WATER
RESEARCH
COMMISSION

2019/20 ANNUAL REPORT

VISION

To have highly informed water decision-making through science and technology at all levels, in all stakeholder groups, and innovative water and sanitation solutions through research and development for South Africa, Africa and the world.

MISSION

To be a global water knowledge node and South Africa's premier water knowledge hub active across the innovation value chain that:

- informs policy and decision making
- creates new products, innovation and services for socio-economic development
- develops human capital in the water and sanitation science sector
- empowers communities and reduces poverty
- supports the national transformation and redress project
- develops sustainable solutions and deepens water and sanitation research and development in South Africa, Africa and the developing world

VALUES

- A culture of learning and sharing
- Innovation and creativity
- Integrity and fairness
- A spirit of professionalism and service orientation
- Facilitating empowerment and social change
- Good governance

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LIST OF ABBREVIATIONS

4IR	4th industrial revolution
AGSA	Auditor-General of South Africa
BBBEE	Broad-based black economic empowerment
CEO	Chief Executive Officer
CFO	Chief Financial Officer
CMA	Catchment management agency
DEAFF	Department of Environmental Affairs, Forestry and Fisheries
DoA	Delegation of Authority
DoF	Department of Finance
DPE	Department of Public Enterprises
DSI	Department of Science and Innovation
DWS	Department of Water and Sanitation
EM	Executive Manager
GE	Group Executive
HEI	Higher-education institutions
HDI	Historically disadvantaged institution
IoE	Internet of everything
IP	Intellectual property
KPA	Key performance area
KSA	Key strategic area
MOA	Memorandum of agreement
MOU	Memorandum of understanding
MTEF	Medium Term Expenditure Framework
NDP	National Development Plan
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
RW	Rand Water
SADC	Southern African Development Community
SALGA	South African Local Government Association
SIPS	Strategic Integrated Projects
SMME	Small, medium and micro enterprises
SCM	Supply chain management
SDG	Sustainable Development Goal
S&T	Science and technology
TIA	Technology Innovation Agency
UN	United Nations
UW	Umgeni Water
WMA	Water management area
WRA	Water Research Act
WRC	Water Research Commission
WRL	Water Research Levy
WRM	Water resource management
WSA	Water Services Act

MINISTER'S REPORT

Lindiwe Sisulu,
Minister of Human Settlements, Water and Sanitation

Access to sufficient water and adequate sanitation of an appropriate quality is necessary for life, human dignity, economic growth and social development. The wellbeing and prosperity of South Africa and all its people are predicated on our keeping the country water secure.

Over the past financial year and subsequent months we have been reminded of the absolute dependence of mankind on water, not only for basic sustenance, but to stave off disease.

The coronavirus (COVID-19) pandemic has been one of the worst health emergencies in world history. The World Health Organisation's recommended protective measure against the coronavirus is to wash hands frequently with soap. Ensuring the availability of safe water for all has clearly been vital to keep up the fight against the spread of the COVID-19 virus. As the South African Government rallied in its response to the coronavirus, thousands of water storage tanks and water tankers have been delivered across the country in order to provide our citizens with the clean water needed to maintain the required health and hygiene.

The pandemic has also highlighted the importance of strengthening cooperation between scientists, decision-makers, private practitioners, industries and civil society in the water and sanitation sector. This calls for open access to scientific knowledge and know-how, data sharing and evidence-based policy and decision-making.

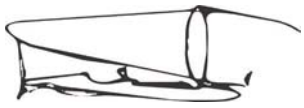
A noteworthy highlight of the South African water and sanitation sector in November 2019 was the launch of the National Water and Sanitation Master Plan by the Department of Water and Sanitation (DWS). The master plan outlines the top priority issues confronting the water and sanitation sector at this time. The document seeks to rally all water sector stakeholders in South Africa to work together to ensure that the country gets ahead of the curve in relation to both current and future challenges. This includes ensuring that by 2030 and beyond South Africa has a sufficient reserve of supply to take the country safely into the future, that accelerated progress towards meeting Constitutional imperatives is made and that service delivery commitments, such as meeting Sustainable Development Goal 6: Ensure access to water and sanitation for all is achieved.

Central to South Africa reaching these goals is enhancing research, development and innovation (RDI) in the water and sanitation spheres. Ongoing research, development and innovation, and the harnessing of international developments, is a critical element of delivering effectively on the DWS's Call to Action, as is the translation of research and innovation into implementation at scale. The RDI system is key to being 'ahead of the curve' as it supports the development of new solutions and technology, provides evidence to support robust decision making, and builds capabilities that enable South Africa to respond to challenges. This is critical in terms of shifting the country into a more proactive planning space that abates some of the more reactive activities that emerge when we are not properly prepared for droughts and other extreme events. Innovation also offers a significant opportunity to develop a water sector industry which can contribute to job creation, and to the development of economic opportunities for the country.

As the leading funder of water research in South Africa, the Water Research Commission (WRC) plays a principal role in many of the country's key RDI initiatives, including, among others:

- Structuring test bed partners with key water sector institutions to accelerate innovations to the market
- Developing technologies, guidelines and implementation support tools that enable South Africa to use alternative and appropriate sources as part of water supply
- Developing and testing tools for agriculture early warning systems
- Scanning the innovation sector for solutions that are ready for application and invest in their implementation
- Developing, demonstrating and validating appropriate alternative, waterless and off-grid sanitation solutions
- Research on land-use impacts on water-linked ecosystems
- Review of relevant guidelines and R&D products to understand where training modules need to be developed around new knowledge

The National Water and Sanitation Master Plan presents a solid affirmation and commitment from DWS to support water-related research, development and innovation. The Department will continue to work with the WRC towards innovative, sustainable solutions for the benefit of all South Africans. My gratitude to the WRC team in ensuring that the Commission remains at the cutting edge of water-related research in South Africa.



