products and services produced from WRC research	11	11	0	No variance
To ensure that the WRC increasingly contributes to sustainable solutions for the water sector by creating knowledge products and events that disseminate knowledge produced from WRC research	The number of dialogues held during the financial year	15	16	+1	An increasing demand was experienced for dialogues
	The number of manuals and guidelines published in the financial year	26	26	0	No variance
	The number of issues of the <i>Water Wheel</i> magazine published in the financial year	6	6	0	No variance
	The number of issues of the journal, <i>Water SA</i> , published in the financial year	4	4	0	No variance
	The number of conferences/workshops/summits held by the WRC	19	29	+10	There was increased demand for knowledge sharing events
	The number of policy briefs produced and distributed to relevant government departments and entities	12	12	0	No variance
	The number of ministerial briefs produced by the WRC and received by the Minister's office	12	12	0	No variance
	The number of WIN-SA publications produced and distributed to relevant institutions	30	31	1	The opportunity arose for an extra publication

In 2015/16, the WRC initiated 90 new projects and also completed 90 projects. This represents a cumulative increase in the amount of new and finalised research projects funded over the past five years.

Over the past 5 years the WRC has finalised 440 research projects (Figure 6) indicating a significant contribution to knowledge in the water sector. An average number of 87 projects were finalised per year, over the past 5 years. Over the same 5-year period 445 new projects (Figure 7) were initiated, ensuring the continuous contribution of new knowledge to the sector. The large number of initiated projects was largely as a result of the WRC's new and existing funding partnerships.

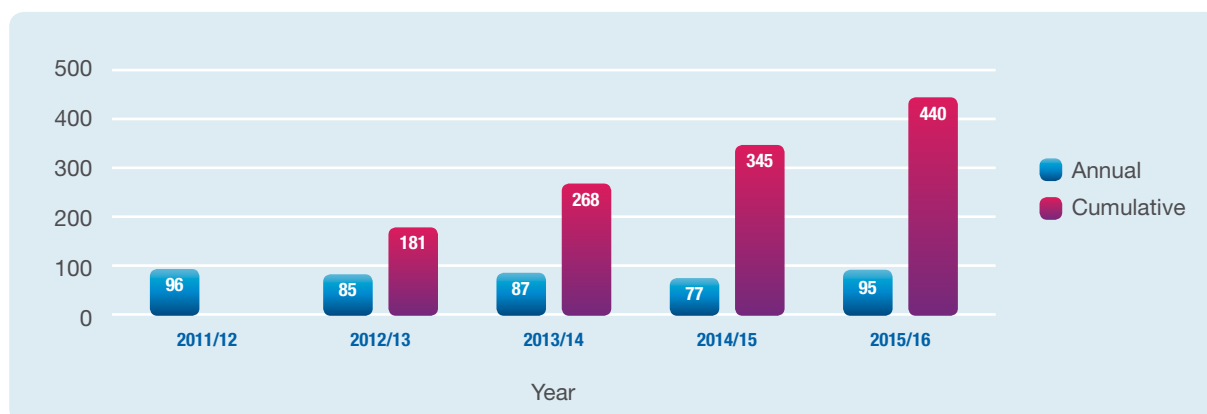


Figure 6: Annual and cumulative number of projects finalised over the past five years

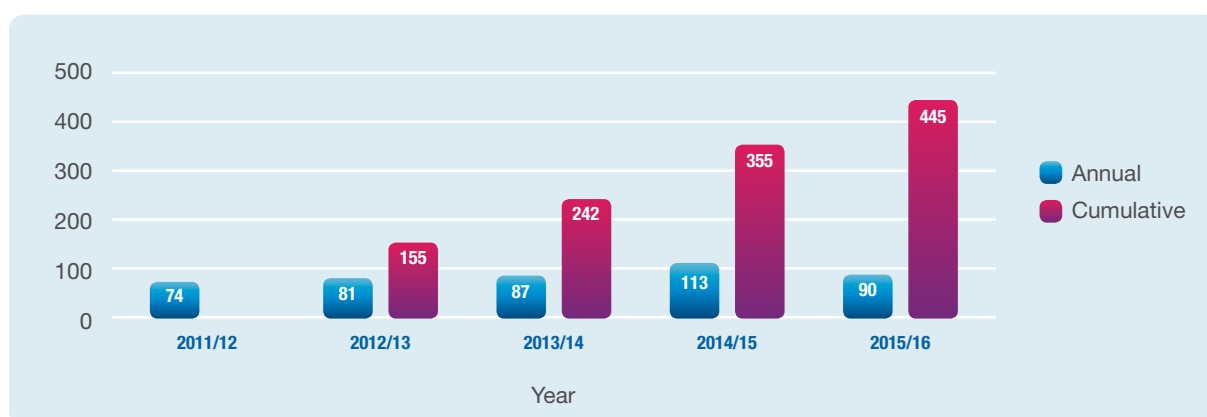


Figure 7: Annual and cumulative number of projects initiated over the past five years

Building capacity

The WRC aims to provide 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 many areas of research supported by the WRC, it is evident that students who participated in earlier WRC projects are now leading Commission-funded research projects and/or serving as members of steering committees as well as representatives of new proposals.

In recent years the WRC has adjusted its portfolio to train and mentor new research leaders. More than 60% of research leaders on new projects are now from designated groups and most are younger than 50 years old. This is both

assisting with the national transformation project as well as building the next generation of researchers. Historically, most projects lay within universities, however, it is encouraging to note that 24 WRC projects were being led by small, medium and micro enterprises in the last financial year. While stakeholder participation in research has always formed an important part of WRC research activities, this year the Commission is also playing increased emphasis on community participation as a KPA. The WRC is proud report that it has 9 community-based research projects in its project portfolio.

The WRC is further encouraged by the number of innovations and/or new products stemming from its research. No less than 20 innovations were recorded in the past financial year.





Human resources

This KPA addresses organisational transformation and focuses on the enhancement of effective leadership and an improved level of staff competence.

Table 2: Human resources performance targets for 2015/16

Objective	Performance indicator	Target	Actual	Variance	Notes on variance
Maintain healthy staff diversity profile	% of staff from designated groups	80%	91%	11%	The best candidates for the positions were from the designated groups
	% staff that are Black	66%	77%	11%	
	% of female staff members	56%	57%	1%	
Improve employee development and wellness	Personal development plans (PDPs)	60 completed	60	0	No variance
	In-house training courses	8 courses	8	0	
	External training courses	20 courses	20	0	



R48 000

Skills development of WRC employees is an important focus area for the WRC. During 2015/16 R48 000 was spent on staff bursaries.



Financial wellbeing

The objective of this KPA is to improve financial practices, management and financial performance of the organisation, simultaneously meeting the required accounting and auditing standards and thereby complying with the legislative requirements.

Table 3: Summary of financial performance for 2015/16

	Objective	Performance indicator	Target	Actual	Variance	Notes on variance
Financial performance	Maintain income growth	The total amount of leverage income	R67.5 million	R61.0 million	-R6.5 million	Unforeseen delays in project deliverables of leverage-funded projects as well as the erroneous inclusion of some levy-funded projects as part of the leverage income budget.
		Initiate contracts with other organisations that increase leverage funding	11	11	0	No variance
Audit response	Improve response to internal audit results	Measured as % of the previous year's internal audit queries fully addressed	100%	100%	0	No variance
	Improve response to external audit results	Measured as an unqualified vs. qualified audit report	Achieve unqualified audit	Unqualified audit	0	No variance
	% of previous year's external audit queries fully addressed	100% of operational findings fully addressed in specified action timeframes as per the agreed external audit response plan	100%	100% achieved	0	No variance

Summary of Financial Information

The Water Research Levy (WRL) is the WRC's main source of revenue. It is receivable in terms of the Water Research Act No. 34 of 1971. The WRC receives its WRL from three sources, namely, the Rand Water Board, the Umgeni Water Board and the Department of Water and Sanitation (DWS).

Table 4: Revenue collection

Sources of revenue	2015/16			2014/15		
	Budget (R'000)	Actual amount collected (R'000)	(Over)/Under collection (R'000)	Budget (R'000)	Actual amount collected (R'000)	(Over)/Under collection (R'000)
WR Levies	201,438	200,031	1,407	184,492	198,719	(14,227)
Leverage	67,512	60,965	6,548	75,410	52,391	23,019
Other income*	10,107	12,324	(2,217)	6,182	10,768	(4,586)
Total	279,057	273,320	5,738	266,084	261,878	4,206

* Other income does not include amounts from non-cash transactions which were not budgeted for.

Water Research Levies

The revenue earned from levies during the 2015/2016 financial year was less than budgeted due to a decrease in consumption volumes from the water boards compared to the WRC's expectations.

Investment revenue

The investment revenue for the 2015/2016 financial year was more than budgeted due to the higher than anticipated average cash holdings during the financial year.

Leverage income

Leverage income for the 2015/2016 financial year was lower than budgeted due to unforeseen delays in project deliverables of leverage funded projects as well as the erroneous inclusion of some levy funded projects as part of the leverage income budget.

Table 5: Income indicators for the year under review compared to the previous financial year

Indicator	2015/16 (actual)	2014/15 (actual)
Levies as a percentage of total income	73%	76%
Other sources of income as a percentage of total income*	27%	24%
Leverage income as a percentage of other income	83%	83%

*Other sources of income includes leverage income

Table 5 presents income indicators for the year under review, compared to the previous financial year. As can be seen from the table above, levy income as a percentage of total income has decreased from 76% to 73%, due to numerous factors such as the impact of drought on water consumption volumes. In addition, we have increased the emphasis of leverage income as a key source of funds in respect of research as reflected in the increase in other income as a percentage of total income from 24% to 27%.

Table 6: Expenditure: Comparison of Budget versus Actuals

Expenditure	2015/16			2014/15		
	Budget (R'000)	Actual expenditure (R'000)	(Over)/Under expenditure (R'000)	Budget (R'000)	Actual expenditure (R'000)	(Over)/Under expenditure (R'000)
Fixed costs	7,112	6,036	1,076	4,545	4,285	260
Running costs	10,741	10,014	727	9,878	9,327	551
Human resources	53,784	52,217	1,567	46,497	45,752	744
Research and development funding	202,532	201,047	1,485	213,256	176,457	36,799
Corporate expenses	2,866	1,821	1,045	2,631	2,290	341
Capital expenditure	2,023	657	1,366	3,575	2,648	928
Total	279,057	271,952	7,265	280,381	240,759	39,623

Fixed costs

The actual fixed costs for the 2015/2016 financial year was lower than budgeted due to the fact that the relocation to the new premises, whilst budgeted for in 2015/2016, was postponed to the 2016/2017 financial year.

Running costs

The under-expenditure in running costs relates to an under-expenditure in respect of subsistence and travel for the 2015/2016 financial year.

Corporate expenditure

The outsourced internal audit contract ended during 2015/2016. There was a strategic decision to recruit an internal audit manager whose appointment was finalised after year-end. This resulted in a lower actual expenditure in respect of internal audit than budgeted.

Table 7: Expenditure indicators for the year under review compared to the previous financial year

Indicator	2015/16 (actual)	2014/15 (actual)
Fixed costs	2.2%	1.8%
Running costs	3.7%	3.9%
Human resources	19.2%	19.0%
Research and development funding	74.0%	73.3%
Corporate expenses	0.7%	1.0%
Capital expenditure	0.2%	1.1%
Total	100%	100%

As reflected in the table above, there were no material changes in the key expenditure indicators between the 2014/2015 and 2015/2016 financial year.

Capital Investment, Maintenance and Asset Management Plan

IT equipment (desktop and laptop computers) is leased and treated as financial leases and capitalised accordingly. The fixed asset registers are timeously updated with new acquisitions of assets. An asset verification was done at year-end which included a physical verification and the assessment of the condition of each verified asset. All assets on the asset register are in use and in good condition.

Table 8: Summary of capital asset expenditure

	2015/16			2014/15		
	Budget (R'000)	Actual expenditure (R'000)	(Over)/Under expenditure (R'000)	Budget (R'000)	Actual expenditure (R'000)	(Over)/Under expenditure (R'000)
Infrastructure projects						
IT Equipment & Software	1,819	484	1,335	3,457	2,491	966
Office Furniture & Equipment	204	173	31	118	156	(38)
Vehicle	0	0	0	0	0	0
Total	2,023	657	1,366	3,575	2,647	928

The difference between budget and actual expenditure for the 2015/2016 financial year is due to a strategic postponement in the implementation of the electronic knowledge management system, website development and purchasing of IT equipment, which is directly related to the relocation to the new WRC premises in the 2016/2017 financial year.

Analysis of Research and Development Expenditure

Table 9: Summary of research and development expenditure

	2015/16		
	Budget (R'000)	Actual expenditure (R'000)	(Over)/Under expenditure (R'000)
KSA			
Water Resource Management (KSA 1)	42,592 [21%]	46,219 [22%]	(3,626)
Water Linked Ecosystems (KSA 2)	23,920 [12%]	25,984 [13%]	(2,064)
Water Use and Waste Management (KSA 3)	48,835 [24%]	52,651 [26%]	(3,816)
Water Utilisation in Agriculture (KSA 4)	34,526 [17%]	29,790 [15%]	4,736
Knowledge Dissemination (KSA 5)	18,428 [9%]	11,400 [6%]	7,028
Other levy funded projects (KSA 6 – 8)	187 [0%]	177 [1%]	10
Empowerment fund	2,227 [1%]	1,161 [1%]	1,065
Other leverage funded projects	31,818 [16%]	33,666 [17%]	(1,848)
Total	202,532 [100%]	201,047 [100%]	1,485

The actual expenditure on research and development within the key strategic areas was in line with the WRC's budget and strategic objectives. The overall variance on research and development expenditure is R1.5 million which represents a deviation of less than 1% (0.73%).

Table 10: Research & Development Expenditure per Operating Branch

	2015/16	
	Budget (R'000)	Actual expenditure (R'000)
KSA		
Research and development	184,104	189,647
Innovation and impact	18,428	11,400
Total	202,532	201,047

During the 2015/2016 financial year, a new branch was established, namely Innovation and Impact.

The primary reason for the renewed focus on achieving impact is that, as a public entity, the WRC forms part of a Government that strives to improve the lives of its citizens. The WRC is increasing the emphasis on the need for evidence of economic and social returns from its investment in research. This has the potential to enhance social and economic wellbeing across all sections of society by means of:

- Improving the effectiveness and sustainability of public and private sector organisations
- Improving social welfare and cohesion
- Increasing economic prosperity, wealth, and job creation
- Enhancing cultural enrichment and quality of life

The percentage utilisation of research project funds by the KSAs during 2015/16 (Figure 8) indicates that approximately

6% was invested in projects that focused on Innovation and Impact, whereas 94% was invested in Research and development. Going forward, the emphasis will shift to the Innovation and Impact branch, which will have an effect on the future utilisation of research project funds.

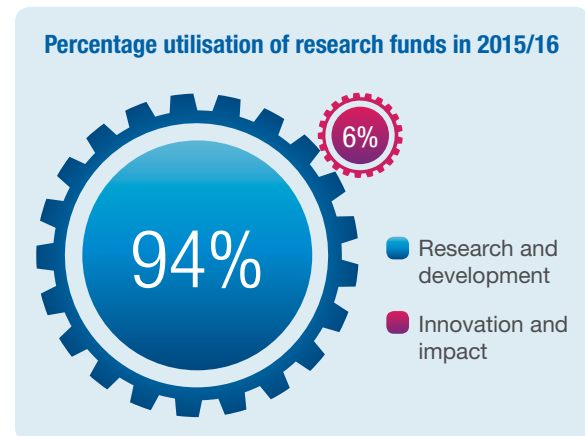


Figure 8: Utilisation of research funds



SECTION C

GOVERNANCE

Corporate governance embodies processes and systems by which public entities are directed, controlled and held to account. In addition to legislative requirements based on a public entity's enabling legislation, and the Companies Act, corporate governance with regard to public entities is applied through the precepts of the PFMA, and run in tandem with the principles contained in the King Report on Corporate Governance.

The WRC Board is the accounting authority of the WRC, and is supported by the Company Secretary. The CEO is the Accounting Officer and is accountable to the WRC Board. The Chief Financial Officer and the Executive Managers of Water Resource Management; Water-Linked Ecosystems; Water Use and Wastewater; Water Utilisation in Agriculture; Business Development, Marketing & Communications; and Corporate Services report directly to the CEO.

Further, the governance manuals relating to the activities of the Board and Board committees, the rules of procedure, terms of reference and other relevant governance matters were reviewed and updated to ensure its continued relevance and compliance with legislative and governance requirements.



The WRC Board are standing (left to right): Mr Anil Singh (representing the Director-General of the Department of Water and Sanitation), Mr Imraan Patel, Prof Aldo Stroebe, Ms Mpumi Msezane, Mr Dhesigen Naidoo (CEO) and sitting (left to right): Prof Sibusiso Vil-Nkomo (Vice Chairperson), Dr Nozibele Mjoli (Chairperson) and Dr Ntombifuthi Nala. Absent from photograph: Dr Mosidi Makgae, Mr MAC Ndhlovu and Ms Khulekelwe Mbonambi.



The Executive members of the WRC are (left to right): Ms Reshmili Lutchman, Mr Jay Bhagwan, Mr Fazel Ismail, Dr Gerhard Backeberg, Mr Dhesigen Naidoo, Dr Mandla Msibi, Dr Valerie Naidoo, Dr Stanley Liphadzi and Dr Shafick Adams.

Table 11: WRC Board Portfolio Committees (until 31 January 2016)

Committee	No. of meetings held	Date of meeting	No. of members	Name of members
Research Policy and Strategy	3	6 May 2015 8 September 2015 27 January 2016	6	Mr G Mwiinga (Chairperson) Ms B Schreiner Dr B van Koppen Mr I Patel Prof E Cloete Mr D Naidoo (CEO)
Social, Ethics, Human Resources and Information Technology	2	6 May 2015 27 January 2016	5	Ms D Ndaba (Chairperson) Mr N Mhlongo Ms B Schreiner Dr B van Koppen Mr D Naidoo (CEO)
Remuneration Committee	3	6 May 2015 27 July 2015 27 January 2016	5	Ms D Ndaba (Chairperson) Ms B Schreiner Mr N Mhlongo Mr G Mwiinga Mr D Naidoo (CEO)
Audit, Risk and Finance Committee	5	30 April 2015 27 May 2015 28 July 2015 28 September 2015 28 January 2016	5	Mr N Mhlongo (Chairperson) Mr G Mwiinga Prof TE Cloete Ms D Ndaba Mr D Naidoo (CEO)

Table 12: WRC Board Portfolio Committees from 1 February 2016

Committee	No. of meetings held	No. of members	Name of members
Research and Innovation	0	5	Dr Mosidi Makgae (Chairperson) Prof Aldo Stroebe Mrs Mpumi Msezane Dr Ntombifuthi Nala Mr Imraan Patel Mr D Naidoo (CEO)
Human Resources, Social and Ethics	0	5	Mr Mxolisi Aldophus Cassius Ndhlovu (Chairperson) Ms Mpumi Msezane Dr Ntombifuthi Nala Dr Mosidi Makgae Prof Sibusiso Vil-Nkomo Mr D Naidoo (CEO)
Remuneration Committee	0	5	Prof Sibusiso Vil-Nkomo (Chairperson) Dr Nozibele Mjoli Dr Mosidi Makgae Ms Khulekelwe Mbonambi Mr Mxolisi Aldophus Cassius Ndhlovu Mr D Naidoo (CEO)
Audit, Risk and Finance Committee	0	4	Ms Khulekelwe Mbonambi (Chairperson) Prof Sibusiso Vil-Nkomo Prof Aldo Stroebe Mr Mxolisi Aldophus Cassius Ndhlovu Mr D Naidoo (CEO)

The Accounting Authority/Board

The following section outlines the importance and purpose of the WRC Board as well as the Board's responsibilities.

Role of the Board

The Board is the Accounting Authority of the WRC, and in this respect provides oversight, fiduciary duties and responsibilities to the WRC as required by the PFMA, the Water Research Act, Treasury Regulations for Public Entities (2001, amended 2002) and the King Report on Corporate Governance in South Africa (2009).

During the year under review the WRC operated under the leadership of its newly-appointed Board (from 1 February 2016). The Board members, who are appointed by the Minister of Water and Sanitation, are independent, non-executive Directors. The CEO and the Director-General of the DWS are ex officio members of the Board. The WRC Board provides leadership and governance to the WRC, 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 Charter

The Board Charter, which has been developed in alignment with King III, provides a concise overview of the fiduciary duties and responsibilities of the Board of the WRC, as well as the procedures and structures that will govern how the Board is to function in order to discharge its duties.

The Board Charter was last updated on 27 March 2012. The following Board Committees have been established:

1. Audit Risk and Finance Committee (AR&F)

2. Remuneration Committee (Rem Com)
3. Human Resources, Social and Ethics Committee (HRS&E)
4. Executive Committee (Exco)
5. Research and Innovation Committee (RIC)

The Board Members (from 1 February 2016)

Dr Nozibele Mjoli (Chairperson of the Board)

Appointed on 1 February 2016. Dr Mjoli is the Managing Director of Hlathi Development Services. WRC Board and Committee meetings attended: Board (1).

Prof Sibusiso Vil-Nkomo (Vice Chairperson of the Board and Chairperson for Remuneration Committee)

Appointed on 1 February 2016. Prof Vil-Nkomo is the Senior Research Professor for Centre for Advancement of Scholarship at the University of Pretoria. He also serves, as the Chairperson on two boards, namely: Agricultural Research Council and Mapungubwe Institute for Strategic Reflection respectively. WRC Board and Committee meetings attended: Board (1).