LN Sisulu, MP
Minister of Human Settlements, Water and Sanitation

CHAIRPERSON'S REPORT

Dr Nozibele Mjoli,
WRC Chairperson

On behalf of the Board of the Water Research Commission (WRC), I am pleased to report on the activities and performance highlights of the Commission for 2019/20.

During the year under review, the Water Research Commission has continued to play its important role as a water sector knowledge hub by ensuring that its research and innovation products contribute to the improvement of sustainable water and sanitation services for all South Africans.

The WRC performance highlights for 2019/20 are presented below:

- The WRC has managed to achieve its performance targets for 2019/2020 despite the disruptions caused by the announcement of Covid-19 lockdown in March 2020.
- The WRC has made great strides towards growing its international partnerships. A highlight in this regard was the development of the WRC African engagement strategy to ensure value-add and positioning of the WRC as a key African knowledge and innovative partner.
- The leverage income for the 2019/20 year increased significantly, this is a favourable result for the WRC under the current difficult economic environment.
- The WRC hosted its fourth WRC Biennial Symposium in September 2019 themed, "Innovation in Every

Drop". The Symposium was a great success and it attracted the largest number of participants since its inception in 2013. It provided a platform for learning, sharing and engagement for policy makers, researchers, innovators and funders.

- In November 2019, the WRC in partnership with Bill & Melinda Gates Foundation hosted The African Sanitation Revolution Investment Roundtable. This forum provided a platform for the Water and Sanitation Innovators and Entrepreneurs to explore viable business opportunities for the provision of sustainable innovative water and sanitation services to South Africa and rest of the African continent. The purpose of this event was to launch the South African Sanitation Technology Evaluation Programme (SASTEP) which is a partnership between WRC, Departments of Housing Settlements, Water and Sanitation, Science and Innovation and Trade and Industry. SASTEP is funded by the Bill & Melinda Gates Foundation. The aim of SASTEP is to boost the South African economy and create jobs while contributing to the reduction of sanitation services backlogs.

I wish to thank the Minister of Human Settlements, Water and Sanitation, Deputy Minister and officials of the Departments of Human Settlements, Water and Sanitation for their support. My sincere gratitude goes to the members of the WRC Board, WRC executive management, staff, stakeholders, researchers, international and national partners for their commitment and support for the WRC's research and innovation.

Dr Nozibele Mjoli,
WRC Chairperson

The WRC held its 4th Symposium at the Sandton Convention Centre in Johannesburg from 11-13 September 2019. The Symposium was a successful strategic knowledge, information and solutions sharing platform that: acknowledged local scientific solution with global impact; showcased excellence in the South African water research and development domains; linked various institutions operating in different stages of the water innovation value chain; and ensured that various stakeholders understood their complementary roles as water custodians in the value chain.

CEO'S REPORT

Dhesigen Naidoo,
WRC CEO

As one of the most arid countries in the world, South Africa is continually assessing how best to balance water supply with ever-growing demand. The continuously increasing requirement for water for socio-economic development amid threats such as climate change, pollution and a growing population have made research, development and innovation in the water and sanitation sphere imperative.

The local water and sanitation sector, steered and supported by the Water Research Commission (WRC), has shown remarkable ingenuity and competes well on the world stage despite its relatively small size. RDI efforts are aimed at utilising the water we already have innovatively, effectively, and efficiently, while contributing to the greater goal of a better life for all, and building a transformed, capacitated society.

Interventions spearheaded by the WRC have included, but are not limited to, 'new sanitation', innovations in water quality and environmentally sensitive water development, a fundamental diversification of water-supply options, smart – beneficiation oriented and decentralised (localised) – wastewater treatment, innovative water sensitive design, embracing the water-energy-food nexus and fully implementing a 4th industrial revolution (4IR) approach to water and sanitation management.

Efforts of the WRC and its research partners have shown that taking advantage of our water science and technology asset will not only significantly enhance our water security but, if done correctly, the net result will also be in increased energy and nutritional security, with concomitant improved health security. In addition, and if the correct investments are made, we can industrialise our water and sanitation innovations and produce for a global market, as envisaged in the Industrial Policy Action Plan (IPAP). This, in turn, significantly changes the risk profile of water financing and investment as more private sector participation is enabled through large corporates as well as start-ups and co-operatives.

Combining our efforts in addressing the national challenges on water and energy in a joint strategy is key. From 11 – 13 September 2019 the WRC united key stakeholders, including scientists, innovators, policymakers, donor institutions, and private sector representatives at its 4th Symposium titled 'Innovation in every drop'. The symposium was a successful strategic knowledge, information and solution sharing platform that: acknowledged local scientific solutions with global impact; showcased excellence in the South African water research and development domains; linked various institutions operating in different stages of the water innovation value chain; and ensured that diverse stakeholders understood their complementary roles as water custodians in the value chain.

The novel coronavirus (COVID-19) caused significant disruptions around the globe during the last three months of the financial year. On 27 March 2020, the WRC held the first of a series of webinars on knowledge regarding COVID-19. The title of this webinar was 'Water quality, sanitation and hygiene in light of COVID-19'. Additional webinars and other knowledge sharing events were planned for 2020/21, while research funding was redirected towards fighting the pandemic. This included the provision of laboratory and research work services on the monitoring of SARS-CoV-2 in water and faecal sludge as means of estimating the prevalence and burden of COVID-19 infections in communities.

Further, the WRC was a member of the content steering committee to develop and shape the agenda of the Human Settlements Indaba held on 6 March 2020 at Birchwood Conference Centre in Ekurhuleni. The Indaba aimed to develop the Department of Human Settlements' position as part of the five-year plan and Government's Social Compact. The WRC played a leading role as a water research partner and collaborated with the Department of Human Settlements' Innovation and Transformative Technologies work stream in harmonising the position paper that finally contributed to the 2020 Human Settlements Indaba Declaration on strengthening strategic partnerships to transform spatial justice and social cohesion.