Ms Mpumi Msezane

Appointed on 1 February 2016. Ms Msezane is the Head of Environment at TCTA. She also serves as a non-executive Director on the Johannesburg Road Agency Board. WRC Board and Committee meetings attended: Board (1).

Mr Nala Mhlongo

Appointed on 1 February 2016 to serve only on the Audit, Risk & Finance Committee and may attend Board Meeting by invitation. Mr Mhlongo heads up his own accounting and management consulting firm. WRC Board and committee meetings attended: Board (0), AR&F (0).

Mr Imraan Patel

Appointed on 1 February 2016 (for a second term). Mr Patel is the Deputy Director-General at the Department of Science and Technology responsible for socio-economic innovation partnerships. WRC Board and committee meetings attended: Board (3) and RIC (2).

Dr Ntombifuthi Patience Nala

Appointed on 1 February 2016. Dr Nala is a Communication Researcher for Government Communication and Information System (GCIS). WRC Board and committee meetings attended: Board (1).

Prof Aldo Stroebe

Appointed on 1 February 2016. Prof Stroebe is the Executive Director International Relations and Cooperation at the National Research Foundation. He holds academic affiliations as Visiting Fellow at the Institute for African Development, Cornell University (USA), and as Adjunct Professor at the University of Venda. Board and Committee meetings attended: Board (1).

Mr Mxolisi Adolphus Cassius Ndhlovu (Chairperson HR, Social and Ethics Committee)

Appointed on 1 February 2016. Mr Ndhlovu is a Director at MAC Ndhlovu Inc. Attorneys. He is a member of the Law Society of South Africa and a member of Institute of Directors. WRC Board and committee meetings attended: Board (0).

Ms Masaccha Khulekelwe Mbonambi (Chairperson of ARF Committee)

Appointed on 1 February 2016. Ms Mbonambi is the Founder and Director of Mtzobozi Financial Governance & Compliance Services. WRC Board and committee meetings attended: Board (1).

Dr Mosidi Elizabeth Makgae (Chairperson Research and Innovation Committee)

Appointed on 1 February 2016. Dr Makgae is a Scientific Research and Programmes Manager at the Council for Geosciences. WRC Board and committee meetings attended: Board (1).

Mr Dhesigen Naidoo (WRC CEO and Ex-officio member)

Appointed on 1 October 2011. Mr Naidoo is the CEO of the WRC. WRC Committee meetings attended: Board (1).

Ms Margaret-Anne Diedricks (DWA DG and Ex-officio Board member)

Appointed on 1 October 2014. WRC Committee meetings attended: Board (0).

The Board members (until 31 January 2016)**Ms Barbara Schreiner (Chairperson of the Board until 31 January 2016)**

Appointed on 29 May 2012 (for second term). Ms Schreiner is the Executive Director of Pegasys Strategy & Development. She also serves on the Board of the International Water Management Institute (IWMI). WRC Board and Committee meetings attended: Board (6), ARF (3), RPS (2), SEHRIT (2), and Rem Com (3).

Ms Dora Ndaba (Chairperson of SEHRIT Committee until 31 January 2016)

Appointed on 29 May 2012 (for second term). Ms Ndaba serves on the NEDLAC Development Chamber: Public Transport Task Team and is a member of the Presidential Working Group on Women. WRC Board and Committee meetings attended: Board (6), ARF (5), Rem Com (3), and SEHRIT (2).

Dr Barbara van Koppen

Appointed on 29 May 2012. Dr van Koppen is a principal researcher in poverty, gender and water at IWMI. WRC Board and Committee meetings attended: Board (2), RPS (2) and SEHRIT (1).

Mr Nala Mhlongo (Chairperson of AR&F and Finance committees until 31 January 2016)

Appointed on 29 May 2012 (for second term). Mr Mhlongo heads up his own accounting and management consulting firm. WRC Board and committee meetings attended: Board (5), AR&F (5), SEHRIT (2), and Rem Com (3).

Prof Eugene Cloete

Appointed on 29 May 2014. Prof Cloete is Vice Rector: Research and Innovation at the University of Stellenbosch. WRC Board and committee meetings attended: Board (4), RPS (1) and AR&F (2).

Mr Godfrey Mwiinga

Appointed on 29 May 2012. Mr Mwiinga works for the Development Bank of Southern Africa. Board and Committee meetings attended: Board (4), RPS (2), AR&F (3) and Rem Com (2).

Remuneration of Board members

Members of the Board are paid an allowance in respect of the performance of their duties. The allowance is determined by the Minister of Water and Sanitation in consultation with the Minister of Finance. Members that are not remunerated are the CEO and the ex-officio members of DWS and DST. Board members are also paid for travel expenses.

Table 13: Remuneration paid to each Board member in 2015/16

Name	Remuneration (rate per meeting)	Total (R)
Ms Barbara Schreiner (<i>Chairperson until 31 January 2016</i>)	2,056	155,702
Ms Dora Ndaba (<i>Vice-Chairperson until 31 January 2016</i>)	1,560	205,386
Mr Nala Mhlongo	1,560	113,203
Prof Eugene Cloete	1,560	43,968
Mr Godfrey Mwiinga	1,560	68,457
Dr Barbara van Koppen	1,560	56,160
Dr Nozibele Mjoli (<i>Chairperson from 1 February 2016</i>)	2,296	18,743
Prof Sibusiso Vil-Nkomo (<i>Vice-Chairperson from 1 February 2016</i>)	1,736	10,416
Ms Mpumi Msezane	1,736	5,208
Dr Mosidi Elizabeth Makgae	1,736	3,472
Dr Ntombifuthi Patience Nala	1,736	5,208
Prof Aldo Stroebe	1,736	3,472
Mr Mxolisi Adolphus Cassius Ndhlovu	1,736	5,208
Ms Masaccha Khulekelwe Mbonambi	1,736	5,208
Mr Imraan Patel	N/A	N/A
Mr Dhesigen Naidoo (CEO)	N/A	N/A

Risk Management

The WRC Board is accountable for the process of risk management, which is reviewed regularly. Risk management at the WRC is an on-going process. The WRC has established a risk management framework. The risks presented below have each been assessed in terms of impact and likelihood, i.e., inherent risk exposure. The WRC also identified the existing controls (mitigations) which are in place, and assessed the perceived control effectiveness of the identified controls. Each risk was allocated to a risk owner. These risks were also linked to the strategic objectives of the WRC. A risk rating was assigned from both an inherent risk and a residual risk exposure perspective.

Executive Management and the Board undertake the risk assessment annually in November, facilitated by the internal auditors. The WRC reviews the risk register on a quarterly basis and reports its progress to the Audit and Risk Committee.

The following risks have been collectively identified and assessed by Executive Management and the Board:

Table 14: Summary of WRC Risk Register

Risk name	Controls (Business process to manage the risk exposure)
Institutional human capital deficit	<ul style="list-style-type: none"> Partnerships and collaboration with other organisations that have the capability Interim capacity deployment on a project to project basis Investment and exposure in training
Financial sustainability	<ul style="list-style-type: none"> MOA (memorandum of agreement) on monthly payments with DWS Escalation provisions for funding Governed by legislation, Government Gazette Diversified levy agencies (DWS, RW and UW) Significant leverage income to offset dependency Regular interaction with shareholder (DWS) and stakeholders on funding issues Strategy to further diversify funding Prioritisation of available funds Stretching of resources Regular meetings with funders Adherence to legislation (collection of income – WRA)
Insufficient uptake of research	<ul style="list-style-type: none"> Involvement of end users in design and rollout of research projects New partnerships for implementation (TIA, SASOL, SALGA) Packaging of research to various stakeholders Development of policy and ministerial briefs to influence decision making Direct support for IP development and commercialisation Development of manuals, guidelines and support tools for implementation Incorporation of research uptake into WRC research proposal template Inclusion of research impact and uptake interventions in WRC Corporate Plan
Constraints in keeping up with changes and trends in water research	<ul style="list-style-type: none"> Capacity building as part of research contracts and research prioritisation (including post docs) Mechanism of WRC dialogues, symposiums, conferences to be at forefront of development Engagement with research partners Partnership to be at cutting edge of technology and research Support publication and exposure of students and training material Conference participation to enhance knowledge Stakeholder involvement in research portfolio Annual strategic review of research portfolio Periodic institutional review of research portfolio Engaging performance of researchers Development programme for individuals Implementation of new strategy Increasing international partnerships and engagement
Inadequate availability, continuity and growth of adequate research expertise	<ul style="list-style-type: none"> Capacity building as part of research contracts and research prioritisation in particular post graduate student support Introduction of lighthouse Engagement with research partners Support publication and exposure of students and training material Lobby for increased research funds through DWA and DST and other players Marketing research careers (through schools, universities etc.) Rolling out of international strategy
Inadequate ability to deal with complexity of research issues and challenges	<ul style="list-style-type: none"> Implementation of the lighthouse programme to engage both complexity and trans-disciplinarity Technical, policy and ministerial briefs to ensure faster exposure to research outcomes Annual strategic review of research portfolio Partnerships to facilitate implementation Periodic institutional review of research portfolio Development of the social science inter disciplinarily program Implementation and monitoring of the Knowledge Tree objectives

Risk name	Controls (Business process to manage the risk exposure)
Profile of the WRC within SADC, Africa and Global	<ul style="list-style-type: none"> • Attendance of international conferences etc. • Involvement in global, African and SADC level projects • WRC international strategy implemented • Interaction with stakeholders on SADC, Africa and global involvement • Conducting SADC wide projects with donor partners • Contracts in place with researchers to acknowledge the WRC
Business interruption / disaster	<ul style="list-style-type: none"> • Offsite backups of core systems and data, disaster recovery site and plans • Uninterrupted power supply • Anti-virus software (renewed annually and daily updates) and firewalls • Insurance • Emergency response teams • Evacuation plans and procedures • Fully functional private network (van) • Logical and physical access controls • Fire proof strong room for research contracts (Offsite) • Digitisation of documentation • 3G and cell phone enablement • 24 hour security with armed response • Outsource courier service provider • Annual simulation testing • Uninterrupted water and power supply
Fraud and corruption	<ul style="list-style-type: none"> • Financial and management (reconciliatory, supervisory, etc.) controls • Monitoring daily cash balance • Segregation of duties • Audit trails • Delegation of authority • Change controls • Fraud prevention plan implemented and work shopped annually • 24 hour fraud hotline • Whistle blowing policy implemented • Code of Ethics
Potential for biased/compromised science	<ul style="list-style-type: none"> • Declaration of interests • Decision protocols • Contract Management • Reference group system • Anti-fraud measures
Losing competitive edge	<ul style="list-style-type: none"> • Balanced strategy • Performance management system • Legislative mandate • Stakeholder engagements • Change management policies and procedures
Poor quality or compromised researched outputs	<ul style="list-style-type: none"> • Reference group peer review system • Multiple approver procedure • Requirement for declaration of publications and intellectual property • Conference presentation for further technical peer review • Encourage peer reviewed publication
Non-compliance to Acts, regulations, legislations, policies and procedures	<ul style="list-style-type: none"> • Good internal knowledge of the PFMA and other legislation and all regulations with regular internal audit of performance and compliance • Good relationship with Treasury and Auditor-General secures continuous updates • Ongoing training • Regular self-assessment • Compliance is the responsibility for all Executive Managers. • Dialogues with various stakeholders and with decision makers. • Policy and ministerial briefs for decision making. • Policy research in the WRC portfolio. • Secondary auditing procedures. • Appointment of a Compliance Manager. • Appointment of Health and Safety representatives • Health and Safety awareness campaigns and reviews

Internal Control Unit

To enable the WRC to meet its responsibility to provide reliable financial information, the WRC maintains accounting systems and practices adequately supported by a system of internal controls. These controls are designed to provide reasonable assurance that transactions are concluded in accordance with management authority and that the assets are adequately safeguarded.

The internal audit function monitors the effectiveness and efficiency of the internal control systems, reports their findings and makes recommendations to management and the Audit Committee of the WRC Board, and monitors whether corrective action has been taken.

Internal Audit and Audit Committees

The WRC has an outsourced internal audit function. The WRC has adopted formal terms of reference as its Internal Audit Charter. The internal auditors prepare a rolling three-year audit plan, which on the recommendation of the Audit and Risk Committee is approved by the Board. The internal audit function reports directly to the Audit and Risk Committee.

Tables 15 and 16 disclose relevant information on the Audit Committee Members:

Table 15: Audit Committee Member Details

Name	Qualifications	Internal/ External	Date appointed*
Ms Khulekelwe Mbonambi (Chairperson)	B.Com Accounting, B.Com (Hons), a certificate in Board Governance, certificate in Enterprise Risk Management	External	1 February 2016
Mr Nala Mhlongo	Chartered Management Accountant, Chartered Global Management Accountant, Chartered Accountant, B.Com (Hons), B.Com	External	15 October 2010
Prof Sibusiso Vil-Nkomo	PhD from University of Delaware (USA)	External	1 February 2016
Prof Aldo Stroebel	PhD from UFS and Cornell University (USA), Postdoctoral research at Wageningen University (The Netherlands)	External	1 February 2016
Mr Mxolisi Aldophus Cassius Ndhlovu	LLB, LLM, Advanced Certificate in Insolvency Practice, Certificate in PPP (GTAC)	External	1 February 2016
Mr Dhesigen Naidoo	CEO and ex-officio	Internal	1 October 2011

* While the new Audit Committee had been appointed before the end of 2015/16 no meetings had been held with the new committee before year-end.

Table 16: Audit Committee Member Details (until 31 January 2016)

Name	Qualifications	Internal/ External	Date appointed	No. of meetings attended
Mr Nala Mhlongo (Committee chair)	Chartered Management Accountant, Chartered Global Management Accountant, Chartered Accountant, B.Com (Hons), B.Com	External	15 October 2010	6
Ms Dora Ndaba	M. Tech Transport Logistics, B Tech Transport Logistics, Certificate in Food Processing (Belgium), Certificate in Marketing and Management in Agriculture (USA), Diploma in Transport Economics, Diploma in Nursing	External	31 July 2008	6
Mr Godfrey Mwiinga	MBA, MA Civil Engineering, Post Graduate Diploma in Sanitary Engineering BA Civil Engineering	External	29 May 2012	4
Prof Eugene Cloete	BSc (Hons), MSc (Botany), DSc (Microbiology)	External	29 May 2014	2
Mr Dhesigen Naidoo	CEO and ex-officio	Internal	1 October 2011	6

Fraud and Corruption

The WRC has a zero tolerance fraud and corruption policy. All fraud and corruption will be investigated and followed up. The application of all remedies falls within the full extent of the law and the implementation of appropriate prevention and detections controls. The WRC has an approved Fraud Prevention Policy and Whistle Blowing policy to ensure that the Commission's tolerance to fraud and corruption is integrated into the day-to-day activities of the organisation. Further to that the WRC has a 24-hour Ethics Hotline hosted by an external service provider.

Code of Ethics and Business Conduct

The integrity of the employees underlies all of the WRC's relationships, including those with customers, suppliers and communities, as well as those between employees. The highest standards of ethical business conduct are required of employees of the WRC in fulfilling their WRC responsibilities, and this has been documented in the WRC's Code of Ethics and Business Conduct policy.

Employees may not engage in any activity that could raise questions as to the WRC's integrity, respect for diversity, impartiality or reputation. Ethical business conduct includes

workplace relationships between employees in terms of the Constitution and requires respect for constitutional rights in employment, particularly with regard to human dignity, non-discrimination, and respect for diversity, impartiality and reputation.

Health, Safety and the Environment

During the year under review the WRC completed a carbon footprint assessment. The results of the assessment showed that the WRC would need to invest a significant amount of capital in order to reduce its carbon footprint. This assessment provided the basis on which the decision to relocate the WRC in the 2016/17 financial year was made. The selected premises has a five-star green building rating, and the WRC's environmental policy will now be developed around its new environment.

Company/Board Secretary

The Company Secretary is responsible for guiding the Board in the execution of their duties and responsibilities, and how such duties and responsibilities should be properly carried out in the best interests of the WRC. The Company Secretary also provides a central source of guidance and advice on matters of good governance and changes in legislation.

Responsibilities of the Company Secretary include:

- Ensuring that the procedures for appointment of the Board are properly carried out
- Assisting with the proper induction, orientation and on-going training and education of Directors
- Assessing specific training needs of Directors and Executive Management regarding fiduciary/governance responsibilities
- Ensuring that the Board Charter and sub-committees Terms of Reference are kept up to date
- The proper compilation and timely circulation of documentation for the Board and committees
- Obtaining appropriate responses and feedback to specific agenda items or matters arising from prior meetings of the Board or committees
- Raising any matters that may warrant Board attention
- The proper recording of minutes of Board and committee meetings and seeing to the approval and timely circulation of the minutes to Directors
- Liaising and assisting the Board Chairperson, committee chairs and the CEO with yearly work plans for Board meetings
- Assisting with the annual Board evaluation process (Board, Directors and senior management)

Corporate Social Responsibility

Corporate social responsibility is the commitment by the WRC to behave ethically and contribute to economic development while improving the quality of life of its employees as well as the community and the environment in which the WRC operates.

Through its corporate social responsibility actions, the WRC aims to:

- Minimise impact on the environment through waste reduction;
- Enhance the well-being of employees;
- Ensure empowerment and improvement of the communities in which it operates.

The WRC is part of the DST and NRF internship programme. In 2015/16 the Commission had one intern placed under the mentorship of KSA 4: Water Utilisation in Agriculture.



SECTION D

WATER RESEARCH COMMISSION (WRC) AND SUBSIDIARY FINANCIAL STATEMENTS

for the year ended 31 March 2016

Statement of responsibility and confirmation of accuracy for the Annual Report 2015/16

The Accounting Authority is responsible for the preparation of the public entity's Annual Financial Statements and for the judgments made in this information.

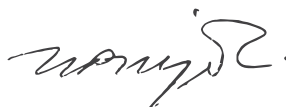
The Accounting Authority is responsible for establishing and implementing a system of internal control designed to provide reasonable assurance as to the integrity and reliability of the Annual Financial Statements.

The external auditors are engaged to express an independent opinion on the Annual Financial Statements of the public entity. The Annual Financial Statements for the year ended 31 March 2016 have been audited by the external auditors and their report is presented on pp. 63-66.

The audited Annual Financial Statements of the public entity set out on pp. 67 to 112 have been approved.



Mr DP Naidoo
Chief Executive Officer



Dr NP Mjoli
Chairperson of the Board

Report of the Audit and Risk Committee

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

The Audit and Risk 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 than eliminate the risk of failure and to maximise opportunities to achieve business objectives. This can provide only reasonable but not absolute assurance.

The Audit and Risk Committee is satisfied that the internal audit function has addressed the high risks pertinent to the entity in its audit.

The Audit and Risk Committee has:

- Reviewed the audited Annual Financial Statements
- Reviewed accounting policies
- Reviewed the Auditor-General's management letter and management's response thereto and is comfortable that management will address the findings adequately
- Reviewed adjustments resulting from the audit
- The Audit and Risk Committee accepts the Auditor-General's conclusions on the Annual Financial Statements, and is of the opinion that the audited Annual Financial Statements be accepted and read together with the report of the Auditor-General.

The Audit and Risk Committee met with the Auditor-General and were assured that there were no unresolved issues of concern.



Ms K Mbonambi
Chairperson of the Audit and Risk Committee

Report of the Auditor-General to Parliament on the Water Research Commission

Report on the consolidated and separate financial statements

Introduction

1. I have audited the consolidated and separate financial statements of the Water Research Commission and its subsidiary set out on pages 58 to 112 which comprise the consolidated and separate statement of financial position as at 31 March 2016, the consolidated and separate statement of financial performance, statement of changes in net assets, cash flow statement and statement of comparison of budget and actual amounts for the year then ended, as well as the notes, comprising a summary of significant accounting policies and other explanatory information.

Accounting Authority's responsibility for the consolidated and separate financial statements

2. The board of directors, which constitutes the accounting authority, is responsible for the preparation and fair presentation of these consolidated and separate financial statements in accordance with Generally Recognised Accounting Practises (SA Standards of GRAP) and the requirements of the Public Finance Management Act of South Africa, 1999 (Act No. 1 of 1999) (PFMA) and the Companies Act of South Africa, 2008 (Act no. 71 of 2008), and for such internal control as the Accounting Authority determines is 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

3. 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. 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.

4. 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.
5. I believe that the audit evidence I have obtained is sufficient and appropriate to provide a basis for my audit opinion.

Opinion

6. In my opinion, the consolidated and separate financial statements presents fairly, in all material respects, the financial position of the Water Research Commission and its subsidiary as at 31 March 2016 and their financial performance and cash flows for the year then ended, in accordance with SA Standards of GRAP, and the requirements of the PFMA and the Companies Act of South Africa.

Emphasis of matters

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

Restatement of corresponding figures

8. As disclosed in note 31 to the financial statements, the corresponding figures for 31 March 2015 have been restated as a result of errors discovered, during the current financial year ended 31 March 2016, in the financial statements of the Water Research Commission.

Report on other legal and regulatory requirements

9. In accordance with the Public Audit Act of South Africa, 2004 (Act No. 25 of 2004) and the general notice issued in terms thereof, I have a responsibility to report findings on the reported performance information against predetermined objectives of selected objectives presented in the annual performance report, compliance with legislation and internal control. The objective of my tests was to identify reportable findings as described under each subheading but not to gather evidence to express assurance on these matters. Accordingly, I do not express an opinion or conclusion on these matters.