The WRC was also instrumental in bringing the 8th SER World Conference on Ecological Restoration to South Africa. The conference was held from 24 – 28 September 2019 in Cape Town. This was the first time that the conference, which had the theme, Restoring Land, Water and Community Resilience, was held in Africa.

We would like to emphasise our gratitude to the Minister and Deputy Minister of Human Settlements, Water and Sanitation for their acute leadership, the WRC Board for their continuous guidance and generous support, and the broader stakeholder base for an incredible partnership during the year. Finally, thanks to the WRC management team and staff for their commitment and hard work as we continue to serve the nation.

Dhesigen Naidoo,
WRC CEO

EXECUTIVE SUMMARY

The need to take care of freshwater resources and water-related ecosystems, and to achieve universal and equitable access to drinking water and sanitation to prepare for water-related disasters is not only firmly embedded in the targets of the United Nations Sustainable Development Goals (SDGs), it is also central to South African Government actions.

To fulfil the objectives of the SDGs, including ensuring the availability and management of water and sanitation for all, requires a fundamental shift in the way the world looks at and manages water. An urgent need to develop innovative approaches to solve global water scarcity and quality issues has arisen, as traditional financing solutions and technologies have proven to be insufficient in addressing these challenges.

Research, development and innovation (RDI) are crucial requirements for addressing these multifaceted and intertwined water-related challenges. Science plays a critical role in informing and supporting management and policy decisions in the water and sanitation sector. Add to this the opportunities presented by the 4th Industrial Revolution (4IR), which is seeing the convergence of the digital, physical and biological realms. The 4IR suite of tools, including, among others, remote sensing, earth observation, digitalisation, big data management and the internet of things, means that water management can finally enter the twenty-first century.

During the past financial year, the WRC has heightened its efforts to not only grow scientific and technological knowledge in the water and sanitation domain, but to translate this repository of knowledge to tangible, accessible and affordable products and services for use on the ground. The WRC's performance during 2019/20 is not only captured in the Annual Report, but is also spread over three additional impact reports, namely the Knowledge Tree Report, the WRC Stakeholder Report, and the WRC CSR (Community Social Responsibility) Report.

In addition to contributing to several Government Outcomes, the WRC's strategic outcome-oriented 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 Knowledge Tree speaks to an investment in the multiplier effect which aims to inform policy and decision-making, contribute to sustainable development solutions, develop products and services for the economy, actively contribute to human capital development, directly empower communities, and enable the national transformation project.

Further, the WRC 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. The Commission also uses other instruments to achieve its goals, most notably driving community involvement in research, promoting the WRC Lighthouses, and leading innovation and impact.

The WRC addresses the three dimensions of the water and sanitation challenges, 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. Towards the end of the financial year, an added dimension which needed to be addressed was the novel coronavirus (COVID-19). This pandemic put a magnifying glass on the issues of water security and safe sanitation access. The WRC was prominent in providing analyses, new knowledge and monitoring and evaluating new systems towards curbing the spread of the virus.

The Commission counted several performance highlights for 2019/20. A number of research projects were concluded in aid of improved decision-making around South Africa's water resources. This included a multiyear study to assess the potential of new space-borne sensors for the inventory and long-term monitoring of palustrine wetlands, as part of freshwater ecosystems, in the face of global change. The findings and data obtained during this project provide valuable information in support of the long-term inventorying of wetlands in the National Wetland Maps and the National Wetland Monitoring Programme of South Africa.

Further, findings from a commissioned WRC study regarding the presence of microplastic particles in surface water, treated drinking water and groundwater sources have been used to strengthen the Department of Environmental Affairs, Forestry and Fisheries' (DEAFF) national plan of action on plastics. In addition, research in the sphere of water utilisation in agriculture established country-specific standardised procedures for calculating blue and green water footprints for irrigated field and forage crops, thereby contributing towards the setting of accurate benchmarks for freshwater use throughout the lifecycle of crops.

The WRC International Cooperation and Partnerships strategy aims to establish new, and strengthen existing, partnerships that will extend the WRC footprint, especially in Africa, and derive maximum value for the WRC, the South African water sector, and the continent. The WRC made great strides towards growing its international partnerships during 2019/20. Highlights in this regard include the development of the Africa Strategy to guide the WRC African engagement, ensure value-add and position the WRC as a key African knowledge and innovation partner. In the fourth quarter, engagements were initiated with key African partners to explore and form knowledge and innovation partnerships to respond to the COVID-19 pandemic and beyond. In addition, the WRC entered into two MoU's with international partners during the year, the African Academy of Sciences (AAS) and WaterNet.

In terms of the WRC's key performance targets, 92 RDI projects were initiated during 2019/20 while 120 projects were finalised during the same period. Over the past five years the WRC has finalised 480 research projects, indicating a significant contribution to knowledge in the water sector.

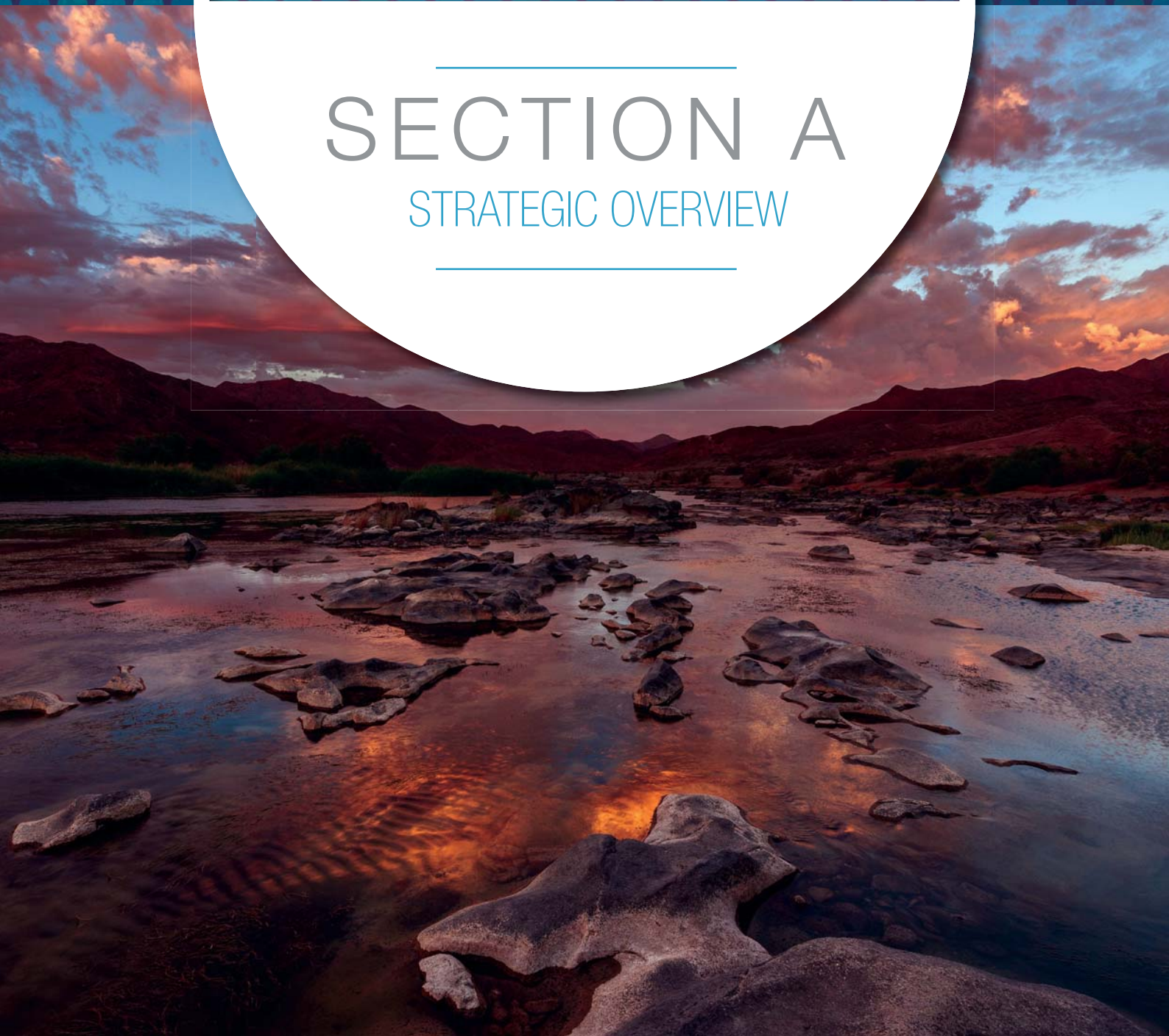
Further, the WRC has, in the past few years, broadened its research scope to one that actively involves communities in the research project, and engages key partners to upscale and maintain interventions post-project. A total of 109 WRC research projects in 2019/20 had a direct impact on the lives and livelihoods of communities through water-related interventions and capacity building.

With regards to the WRC's financial performance, the Water Research Levy is the Commission's main source of revenue. The WRC had a total income (including levy and leverage income) of R64.53 million during 2019/20. Levies made up 76% of the WRC's income during the past financial year.

The WRC recognises the need for more innovation and greater partnership to ensure even higher impact contributions to meet South Africa's, Africa's and the world's water and sanitation challenges going into the future.

SECTION A

STRATEGIC OVERVIEW



Access to sufficient water and adequate sanitation of an appropriate quality is necessary for life, human dignity, economic growth and social development. This underpins the wellbeing and prosperity of South Africa and all its people. 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.

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. It will endeavour in its projects to create a high concentration of activities that support each of these dimensions. In so doing, the WRC funds and facilitates research in water-related innovation and disseminates such knowledge for the advancement of national water security. The recipients of this knowledge may be higher-education institutions (HEIs), science councils, or private agencies/contractors, as well as the various tiers of government.

While the Commission's increased efficiencies, innovation and partnerships will continue to maintain knowledge production levels, it is becoming increasingly difficult to meet two very basic challenges in the South African water and sanitation system. The first is the ability to address the increasingly complex nature of water problems such as non-revenue water and acid mine drainage. The second is the WRC's ability to both transform the South African research and development (R&D) community through the development of researchers from the designated groups as well as create further avenues for job creation and entrepreneurship development, which are all restricted by the limited availability of R&D funds.

At the same time, technological innovation, improvements in communication, increased collaboration and international partnerships have enhanced our ability as a South African water R&D

Figure 1: Five actions of the WRC towards achieving its vision

community 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 our ability to make a significant difference to South Africa's water fortunes.

The primary functions of the WRC are 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.

The four core principles of the WRC's strategy focus on:

PARADIGM

- Impact orientation (Knowledge Tree)
- Development focus (R d <-> r D)
- Narrowing the implementation journey
- Multiplier effect

PARTNERSHIP

- Across stakeholder groups
- Public and private
- Local and international
- Funding
- Implementation
- Development
- Research

CORE PRINCIPLES

PEOPLE

- Transforming and expanding the water R&D community
- Growing the new W&S cohort
- Building the youth cadres
- Community practitioners and entrepreneurs
- WRC leadership development
- Gender and youth foci

POSITIONING

- Relationship with Executing Authority and DWS
- Recognition as key development player
- Leadership in Science and Innovation landscape
- Water sector leadership
- Increasingly important partner in the international sphere

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 Knowledge Tree speaks to an investment in the multiplier effect which aims to inform policy and decision-making, contribute to sustainable development solutions, develop products and services for the economy, actively contribute to human capital development, directly empower communities, and enable the national transformation project. Secondly, it speaks to the continuous improvement of a programmatic approach to choose a significant proportion of new projects in each funding cycle that build on the knowledge base of existing and previous funding cycles.