Predetermined objectives

10. I performed procedures to obtain evidence about the usefulness and reliability of the reported performance information of the following selected Portfolio presented in the annual performance report of the entity for the year ended 31 March 2016:
 - Portfolio 1: Research Portfolio on pages 18 to 39.
11. I evaluated the usefulness of the reported performance information to determine whether it was presented in accordance with the National Treasury's annual reporting principles and whether the reported performance was consistent with the planned portfolios. I further performed tests to determine whether indicators and targets were well defined, verifiable, specific, measurable, time bound and relevant, as required by the National Treasury's *Framework for managing programme performance information* (FMPPI).

12. I assessed the reliability of the reported performance information to determine whether it was valid, accurate and complete.

13. I did not identify any material findings on the usefulness and reliability of the reported performance information for the following Portfolio:

- Portfolio 1: Research Portfolio

Additional matter

14. Although I identified no material findings on the usefulness and reliability of the reported performance information for the selected portfolio, I draw attention to the following matter:

Achievement of planned targets

15. Refer to the annual performance report on pages 18 to 39 for information on the achievement of the planned targets for the year.

Compliance with legislation

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

Financial statements, performance and annual reports

17. The consolidated and separate financial statements submitted for auditing were not prepared in accordance with section 55(1) (a) and (b) of the Public Finance Management Act as a material misstatement identified by the auditors in the submitted financial statements on the commitments disclosure note was subsequently corrected by management which resulted in the financial statements receiving an unqualified audit opinion.

Internal control

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

Financial and performance management

19. Controls around the Fund Management System which records and manages the research contracts were not adequate to ensure completeness of the commitments disclosure note on the consolidated and separate financial statements.

Auditor-General

Pretoria

29 July 2016



AUDITOR-GENERAL
SOUTH AFRICA

Auditing to build public confidence

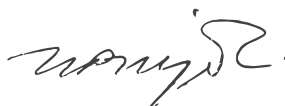
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The financial statements set out on pages 58 to 112, which have been prepared on the going concern basis, were approved by the board of members on 31 May 2016 and were signed on its behalf by:



Mr DP Naidoo
Chief Executive Officer



Dr NP Mjoli
Chairperson of the Board

Statement of Financial Position

		Group		WRC	
		2016	2015 Restated*	2016	2015 Restated*
		R	R	R	R
Notes(s)					
Assets					
Current Assets					
Loans to wholly controlled entity	3	-	-	1,020,000	1,020,000
Operating lease asset	4	2,053	8,441	-	-
Receivables	5	41,706,533	43,520,474	44,171,979	44,841,923
VAT receivable		18,824	135,253	-	-
Cash and cash equivalents	6	217,063,755	173,942,447	212,525,156	170,975,027
		258,791,165	217,606,615	257,717,135	216,836,950
Non-Current Assets					
Property, plant and equipment	7	4,546,311	5,479,332	3,550,403	3,985,471
Intangible assets	8	1,715,018	1,932,374	1,715,018	1,932,374
Investment in wholly controlled entity	9	-	-	755,939	755,939
Loans to wholly controlled entity	3	-	-	26,278,991	23,523,181
Other financial assets	10	14,123,916	12,741,072	14,123,916	12,741,072
		20,385,245	20,152,778	46,424,267	42,938,037
Total Assets		279,176,410	237,759,393	304,141,402	259,774,987
Liabilities					
Current Liabilities					
Finance lease obligation	11	160,913	147,755	160,913	147,755
Payables	12	175,341,738	133,098,365	175,323,698	133,060,178
Accruals – leave and bonus	13	4,751,610	3,648,641	4,751,610	3,648,641
		180,254,261	136,894,761	180,236,221	136,856,574
Non-Current Liabilities					
Finance lease obligation	11	18,564	121,131	18,564	121,131
Employee benefit obligation	14	210,266	4,502,615	210,266	4,502,615
		228,830	4,623,746	228,830	4,623,746
Total Liabilities		180,483,091	141,518,507	180,465,051	141,480,320
Net Assets		98,693,319	96,240,886	123,676,351	118,294,667
Accumulated surplus		98,693,319	96,240,886	123,676,352	118,294,667

Statement of Financial Performance

	Notes(s)	Group		WRC	
		2016 R	2015 Restated* R	2016 R	2015 Restated* R
Revenue					
Revenue from exchange transactions					
Rental received		236,884	246,567	-	-
Recovery of expenditure		11,097	10,181	-	-
Other income		555,124	1,267,747	555,124	1,267,747
Interest received – investment	15	9,172,636	6,203,828	12,940,458	9,584,057
Dividends received – investment	15	66,867	55,123	66,867	55,123
Total revenue from exchange transactions		10,042,608	7,783,446	13,562,449	10,906,927
Revenue from non-exchange transactions					
Water research levies		200,031,249	198,719,161	200,031,249	198,719,161
Leverage income		60,964,552	52,390,961	60,964,552	52,390,961
Total revenue from non-exchange transactions		260,995,801	251,110,122	260,995,801	251,110,122
Total revenue	16	271,038,409	258,893,568	274,558,250	262,017,049
Expenditure					
Administration		(125,102)	(116,229)	(125,102)	(116,229)
Debt impairment		13,190	434,022	13,190	433,929
Depreciation and amortisation		(1,765,444)	(1,375,223)	(1,267,491)	(877,270)
Employee related costs	17	(50,379,234)	(44,783,452)	(50,379,234)	(44,783,452)
Finance costs	18	(32,278)	(328,028)	(32,278)	(328,028)
General expenses	19	(14,917,483)	(14,030,707)	(14,217,017)	(13,447,018)
Lease rentals on operating lease		(385,172)	(312,491)	(2,606,547)	(2,131,971)
Repairs and maintenance		(1,330,866)	(1,198,503)	(898,500)	(1,044,045)
Research and development cost	20	(201,047,393)	(176,521,311)	(201,047,393)	(176,521,311)
Total expenditure		(269,969,782)	(238,231,922)	(270,560,372)	(238,815,395)
Operating surplus / (deficit)	21	1,068,627	20,661,646	3,997,878	23,201,654
Gain (loss) on disposal of assets and liabilities		3,690	(107,979)	3,690	(107,979)
Fair value adjustments	22	1,380,116	1,170,795	1,380,116	1,170,795
		1,383,806	1,062,816	1,383,806	1,062,816
Surplus/ (deficit) for the year		2,452,433	21,724,462	5,381,684	24,264,470

Statement of Changes in Net Assets

Group

	Accumulated surplus R	Total net assets R
Opening balance as previously reported	72,716,435	72,716,435
Adjustments		
Prior year adjustments	1,799,986	1,799,986
Balance at 1 April 2014 as restated*	74,516,421	74,516,421
Changes in net assets		
Surplus for the year	21,724,465	21,724,465
Total changes	21,724,465	21,724,465
Balance at 1 April 2015 as restated*	96,240,884	96,240,884
Changes in net assets		
Surplus for the year	2,452,435	2,452,435
Total changes	2,452,435	2,452,435
Balance at 31 March 2016	98,693,319	98,693,319

WRC

Opening balance as previously reported	92,230,210	92,230,210
Adjustments		
Prior year adjustments	1,799,986	1,799,986
Balance at 1 April 2014 as restated*	94,030,196	94,030,196
Changes in net assets		
Surplus for the year	24,264,471	24,264,471
Total changes	24,264,471	24,264,471
Balance at 1 April 2015 as restated*	118,294,666	118,294,666
Changes in net assets		
Surplus for the year	5,381,686	5,381,686
Total changes	5,381,686	5,381,686
Balance at 31 March 2016	123,676,352	123,676,352

Cash Flow Statement

Notes(s)	Group		WRC	
	2016 R	2015 Restated* R	2016 R	2015 Restated* R
Cash flows from operating activities				
Receipts				
Cash receipts from customers	317,068,271	252,270,236	316,779,358	246,796,853
Interest income	10,179,038	6,911,586	10,179,038	6,911,586
Dividends received	66,867	55,123	66,867	55,123
	327,314,176	259,236,945	327,025,263	253,763,562
Payments				
Cash paid to suppliers	(281,785,946)	(228,644,453)	(284,088,212)	(224,845,393)
Net cash flows from operating activities	45,528,230	30,592,492	42,937,051	28,918,169
Cash flows from investing activities				
Purchase of property, plant and equipment	(236,104)	(2,592,761)	(236,104)	(2,592,761)
Proceeds from sale of property, plant and equipment	45,239	17,833	45,239	17,833
Purchase of other intangible assets	(190,227)	(55,099)	(190,227)	(55,099)
Loans to wholly controlled entity repaid	-	-	1,020,000	1,020,000
Net cash flows from investing activities	(381,092)	(2,630,027)	638,908	(1,610,027)
Cash flows from financing activities				
Contributions paid: Employee benefit obligation	(5,154,005)	-	(5,154,005)	-
Finance lease payments	(173,865)	(483,365)	(173,865)	(483,365)
Net cash flows from financing activities	(5,327,870)	(483,365)	(5,327,870)	(483,365)
Net increase/(decrease) in cash and cash equivalents				
	39,819,268	27,479,100	38,248,089	26,824,777
Cash and cash equivalents at the beginning of the year	173,942,447	144,869,157	170,975,027	142,556,060
Effect of exchange rate movement on cash balances	3,302,040	1,594,190	3,302,040	1,594,190
Cash and cash equivalents at the end of the year	217,063,755	173,942,447	212,525,156	170,975,027

Statement of Comparison of Budget and Actual Amounts

	Approved budget	Adjustments	Final Budget	Actual amounts on comparable basis	Difference between final budget and actual
	R	R	R	R	R
Statement of Financial Performance					
Revenue					
Revenue from exchange transactions					
Other income	587,710	2,151,889	2,739,599	3,084,489	344,890
Interest and dividends received – investment	5,722,200	1,645,548	7,367,748	9,239,503	1,871,755
Total revenue from exchange transactions	6,309,910	3,797,437	10,107,347	12,323,992	2,216,645
Revenue from non-exchange transactions					
Water research levies	194,798,306	6,639,508	201,437,814	200,031,249	(1,406,565)
Leverage income	92,318,690	(24,806,521)	67,512,169	60,964,552	(6,547,617)
Roll/over of committed funds	17,907,147	(17,907,147)	-	-	-
Total revenue from non-exchange transactions	305,024,143	(36,074,160)	268,949,983	260,995,801	(7,954,182)
Total revenue	311,334,053	(32,276,723)	279,057,330	273,319,793	(5,737,537)
Expenditure					
Fixed costs	(4,741,855)	(2,369,879)	(7,111,734)	(6,035,568)	1,076,166
Running costs	(10,364,127)	(376,528)	(10,740,655)	(10,013,932)	726,723
Human resources	(53,784,248)	-	(53,784,248)	(52,216,686)	1,567,562
Research and development funding	(238,270,577)	35,738,588	(202,531,989)	(201,047,393)	1,484,596
Corporate expenses	(2,761,155)	(104,430)	(2,865,585)	(1,821,448)	1,044,137
Capital expenditure	(1,412,091)	(611,028)	(2,023,119)	(656,616)	1,366,503
Total expenditure	(311,334,053)	32,276,723	(279,057,330)	(271,791,643)	7,265,687
Actual Amount on Comparable Basis as Presented in the Budget and Actual Comparative Statement	-	-	-	1,528,150	1,528,150

Refer to note 38 for explanations for material differences between budget and actual amounts and for explanations for the movement from the approved budget to the final budget.

Refer to note 39 for a reconciliation of budget surplus/deficit with the surplus/deficit in the Statement of Financial Performance.

Summary of Significant Accounting Policies

1. Presentation of Financial Statements

The financial statements have been prepared in accordance with the Standards of Generally Recognised Accounting Practice (GRAP), issued by the Accounting Standards Board (ASB) in accordance with Section 91(1) of the Public Finance Management Act (Act 1 of 1999) (PFMA).

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

A summary of the significant accounting policies, which have been consistently applied in the preparation of these financial statements, is disclosed below.

These accounting policies are consistent with the previous period.

1.1 Consolidation

Basis of consolidation

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

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

Control exists when the controlling 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 the controlled entity are included in the consolidated 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 controlled entity and its carrying amount as of the date of disposal, including the cumulative amount of any exchange

differences that relate to the controlled entity 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 a controlled entity.

An investment in an entity is accounted for in accordance with the Standards of GRAP on Financial Instruments from the date that it ceases to be a controlled entity, unless it becomes an associate or a jointly controlled entity, 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 controlled entity is regarded as the fair value on initial recognition of a financial asset in accordance with the Standards of GRAP on Financial Instruments.

The financial statements of the controlling entity and its controlled entity used in the preparation of the consolidated financial statements are prepared as of the same reporting date.

When the reporting dates of the controlling entity and a controlled entity are different, the controlled entity prepares, for consolidation purposes, additional financial statements as of the same date as the controlling entity unless it is impractical to do so. When the financial statements of a controlled entity used in the preparation of consolidated financial statements are prepared as of a reporting date different from that of the controlling entity, adjustments are made for the effects of significant transactions or events that occur between that date and the date of the controlling entity's financial statements. In any case, the difference between the reporting date of the controlled entity and that of the controlling 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 financial statements of the controlled entity to bring their accounting policies in line with those of the controlling entity.

1.2 Significant judgements and sources of estimation uncertainty

In preparing the financial statements, management is required to make estimates and assumptions that affect the amounts represented in the financial statements and related disclosures. Use of available information and the application of judgement is inherent in the formation of

estimates. Actual results in the future could differ from these estimates which may be material to the financial statements. Significant judgements include:

Trade receivables

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

Where impairment indicators arise these receivables are individually assessed for impairment. Accounts outstanding for 120 days and more are fully impaired. Whilst these accounts are being followed up, past experience has indicated that accounts outstanding for such long periods are seldom recovered.

All other receivables which are not individually assessed, and do not fall in the category of 120 days and more, are grouped together and assessed.

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 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 economic entity for similar financial instruments.

Impairment testing

The entity assesses its 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 any observable data indicating a measurable decrease in the estimated future cash flows from the financial asset.

The economic entity reviews and tests the carrying value of assets when events or changes in circumstances suggest that the carrying amount may not be recoverable. 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 tangible assets are inherently uncertain and could materially change over time.

Useful lives and residual values

The entity re-assesses 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 uses of the individual assets to determine the remaining period over which the asset can and will be used.

Employee benefit obligations (Medical aid scheme)

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 include the discount rate. Any changes in these assumptions will impact on the carrying amount of post retirement obligations.

The appropriate discount rate is determined 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 post retirement obligations. The discount rate that reflects the time value of money is best approximated by reference to market yields at the reporting date on government bonds. Where there is no deep market in government bonds with a sufficiently long maturity to match the estimated maturity of all the benefit payments, the entity uses current market rates of the appropriate term to discount shorter term payments, and estimates the discount rate for longer maturities by extrapolating current market rates along the yield curve.

Other key assumptions for post retirement obligations are based on current market conditions. Additional information is disclosed in Note 14.

Effective interest rate

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

Impairment of receivables

On receivables 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 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 period.

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

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

Property, plant and equipment is initially measured 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 management. Trade discounts and rebates are deducted in arriving at the cost.

Where an asset is acquired through a non-exchange transaction, its cost is its fair value as at date of acquisition.

Where an item of property, plant and equipment is acquired in exchange for a non-monetary asset or monetary assets, or a combination of monetary and non-monetary assets, the asset acquired is initially measured at fair value (the cost). If the acquired item's fair value was not determinable, its deemed cost is the carrying amount of the asset(s) given up.

When significant components of an item of property, plant and equipment have different useful lives, they are accounted for as separate items (major components) of property, plant and equipment.

Costs include costs incurred initially to acquire or construct an item of property, plant and equipment and costs incurred subsequently to add to, replace part of, or service it. If a replacement cost is recognised in the carrying amount of an item of property, plant and equipment, the carrying amount of the replaced part is derecognised.

The initial estimate of the costs of dismantling and removing the item and restoring the site on which it is located is also included in the cost of property, plant and equipment, where the entity is obligated to incur such expenditure, and where the obligation arises as a result of acquiring the asset or using it for purposes other than the production of inventories.

Recognition of costs in the carrying amount of an item of property, plant and equipment ceases when the item is in the location and condition necessary for it to be capable of operating in the manner intended by management.

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

Property, plant and equipment are depreciated on the straight line basis over their expected useful lives to their estimated residual value.

The useful lives of items of property, plant and equipment have been assessed as follows:

Item	Depreciation method	Average useful life
Buildings	Straight line	30 years
Furniture and fixtures	Straight line	3 - 35 years
Motor vehicles	Straight line	5 years
Office equipment	Straight line	3 - 15 years
Computer equipment	Straight line	3 - 15 years
Finance lease assets	Straight line	Years according to the lease term

The residual value, and the useful life and depreciation method of each asset are reviewed at the end of each reporting date. If the expectations differ from previous estimates, the change is accounted for as a change in accounting estimate.

Each part of an item of property, plant and equipment with a cost that is significant in relation to the total cost of the item is depreciated separately.

The depreciation charge for each period is recognised in surplus or deficit unless it is included in the carrying amount of another asset.

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

1.4 Intangible assets

An asset is identifiable if it either:

- is separable, i.e. 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, identifiable assets or liability, regardless of whether the entity intends to do so; or
- arises from binding arrangements (including rights from contracts), regardless of whether those rights are transferable or separable from the economic entity 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 economic entity; and
- the cost or fair value of the asset can be measured reliably.

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

Where an intangible asset is acquired through a non-exchange transaction, its initial cost at the date of acquisition is measured at its fair value as at that date.

The intangible assets is regarded as having an finite useful life. The amortisation is provided on a straight line basis over their expected useful life. The amortisation period and the amortisation method for intangible assets are reviewed at each reporting date.

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	3 - 10 years

Intangible assets are derecognised:

- on disposal; or
- when no future economic benefits or service potential are expected from its use or disposal.

1.5 Investment in wholly controlled entity

Group financial statements

The economic entity financial statements include those of the controlling entity and its controlled entity. The revenue and expenses of the controlled entity are included from the effective date of acquisition.

On acquisition the economic entity recognises the controlled entity'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.

WRC financial statements

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

The cost of an investment in a controlled entity 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 controlled entity.

1.6 Financial instruments

A financial instrument is any contract that gives rise to a financial asset of one entity and a financial liability or a residual interest of another entity.

A financial asset is:

- cash;
- a residual interest of another entity; or
- a contractual right to:
 - receive cash or another financial asset from another entity; or
 - exchange financial assets or financial liabilities with another entity under conditions that are potentially favourable to the entity.

A financial liability is any liability that is a contractual obligation to:

- deliver cash or another financial asset to another entity; or
- exchange financial assets or financial liabilities under conditions that are potentially unfavourable to the entity.

A residual interest is any contract that manifests an interest in the assets of an entity after deducting all of its liabilities.

Classification

The entity has the following types of financial assets (classes and categories) as reflected on the face of the statement of financial position or in the notes thereto:

Class	Category
Loans to economic entities	Financial asset measured at amortised cost
Receivables	Financial asset measured at amortised cost
Cash and cash equivalents	Financial asset measured at fair value
Other financial assets	Financial asset measured at fair value

The entity has the following types of financial liabilities (classes and categories) as reflected on the face of the statement of financial position or in the notes thereto:

Class	Category
Payables	Financial liability measured at amortised cost
Finance lease obligation	Financial liability measured at amortised cost
Accruals	Financial liability measured at amortised cost
Employee benefit obligation	Financial liability measured at fair value

Initial recognition

The entity recognises a financial asset or a financial liability in its statement of financial position when the entity becomes a party to the contractual provisions of the instrument.

The entity recognises financial assets using trade date accounting.

Initial measurement of financial assets and financial liabilities

The entity measures a financial asset and financial liability initially at its fair value plus transaction costs that are directly attributable to the acquisition or issue of the financial asset or financial liability.

Subsequent measurement of financial assets and financial liabilities

The entity measures all financial assets and financial liabilities after initial recognition using the following categories:

- Financial instruments at fair value.
- Financial instruments at amortised cost.

All financial assets measured at amortised cost, or cost, are subject to an impairment review.

Financial instruments at fair value

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.

Other financial assets

Other financial assets include investments with recognised financial institutions.

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.

Financial instruments at amortised cost

Loans

These include loans to and from wholly controlled entities and loans to employees. It is recognised initially at fair value plus direct transaction costs and subsequently measured at amortised cost.

Receivables

Trade receivables are measured at initial recognition at fair value, and are subsequently measured at amortised cost using the effective interest rate method.

Payables

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

Fair value measurement considerations

The fair values of listed 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.

Gains and losses

A gain or loss arising from a change in the fair value of a financial asset or financial liability measured at fair value is recognised in surplus or deficit.

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

Impairment and uncollectibility of financial assets

The entity assesses at the end of each reporting period whether there is any objective evidence that a financial asset or group of financial assets is impaired.

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

If there is objective evidence that an impairment loss on financial assets measured 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. The carrying amount of the asset is reduced through the use of an allowance account. The amount of the loss is recognised in surplus or deficit.

If, in a subsequent period, the amount of the impairment loss decreases and the decrease can be related objectively to an event occurring after the impairment was recognised, the previously recognised impairment loss is reversed by adjusting an allowance account. The reversal does not result in a carrying amount of the financial asset that exceeds what the amortised cost would have been had the impairment not been recognised at the date the impairment is reversed. The amount of the reversal is recognised in surplus or deficit.