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. The Knowledge Tree is now well entrenched in the WRC's activities, with all research proposals articulating objectives of the Knowledge Tree branches.

Figure 2: The WRC Knowledge Tree

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.

The Commission also uses other instruments to achieve its goals, most notably driving community involvement in research, promoting the WRC Lighthouses, and leading innovation and impact.

Table 1: The WRC's strategic outcome-oriented goals.

1

Strategic outcome-oriented goal 1:
Inform policy and decision-making

The WRC informs policy and decision-making by commissioning research projects that generate appropriate evidence-based knowledge that guides decision-making, influence the development of policy, practice or service provision, shape legislation and alters behaviour. Policy and Ministerial briefs are generated and distributed to government departments to provide decision-makers with research-based knowledge. This allows for the deeper understanding of policy issues and the reframing of debates with the use of appropriate knowledge.

2

Strategic outcome-oriented goal 2:
Develop new products and services for economic development

With the knowledge generated from its research projects, the WRC can capitalise on projects that produce new intellectual property or can introduce innovations that create new or improved technologies, products and services that can be used in the real economy. Effectively, this is the WRC's contribution to job creation and economic development through water science innovations.

3

Strategic outcome-oriented goal 3:
Enhance human capital development (HCD)

Each project that is selected and funded by the WRC is required to have high levels of student participation in the project. The WRC strives each year to increase the number of postdocs. PhD and Masters students on its projects, which further increases development in the sector. The WRC also focuses on providing support to historically disadvantaged institutions through mentorship. Emphasis is also placed on building capacity in the science community, both in South Africa and Africa, by encouraging black project leaders to manage WRC projects.

4

Strategic outcome-oriented goal 4:
Empowerment of communities

The WRC's each year strives to increase the number of projects funded that include communities that are not only the end- users of research but also active participants in the research. The aim is to have a direct positive impact on the livelihoods of the communities in which the research project is conducted by transferring knowledge that builds capacity to assist with post-project sustainability.

5

Strategic outcome-oriented goal 4:
Promote transformation and redress

Each year the WRC actively strives to increase the number of female and youth project leaders on its funded projects and with the knowledge generated from the research, aims to promote socio-economic development by providing solutions that reduce poverty and inequality in communities. In addition, the WRC emphasis on food security will result in several projects being undertaken that aim to increase food security in communities.

6

Strategic outcome-oriented goal 6:
Drive sustainable development solutions

The WRC's prioritises those projects that provide solutions for sustainable development. These projects must produce knowledge that contributes to providing sustainable solutions in the areas of environment, economy, and community.

THE WRC LIGHTHOUSES

The WRC Lighthouses are a strategic development tool that uses flagship programmes which are transdisciplinary, multi-KSA and inter-institutional mega-projects that will examine priority water issues across the innovation value chain. The WRC's Lighthouses have, since their inception, elevated the research portfolio by emphasising the inter-relationships, interdependency and integration of research in the key strategic areas.

The WRC has seven Lighthouses, as follows:

1

Sustainable Human Settlements

The purpose of this Lighthouse is to develop a critical mass of knowledge around the integration of planning activities for the adoption of more integrated and sustainable solutions using the water sanitation services (settlements) lens for urban, peri-urban and rural environments.

2

Green Economy

The 'green economy' is a transformation philosophy, which indicates a move from a reliance on destructive development to more environmentally friendly growth. For South Africa, green economy principles map out a sustainable development path based on addressing the interdependence between economic growth, social protection and natural ecosystems.

3

Water-Energy-Food Nexus

In response to the global trend in adopting the water–energy–food (WEF) nexus approach, in 2012, the WRC initiated its WEF Nexus Lighthouse with a goal to start championing integrated water, energy and food planning and development for South Africa, in particular, and Southern Africa in general. Since then, the WRC, through its Research and Development (R&D) Branch, has organised various activities under the banner of this Lighthouse. The WEF nexus has evolved into an important framework attracting global attention. The concept presents an opportunity to promote integrated planning in a sustainable manner.

4

Climate Change Variability

The WRC Climate Change Lighthouse is undertaken through collaborative research on priority water-related climate issues with partnerships forged along the innovation value chain. Key issues of concern include extreme climate events (floods, droughts, landslides, heatwaves, wildfires, etc.), water quality and health, coastal zone management, water supply, groundwater recharge and the energy–water nexus. The Lighthouse now incorporates the programme associated with water scarcity. The role of this Lighthouse in climate-change response is embedded within adaptive capacity, resilience, improvement of early warning systems, reduced vulnerability and an improved ability to respond, coupled with proactive planning. The main aim is to enhance the country's water security and resilience to current and future water scarcity.

5

Sustainable Water Behaviours

Human behaviour – culture, perceptions, paradigms and choices – sits at the heart of how the supply of water is managed and demands for water are negotiated. Thus, in the context of the growing challenges of water scarcity, demand outstripping supply, high user expectations and required assurances, and climate variability, interventions are required beyond technical interventions. A focus on behaviour is thus crucial when managing supply and demand issues in the water sector. Behaviour is also important when considering water and its broader links to the green economy and wider sustainable development approaches.

6

Water and 4IR (Big Data and Artificial Intelligence)

The main aim of this Lighthouse is to serve as a platform for growing the knowledge and research base on the application of data and its associated tools in the water sector, and to share current thinking and strategies of future technological development to advance development in the water sector.

7

Water Quality and Health

The Water Quality and Health (WQH) Lighthouse is a crosscutter within the WRC research business divisions as it is applicable to the entire water value chain and covers aspects of water resources, sanitation, drinking water, health and hygiene. In this era of growing uncertainty, addressing water quality challenges requires new imperatives that support a shift to more sustainable, integrated, and equitable approaches.

LEGISLATIVE AND OTHER MANDATES

The WRC serves as the 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

During 2019/20 the WRC continued 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 was 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 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, Forestry and Fisheries-led Climate Change Response Strategy and the Department of Science and Innovation's (DSI) 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 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 DSI, has 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 to facilitate a more optimal water innovation system.

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CONTRIBUTING TOWARDS ACHIEVING GOVERNMENT OUTCOMES AND NATIONAL DEVELOPMENT PLAN (NDP) OBJECTIVES

As a national public agency, the WRC actively strives to support the Government of South Africa in achieving its strategic outcomes, with particular reference to the NDP objectives as well as the Corporate Plan (Annual Performance Plan) of the DWS and the performance agreement of the Minister of Human Settlements, Water and Sanitation.

The WRC also applies the outcome-based approach developed by Government and aims to support all Government Outcomes and Outputs through its research portfolio, with special emphasis given to Government Outcomes 6, 7, 9 and 10 (Table 1). Firstly, Outcome 6 addresses the need for an efficient, competitive and responsible economic infrastructure network. WRC-funded projects support water availability through examining and finding solutions for issues related to bulk water supply, and through supporting the development of appropriate regulations regarding water quantity, quality and usage. A second emphasis is Outcome 7, which focuses on vibrant, equitable and sustainable rural communities and food security for all. This is carried out through several projects addressing water utilisation in agriculture as well as projects focusing on informal settlements and peri-urban communities. Thirdly, Outcome 9 aims at establishing a responsive, accountable, effective and efficient local government system. The WRC supports this outcome through research focused on improving services, with special emphasis on the delivery of water and sanitation services. Finally, Outcome 10 addresses the protection and enhancement of the country's environmental assets and natural resources. This outcome is supported through research in aquatic ecosystem connectivity processes, sustainable utilisation, restoration, global change and biodiversity protection. The WRC workplan is geared to the improvement of the quality and quantity of South Africa's water resources through both its research projects as well as its innovation and technology development activities. Examples include technologies and strategies to reduce water loss in distribution systems, better sanitation solutions and improved wastewater treatment.

ALIGNMENT WITH DWS STRATEGIC OBJECTIVES AND THE NATIONAL WATER AND SANITATION MASTER PLAN

The National Water & Sanitation Master Plan (NWSMP) presents a solid affirmation and commitment from DWS to support water-related research, development and innovation. This is with a view to ensuring that there is highly informed water decision-making through science and technology at all levels, in all stakeholder groups, and innovative water solutions through research and development for South Africa, and the African continent. The DWS will thus continue to support efforts that position the country and its institutions as a global water knowledge node active across the whole water and sanitation innovation value chain.

The DWS with its relevant institutions has to construct, plant, and maintain a true Knowledge Tree which bears many desired fruits, resulting in new sustainable development solutions, new products and services, empowering of communities - especially youth and women, informed policy and decision-making, etc. In fact, this plan constructs a roadmap assuring the commitment of the DWS in addressing the challenges of unemployment, poverty and inequality as stated in the National Development Plan (NDP) of South Africa.

The RDI Chapter of the NWSMP is aligned with and linked to key strategic goals of the DWS as well as other Government priorities. Above all, the NWSMP is meant to advance and comply with the Constitution and all other relevant policies and legislations of South Africa. The chapter thus provides:

- A brief comment on RDI gaps and opportunities
- An overview of the key activities and instruments that underpin the water RDI sector

- The key investment themes/clusters that should be prioritized
- Tracking progress
- An estimation of envisioned investment required
- An overview of the proposed implementation and partnership approach

The Water RDI Roadmap is a 10-year innovation plan (2016/17–2027/27) that provides strategic direction, a set of action plans and an implementation framework to guide, plan, coordinate and manage South Africa's water RDI investment. The Roadmap is a partnership initiative between the DSI, DWS and the WRC. The Roadmap is thus positioned as the implementation plan for Chapter 14 of the NWRS-2 and its current revision processes. It also provides the basis for the research chapter of the National Water and Sanitation Master Plan.

The Roadmap has strong alignment to the Water Chapter in the Industrial Policy Action Plan released in 2017/18. The plan focuses on tracking and driving a series of research, high-end skills development and innovation deployment activities focusing on a range of clusters/thematic areas, such as unlocking alternative sources of water, ecological and built infrastructure, or monitoring and metering.

Ultimately the Roadmap aims to:

- Address water knowledge gaps
- Grow the water sector high-end skills base
- Facilitate faster and more effective deployment of context-appropriate solutions to market
- Provide evidence that guides policy and implementation
- Develop content that guides education and awareness campaigns
- Unlock new opportunities for business and industry
- Deepen insight on how best to balance protection and use of the environment
- Facilitate a learning culture in water sector institutions about the challenges, risks, opportunities and solutions related to the water sector

ORGANISATIONAL ENVIRONMENT

The primary functions of the WRC are 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. 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, four core teams have been developed:

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

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.