Derecognition

Financial assets

The entity derecognises financial assets using trade date accounting.

The entity derecognises a financial asset only when:

- the contractual rights to the cash flows from the financial asset expire, are settled or waived;
- the entity transfers to another party substantially all of the risks and rewards of ownership of the financial asset; or
- the entity, despite having retained some significant risks and rewards of ownership of the financial asset, has transferred control of the asset to another party and the other party has the practical ability to sell the asset in its entirety to an unrelated third party, and is able to exercise that ability unilaterally and without needing to impose additional restrictions on the transfer. In this case, the entity:
 - derecognises the asset; and
 - recognises separately any rights and obligations created or retained in the transfer.

On derecognition of a financial asset in its entirety, the difference between the carrying amount and the sum of the consideration received is recognised in surplus or deficit.

Financial liabilities

The entity removes a financial liability (or a part of a financial liability) from its statement of financial position when it is extinguished — i.e. when the obligation specified in the contract is discharged, cancelled, expires or is waived.

The difference between the carrying amount of a financial liability (or part of a financial liability) extinguished or transferred to another party and the consideration paid, including any non-cash assets transferred or liabilities assumed, is recognised in surplus or deficit.

Presentation

Interest relating to a financial instrument or a component that is a financial liability is recognised as revenue or expense in surplus or deficit.

Offsetting of financial instruments

A financial asset and a financial liability are only offset and the net amount presented in the statement of financial position when the entity currently has a legally enforceable right to set off the recognised amounts and intends either to settle on a net basis, or to realise the asset and settle the liability simultaneously.

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 lessor.

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 interest rate 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 assets

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

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

Identification

The economic entity assesses at each reporting date whether there is any indication that an asset may be impaired. If any such indication exists, the economic entity estimates the recoverable amount of the asset (for all cash-generating assets) and recovery service amount (for all non cash-generating assets).

Recognition and measurement (individual asset)

If the recoverable amount of a cash-generating asset is less than its carrying amount, the carrying amount of the asset is reduced to its recoverable amount. This reduction is an impairment loss. An impairment loss is recognised immediately in surplus or deficit.

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

After the recognition of an impairment loss, the depreciation (amortisation) charge for the cash-generating asset is adjusted in future periods to allocate the cash-generating

asset's revised carrying amount less its residual value (if any), on a systematic basis over its remaining useful life.

1.9 Employee benefits

Employee benefits are all forms of consideration given by the entity in exchange for service rendered by employees.

Short-term employee benefits

Short-term employee benefits are employee benefits (other than termination benefits) that are due to be settled within twelve months after the end of the period in which the employee has rendered the related service.

When an employee has rendered a service to the entity during a reporting period, the entity recognises the cost in the period in which the service was rendered equal to the undiscounted amount of short-term employee benefits expected to be paid in exchange for that service.

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 entity measures the expected cost of accumulating compensated absences as the additional amount that the entity expects to pay as a result of the unused entitlement that has accumulated at the reporting date.

The entity recognises the expected cost of bonus, incentive and performance related payments when the entity has a present legal or constructive obligation to make such payments as a result of past events and a reliable estimate of the obligation can be made. A present obligation exists when the entity has no realistic alternative but to make the payments.

Post-employment benefits

Post-employment benefits are employee benefits (other than termination benefits) which are payable after the completion of employment.

Post-employment benefits: Defined contribution plans

Defined contribution plans are post-employment benefit plans under which the 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.

When an employee has rendered a service to the entity during a reporting period, the entity recognises the contribution payable to a defined contribution plan in exchange for that service:

- as a liability (accrued expense), after deducting any contribution already paid. If the contribution already paid exceeds the contribution due for service before the reporting date, the entity recognises that excess as an asset (prepaid expense) to the extent that the prepayment will lead to, for example, a reduction in future payments or a cash refund; and
- as an expense, unless another Standard requires or permits the inclusion of the contribution in the cost of an asset.

Post-employment benefits: Defined benefit plans

Defined benefit plans are post-employment benefit plans other than defined contribution plans.

The present value of a defined benefit obligation is the present value, without deducting any plan assets (if any), of expected future payments required to settle the obligation resulting from employee service in the current and prior periods.

The amount recognised as a defined benefit liability is the net total of the following amounts:

- the present value of the defined benefit obligation at the reporting date;
- minus the fair value at the reporting date of plan assets (if any) out of which the obligations are to be settled directly;
- plus any liability that may arise as a result of a minimum funding requirement

The amount determined as a defined benefit liability may be negative (an asset). The entity measures the resulting asset at the lower of:

- the amount determined above; and
- the present value of any economic benefits available in the form of refunds from the plan (if any) or reductions in future contributions to the plan. The present value of these economic benefits is determined using a discount rate which reflects the time value of money.

Any adjustments arising from the limit above are recognised in surplus or deficit.

The entity determines the present value of defined benefit obligations and the fair value of any plan assets (if any) with sufficient regularity such that the amounts recognised in the financial statements do not differ materially from the amounts that would be determined at the reporting date.

The entity recognises the net total of the following amounts in surplus or deficit, except to the extent that another Standard requires or permits their inclusion in the cost of an asset:

- current service cost;
- interest cost;
- the expected return on any plan assets and on any reimbursement rights;
- actuarial gains and losses;
- past service cost;
- the effect of any curtailments or settlements; and
- the effect of applying the limit on a defined benefit asset (negative defined benefit liability).

Actuarial valuations are conducted on an annual basis by independent actuaries separately for each plan (if any). The results of the valuation are updated for any material transactions and other material changes in circumstances (including changes in market prices and interest rates) up to the reporting date.

The entity recognises gains or losses on the curtailment or settlement of a defined benefit plan when the curtailment or settlement occurs. The gain or loss on a curtailment or settlement comprises:

- any resulting change in the present value of the defined benefit obligation; and
- any resulting change in the fair value of the plan assets (if any).

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.

1.10 Provisions and contingencies

Provisions are recognised when:

- the economic entity has a present obligation as a result of a past event;

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

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

Where the effect of time value of money is material, the amount of a provision is the present value of the 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 economic entity settles the obligation. The reimbursement is treated as a separate asset. The amount recognised for the reimbursement does not exceed the amount of the provision.

Provisions are reviewed at each reporting date and adjusted to reflect the current 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.

Contingent assets and contingent liabilities are not recognised.

1.11 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 from exchange transactions is measured at the fair value of the consideration received or receivable, net of trade discounts and volume rebates.

Rendering of services

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

Service revenue is recognised by reference to the stage of completion of the transaction at the reporting date. Stage of completion is determined by the proportion that costs incurred to date bear to the total estimated costs of the transaction.

Interest, royalties, dividends and rental income

Revenue arising from the use by others of entity assets yielding interest, royalties, dividends and rental income 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.

1.12 Revenue from non-exchange transactions

Revenue comprises gross inflows of economic benefits or service potential received and receivable by the entity,

which represents an increase in net assets, other than increases relating to contributions from owners.

Non-exchange transactions are transactions that are not exchange transactions. In a non-exchange transaction, an entity either receives value from another entity without directly giving approximately equal value in exchange, or gives value to another entity without directly receiving approximately equal value 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.

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

The WRC receives leverage income from various sources which is used for research. This revenue is recognised in the accounting period in which the research expenditure is incurred.

Revenue from the recovery of unauthorised, irregular, fruitless and wasteful expenditure is based on legislated procedures, including those set out in the PFMA and is recognised when the recovery thereof from the responsible officials is virtually certain.

1.13 Borrowing costs

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 South African Rand, 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 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 South African Rands by applying to the foreign currency amount the exchange rate between the South African Rand and the foreign currency at the date of the cash flow.

1.15 Research and development expenditure

Expenditure on research and development is recognised as an expense when incurred.

1.16 Fruitless and wasteful expenditure

Fruitless and wasteful expenditure means expenditure which was made in vain and would have been avoided had reasonable care been exercised.

All expenditure relating to fruitless and wasteful expenditure is recognised as an expense in the statement of financial performance in the year that the expenditure is incurred. The expenditure is classified in accordance with the nature of the expense, and where recovered, it is subsequently accounted for as revenue in the statement of financial performance.

1.17 Irregular expenditure

Irregular expenditure as defined in section 1 of the PFMA is expenditure other than unauthorised expenditure, incurred in contravention of or that is not in accordance with a requirement of any applicable legislation, including

- (a) the PFMA; or
- (b) WRC supply chain management policy; or
- (c) National Treasury Regulations.

Irregular expenditure that was incurred and identified during the current financial year and which was condoned before year end and/or before finalisation of the financial statements must also be recorded appropriately in the irregular expenditure register. In such an instance, no further action is required with the exception of updating the note to the financial statements.

Irregular expenditure that was incurred and identified during the current financial year and for which condonement is being awaited at year end must be recorded in the irregular expenditure register. No further action is required with the exception of updating the note to the financial statements.

Where irregular expenditure was incurred in the previous financial year and is only condoned in the following financial year, the register and the disclosure note to the financial statements must be updated with the amount condoned.

Irregular expenditure that was incurred and identified during the current financial year and which was not condoned by the National Treasury or the relevant authority must be recorded appropriately in the irregular expenditure register. If liability for the irregular expenditure can be attributed to a person, a debt account must be created if such a person is liable in law. Immediate steps must thereafter be taken to recover the amount from the person concerned. If recovery is not possible, the accounting officer or accounting authority may write off the amount as debt impairment and disclose such in the relevant note to the financial statements. The irregular expenditure register must also be updated accordingly. If the irregular expenditure has not been condoned and no person is liable in law, the expenditure related thereto must remain against the relevant programme/expenditure item, be disclosed as such in the note to the financial statements and updated accordingly in the irregular expenditure register.

All expenditure relating to irregular expenditure is recognised as an expense in the statement of financial performance in the year that the expenditure is incurred. The expenditure is classified in accordance with the nature of the expense, and where recovered, it is subsequently accounted for as revenue in the statement of financial performance.

1.18 Conditional grants and receipts

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

1.19 Income tax expense

The WRC is exempt from income tax in terms of section 10(1)(cA)(ii) of the Income Tax Act, 1962 (No 58 of 1962).

1.20 Budget information

The financial statements and the budget are not on the same basis of accounting, therefore a reconciliation between the statement of financial performance and the budget has been included in the financial statements. Refer to note 38.

1.21 Related parties

The economic entity operates in an economic sector currently dominated by entities directly or indirectly owned by the South African Government. As a consequence of the constitutional independence of the three spheres of government in South Africa, only entities within the national sphere of government are considered to be related parties.

Key management are those individuals responsible for planning, directing and controlling the activities of the economic entity, including those charged with the governance of the economic entity in accordance with legislation, in instances where they are required to perform such functions.

Close members of the family of a person are considered to be those family members who may be expected to influence, or be influenced by, that management in their dealings with the economic entity.

Only transactions with related parties not at arm's length or not in the ordinary course of business are required to be disclosed.

1.22 Events after reporting date

Events after reporting date are those events, both favourable and unfavourable, that occur between the reporting date and the date when the financial statements are authorised for issue. Two types of events can be identified:

- those that provide evidence of conditions that existed at the reporting date (adjusting events after the reporting date); and
- those that are indicative of conditions that arose after the reporting date (non adjusting events after the reporting date).

The economic entity will adjust the amount recognised in the financial statements to reflect adjusting events after the reporting date once the event occurred.

The economic entity will disclose the nature of the event and an estimate of its financial effect or a statement that such estimate cannot be made in respect of all material non-adjusting events, where non-disclosure could influence the economic decisions of users taken on the basis of the financial statements.

Other explanatory notes

2. New standards and interpretations

2.1 Standards and interpretations early adopted

The entity early adopted GRAP 20: Related parties and GRAP 6 (as revised 2010): Consolidated and Separate Financial Statements in the 2014/2015 financial year. GRAP 6 became effective on 1 April 2015 whereas the effective date for GRAP 20 is only 1 April 2016.

3. Loans to wholly controlled entity

Controlled entity

Erf 706 Rietfontein (Pty) Ltd – Loan 1

The unsecured loan bears interest at 15% (2015 – 15%) and is repayable in equal monthly installments of not less than R60,000. The capital sum and interest thereon must be repaid in full by no later than 30 June 2017.

Erf 706 Rietfontein (Pty) Ltd – Loan 2

The unsecured loans bears interest at prime plus 2% and is repayable within 60 days from receipt of a written demand.

Non-current assets

Current assets

Group		WRC	
2016	2015 Restated*	2016	2015 Restated*
R	R	R	R
-	-	24,734,980	21,974,145
-	-	2,564,011	2,569,036
-	-	27,298,991	24,543,181
-	-	26,278,991	23,523,181
-	-	1,020,000	1,020,000
-	-	27,298,991	24,543,181

Credit quality of the loans to wholly controlled entity

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

None of the loans to the wholly controlled entity defaulted during the year under review.

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

Fair value of loans to and from wholly controlled entity

The fair value of the loans are determined by calculating the present value of future payments by using a discount rate of 15% and prime rate plus 2%. The entity does not hold any collateral as security for the loans.

Loans to controlled entities past due but not impaired

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

4. Operating lease asset

	Group		WRC	
	2016	2015 Restated*	2016	2015 Restated*
	R	R	R	R
Balance at year end				
Operating lease asset	2,053	8,441	-	-
Minimum lease receipts/ (payments) due				
Within 12 months	41,434	221,952	-	-
Between 12 – 60 months	-	41,434	-	-
	41,434	263,386	-	-

The wholly controlled entity enters into lease agreements between 2 and 5 years whereafter the option is available for the lessee to renew the contract. Rentals are payable per month and escalates by between 5 and 11 percent per annum. No contingent rent is receivable/payable and there are no restrictions on the leases.

5. Receivables

	Group		WRC	
	2016	2015 Restated*	2016	2015 Restated*
	R	R	R	R
Receivables from non-exchange transactions				
Receivables: Water research levies	35,992,615	42,023,255	35,992,615	42,023,255
Receivables from exchange transactions				
Receivables: Other	1,835,740	1,802,224	4,381,735	2,972,627
Deposits	842,212	8,105	834,907	800
Prepaid expenses	73,244	81,872	-	-
Advance	2,962,722	-	2,962,722	-
Provision for impairment losses	-	(394,982)	-	(154,759)
	41,706,533	43,520,474	44,171,979	44,841,923

Receivables pledged as security

No receivables were pledged as security for any financial liability.

Credit quality of receivables

None of the receivables defaulted during the year under review. Management considers that all of 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. The fair value approximates the carrying amount of the balances due to their short term maturity.

Receivables

All the receivables as reflected above represent receivables from exchange transactions, except for Receivables: Water research levies which represents receivables from non-exchange transactions.

Where impairment indicators arise these receivables are individually assessed for impairment. Accounts outstanding for 120 days and more are fully impaired. Whilst these accounts are being followed up, past experience has indicated that accounts outstanding for such long periods are seldom recovered.

All other receivables which are not individually assessed and do not fall in the category of 120 days and more, are grouped together and assessed. During the evaluation of recoverability of these amounts receivable it became apparent that the full amount will be recoverable for the respective debtors. The fair value is thus equal to the full amount receivable as at year end.

The recoverable amount of the debtors is equal to the fair value.

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

Receivables past due but not impaired

Receivables are all considered for impairment. At 31 March 2016, R22,228,229 (2015: R 25,853,846) were past due but not impaired, whereas for the economic entity it was R19,772,756 (2015: R25,861,151).

Receivables impaired

As at 31 March 2016, receivables of R 154,759 (2015: R (433,931)) were (reversed) / impaired and provided for in the WRC, whereas for the economic entity it was R394,982 (2015: R434,022).

The amount of the provision was NIL as at 31 March 2016 (2015: R 154,759) for the WRC, whereas for the economic entity it was NIL (2015: R394,982).

The ageing of these receivables is as follows:

	Group		WRC	
	2016	2015 Restated*	2016	2015 Restated*
	R	R	R	R
Current – Gross	21,933,777	17,659,323	21,943,750	18,988,077
1 Month past due – Gross	10,299,329	16,405,681	10,370,332	16,405,681
2 Months past due – Gross	9,465,322	9,211,889	9,547,572	9,211,889
3 Months past due – Gross	8,105	638,563	2,310,325	391,035
	41,706,533	43,915,456	44,171,979	44,996,682
Current impaired amount				
1 Month past due – Impaired amount	-	-	-	-
2 Months past due – Impaired amount	-	-	-	-
3 Months past due – Impaired amount	-	(394,982)	-	(154,759)
	-	(394,982)	-	(154,759)

Reconciliation of provision for impairment losses on receivables

	Group		WRC	
	2016	2015 Restated*	2016	2015 Restated*
	R	R	R	R
Opening balance	394,982	829,004	154,759	588,690
Provision for impairment	(394,982)	(434,022)	(154,759)	(433,931)
	-	394,982	-	154,759

The movement in the provision for impaired receivables are included in operating expenses in surplus or deficit. Receivables are generally written off when there is no expectation of recovery.

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

6. Cash and cash equivalents

	Group		WRC	
	2016	2015 Restated*	2016	2015 Restated*
	R	R	R	R
Cash and cash equivalents consist of:				
Cash on hand	2,619	875	2,619	875
Bank balances	147,754,099	109,871,391	143,215,500	106,903,970
Short-term deposits	69,307,037	64,070,181	69,307,037	64,070,182
	217,063,755	173,942,447	212,525,156	170,975,027

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

Management considers that all of the above cash and cash equivalents categories are of good quality by reference to external credit ratings. The maximum exposure to credit risk at the reporting date is the fair value of each class of cash and cash equivalents mentioned above. The fair value approximates the carrying amount of the balances.

All cash and cash equivalents held by the entity are available for use. The cash and cash equivalents are not pledged as security for financial liabilities.

Financial assets at fair value

The entity 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.

Fair value hierarchy of financial assets at fair value

For financial assets recognised at fair value, disclosure is required of a fair value hierarchy which reflects the significance of the inputs used to make the measurements. The fair value hierarchy have the following levels:

- Level 1 represents those assets which are measured using unadjusted quoted prices in active markets for identical assets.

- Level 2 applies inputs other than quoted prices that are observable for the assets either directly (i.e. as prices) or indirectly (i.e. derived from prices).
- Level 3 applies inputs which are not based on observable market data.

There were no significant transfers into or out of level 1, 2 or 3 for the years presented.

	Group		WRC	
	2016	2015 Restated*	2016	2015 Restated*
	R	R	R	R
Level 2				
Cash and cash equivalents	217,063,755	173,942,447	212,525,156	170,975,027

7. Property, plant and equipment

	2016			2015		
	Cost	Accumulated depreciation and accumulated impairment	Carrying value	Cost	Accumulated depreciation and accumulated impairment	Carrying value
	R	R	R	R	R	R
Group						
Buildings	8,691,522	(7,695,614)	995,908	8,691,522	(7,197,661)	1,493,861
Furniture and fixtures	1,575,930	(580,332)	995,598	1,414,971	(494,498)	920,473
Motor vehicles	300,391	(101,696)	198,695	369,366	(69,580)	299,786
Office equipment	826,906	(611,619)	215,287	823,352	(514,054)	309,298
IT equipment	3,729,981	(1,589,158)	2,140,823	4,103,298	(1,647,384)	2,455,914
Total	15,124,730	(10,578,419)	4,546,311	15,402,509	(9,923,177)	5,479,332

	2016			2015		
	Cost	Accumulated depreciation and accumulated impairment	Carrying value	Cost	Accumulated depreciation and accumulated impairment	Carrying value
	R	R	R	R	R	R
WRC						
Furniture and fixtures	1,575,930	(580,332)	995,598	1,414,971	(494,498)	920,473
Motor vehicles	300,391	(101,696)	198,695	369,366	(69,580)	299,786
Office equipment	826,906	(611,619)	215,287	823,352	(514,054)	309,298
IT equipment	3,729,981	(1,589,158)	2,140,823	4,103,298	(1,647,384)	2,455,914
Total	6,433,208	(2,882,805)	3,550,403	6,710,987	(2,725,516)	3,985,471

Reconciliation of property, plant and equipment

	Opening balance	Additions	Disposals	Depreciation	Impairment loss	Total
	R	R	R	R	R	R
Group – 2016						
Buildings	1,493,861	-	-	(497,953)	-	995,908
Furniture and fixtures	920,473	168,286	-	(88,334)	(4,827)	995,598
Motor vehicles	299,786	-	-	(90,279)	(10,812)	198,695
Office equipment	309,298	4,553	-	(98,191)	(373)	215,287
IT equipment	2,455,914	293,550	(41,549)	(565,843)	(1,248)	2,140,824
	5,479,332	466,389	(41,549)	(1,340,600)	(17,260)	4,546,312

	Opening balance	Additions	Disposals	Depreciation	Impairment loss	Total
	R	R	R	R	R	R
Group – 2015						
Buildings	1,991,814	-	-	-	(497,953)	1,493,861
Furniture and fixtures	935,562	143,739	(102,659)	22,127	(78,296)	920,473
Motor vehicles	313,117	-	-	-	(13,331)	299,786
Office equipment	441,365	12,647	(3,361)	(42,748)	(98,605)	309,298
IT equipment	307,487	2,436,375	(19,792)	20,621	(288,776)	2,455,915
	3,989,345	2,592,761	(125,812)	-	(976,961)	5,479,333

Reconciliation of property, plant and equipment

	Opening balance	Additions	Disposals	Depreciation	Impairment loss	Total
	R	R	R	R	R	R
WRC – 2016						
Furniture and fixtures	920,473	168,286	-	(88,334)	(4,827)	995,598
Motor vehicles	299,786	-	-	(90,279)	(10,812)	198,695
Office equipment	309,298	4,553	-	(98,191)	(373)	215,287
IT equipment	2,455,914	293,550	(41,549)	(565,843)	(1,248)	2,140,824
	3,985,471	466,389	(41,549)	(842,647)	(17,260)	3,550,404

	Opening balance	Additions	Disposals	Depreciation	Impairment loss	Total
	R	R	R	R	R	R
WRC – 2015						
Furniture and fixtures	935,562	143,739	(102,659)	22,127	(78,296)	920,473
Motor vehicles	313,117	-	-	-	(13,331)	299,786
Office equipment	441,365	12,647	(3,361)	(42,748)	(98,605)	309,298
IT equipment	307,487	2,436,375	(19,792)	20,621	(288,776)	2,455,915
	1,997,531	2,592,761	(125,812)	-	(479,008)	3,985,472

Pledged as security

None of the assets were or are pledged as security.