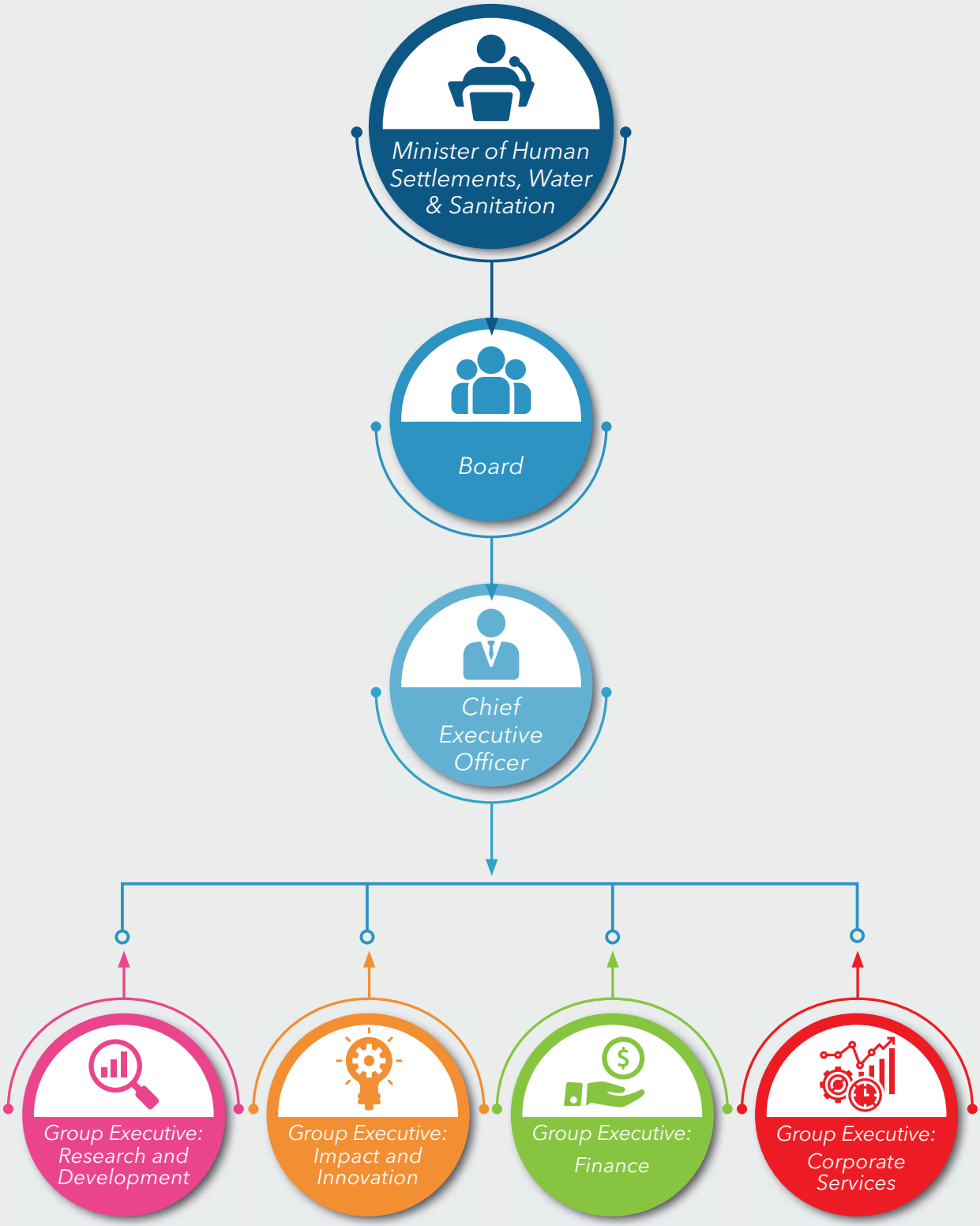
Finance – which focuses on improved efficiencies and effectiveness within the WRC's supply chain and the enhancement of financial planning capabilities which will contribute towards creating an appropriately funded and financially stable environment.

Corporate Services – which focuses on the world of work within the WRC. This includes people and culture, information technology, corporate social responsibility, legal and compliance as well as facilities.

The following structure defines the internal governance framework:

- The Minister of Human Settlements, 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 a member of the WRC Board.
- The Heads of Branches, namely the Group Executives and the Chief Financial Officer report directly to the CEO.

Figure 3: WRC organisational structure



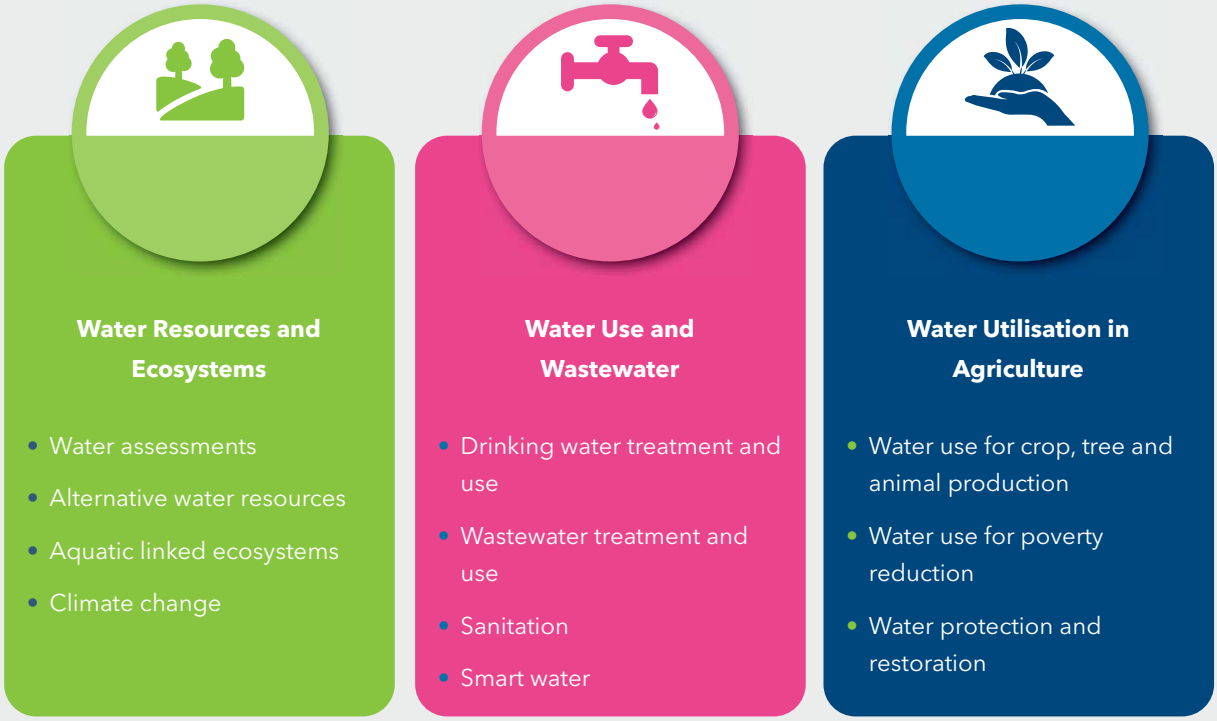
RESEARCH AND DEVELOPMENT

The Research and Development (R&D) Branch of the WRC is the custodian of instruments, programmes and processes which create new knowledge and innovation in water and sanitation. It uses R&D projects and other activities to produce new knowledge required for water and sanitation, human settlements, and many other sectors in South Africa and beyond.