Assets subject to finance lease

	Group		WRC	
	2016	2015 Restated*	2016	2015 Restated*
	R	R	R	R
Office equipment	402,847	402,847	402,847	402,847
IT equipment	230,284	626,205	230,284	626,205
	633,131	1,029,052	633,131	1,029,052

Details of valuation

The effective date of the valuation was 31 March 2016. The valuation was performed by an independent valuer, Barry Peter Richardson, of Onyx Valuation Services on 29 April 2016. Barry Peter Richardson is registered as a Professional Valuer with the South African Council for the Property Valuers Profession. Onyx Valuation Services is not connected to the entity and have recent experience in location and category of the property concerned. Barry Peter Richardson has no present or contemplated interest in this entity which would affect the statements or values contained in the valuation report. The valuation was therefore undertaken on a completely independent basis.

The property has been valued at R29,800,000 (2015: R31,000,000). The valuation is based on open market value for existing use.

The market value of the property was determined by using the income capitalisation method of valuation. This comparative approach considers income and expense data relating to the property being valued and estimates the value through a capitalisation process. Capitalisation relates income (the expected net future income flow generated by the property) into a value estimate of the property by considering yields or discount rates.

Other information

	Group		WRC	
	2016	2015 Restated*	2016	2015 Restated*
	R	R	R	R
Property, plant and equipment fully depreciated and still in use (Gross carrying amount)				
Furniture	17,098	1,938	17,098	1,938
Office Equipment	10,370	2,417	10,370	2,417
Computer Equipment	1,476,865	510,146	1,476,865	510,146
	1,504,333	514,501	1,504,333	514,501
Details of properties				
Erf 706 Rietfontein (Pty) Ltd				
Purchase price	615,855	615,855	-	-
Additions since purchase or valuation	8,075,667	8,075,667	-	-
	8,691,522	8,691,522	-	-

A register containing the information required by the PFMA is available for inspection at the registered office of the economic entity.

8. Intangible assets

	2016			2015		
	Cost	Accumulated amortisation and accumulated impairment	Carrying value	Cost	Accumulated amortisation and accumulated impairment	Carrying value
	R	R	R	R	R	R
Group						
Computer software, other	4,217,302	(2,502,284)	1,715,018	4,027,075	(2,094,701)	1,932,374

WRC

Computer software, other	4,217,302	(2,502,284)	1,715,018	4,027,075	(2,094,701)	1,932,374
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Reconciliation of intangible assets

	Opening balance	Additions	Amortisation	Total
	R	R	R	R
Group – 2016				
Computer software, other	1,932,373	190,227	(407,582)	1,715,018

Group – 2015

Computer software, other	2,275,536	55,099	(398,262)	1,932,373
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WRC – 2016

Computer software, other	1,932,373	190,227	(407,582)	1,715,018
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WRC – 2015

Computer software, other	2,275,536	55,099	(398,262)	1,932,373
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Pledged as security

None of the intangible assets are pledged as security.

9. Investment in wholly controlled entity

Name of company

An ordinary share in Erf 706 Rietfontein (Pty) Ltd (100% holding)

WRC	
Carrying amount 2016	Carrying amount 2015
R	R
755,939	755,939

The carrying amounts of controlled entity are shown net of impairment losses.

The WRC holds 100% of the ordinary shares in Erf 706 Rietfontein (Pty) Ltd, a property company. Erf 706 Rietfontein (Pty) Ltd owns one property which is mainly occupied by the WRC and disclosed in note 7.

Controlled entity pledged as security

The investment is not pledged as security.

10. Other financial assets

Designated at fair value

Old Mutual: Wealth life wrapped investment

Momentum: Flexible investment option

Group		WRC	
2016	2015 Restated*	2016	2015 Restated*
R	R	R	R
3,517,031	2,902,660	3,517,031	2,902,660
10,606,885	9,838,412	10,606,885	9,838,412
14,123,916	12,741,072	14,123,916	12,741,072
14,123,916	12,741,072	14,123,916	12,741,072

Non-current assets

Designated at fair value

Financial assets at fair value

The economic entity 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.

Fair value hierarchy of financial assets at fair value

For financial assets recognised at fair value, disclosure is required of a fair value hierarchy which reflects the

- Level 1 represents those assets which are measured using unadjusted quoted prices in active markets for identical assets.
- Level 2 applies inputs other than quoted prices that are observable for the assets either directly (i.e. as prices) or indirectly (i.e. derived from prices).
- Level 3 applies inputs which are not based on observable market data.

The fair value hierarchy have the following levels:

	Group		WRC	
	2016	2015 Restated*	2016	2015 Restated*
	R	R	R	R
Level 2				
Other financial assets	14,123,916	12,741,072	14,123,916	12,741,072

There were no significant transfers into or out of level 1, 2 or 3 for the years presented.

11. Finance lease obligation

	Group		WRC	
	2016	2015 Restated*	2016	2015 Restated*
	R	R	R	R
Minimum lease payments due				
- within one year	173,366	173,865	173,366	173,865
- in second to fifth year inclusive	18,898	132,282	18,898	132,282
	192,264	306,147	192,264	306,147
less: future finance charges	(12,787)	(37,261)	(12,787)	(37,261)
Present value of minimum lease payments	179,477	268,886	179,477	268,886
Present value of minimum lease payments due				
- within one year	160,913	147,755	160,913	147,755
- in second to fifth year inclusive	18,564	121,131	18,564	121,131
	179,477	268,886	179,477	268,886
Non-current liabilities	18,564	121,131	18,564	121,131
Current liabilities	160,913	147,755	160,913	147,755
	179,477	268,886	179,477	268,886

It is the economic entity's policy to lease certain equipment under finance leases.

The average lease term is 3 years and the average effective borrowing rate is 13% (2015: 13%).

Interest rates are fixed at the contract date. All leases have fixed repayments and no arrangements have been entered into for contingent rent.

Defaults and breaches

The entity did not default on any interest or capital portions on any of the finance leases. None of the finance leases were re-negotiated during the year under review.

12. Payables

	Group		WRC	
	2016	2015 Restated*	2016	2015 Restated*
	R	R	R	R
Payables from non-exchange transactions				
Income received in advance	151,360,258	97,791,331	151,360,258	97,791,331
Payables from exchange transactions				
Trade payables	20,222,065	31,908,881	20,222,066	31,888,735
Accruals	3,741,373	3,380,111	3,741,373	3,380,111
Deposits received	18,042	18,042	-	-
	175,341,738	133,098,365	175,323,698	133,060,178

All the payables as reflected above represent payables from exchange transactions, except for Income received in advance which represents payables from non-exchange transactions.

The entity did not default on interest or capital on any trade and other payables. None of the items attached to the trade and other payables were re-negotiated during the period under review.

The maximum exposure to credit risk at the reporting date is the fair value of the payables above. The fair value of the payables approximates the carrying amount of the balances due to their short-term maturity.

13. Accruals – leave and bonus

Reconciliation of accruals – leave and bonus

	Opening balance	Additions	Utilised	Payments	Remeasure- ment	Total
	R	R	R	R	R	R
Group – 2016						
Accruals for leave	3,426,754	819,790	(505,542)	(311,993)	1,308,619	4,737,628
Accruals for bonuses	221,887	15,862	-	(359,040)	135,273	13,982
	3,648,641	835,652	(505,542)	(671,033)	1,443,892	4,751,610
	Opening balance	Additions	Utilised	Payments	Remeasure- ment	Total
	R	R	R	R	R	R
Group – 2015						
Accruals for leave	3,371,244	555,249	(103,906)	(709,050)	313,217	3,426,754
Accruals for bonuses	228,831	657,600	-	(664,544)	-	221,887
	3,600,075	1,212,849	(103,906)	(1,373,594)	313,217	3,648,641

WRC – 2016

	Opening balance R	Additions R	Utilised R	Payments R	Remeasure- ment R	Total R
Accruals for leave	3,426,754	819,790	(505,542)	(311,993)	1,308,619	4,737,628
Accruals for bonuses	221,887	15,862	-	(359,040)	135,273	13,982
	3,648,641	835,652	(505,542)	(671,033)	1,443,892	4,751,610

WRC – 2015

	Opening balance R	Additions R	Utilised R	Payments R	Remeasure- ment R	Total R
Accruals for leave	3,371,244	555,249	(103,906)	(709,050)	313,217	3,426,754
Accruals for bonuses	228,831	657,600	-	(664,544)	-	221,887
	3,600,075	1,212,849	(103,906)	(1,373,594)	313,217	3,648,641

Accruals are made for possible leave that will be taken or paid out in cash. This is based on the number of days accumulated at the reporting date.

Accruals are made for the payment of service bonuses which are paid to employees on their respective birthdays.

There are uncertainties regarding the amount and timing of the cash outflows relating to the accrual for leave. Leave days may be accumulated, and thus there is uncertainty about the amount of leave days that will be taken in the next 12 months and also what the cost of the leave days taken will amount to due to possible increases in salaries in the next 12 months. Accumulated leave days may be paid out in cash in terms of the policy of the WRC. There is, however, uncertainty regarding how many employees would request a leave pay-out (due to possible resignations or due to accumulated leave reaching the upper limit before capitalisation is required). The cost of payout will further be affected by possible increases in salaries in the next 12 months.

There are no uncertainties regarding the timing of the cash outflows relating to the accrual for bonuses due to the fact that the WRC pays employees a service bonus in the month of their respective birthdays as stipulated in the policy. There are uncertainties regarding the amount of the cash outflows due to possible increases in salaries in the next 12 months. There is no expected reimbursement in respect of these provisions for leave and bonus.

14. Employee benefit obligations

Medical aid scheme

Defined benefit plan:

The WRC has made provision for a medical aid scheme covering retired employees and active employees before 1 April 2008. These funds are actuarially valued at intervals of not more than three years using the projected unit credit method. The Scheme was last actuarially valued at 31 March 2016. At that time the reporting actuary certified that the vested liability for continuation members will fluctuate depending on mortality rates 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 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 pro actively managed represents a significant systematic 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 closed the subsidy/benefit to new recruits to the WRC as of 1 of April 2008.
- The WRC employed the professional services of an independent consultant and actuary to value the quantum of the liability 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 through an insurance cover administered by Momentum Group Limited.

The amounts recognised in the statement of financial position are as follows:

	Group		WRC	
	2016	2015 Restated*	2016	2015 Restated*
	R	R	R	R
Carrying value				
Present value of the defined benefit obligation-wholly unfunded	(32,643,734)	(29,466,200)	(32,643,734)	(29,466,200)
Present value of the defined benefit obligation-wholly funded	(210,266)	(4,502,615)	(210,266)	(4,502,615)
Fair value of plan assets	32,643,734	29,466,200	32,643,734	29,466,200
Employee benefit obligation recognised	(210,266)	(4,502,615)	(210,266)	(4,502,615)
Movement for the year – medical aid fund				
Opening balance	4,502,615	4,008,106	4,502,615	4,008,106
Benefits paid	(2,553,263)	-	(2,553,263)	-
Net expense recognised in the statement of financial performance	(1,739,086)	494,509	(1,739,086)	494,509
	210,266	4,502,615	210,266	4,502,615

Net expense recognised in the statement of financial performance – medical aid fund:

	Group		WRC	
	2016	2015 Restated*	2016	2015 Restated*
	R	R	R	R
Current service cost	227,484	238,310	227,484	238,310
Interest cost	(431,346)	261,159	(431,346)	261,159
Actuarial (gains) losses	(1,535,224)	(4,960)	(1,535,224)	(4,960)
	(1,739,086)	494,509	(1,739,086)	494,509

Reconciliation of the obligation

	Group		WRC	
	2016	2015 Restated*	2016	2015 Restated*
	R	R	R	R
Opening balance	33,968,815	31,511,745	33,968,815	31,511,745
Current service cost	227,484	238,310	227,484	238,310
Interest cost	2,583,654	2,641,201	2,583,654	2,641,201
Benefits paid	(2,215,381)	(2,022,300)	(2,215,381)	(2,022,300)
Actuarial gains	(1,710,572)	1,599,859	(1,710,572)	1,599,859
	32,854,000	33,968,815	32,854,000	33,968,815

Reconciliation of the plan assets

	Group		WRC	
	2016	2015 Restated*	2016	2015 Restated*
	R	R	R	R
Opening balance	29,466,200	27,503,639	29,466,200	27,503,639
Expected return	3,015,000	2,380,042	3,015,000	2,380,042
Actuarial gains (losses)	(175,348)	1,604,819	(175,348)	1,604,819
Contributions paid	2,553,263	-	2,553,263	-
Benefits paid	(2,215,381)	(2,022,300)	(2,215,381)	(2,022,300)
	32,643,734	29,466,200	32,643,734	29,466,200

Key assumptions used

Assumptions used on last evaluation as at 31 March 2016:

	Group		WRC	
	2016	2015 Restated*	2016	2015 Restated*
	R	R	R	R
Average retirement age	65	65	65	65
Discount rates used	Yield Curve	7.86%	Yield Curve	7.86%
Expected rate of return on assets	Yield Curve	7.05%	Yield Curve	7.05%
Expected rate of return on reimbursement rights		0.75%		0.75%
Medical aid contribution inflation (Medical cost trend rates)	CPI + 1%	7.86%	CPI + 1%	7.86%
Expected increase in salaries		90.00%		90.00%
Proportion of employees opting for early retirement	0%	100.00%	0%	100.00%
Consumer price inflation	Difference between nominal and yield curves		Difference between nominal and yield curves	
Net effective discount rate	Yield curve based		Yield curve based	

The normal and average retirement age for all active employees was assumed to be 65 years. This assumption was made since there are only 4 active members left and they are close to the retirement age of 65. Withdrawal rates or early retirement does not have a significant impact due to the fact that most members are either very close to retirement or have already retired.

The expected rate of return on assets is based on the discount rate. The nominal and real zero curves as at 31 March 2016 supplied by the JSE are used to determine the discount rates and CPI assumptions at each relevant time period. This represents a change in the methodology used from a point estimate used in the prior year, in order to present a more accurate depiction of the liability. The previous methodology used one discount rate to discount all future liabilities whereas the yield curves acknowledges that the discount rate will vary depending on the period.

The Medical Aid Contribution Inflation rate was set with reference to the past relationship between the (yield curve based) discount rate for each relevant time period and the (yield curve based) Medical Aid Contribution Inflation for each relevant time period. Medical cost trends (for example an increase in utilisation) are included in Medical Aid Contribution Inflation.

Salary increases were not considered during the evaluation due to the fact that medical aid contributions are not impacted by salaries in any way, which will result in having no impact on the valuation of the liability.

The next contribution rate increase is assumed to occur at 1 January 2017. The WRC expects to contribute R 2,435,000 to the defined benefit plan in the following financial year.

Sensitivity analysis on accrued liability

The assumptions made in the liability calculations are best estimates of future levels of the various factors. These factors in reality may turn out to be different than the assumed values.

The net discount rate and the mortality rate are the two main variables impacting valuation results. Since most members are either very close to retirement or already retired, withdrawal rates or early retirement does not have a significant impact.

In order to illustrate the sensitivity of the results to the changes in certain key variables, the liability figure has been recalculated to show the effect of:

- A 20% increase and decrease in the assumed level of mortality;
- A 1% increase and decrease in the medical aid inflation.

This sensitivity analysis is the same for the economic entity and the WRC.

Assumption	Change	Liability	% Change
Central assumptions		32,854,000	
Mortality rate	20%	30,136,000	(8.27%)
Mortality rate	(20%)	36,357,000	10.66%
Medical aid inflation	1%	35,877,000	9.20%
Medical aid inflation	(1%)	30,209,000	(8.05%)

The following table shows the sensitivity of the interest cost and current service cost:

	Change	Interest cost	Service cost	Total	% Change
		R	R	R	
Assumption					
Central assumptions		3,249,000	206,000	3,455,000	
Mortality rate	20%	2,971,000	189,000	3,160,000	(8.54%)
Mortality rate	(20%)	3,609,000	228,000	3,837,000	11.06%
Medical aid inflation	1%	3,560,000	232,000	3,792,000	9.75%
Medical aid inflation	(1%)	2,978,000	184,000	3,162,000	(8.48%)

The analysis above shows that past service liability is most sensitive to a change in the mortality rate which is most significant at post-retirement ages.

The analysis above shows that the sensitivity of the interest cost and the service cost is similar to the sensitivity of the past service liability.

Other assumptions

Mortality Rates

Mortality before retirement has been based on the SA 85-90 mortality tables. These are the most commonly used tables in the industry. Mortality post-employment (for pensioners) has been based on the PA (90) ultimate mortality tables.

Spouses and Dependents

It was assumed that the marital status of members who are currently married will remain the same up to retirement. It was also assumed that 90% of all single employees would be married at retirement with no dependent children. Where necessary it was assumed that female spouses would be five years younger than their male spouses at retirement.

Withdrawal

A table setting out the assumed rates of withdrawal from service is set out below:

	Withdrawal Rate – Males	Withdrawal Rate – Females
Age Band		
20 - 24	16.00%	24.00%
25 - 29	12.00%	18.00%
30 - 34	10.00%	15.00%
35 - 39	8.00%	10.00%
40 - 44	6.00%	6.00%
45 - 49	4.00%	4.00%
50 - 54	2.00%	2.00%

Amounts for the current and previous four years for the economic entity and the WRC are as follows:

	2016	2015	2014	2013	2012
	R	R	R	R	R
Defined benefit obligation	(32,854,000)	(33,968,815)	(31,511,745)	(33,198,862)	(34,879,398)
Plan assets	32,643,734	29,466,200	27,503,639	28,395,122	31,318,222
Surplus (deficit)	(1,739,086)	494,509	(795,634)	3,037,565	(556,472)

15. Investment revenue

	Group		WRC	
	2016	2015 Restated*	2016	2015 Restated*
	R	R	R	R
Dividend revenue				
Listed financial assets	66,867	55,123	66,867	55,123
Interest revenue				
Listed financial assets	60,256	42,456	60,256	42,456
Loans to wholly controlled entity	-	-	3,775,810	3,383,953
Bank	8,681,034	6,161,372	8,673,046	6,157,648
Employee benefit obligations	431,346	-	431,346	-
	9,172,636	6,203,828	12,940,458	9,584,057
	9,239,503	6,258,951	13,007,325	9,639,180

16. Revenue

	Group		WRC	
	2016	2015 Restated*	2016	2015 Restated*
	R	R	R	R
Leverage income	60,964,552	52,390,961	60,964,552	52,390,961
Water research levies	200,031,249	198,719,161	200,031,249	198,719,161
Other income	555,124	1,267,747	555,124	1,267,747
Rental received	236,884	246,567	-	-
Recovery of expenditure	11,097	10,181	-	-
	261,798,906	252,634,617	261,550,925	252,377,869

Revenue classification

All the revenue as reflected above represent revenue from exchange transactions, except for Water research levies and Leverage income which represent revenue from non-exchange transactions.

Investment revenue was disclosed separately in note 15.

17. Employee related costs

	Group		WRC	
	2016	2015 Restated*	2016	2015 Restated*
	R	R	R	R
Basic salary	45,812,933	39,094,820	45,812,933	39,094,820
Merit bonus	2,917,647	2,301,885	2,917,647	2,301,885
Workmen's compensation – Department of Labour	216,569	151,743	216,569	151,743
Skills Development Levies	465,267	368,799	465,267	368,799
Other employee related costs	966,818	2,866,205	966,818	2,866,205
	50,379,234	44,783,452	50,379,234	44,783,452

18. Finance costs

	Group		WRC	
	2016	2015 Restated*	2016	2015 Restated*
	R	R	R	R
Finance leases	34,113	65,034	34,113	65,034
Late payment	(1,835)	1,835	(1,835)	1,835
Employee benefit obligations	-	261,159	-	261,159
	32,278	328,028	32,278	328,028

19. General expenses

		Group		WRC	
		2016	2015 Restated*	2016	2015 Restated*
		R	R	R	R
Auditors remuneration	24	1,510,738	2,003,087	1,510,738	2,003,087
Bank charges		90,039	89,978	86,991	86,182
Consumables		9,897	5,498	9,897	5,498
Discretionary fund		300	5,296	300	5,296
Entertainment		351,581	290,963	351,581	290,963
IT expenses		1,784,156	1,276,004	1,784,156	1,276,004
Insurance		63,291	52,966	26,263	21,317
Leadership development		183,742	323,244	183,742	323,244
Motor vehicle expenses		22,556	16,097	22,556	16,097
Postage and courier		153,211	120,526	153,211	120,526
Professional fees		1,841,660	1,731,705	1,829,660	1,714,905
Promotions		409,327	585,377	409,327	585,377
Recruitment costs		595,290	213,620	595,290	213,620
Staff welfare		46,516	29,416	46,516	29,416
Stationery and other purchases		198,375	168,055	198,375	168,055
Subscriptions and membership fees		395,305	611,152	395,305	611,152
Telephone and fax		831,936	598,976	831,936	598,976
Training		422,303	432,003	422,303	432,003
Travel – local		3,733,763	3,535,281	3,733,763	3,535,281
Travel – overseas		1,220,496	1,088,405	1,220,496	1,088,405
Utilities		1,053,001	853,058	404,612	321,615
		14,917,483	14,030,707	14,217,018	13,447,019

20. Research and development cost

		Group		WRC	
		2016	2015 Restated*	2016	2015 Restated*
		R	R	R	R
Research and development costs		194,564,089	168,925,149	194,564,089	168,925,149
Printing and publishing		6,226,332	7,268,184	6,226,332	7,268,184
Patent registrations		256,972	327,978	256,972	327,978
		201,047,393	176,521,311	201,047,393	176,521,311

21. Operating surplus

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

	Group		WRC	
	2016	2015 Restated*	2016	2015 Restated*
	R	R	R	R
Operating lease charges				
Premises				
- Contractual amounts	310,992	254,727	2,532,367	2,074,208
Equipment				
- Contractual amounts	74,179	57,763	74,179	57,763
	385,171	312,490	2,606,546	2,131,971
Loss on sale/write-off of property, plant and equipment	3,690	(107,979)	3,690	(107,979)
Amortisation on intangible assets	407,583	398,261	407,583	398,261
Depreciation on property, plant and equipment	1,357,861	976,962	859,909	479,009
Employee costs	50,379,234	44,783,452	50,379,234	44,783,452
Research and development costs	201,047,393	176,521,311	201,047,393	176,521,311

22. Fair value adjustments

	Group		WRC	
	2016	2015 Restated*	2016	2015 Restated*
	R	R	R	R
Other financial assets	1,380,116	1,170,795	1,380,116	1,170,795

23. Taxation

No provision has been made for taxation as the economic entity is exempt from income tax in terms of Section 10(1)(cA) (i) of the Income Tax Act. Refer to note 11: Deferred tax for the disclosures regarding Deferred Tax.

24. Auditors' remuneration

	Group		WRC	
	2016	2015 Restated*	2016	2015 Restated*
	R	R	R	R
Fees – external auditors	1,139,831	1,150,774	1,139,831	1,150,774
Fees – internal auditors	370,908	852,313	370,908	852,313
	1,510,739	2,003,087	1,510,739	2,003,087

25. Cash generated from operations

	Group		WRC	
	2016	2015 Restated*	2016	2015 Restated*
	R	R	R	R
Surplus	2,452,435	21,724,465	5,381,686	24,264,471
Adjustments for:				
Depreciation, amortisation and impairment	1,765,444	1,375,223	1,267,491	877,270
(Loss) gain on sale of assets and liabilities	(3,690)	107,979	(3,690)	107,979
Fair value adjustments	(1,380,116)	(1,170,795)	(1,380,116)	(1,170,795)
Finance costs – Finance leases	34,113	65,034	34,113	65,034
Debt impairment	(13,190)	(434,022)	(13,190)	(433,929)
Movements in operating lease assets and accruals	6,388	(32,283)	-	(207,175)
Movements in retirement benefit assets and liabilities	861,656	494,509	861,656	494,509
Movements in provisions	1,102,969	48,566	1,102,969	48,566
Non-cash movement of finance lease	(179,943)	-	(179,943)	-
Foreign exchange loss on foreign bank accounts	(3,302,040)	(1,594,190)	(3,302,040)	(1,594,190)
Other non-cash movement in financial assets	(2,728)	15,111	(2,728)	15,111
Interest on intercompany loans	-	-	(3,775,810)	(3,383,953)
Changes in working capital:				
Receivables	1,827,130	(12,636,766)	683,133	(14,028,378)
Payables	42,243,373	22,652,360	42,263,520	23,863,649
VAT	116,429	(22,699)	-	-
	45,528,230	30,592,492	42,937,051	28,918,169

26. Commitments

	Group		WRC	
	2016	2015 Restated*	2016	2015 Restated*
	R	R	R	R
Commitments				
- General	115,785,851	3,538,843	115,785,851	3,538,843
Commitments				
- Research projects	353,226,736	330,613,466	353,226,736	330,613,466
Total commitments				
General commitments	115,785,851	3,538,843	115,785,851	3,538,843
Research projects commitments	353,226,736	330,613,466	353,226,736	330,613,466
	469,012,587	334,152,309	469,012,587	334,152,309

General commitments relate to contractual obligations that the WRC entered into before 31 March 2016. Included in the general commitment is R 95,074,223 related to the contractual obligation of the WRC in respect of the 10-year lease agreement associated with the re-location of the WRC offices to the Lynnwood premises. It further includes associated contractual obligations in respect of space planning, supply and delivery of office furniture and interior décor, printing services, rental of computer equipment and rental of printers as a result of contracts being entered into by the WRC before 31 March 2016.

At year-end research project commitments comprise of projects approved by the executive management and include those for which contracts have been signed at year-end and those that at year-end are in the process of being signed by all contracting parties.

As at 31 March 2016 commitments relating to research projects with signed contracts amounted to R312,796,848 (2015: R214,669,470) and projects for which contracts are in the process of signing amount to R40,429,888 (2015: R115,943,996).

27. Contingencies

No contingencies existed at year end of which management was aware.

28. Related parties

Relationships

Controlling entity

- Erf 706 Rietfontein (Pty) Ltd

Refer to note 9

Related party balances

Loan accounts – Owing (to) by related parties

Erf 706 Rietfontein (Pty) Ltd

27,298,991 24,543,181

Amounts included in Receivables (Payables) regarding related parties

Erf 706 Rietfontein (Pty) Ltd – Receivables

2,563,678 1,410,626

Related party transactions

Interest paid to (received from) related parties

Erf 706 Rietfontein (Pty) Ltd

(3,775,810) (3,383,953)

Rent paid to (received from) related parties

Erf 706 Rietfontein (Pty) Ltd

2,532,367 2,281,383

Municipal expenses paid to (received from) related parties

Erf 706 Rietfontein (Pty) Ltd

404,612 321,614

Compensation to directors and other key management, refer to note 28.

Department of Water and Sanitation

WRC derives its main source of income (Water research levy) from the Department of Water and Sanitation in terms of the Water Research Act.

The WRC and the Department of Water and Sanitation reports to the Minister of Water and Sanitation as their Executive Authority.

29. Emoluments of Executive Management and Board of Directors (Non-executive)

The emoluments is the same for the economic entity and the WRC.

	Group		WRC	
	2016	2015 Restated*	2016	2015 Restated*
	R	R	R	R
Total emoluments				
Fees for services as directors	409,608	286,731	409,608	286,731
Basic salary	14,209,157	10,947,011	14,209,157	10,947,011
Bonuses and performance payments	1,216,739	1,007,239	1,216,739	1,007,239
Travel allowance	581,000	313,002	581,000	313,002
	16,416,504	12,553,983	16,416,504	12,553,983

	Basic salary	Bonuses and performance payments	Travel allowance	Total
	R	R	R	R
Executive – 2016				
Mr DP Naidoo – CEO	2,486,684	280,219	-	2,766,903
Dr G Backeberg	1,380,931	197,140	-	1,578,071
Mr JN Bhagwan	1,518,343	220,077	156,000	1,894,420
Ms E Karar	1,572,349	141,479	84,000	1,797,828
Ms R Lutchman	1,632,916	199,763	-	1,832,679
Dr I Jacobs: Resigned in December 2015	1,021,859	-	-	1,021,859
Dr MS Liphadzi	1,607,495	178,061	96,000	1,881,556
Mr F Ismail – CFO: Appointed in September 2015	821,441	-	245,000	1,066,441
Dr M Msibi: Appointed in October 2015	895,600	-	-	895,600
Dr V Naidoo: Appointed in October 2015	747,651	-	-	747,651
Dr S Adams: Appointed in December 2015	523,888	-	-	523,888
	14,209,157	1,216,739	581,000	16,006,896

Basic salary	Bonuses and performance payments	Travel allowance	Total
R	R	R	R
1,934,571	174,296	-	2,108,867
1,378,755	86,467	-	1,465,222
1,118,914	163,653	-	1,282,567
1,363,363	136,888	156,000	1,656,251
1,435,364	136,888	84,000	1,656,252
1,379,116	124,252	-	1,503,368
1,180,638	74,042	-	1,254,680
1,156,290	110,753	73,002	1,340,045
10,947,011	1,007,239	313,002	12,267,252

Executive – 2015

Mr DP Naidoo – CEO	1,934,571	174,296	-	2,108,867
Mr NB Patel – CFO	1,378,755	86,467	-	1,465,222
Dr G Backeberg	1,118,914	163,653	-	1,282,567
Mr JN Bhagwan	1,363,363	136,888	156,000	1,656,251
Ms E Karar	1,435,364	136,888	84,000	1,656,252
Ms R Lutchman	1,379,116	124,252	-	1,503,368
Dr I Jacobs	1,180,638	74,042	-	1,254,680
Dr MS Liphadzi	1,156,290	110,753	73,002	1,340,045
	10,947,011	1,007,239	313,002	12,267,252

Non-executive – 2016

Ms BG Schreiner – Chairperson	98,688	527	99,215
Prof TE Cloete	18,720	1,148	19,868
Mr G Mwiinga	37,440	1,855	39,295
Dr BCM Van Koppen	15,600	-	15,600
Mrs DN Ndaba – Vice chairperson	102,960	15,514	118,474
Mr AN Mhlongo	53,040	10,653	63,693
Dr NP Mjoli – Chairperson	18,368	375	18,743
Ms N Msezane	5,208	-	5,208
Dr NP Nala	5,208	-	5,208
Mr M Ndhlovu	1,736	-	1,736
Dr A Stroebe	3,472	-	3,472
Prof SV Nkomo	10,416	-	10,416
Dr M Makgae	3,472	-	3,472
Ms MK Mbonambi	5,208	-	5,208
	379,536	30,072	409,608

Non-executive – 2015

Ms BG Schreiner – Chairperson	53,456	3,031	56,487
Prof TE Cloete	21,840	2,260	24,100
Mr G Mwiinga	28,080	1,082	29,162
Dr BCM Van Koppen	40,560	-	40,560
Mrs DN Ndaba – Vice chairperson	71,760	15,152	86,912
Mr AN Mhlongo	40,560	8,950	49,510
	256,256	30,475	286,731

30. Financial instruments disclosure

Categories of financial instruments

Group – 2016

Financial assets

Other financial assets
Receivables
Cash and cash equivalents

At fair value	At amortised cost	Total
R	R	R
14,123,916	-	14,123,916
-	41,706,533	41,706,533
217,063,755	-	217,063,755
231,187,671	41,706,533	272,894,204

Financial liabilities

Payables
Finance lease obligation
Accruals – leave and bonus

At amortised cost	Total
R	R
175,341,738	175,341,738
179,477	179,477
4,751,610	4,751,610
180,272,825	180,272,825

Group – 2015

Financial assets

Other financial assets
Receivables
Cash and cash equivalents

At fair value	At amortised cost	Total
R	R	R
12,741,072	-	12,741,072
-	43,520,474	43,520,474
173,942,447	-	173,942,447
186,683,519	43,520,474	230,203,993

Financial liabilities

Payables
Finance lease obligation
Accruals – leave and bonus

At amortised cost	Total
R	R
133,098,365	133,098,365
268,886	268,886
3,648,641	3,648,641
137,015,892	137,015,892

WRC – 2016

Financial assets

Loans to wholly controlled entity
Other financial assets
Receivables
Cash and cash equivalents

At fair value	At amortised cost	Total
R	R	R
-	27,298,991	27,298,991
14,123,916	-	14,123,916
-	44,171,979	44,171,979
212,525,156	-	212,525,156
226,649,072	71,470,970	298,120,042

Financial liabilities

Payables
Finance lease obligation
Accruals – leave and bonus

At amortised cost	Total
R	R
175,323,698	175,323,698
179,477	179,477
4,751,610	4,751,610
180,254,785	180,254,785

WRC – 2015

Financial assets

Loans to wholly controlled entity
Other financial assets
Receivables
Cash and cash equivalents

At fair value	At amortised cost	Total
R	R	R
-	24,543,181	24,543,181
12,741,072	-	12,741,072
-	44,841,923	44,841,923
170,975,027	-	170,975,027
183,716,099	69,385,104	253,101,203

Financial liabilities

Payables
Finance lease obligation
Accruals – leave and bonus

At amortised cost	Total
R	R
133,060,178	133,060,178
268,886	268,886
3,648,641	3,648,641
136,977,705	136,977,705

31. Risk management

Liquidity risk

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

Less than 1 year	Between 1 and 2 years	Between 2 and 5 years	Over 5 years
R	R	R	R

Group

At 31 March 2016

Payables	175,341,738	-	-	-
Finance lease obligation	173,366	18,898	-	-

At 31 March 2015

Payables	133,098,365	-	-	-
Finance lease obligation	173,865	132,282	-	-

WRC

At 31 March 2016

Payables	175,323,698	-	-	-
Finance lease obligation	173,366	18,898	-	-

At 31 March 2015

Payables	133,060,178	-	-	-
Finance lease obligation	173,865	132,282	-	-

Interest rate risk

Due to the nature and extent of the economic entity's investments, the economic entity is not unduly exposed to interest rate risks.

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 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:

	Group		WRC	
	2016	2015 Restated*	2016	2015 Restated*
	R	R	R	R
Financial instrument				
Corporation for Public Deposits	69,307,036	64,070,181	69,307,036	64,070,181
Bank balances	147,754,099	109,871,391	143,215,500	106,903,970

These balances represent the maximum exposure to credit risk.

Foreign exchange risk

The economic entity does not hedge foreign accounts receivables, foreign accounts payables or derivative market instruments.

Foreign currency exposure at statement of financial position date

	Group		WRC	
	2016	2015 Restated*	2016	2015 Restated*
	R	R	R	R
Non-current assets				
Cash and cash equivalents, USD 2,049,558 (2015 : USD 1,119,558)	29,745,241	13,409,286	29,745,241	13,409,286
Cash and cash equivalents, € 535,985 (2015 : € 0)	8,660,154	-	8,660,154	-

Price risk

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

32. Prior period errors

Water Research Commission

Payables and Receivables

During the design and implementation of the enhanced controls and business processes the WRC identified reconciling items reflecting in the GRV accrual account that were not reversed upon invoice and payment of creditors. A prior period adjustment to Payables of R205,969 was required to correct the GRV accrual account.

During the process of implementing improved accounting controls in respect of leverage funded projects, discrepancies in the balances reflected in the Income Received in Advance Account, and the corresponding leverage income were also identified. This analysis included verification of the information and alignment to the underlying contracts as well as the expenditure for the contracts incurred in the prior years. Investigation of the contracts also resulted in the identification of a clause in respect of DST funded projects which stipulate that funds should be held in interest bearing accounts and that this interest should be used for either human capital development purposes, or for the purposes of the project. Retrospective adjustments were made to correct the Payables and Receivables amounting to R 2,160,942 and R 303,520 respectively of the comparative year.

The net effect of correcting these errors can be summarised as follows:

Statement of Financial Position items:

	R
Opening Accumulated Surplus or Deficit	(R 1,921,695)
Receivables	R 303,520
Payables	R 2,366,910

Statement of Financial Performance items:

Leverage income	(R 1,522,948)
Investment revenue	R 711,483
Research expenditure	(R 3,900)
General expenditure	R 66,630

Cash and cash equivalents

During the implementation of improved business processes and controls it was found that the bank balance denominated in US dollars was understated in the comparative period due to the impact of the valuation of the bank balance using the exchange rate as at year-end. A foreign exchange profit/loss was recognised in WRC's profit/loss in the comparative period instead of against the Income Received in Advance account.

Deposits were included as part of cash and cash equivalents in the prior financial years' financial statements. After further investigation, it was identified that these deposits do not represent highly liquid funds and that one of the deposits was not valid. A retrospective adjustment was made to correct this.

The net effect of correcting these errors can be summarised as follows:

Statement of Financial Position items:

	R
Cash and cash equivalents	(R 1756)
Receivables	R 800

Statement of Financial Performance items:

Foreign exchange profit/loss	(R 8,247)
Research expenditure	R 8,203
General expenditure	R 1,000

Property, plant and equipment

The accounting policy of the WRC indicates that leased assets should be depreciated over the lease term. In the prior financial year, instead of depreciating the assets over the lease term, the assets' useful lives were re-assessed and these were used during the depreciation calculation in contravention with the accounting policy. A retrospective adjustment was made to correct the balance of property, plant and equipment.

The net effect of correcting these errors can be summarised as follows:

Statement of Financial Position items:

	R
Opening Accumulated Surplus or Deficit	R 121,708
Property, plant and equipment	(R 227,825)

Statement of Financial Performance items:

Depreciation	R 106,116
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Intercompany transactions and balances

The WRC leases a portion of the Marumati Building and in accordance with the lease agreement the water and electricity cost incurred on the Marumati Building should be apportioned based on the portion of the building which is being utilised by the WRC. This contractual term was not complied with therefore during the 2014/2015 financial year, the transactions for a five-year lease period, 1 April 2010 to 31 March 2015 was investigated. This investigation led to a correction in respect of the recognition of municipal expenditure and the subsequent recovery of water and electricity.

During the 2015/2016 financial year it was identified that there was a pre-paid expenditure component in respect of the pre-paid electricity which was incorrectly recognised as an asset in the WRC's financials and that there were some accruals that were incorrectly dealt with in 2014/2015.

The necessary adjustments were made retrospectively in order to correct these remaining errors. These adjustments represent intercompany transactions between the WRC and Erf 706 Rietfontein (Pty) Ltd and are eliminated upon preparation of the consolidated financial statements. Although these adjustments are not material in nature, we adjusted all balances in order to ensure that the financial statements are substantiated with valid and accurate supporting documentation and this was disclosed as a prior period error. This is particularly important in light of the possible disposal of Erf 706 as more fully described under note 40.

The net effect of correcting these errors can be summarised as follows:

Statement of Financial Position items:

	R
Receivables	(R 349,167)
Payables	R 296,125

Statement of Financial Performance items:

General expenditure	R 53,042
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The overall impact of the above prior period errors in the Water Research Commission's separate financial statements can thus be summarised as follow:

Statement of Financial Position items:

	R
Receivables	(R 44,847)
Payables	R 2,663,035
Cash and cash equivalents	(R 1,756)
Opening Accumulated Surplus or Deficit	(R1,799,986)
Property, plant and equipment	(R 227,825)

Statement of Financial Performance items:

Leverage income	(R1,522,948)
Investment revenue	R 711,483
Foreign exchange profit/loss	(R 8,247)
General expenditure	R 120,673
Research and development expenditure	R 4,302
Depreciation	R 106,116

Water Research Commission and Subsidiary

The nature of the prior period errors for the Water Research Commission and Subsidiary (consolidated) is the same as for the Water Research Commission (separate) and Erf 706 Rietfontein (Pty) Ltd. During consolidation the financial results of the two entities are combined and all intercompany transactions and balances between the Water Research Commission and Erf 706 Rietfontein (Pty) Ltd are eliminated. The VAT on the intercompany transactions is payable to an external party, the South African Revenue Service. The impact of VAT on the transactions can therefore not be eliminated upon consolidation.

Intercompany transactions were incorrectly eliminated during the 2014/2015 financial year. This has been corrected during the elimination journals in the current year. The effect can be summarised as follows:

Statement of Financial Position items:

	R
Receivables	R 40,000
Payables	R 60,740

Statement of Financial Performance items

Revenue	(R 124,034)
General expenditure	(R 158,438)
Lease rentals on operating lease	R 181,732

The consolidation of the prior period errors of the Water Research Commission and Erf 706 Rietfontein (Pty) Ltd as per the separate financial statements and the elimination of all intercompany balances and transactions result in the following changes in respect to the prior period errors:

Statement of Financial Position items:

	R
Receivables	R 349,167
Payables	(R 296,125)
VAT	(R 8,830)

Statement of Financial Performance items:

General expenditure	(R 44,211)
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The total impact on the consolidated financial statements can thus be summarised as follows:

Statement of Financial Position items:

	R
Receivables	R 389,166
Payables	(R 235,384)
VAT	(R 8,830)

Statement of Financial Performance items:

Revenue	(R124,034)
General expenditure	(R 202,650)
Lease rentals on operating lease	R 181,732

The overall impact of the above corrections can be summarised as follows in respect of both the WRC and subsidiary (consolidated financial statements) and the WRC (separate financial statements).

Group	WRC
2015 Restated*	2015 Restated*
R	R

Statement of Financial Position

Receivables	344,319	(44,847)
Payables	2,427,651	2,663,035
Cash and cash equivalents	(1,756)	(1,756)
VAT	(8,830)	-
Opening Accumulated Surplus or Deficit	(1,799,986)	(1,799,986)
Property, plant and equipment	(227,825)	(227,825)

Statement of Financial Performance

Leverage income	(1,522,948)	(1,522,948)
Revenue	(124,034)	-
Investment revenue	711,483	711,483
Foreign exchange profit/ (loss)	(8,247)	(8,247)
General expenditure	(81,977)	120,673
Research and development expenditure	4,302	4,302
Lease rentals on operating lease	181,732	-
Depreciation	106,116	106,116

33. Comparative figures

Certain comparative figures have been reclassified.

Reclassifications were made within payables from exchange transactions. This was done in order to truly reflect the nature of the transactions.

Reclassifications were made between Receivables from exchange transactions to Payables from non exchange. This was done in order to truly reflect the nature of the transactions.

Reclassifications were made between general expenditure and research and development cost in order to truly reflect the nature of the transactions that relate to research and development.

The effects of the reclassification are as follows:

	Group	WRC
	2015 Restated*	2015 Restated*
	R	R
Statement of Financial Position		
Payables from non-exchange transactions	33,225	33,225
Receivables from exchange transactions	(33,225)	(33,225)

Statement of Financial Performance

General expenditure	(7,610,838)	(7,596,162)
Research and development cost	7,596,162	7,596,162
Repairs and maintenance	31,476	-
Administration and management fee	(16,800)	-

34. Change in estimate

Property, plant and equipment

The WRC has reassessed the useful lives of property, plant and equipment which resulted in certain asset's remaining useful lives to change as follows:

- Computer equipment from 3 - 7 years to 3 - 15 years
- Office Equipment from 3 - 35 years to 3 - 15 years
- Office Furniture from 10 - 40 years to 3 - 35 years
- Vehicles from 170 000 km to 5 years

The effect of the change in accounting estimate is a decrease in depreciation amounting to R73,025 for the current and future periods. This change in estimate is the same for the economic entity as for the WRC.

	Previously assessed useful life	Reassessed useful life	Financial impact on current and future depreciation
	R	R	R
Class			
Computer equipment	3 - 7 years	3 - 15 years	786
Office equipment	3 - 35 years	3 - 15 years	51
Furniture and Fittings	10 - 40 years	3 - 35 years	26
Vehicles	170 000 km	5 years	72,162
			73,025

35. Defined contribution plans

Medical fund scheme

Employee contributions

Group		WRC	
2016	2015 Restated*	2016	2015 Restated*
R	R	R	R
2,971,077	2,890,066	2,971,077	2,890,066

Defined contribution plan – Medical fund:

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). No plan assets are held by the entity to fund this obligation. The above contributions have been included as part of the personnel cost expense.

Pension and provident fund scheme

Employee contributions

Group		WRC	
2016	2015 Restated*	2016	2015 Restated*
R	R	R	R
4,803,713	4,553,248	4,803,713	4,553,248

Defined contribution plan – Pension and provident fund:

The WRC has pension and provident fund schemes covering all employees. Until 31 March 2005 all eligible employees were members of the defined benefit funds administered by ABSA Consultants and Actuaries. As at 1 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 any adverse market conditions. However, all pensioners remained entitled to their benefits in terms of the old dispensation. This afore-mentioned liability was outsourced to Old Mutual during the 2012/13 financial year. The above contributions have been included as part of the personnel cost expense.

36. Irregular expenditure

Opening balance
Add: Irregular Expenditure – current year
Less: Amounts condoned

Group		WRC	
2016	2015 Restated*	2016	2015 Restated*
R	R	R	R
7,982,437	4,789,759	7,982,437	4,789,759
8,554	3,192,678	8,554	3,192,678
(3,518,674)	-	(3,518,674)	-
4,472,317	7,982,437	4,472,317	7,982,437

Analysis of expenditure awaiting condonation per age classification

	Group		WRC	
	2016	2015 Restated*	2016	2015 Restated*
	R	R	R	R
Current year	8,554	3,192,678	8,554	3,192,678
Prior years	4,463,763	4,789,759	4,463,763	4,789,759
	4,472,317	7,982,437	4,472,317	7,982,437

Details of irregular expenditure for the year

	Group		WRC	
	2016	2015 Restated*	2016	2015 Restated*
	R	R	R	R
Incident				
Competitive bidding not followed for procurement of service below R1,000,000	-	687,852	-	687,852
The procurement process was not completely followed, no functional evaluation conducted, the lowest scoring bidder was selected without justifiable reasons	-	354,107	-	354,107
Bid awarded to bidder that did not score the highest points	-	1,915,619	-	1,915,619
Purchases of non-petty cash items in contravention of Treasury Regulation 31.2.6 and 31.2.7	-	5,260	-	5,260
Deviation not documented/ approved by the Accounting Authority or delegated official	-	229,840	-	229,840
Splitting of requirements to fit a threshold	8,554	-	8,554	-
	8,554	3,192,678	8,554	3,192,678

A disciplinary investigation was conducted in respect of the irregular expenditure for the current financial year and the officials responsible for the irregular expenditure were provided with a final written warning.

The irregular expenditure incurred during the prior financial year have been condoned by the relevant authority during the current financial year.

Condonation was sought from National Treasury in the 2013/ 2014 financial year in respect of irregular expenditure for the prior years. National Treasury condoned some of the irregular expenditure in respect of the prior years. The Updated Guideline on Irregular Expenditure issued by the National Treasury states that where the relevant authority does not condone the irregular expenditure, the Accounting Authority may authorise the write-off and subsequent de-recognition of the irregular expenditure if:

- reasonable steps have been taken to confirm that such irregular expenditure did not result in any loss or damages to the state and that the state did obtain value from such a transaction, condition or event;
- the non-compliance that led to the irregular expenditure is being addressed; and
- transactions, conditions or events of a similar nature are regularly reviewed to ensure that there are no possible future non-compliance cases reported.

Further investigation will be done in respect of the irregular expenditure incurred in prior years that have not been condoned to identify whether the expenditure is recoverable and whether the necessary controls are in place. The results of the investigation will be presented to the Accounting Authority to consider the write-off of irregular expenditure in line with the above Treasury guidelines.

37. Fruitless and wasteful expenditure

	Group		WRC	
	2016	2015 Restated*	2016	2015 Restated*
	R	R	R	R
Opening balance	1,836	-	1,836	-
Add: Fruitless and Wasteful Expenditure – current year	3,556	1,836	1,850	1,836
Less: Amounts transferred to receivables due to recoverability	(3,686)	-	(3,686)	-
	1,706	1,836	-	1,836
Details of fruitless and wasteful expenditure for the year				
Interest on overdue payments	1,850	1,836	-	1,836
Penalties	1,706	-	1,706	-
	3,556	1,836	1,706	1,836

The WRC incurred fruitless and wasteful expenditure in respect of penalties that resulted during the procurement of a venue which could have been avoided had the refund process been followed. A final written warning was provided to the official in the WRC that was responsible for this fruitless and wasteful expenditure and the expenditure will be recovered from this official.

The interest paid on overdue payments is in respect of Telkom. The WRC investigated and consulted with Telkom in respect of this interest. It was concluded that it seems like the WRC does indeed make the payments on a timely basis but that there is an error on Telkom's side when allocating payments. Telkom agreed to refund the interest.

38. Budget differences

Material differences between budget and actual amounts

Income

Water Research Levies

The revenue earned from levies during the 2015/2016 financial year was less than budgeted due to a decrease in consumption volumes from the water boards compared to the WRC's expectations.

Investment revenue

The investment revenue for the 2015/2016 financial year was more than budgeted due to higher interest income related to the higher than anticipated average cash holdings during the financial year.

Leverage income

Leverage income for the 2015/2016 financial year was lower than budgeted due to unforeseen delays in project deliverables of leverage funded projects as well as the erroneous inclusion of levy-funded projects as part of the leverage income budget.

Expenditure

Fixed costs

The actual fixed costs for the 2015/2016 financial year was lower than budgeted due to the fact that the re-location to the new premises, whilst budgeted for in 2015/2016, was postponed to the 2016/2017 financial year.

Running costs

The under-expenditure in running costs relates to an under-expenditure in respect of subsistence and travel for the 2015/2016 financial year.

Corporate expenditure

The outsourced internal audit contract ended during 2015/2016. There was a strategic decision to recruit an internal audit manager whose appointment was finalised after year-end. This resulted in a lower actual expenditure in respect of internal audit than budgeted.

Capital expenditure

The difference between expected and actual expenditure is due to a postponement in the implementation of the electronic knowledge management system, website development and purchasing of IT equipment. This is related to the postponement of the office re-location.

There were no other material differences between the final budget and the actual amounts.

Changes from the approved budget to the final budget

The changes between the approved and final budget are a consequence of reallocations within the approved budget parameters.

39. Reconciliation between budget and Statement of Financial Performance

Reconciliation of budget surplus/deficit with the surplus/deficit in the statement of financial performance:

Net surplus per the statement of financial performance	2,452,433
Adjusted for:	
Fair value adjustments	(1,380,116)
Impairments recognised / reversed	(13,190)
Loss on the sale of assets	(3,690)
Depreciation, amortisation and impairment	1,765,444
Accruals – leave and bonus: Movement	1,102,969
Employee benefit obligation: Movement	(1,739,086)
Additions – Property, plant and equipment	466,389
Additions – Intangible assets	190,227
Rental revenue included separately as part of other income in budget	2,281,383
Rental expenditure included separately as part of fixed costs	(2,281,383)
	1,528,150

The budget is approved on a cash basis by nature classification. The approved budget covers the fiscal period from 01 April 2015 to 31 March 2016 and is in respect of the Water Research Commission and its subsidiary.

The financial statements differ from the budget, which is approved on the cash basis. The budget is prepared on the cash basis and the financial statements on an accrual basis.

The amounts in the financial statements were restated from the accrual basis to the cash basis to be in line with the final approved budget.

A reconciliation between the actual amounts on a comparable basis as presented in the Statement of Budget and Actual Amounts and the actual amounts in the Statement of Financial Performance for the period ended 31 March 2016 is presented above. The Financial Statements and budget documents are prepared for the same reporting period.

40. Going concern

The 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.

41. Events after the reporting date

The Board and the Minister of Water and Sanitation approved the relocation of the WRC offices. The WRC commenced with the process of disposal in respect of Erf 706 Rietfontein (Pty) Ltd in accordance with the Public Finance Management Act. According to the disposal strategy, the Department of Public Works (as a custodian of State owned Immovable Property) will have the first option to acquire the building. On 31 March 2016, the Department of Public Works indicated that its preliminary feasibility studies have provided favourable results for the acquisition of Marumati building and the department is in the process of sourcing a suitable tenant. If this does not succeed, the WRC will commence with a competitive bidding process.

The effective rate for capital gains tax changes from 18.65% for the 2015/2016 financial year to 22.4% for the 2016/2017 financial year. This will impact the capital gains tax paid upon disposal of Erf 706 Rietfontein (Pty) Ltd.

The WRC requested the Minister of Water and Sanitation for approval for the dis-investment of the investments of the WRC in terms of section 54(2) of the PFMA. The Minister approved the dis-investment on 11 April 2016. The WRC commenced with the process to dis-invest the investments.

No further events after the reporting date were identified that require adjustment or disclosure in the financial statements.



SECTION E

ERF SEWE NUL SES RIETFontein (PTY) LTD FINANCIAL STATEMENTS

for the year ended 31 March 2016

General Information

COUNTRY OF INCORPORATION AND DOMICILE

South Africa

NATURE OF BUSINESS AND PRINCIPAL ACTIVITIES

The main business of the company is to own the immovable property known as Erf 706 Rietfontein and supplementary to the aim of the Water Research Commission to place the property at the disposal of the WRC as their main place of business.

MEMBERS

Mr DP Naidoo
Dr N Mjoli – Chairperson

REGISTERED OFFICE

301 Watko Building
491, 18th Avenue
Rietfontein
Pretoria

CONTROLLING ENTITY

Water Research Commission

AUDITORS

Auditor-General

COMPANY REGISTRATION NUMBER

1984/003566/07

Report of the Auditor-General to Parliament on Erf Sewe-Nul Ses Rietfontein (Proprietary) Limited

Report on the financial statements

Introduction

1. I have audited the financial statements of the Erf Sewe-Nul-Ses Rietfontein (Proprietary) Limited set out on pages 118 to 142, which comprises the statement of financial position as at 31 March 2016, the statement of financial performance, statement of changes in net assets and statement of cash flows for the year then ended, as well as the notes, comprising a summary of significant accounting policies and other explanatory information.

Accounting Authority's responsibility for the financial statements

2. The board of directors, which constitutes the accounting authority, is responsible for the preparation and fair presentation of these financial statements in accordance with Generally Recognised Accounting Practices (SA Standards of GRAP) and the requirements of the Public Finance Management Act of South Africa, 1999 (Act No. 1 of 1999) (PFMA) and the Companies Act of South Africa, 2008 (Act No. 71 of 2008) and for such internal control as the accounting authority determines is 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

3. 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. Those standards require that I comply with ethical requirements, and plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

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

Opinion

6. In my opinion, the financial statements present fairly, in all material respects, the financial position of the Erf Sewe-Nul-Ses Rietfontein (Proprietary) Limited as at 31 March 2016 and its financial performance and cash flows for the year ended, in accordance with SA Standards of GRAP and the requirements of the PFMA and the Companies Act of South Africa, 2008 (Act No. 71 of 2008).

Auditor General.

Pretoria

28 July 2016



AUDITOR-GENERAL
SOUTH AFRICA

Auditing to build public confidence



Index

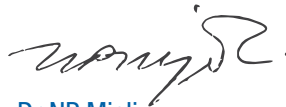
The reports and statements set out below comprise the financial statements presented to the shareholders:

Directors' report	118
Statement of Financial Position.....	119
Statement of Financial Performance	120
Statement of Changes in Net Assets	121
Cash Flow Statement	122
Summary of significant accounting policies.....	123
Other explanatory notes.....	129
Tax Computation	142

The financial statements set out on pages 118 to 142, which have been prepared on the going concern basis, were approved by the Board on 31 May 2016 and were signed on its behalf by:



Mr DP Naidoo
Chief Executive Officer



Dr NP Mjoli
Chairperson of the Board

Directors' report

1. General review

To review the business and operations of the company for the reporting 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.

The Companies Act, 71 of 2008 requires that the Directors' report on any material facts or circumstances which occurred between the reporting date and the date of their report. No such matters or circumstances occurred for the period under review.

2. Specific matters

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 the Water Research Commission.

No shares were allotted or issued by the company during the period under review. The entity is wholly-owned by the Water Research Commission.

No dividends were paid or declared during the period under review and the Directors have no recommendation to make in respect of dividends.

3. Directors

Directors and certain members of staff of the Water Research Commission managed the business of the company. No third person was involved in managing the entity.

The names of the Directors are shown below:

- Mr DP Naidoo
- Dr N Mjoli

There was a change in Directors during the period under review. Ms B Schreiner resigned as Director of Erf 706 Rietfontein (Pty) Ltd effective 31 January 2016. Dr N Mjoli was appointed as Director of Erf 706 Rietfontein (Pty) Ltd effective 1 February 2016.

4. Company secretary

The company's secretary is Rene Vorster.

Statement of Financial Position

		2016	2015 Restated*
	Notes(s)	R	R
Assets			
Current Assets			
Operating lease asset	3	2,053	8,441
Receivables from exchange transactions	4	98,233	89,177
VAT receivable	5	18,824	135,253
Cash and cash equivalents	6	4,538,599	2,967,421
		4,657,709	3,200,292
Non-Current Assets			
Investment property	7	29,800,000	31,000,000
Deferred tax	8	3,822,017	-
		33,622,017	31,000,000
Total Assets		38,279,726	34,200,292
Liabilities			
Current Liabilities			
Other financial liabilities	9	1,020,000	1,020,000
Payables from exchange transactions	10	2,581,721	1,448,815
		3,601,721	2,468,815
Non-Current Liabilities			
Other financial liabilities	9	26,278,991	23,523,181
Deferred tax	8	4,788,500	6,976,462
		31,067,491	30,499,643
Total Liabilities		34,669,212	32,968,458
Net Assets		3,610,514	1,231,834
Share capital	11	1	1
Accumulated surplus/(deficit)		3,610,513	1,231,833
Total Net Assets		3,610,514	1,231,834

Statement of Financial Performance

		2016	2015 Restated*
	Notes(s)	R	R
Revenue			
Revenue from exchange transactions			
Interest received	12	7,988	3,724
Other income	13	2,824,280	2,358,347
Total revenue from exchange transactions		2,832,268	2,362,071
Expenditure			
Finance costs	14	3,775,810	3,383,953
Debt impairment		-	(93)
Repairs and maintenance		432,366	154,458
General expenses	15	1,055,390	865,807
Total expenditure		5,263,566	4,404,125
Fair value adjustments	16	(1,200,000)	4,600,000
(Deficit) surplus before taxation		(3,631,298)	2,557,946
Taxation	17	(6,009,978)	1,409,681
Surplus for the year		2,378,680	1,148,265

Statement of Changes in Net Assets

	Share capital	Accumulated Surplus / (Deficit)	Total net assets
	R	R	R
Balance at 1 April 2014	1	83,568	83,569
Changes in net liabilities			
Surplus / (Deficit) for the year	-	1,148,265	1,148,265
Total changes	-	1,148,265	1,148,265
Balance at 1 April 2015 as restated	1	1,231,833	1,231,834
Changes in net liabilities			
Surplus / (Deficit) for the year	-	2,378,680	2,378,680
Total changes	-	2,378,680	2,378,680
Balance at 31 March 2016	1	3,610,513	3,610,514
Note	11		

Cash Flow Statement

	Notes(s)	2016 R	2015 Restated* R
Cash flows from operating activities			
Receipts			
Cash receipts from customers		3,225,894	2,870,386
Payments			
Cash paid to suppliers		(634,716)	(1,196,062)
Net cash flows from operating activities	18	2,591,178	1,674,324
Cash flows from financing activities			
Repayments of other financial liabilities	9	(1,020,000)	(1,020,000)
Net cash flows from financing activities		(1,020,000)	(1,020,000)
Net increase/(decrease) in cash and cash equivalents		1,571,178	654,324
Cash and cash equivalents at the beginning of the year		2,967,421	2,313,097
Cash and cash equivalents at the end of the year	6	4,538,599	2,967,421

Summary of Significant Accounting Policies

1. Presentation of Financial Statements

The financial statements have been prepared in accordance with the Standards of Generally Recognised Accounting Practice (GRAP), issued by the Accounting Standards Board (ASB) in accordance with Section 91(1) of the Public Finance Management Act (Act 1 of 1999) (PFMA).

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

A summary of the significant accounting policies, which have been consistently applied in the preparation of these financial statements, is disclosed below.

These accounting policies are consistent with the previous period.

1.1 Significant judgements and sources of estimation uncertainty

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

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

The entity assesses its receivables for impairment at the end of each reporting period. In determining whether an impairment loss should be recorded in surplus or deficit, the surplus 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 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.

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 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 entity for similar financial instruments.

Impairment testing

The entity assesses its 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 estimated future cash flows from financial assets.

The recoverable amounts of 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 assumptions may change which may then impact our estimations and may then require a material adjustment to the carrying value of tangible assets.

The entity reviews and tests the carrying value of assets when events or changes in circumstances suggest that the carrying amount may not be recoverable. 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.

Expected manner of realisation for deferred tax

Deferred tax is provided for on the depreciation of investment properties based on the expected manner of recovery, i.e. sale or use. This manner of recovery affects the rate used to determine the deferred tax asset/ liability. Refer note 8 – Deferred tax.

1.2 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 are associated with the investment property will flow to the entity, and the cost or fair value of the investment property can be measured reliably.

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

Where investment property is acquired through a non-exchange transaction, 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.

Fair value

Subsequent to initial measurement investment property is measured at fair value.

The fair value of investment property reflects market conditions at the reporting date.

A gain or loss arising from a change in fair value is included in net surplus or deficit for the period in which it arises.

1.3 Financial instruments

A financial instrument is any contract that gives rise to a financial asset of one entity and a financial liability or a residual interest of another entity.

A financial asset is:

- cash;
- a residual interest of another entity; or
- a contractual right to:
 - receive cash or another financial asset from another entity; or
 - exchange financial assets or financial liabilities with another entity under conditions that are potentially favourable to the entity.

A financial liability is any liability that is a contractual obligation to:

- deliver cash or another financial asset to another entity; or
- exchange financial assets or financial liabilities under conditions that are potentially unfavourable to the entity.

Classification

The entity has the following types of financial assets (classes and category) as reflected on the face of the statement of financial position or in the notes thereto:

Class	Category
Receivables from exchange transactions	Financial asset measured at amortised cost
Cash and cash equivalents	Financial asset measured at fair value

The entity has the following types of financial liabilities (classes and category) as reflected on the face of the statement of financial position or in the notes thereto:

Class	Category
Payables from exchange transactions	Financial liability measured at amortised cost
Other financial liabilities	Financial liability measured at amortised cost

Initial recognition

The entity recognises a financial asset or a financial liability in its statement of financial position when the entity becomes a party to the contractual provisions of the instrument.

The entity recognises financial assets using trade date accounting.

Initial measurement of financial assets and financial liabilities

The entity measures a financial asset and financial liability initially at its fair value plus transaction costs that are directly attributable to the acquisition or issue of the financial asset or financial liability.

Subsequent measurement of financial assets and financial liabilities

The entity measures all financial assets and financial liabilities after initial recognition using the following categories:

- Financial instruments at fair value.
- Financial instruments at amortised cost.

Financial instruments at fair value

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.

Financial instruments at amortised cost

Receivables

Receivables are measured at initial recognition at fair value, and are subsequently measured at amortised cost using the effective interest rate method.

Payables

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

Fair value measurement considerations

The fair values of listed 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.

Impairment and uncollectibility of financial assets

The entity assesses at the end of each reporting period whether there is any objective evidence that a financial asset or group of financial assets is impaired.

All financial assets measured at amortised cost, or cost, are subject to an impairment review. 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.

If, in a subsequent period, the amount of the impairment loss decreases and the decrease can be related objectively to an event occurring after the impairment was recognised, the previously recognised impairment loss is reversed by adjusting an allowance account. The reversal does not result in a carrying amount of the financial asset that exceeds what the amortised cost would have been had the impairment not been recognised at the date the impairment is reversed. The amount of the reversal is recognised in surplus or deficit.

Derecognition

Financial assets

The entity derecognises financial assets using trade date accounting.

The entity derecognises a financial asset only when:

- the contractual rights to the cash flows from the financial asset expire, are settled or waived;
- the entity transfers to another party substantially all of the risks and rewards of ownership of the financial asset; or
- the entity, despite having retained some significant risks and rewards of ownership of the financial asset, has transferred control of the asset to another party and the other party has the practical ability to sell the asset in its entirety to an unrelated third party, and is able to exercise that ability unilaterally and without needing to impose additional restrictions on the transfer. In this case, the entity:
 - derecognises the asset; and
 - recognises separately any rights and obligations created or retained in the transfer.

On derecognition of a financial asset in its entirety, the difference between the carrying amount and the sum of the consideration received is recognised in surplus or deficit.

Financial liabilities

The entity removes a financial liability (or a part of a financial liability) from its statement of financial position when it is extinguished — i.e. when the obligation specified in the contract is discharged, cancelled, expires or waived.

The difference between the carrying amount of a financial liability (or part of a financial liability) extinguished or transferred to another party and the consideration paid, including any non cash assets transferred or liabilities assumed, is recognised in surplus or deficit.

Presentation

Interest relating to a financial instrument or a component that is a financial liability is recognised as revenue or expense in surplus or deficit.

Offsetting of financial instruments

A financial asset and a financial liability are only offset and the net amount presented in the statement of financial position when the entity currently has a legally enforceable right to set off the recognised amounts and intends either to settle on a net basis, or to realise the asset and settle the liability simultaneously.

1.4 Tax

Current tax assets and liabilities

Current tax for current and prior periods is, to the extent unpaid, recognised as a liability. If the amount already paid in respect of current and prior periods exceeds the amount due for those periods, the excess is recognised as an asset.

Current tax liabilities (assets) for the current and prior periods are measured at the amount expected to be paid to (recovered from) the tax authorities, using the tax rates (and tax laws) that have been enacted or substantively enacted by the end of the reporting period.

Deferred tax assets and liabilities

A deferred tax liability is recognised for all taxable temporary differences, except to the extent that the deferred tax liability arises from the initial recognition of an asset or liability in a transaction which at the time of the transaction, affects neither accounting surplus nor taxable profit (tax loss).

A deferred tax asset is recognised for all deductible temporary differences to the extent that it is probable that taxable surplus will be available against which the deductible temporary difference can be utilised. A deferred tax asset is not recognised when it arises from the initial recognition of an asset or liability in a transaction at the time of the transaction, affects neither accounting surplus nor taxable profit (tax loss).

A deferred tax asset is recognised for the carry forward of unused tax losses and unused STC credits to the extent that it is probable that future taxable surplus will be available against which the unused tax losses and unused STC credits can be utilised.

Deferred tax assets and liabilities are measured at the tax rates that are expected to apply to the period when the asset is realised or the liability is settled, based on tax rates (and tax laws) that have been enacted or substantively enacted by the end of the reporting period.

Tax expenses

Current tax and deferred taxes are charged or credited to net assets if the tax relates to items that are credited or charged, in the same or a different period, to net assets.

1.5 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.

Operating leases – lessor

Operating lease revenue is recognised as revenue on a straight-line basis over the lease term.

Initial direct costs incurred in negotiating and arranging operating leases are added to the carrying amount of the leased asset and recognised as an expense over the lease term on the same basis as the lease revenue.

The aggregate cost of incentives is recognised as a reduction of rental revenue over the lease term on a straight-line basis.

Income for leases is disclosed under revenue in statement of financial performance.

1.6 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.

1.7 Contingencies

Contingent assets and contingent liabilities are not recognised. Contingencies are disclosed in note 20.

1.8 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.

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. 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.

Measurement

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.

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.

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.

Rendering of services

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 reporting date. 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 or service potential associated with the transaction will flow to the entity;
- the stage of completion of the transaction at the reporting date 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 is recognised only to the extent of the expenses recognised that are recoverable.

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.

1.9 Borrowing costs

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

1.10 Comparative figures

Where necessary, comparative figures have been reclassified to conform to changes in presentation in the current year.

1.11 Related parties

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

1.12 Events after reporting date

Events after reporting date are those events, both favourable and unfavourable, that occur between the reporting date and the date when the financial statements are authorised for issue. Two types of events can be identified:

- those that provide evidence of conditions that existed at the reporting date (adjusting events after the reporting date); and
- those that are indicative of conditions that arose after the reporting date (non-adjusting events after the reporting date).

The entity will adjust the amount recognised in the financial statements to reflect adjusting events after the reporting date once the event occurred.

The entity will disclose the nature of the event and an estimate of its financial effect or a statement that such estimate cannot be made in respect of all material non-adjusting events, where non-disclosure could influence the economic decisions of users taken on the basis of the financial statements.

Other explanatory notes

2. New standards and interpretations

2.1 Standards and interpretations early adopted

The entity early adopted GRAP 20: Related parties and GRAP 6 (as revised 2010): Consolidated and Separate Financial Statements in the 2014/2015 financial year. GRAP 6 became effective on 1 April 2015 whereas the effective date for GRAP 20 is only 1 April 2016.

3. Operating lease asset

Balance at year end

Operating lease asset

Minimum lease receipts due

Within 12 months

Between 12 - 60 months

2016 R	2015 Restated* R
2,053	8,441
41,434	221,952
-	41,434
41,434	263,386

The company enters into lease agreements between 2 and 5 years whereafter the option is available for the lessee to renew the contract. Rentals are payable per month and escalates by between 5 and 11 percent per annum.

No contingent rent is receivable and there are no restrictions on the leases.

The Water Research Commission and Erf 706 Rietfontein (Pty) Ltd terminated the lease agreement. The termination agreement stipulated that no rent will be payable by the Water Research Commission as from the 1st of April 2016 until the time of disposal of the building, but that the Water Research Commission will be liable for the expenditure incurred by Rietfontein (Pty) Ltd in respect of the maintenance and operations of the property.

4. Receivables from exchange transactions

Receivables

Deposits

Provision for impairment

Prepaid expenses

2016 R	2015 Restated* R
17,684	240,223
7,305	7,305
-	(240,223)
73,244	81,872
98,233	89,177

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Receivables pledged as security

No receivables were pledged as security for any financial liability.

Credit quality of 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.

The fair value of the receivables approximates the carrying amount of the balances due to their short-term maturity. None of the receivables that are fully performing have been renegotiated in the last year.

Receivables past due but not impaired

Receivables are all considered for impairment. At 31 March 2016, R 7,305 (2015: R 7,305) were past due but not impaired.

Receivables impaired

As of 31 March 2016, receivables of R NIL (2015: R (93)) were impaired and provided for.

The amount of the provision was R NIL as of 31 March 2016 (2015: R (240,223)).

The ageing of these receivables is as follows:

	2016 R	2015 Restated* R
Current – Gross	91,028	81,873
1 Month past due – Gross	(100)	-
2 Months past due – Gross	-	-
3 Months past due – Gross	7,305	247,528
	98,233	329,400
Current – Impaired amount	-	-
1 Month past due – Impaired amount	-	-
2 Months past due – Impaired amount	-	-
3 Months past due – Impaired amount	-	(240,223)
	-	(240,223)

Reconciliation of provision for impairment losses on receivables

	2016 R	2015 Restated* R
Opening balance	240,223	240,316
Provision for impairment	(240,223)	(93)
	-	240,223

5. VAT receivable

	2016 R	2015 Restated* R
SARS: VAT	18,824	135,253

6. Cash and cash equivalents

	2016 R	2015 Restated* R
Cash and cash equivalents consist of:		
Bank balances	4,538,599	2,967,421

Fair value hierarchy of financial assets at fair value

For financial assets recognised at fair value, disclosure is required of a fair value hierarchy which reflects the significance of the inputs used to make the measurements.

The fair value hierarchy have the following levels:

- Level 1 represents those assets which are measured using unadjusted quoted prices in active markets for identical assets.
- Level 2 applies inputs other than quoted prices that are observable for the assets either directly (i.e. as prices) or indirectly (i.e. derived from prices).
- Level 3 applies inputs which are not based on observable market data.

Level 2

Cash and cash equivalents

	2016 R	2015 Restated* R
Cash and cash equivalents	4,538,599	2,967,421

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

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

The fair value of the cash and cash equivalents approximates the carrying amount of the balances.

The entire cash and cash equivalents balance held by the entity is available for use.

The entity 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.

Cash and cash equivalents pledged as collateral

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

7. Investment property

	2016			2015		
	Valuation	Accumulated depreciation and accumulated impairment	Carrying value	Valuation	Accumulated depreciation and accumulated impairment	Carrying value
	R	R	R	R	R	R
Investment property	29,800,000	-	29,800,000	31,000,000	-	31,000,000

Reconciliation of investment property – 2016

Investment property	Opening balance	Fair value adjustments	Total
	R	R	R
	31,000,000	(1,200,000)	29,800,000

Reconciliation of investment property – 2015

Investment property	Opening balance	Fair value adjustments	Total
	R	R	R
	26,400,000	4,600,000	31,000,000

Fair value of investment properties	29,800,000	31,000,000
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Details of property

ERF 706 RIETFontein, Pretoria

	2016	2015 Restated*
	R	R
- Purchase price	615,855	615,855
- Additions since purchase	8,075,667	8,075,667
- Fair value adjustments	21,108,478	22,308,478
	29,800,000	31,000,000

A register containing the information required by the PFMA is available for inspection at the registered office of the entity.

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Details of valuation

The effective date of the valuation was 31 March 2016. The valuation was performed by an independent valuer, Barry Peter Richardson, of Onyx Valuation Services on 29 April 2016. Barry Peter Richardson is registered as a Professional Valuer with the South African Council for the Property Valuers Profession. Onyx Valuation Services is not connected to the entity and have recent experience in location and category of the property concerned. Barry Peter Richardson has no present or contemplated interest in this entity which would affect the statements or values contained in the valuation report. The valuation was therefore undertaken on a completely independent basis.

The property has been valued at R29,800,000 (2015: R31,000,000). The valuation is based on open market value for existing use.

The market value of the property was determined by using the income capitalisation method of valuation. This comparative approach considers income and expense data relating to the property being valued and estimates the value through a capitalisation process. Capitalisation relates income (the expected net future income flow generated by the property) into a value estimate of the property by considering yields or discount rates.

Amounts recognised in surplus and deficit for the year.

	2016 R	2015 Restated* R
Rental revenue from investment property	2,824,280	2,358,347
Direct operating expenses from rental generating property	1,003,313	813,562

8. Deferred tax

	2016 R	2015 Restated* R
Deferred tax asset/(Liability)		
Investment Property	(4,788,500)	(6,976,462)
Deferred tax asset		
Tax losses available for set off against future taxable income	3,822,017	-
Deferred tax liability	(4,788,500)	(6,976,462)
Deferred tax asset	3,822,017	-
Total net deferred tax liability	(966,483)	(6,976,462)
Reconciliation of deferred tax asset \ (liability)		
At beginning of year	(6,976,462)	(5,566,780)
Increase (decrease) in tax loss available for set off against future taxable income – gross of valuation allowance	3,822,017	-
Deferred tax on fair value adjustments on Investment Property	2,187,962	(1,409,682)
	(966,483)	(6,976,462)

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Use and sales rate

The deferred tax rate applied to the fair value adjustments is determined by the expected manner of recovery. Where the expected recovery is through sale the capital gains tax rate of 18.65% (2015: 18.67%) is used. If the expected manner of recovery is through indefinite use the normal tax rate of 28% (2015: 28%) is applied. If the manner of recovery is partly through use and partly through sale, a combination of capital gains rate and normal tax rate is used.

The deferred tax on the fair value adjustments comprises of:

R 21,108,478 (2015: R-) at the capital gains tax rate.

R 3,042,033 (2015: R 24,915,934) at the normal tax rate.

9. Other financial liabilities

At amortised cost

Loan Nr. 1 – Water Research Commission

The unsecured loan bears interest at 15% (2015 – 15%) and is repayable in equal monthly installments of not less than R60,000. The capital sum and interest thereon must be repaid in full by no later than 30 June 2017.

Loan Nr. 2 – Water Research Commission

The unsecured loan bears interest at prime plus 2% and is repayable within 60 days from receipt of a written demand.

Total other financial liabilities

Non-current liabilities

At amortised cost

Current liabilities

At amortised cost

2016 R	2015 Restated* R
24,734,980	21,974,145
2,564,011	2,569,036
27,298,991	24,543,181
27,298,991	24,543,181
26,278,991	23,523,181
1,020,000	1,020,000

The maximum exposure to credit risk at the reporting date is the fair value of the loan mentioned above. The fair value of the loan approximates the carrying amount. The fair value of the loan is determined by calculating the present value of future payments by using a discount rate of 15% and prime rate plus 2%.

The entity did not default on interest or capital on loans during the year under review.

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

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10. Payables from exchange transactions

	2016 R	2015 Restated* R
Trade and other payables	2,563,678	1,430,773
Deposits received	18,043	18,042
	2,581,721	1,448,815

The maximum exposure to credit risk at the reporting date is the fair value of the payables above. The fair value of the payables approximates the carrying amount of the balances due to their short-term maturity.

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

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

11. Share capital

	2016 R	2015 Restated* R
Authorised		
4000 Ordinary shares of R1 each	4,000	4,000
Issued		
1 Ordinary share of R1 each	1	1

100% of the shares are owned by the Water Research Commission.

12. Investment revenue

	2016 R	2015 Restated* R
Interest revenue		
Bank	7,988	3,724

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13. Revenue

	2016 R	2015 Restated* R
Municipal expense recoveries	354,923	282,119
Rental received	2,458,260	2,066,048
Sundry income	11,097	10,180
	2,824,280	2,358,347

14. Finance costs

	2016 R	2015 Restated* R
Non-current borrowings	3,775,810	3,383,953

15. General expenses

	2016 R	2015 Restated* R
Bank charges	3,049	3,796
Insurance	37,029	31,649
Professional fees	12,000	16,800
Utilities	1,003,313	813,562
	1,055,391	865,807

16. Fair value adjustments

	2016 R	2015 Restated* R
Investment property (Fair value model)	(1,200,000)	4,600,000

17. Taxation

	2016 R	2015 Restated* R
Major components of the tax (income) expense		
Deferred		
Originating and reversing temporary differences	(6,009,978)	1,409,681

No provision has been made for 2016 tax as the entity has no taxable income.

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18. Cash generated from operations

	2016	2015 Restated*
	R	R
Surplus/ (deficit)	2,378,680	1,148,265
Adjustments for:		
Fair value adjustments	1,200,000	(4,600,000)
Debt impairment	-	(93)
Movements in operating lease assets and accruals	6,388	174,892
Annual charge for deferred tax	(6,009,978)	1,409,681
Finance cost on other financial liabilities	3,775,810	3,383,953
Changes in working capital:		
Receivables from exchange transactions	(9,056)	(19,013)
Payables from exchange transactions	(1,430,774)	199,338
VAT	116,429	(22,699)
Other Financial Liabilities	2,563,679	-
	2,591,178	1,674,324

19. Related parties

	2016	2015 Restated*
	R	R
Relationships		
Holding company: Water Research Commission		
Related party balances		
Loan accounts – Owing (to) by related parties		
Water Research Commission	(27,298,991)	(24,543,181)
Amounts included in Receivables (Payables) regarding related parties		
Water Research Commission: Payable	(2,563,678)	(1,410,626)
Related party transactions		
Interest paid to (received from) related parties		
Water Research Commission	3,775,810	3,383,953
Municipal expenses paid to (received from) related parties		
Water Research Commission	(404,612)	(321,614)
Rent paid to (received from) related parties		
Water Research Commission	(2,532,367)	(2,281,383)

20. Contingencies

No contingencies existed at year end of which management were aware.

21. Financial instruments disclosure

Categories of financial instruments

2016

Financial assets

Receivables from exchange transactions
Cash and cash equivalents

At fair value	At amortised cost	Total
R	R	R
-	98,233	98,233
4,538,599	-	4,538,599
4,538,599	98,233	4,636,832

Financial liabilities

Payables from exchange transactions
Other Financial Liabilities

At amortised cost	Total
R	R
2,581,720	2,581,720
27,298,991	27,298,991
29,880,711	29,880,711

2015

Financial assets

Receivables from exchange transactions
Cash and cash equivalents

At fair value	At amortised cost	Total
R	R	R
-	89,177	89,177
2,967,421	-	2,967,421
2,967,421	89,177	3,056,598

Financial liabilities

Payables from exchange transactions
Other Financial Liabilities

At amortised cost	Total
R	R
1,448,815	1,448,815
24,543,181	24,543,181
25,991,996	25,991,996

The entity 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.

Payables from exchange transactions above do not include VAT payable due to the fact that it is not a financial liability.

22. 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 utilisation of borrowing facilities are monitored.

The table below analyse the entity's financial liabilities and net settled derivative financial liabilities into relevant maturity groupings based on the remaining period at the date of statement of financial position to the contractual maturity date. The amounts disclosed in the table are the contractual undiscounted cash flows.

	Less than 1 year	Between 1 and 2 years	Between 2 and 5 years	Over 5 years
	R	R	R	R
At 31 March 2016				
Payables	18,043	-	-	-
Loan 1: Water Research Commission	720,000	24,014,980	-	-
Loan 2: Water Research Commission	300,000	300,000	900,000	1,064,011

At 31 March 2015

Payables	1,448,815	-	-	-
Loan 1: Water Research Commission	720,000	720,000	20,534,145	-
Loan 2: Water Research Commission	300,000	300,000	900,000	1,069,036

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 2016, if interest rates on Rand denominated borrowings had been 2% higher with all other variables held constant, post tax surplus for the year would have been R 54,207 (2015: R 54,301) lower and if the interest rate was 2% lower the post tax surplus for the year would have been higher with R 53,199 (2015: R 53,299), mainly as a result of higher/lower interest expense on floating rate borrowings.

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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:

2016	2015 Restated*
R	R
4,538,599	2,967,421

Financial instrument

ABSA Bank

23. Prior period errors

The WRC leases a portion of the Marumati Building and in accordance with the lease agreement the water and electricity cost incurred on the Marumati Building should be apportioned based on the portion of the building which is being utilised by the WRC. This contractual term was not complied with, therefore during the 2014/2015 financial year, the transactions for a five-year lease period, 1 April 2010 to 31 March 2015 was investigated. This investigation led to a correction in respect of the recognition of municipal expenditure and the subsequent recovery of water and electricity.

During the 2015/2016 financial year it was identified that there was a pre-paid expenditure component in respect of the pre-paid electricity which was incorrectly recognised as an asset in the WRC's financials and that there were some accruals that were incorrectly dealt with during the audit adjustment in 2014/2015.

The necessary adjustments were made retrospectively in order to correct these remaining errors. These adjustments represents intercompany transactions between the WRC and Erf 706 Rietfontein (Pty) Ltd and is eliminated upon preparation of the consolidated financial statements. Although these adjustments are not material in nature, the WRC adjusted all balances in order to ensure that the financial statements are substantiated with valid and accurate supporting documentation and this was disclosed as a prior period error. This is particularly important in light of the possible disposal of Erf 706 as more fully described under note 24.

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

Statement of Financial Position

	R
Receivables	(235,385)
Payables	307,295
VAT receivable/ (payable)	(8,830)
Prepaid expenditure (Receivables)	81,872

Statement of Financial Performance

Municipal expenditure	(27,377)
Revenue	(117,575)

24. Events after the reporting date

The Board and the Minister of Water and Sanitation approved the relocation of the WRC offices. The WRC commenced with the process of disposal in respect of Erf 706 Rietfontein (Pty) Ltd in accordance with the PFMA. According to the disposal strategy, the Department of Public Works (as a custodian of State owned Immovable Property) will have the first option to acquire the building. On 31 March 2016, the Department of Public Works indicated that its preliminary feasibility studies have provided favourable results for the acquisition of Marumati building and the department is in the process of sourcing a suitable tenant. If this does not succeed, the WRC will commence with a competitive bidding process.

The effective rate for capital gains tax will change from 18.65% for the 2015/2016 financial year to 22.4% for the 2016/2017 financial year. This will impact the capital gains tax paid upon disposal of Erf 706 Rietfontein (Pty) Ltd.

No further events after the reporting date were identified that require adjustment or disclosure in the financial statements.

25. Comparative figures

Certain comparative figures have been reclassified.

Reclassifications were made between administration and management fee and general expenditure as well as between repairs and maintenance and general expenditure. This was done in order to truly reflect the nature of the transaction.

The effects of the reclassification are as follows:

Statement of Financial Performance

	R
Administration and management fee	(16,800)
Repairs and maintenance	31,475
General expenditure	(14,675)

Tax Computation

	R
Net loss per statement of financial performance	(3,631,298)
Temporary differences	
Fair value adjustment on Investment Property	1,200,000
Section 13 quin allowance	(434,576)
	765,424
Assessed loss for 2016 – carried forward	(2,865,874)
Assessed loss brought forward	(10,784,187)
Tax loss carried forward	(13,650,061)
Tax thereon @ 28%	-





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