The knowledge generated results in new or refined technologies and innovations which the WRC provides to the water sector to address specific needs and challenges. The Branch is actively involved in human and institutional capacity development using research and development projects, research products and services. It supports other branches in the WRC with knowledge, innovations and technologies that enable them to fulfil their functions, for instance, Innovation and Impact and Corporate Services (corporate social responsibility) get R&D support when they embark on knowledge dissemination and transfer, screening and evaluation of new technologies, negotiation of new water business development initiatives, assisting schools and needy communities, etc.

The R&D Branch has three business divisions, which are Water Resources and Ecosystems, Water Use and Wastewater Management, and Water Utilisation in Agriculture (Figure 4).

Figure 4: **The three strategic areas of the R&D branch.**



INNOVATION AND IMPACT

Regardless of the complexity of the water challenges facing the nation we need to have enough clean water now and in the future. Whilst water demand is increasing due to growth in population and the economy, along with urbanisation and land-use changes, we must usher in the future water situation we require now. In the next five years, there is a need to ensure that these five pillars are addressed urgently:

- Innovative water technologies
- Smart policy
- Adequate financing
- Good governance
- Appropriate skills

Solutions to the country's growing water challenges lie, in part, with the development and adoption of new innovative technologies, paradigm shifts in our technological choices, our ways of working and our ability to smartly and responsibly open up our water services markets leading to creation of new products and services and new industries.

The Innovation and Impact Branch of the WRC focuses on the following:

- The positioning of the WRC as a premier knowledge hub, leading the sector in terms of disseminating appropriately packaged knowledge products, including multimedia and interactive solutions.
- Inspiring water conversations, ensuring that water and water-related knowledge permeate though all sectors of our population leading to better understanding of water management issues and hence behavioural changes, positioning the WRC and its personnel as the credible water conversation leader in all media channels
- Creating a robust and vibrant innovation ecosystem that allows the WRC to play a lead and co-ordinating role with strategic sector partners in accelerating innovations and best practice to the market
- Creating an environment whereby professionals and non-professionals can contribute and channel their knowledge and innovative skills to solving water problems from a multidisciplinary point of view
- Drawing various stakeholders to engage in water conversations and tell their water stories, and supporting the development of appropriate skills
- Supporting and influencing the development of smart policies, improved partnerships and good governance

FINANCE

The Finance Branch focuses on financial reporting and compliance as this is an important element related to the WRC retaining and building on its clean audit status. This also provides the Commission's partners and stakeholders further assurance of the entity's financial soundness.

As such, the Finance Branch has, in recent years, developed into a more strategic unit within WRC operations, evolving from being primarily engaged in administration to being driven by improved efficiencies and effectiveness within the WRC Supply Chain Management (SCM) function and the financial planning

and management areas. The Branch is now better geared towards providing the WRC with the required financial planning, structuring and support tools to facilitate and empower the organisation to understand its funding requirements and funding sources that will enable it to realise its research, development and impact vision and strategic objectives.

CORPORATE SERVICES

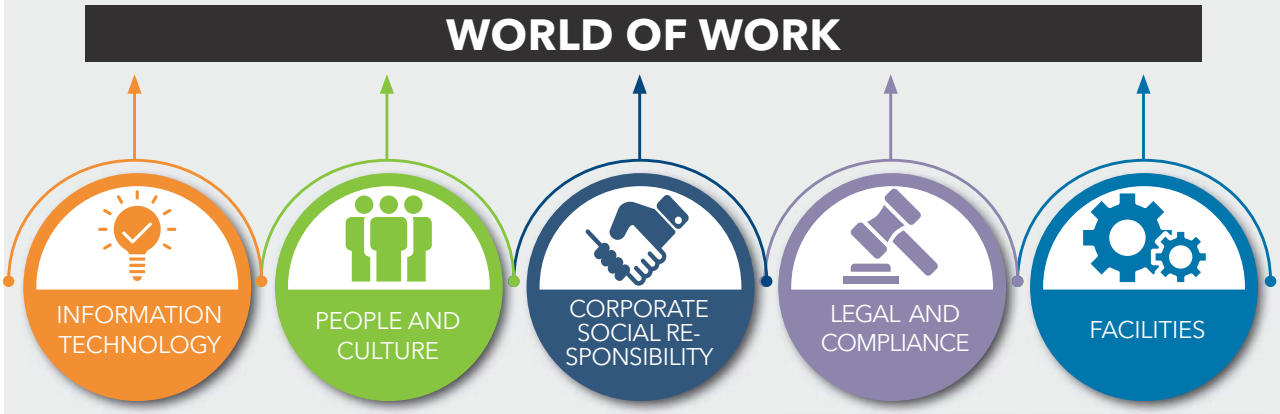
The WRC's workplace is being defined by technology and the employees that are using it, corporate social responsibility, good governance and the physical work environment.

The internet of everything (IoE) is enabling new forms of connectivity, changing communications and fostering new ways of working. With the plethora of devices, apps and solutions now available and growing at a phenomenal rate, to remain competitive the WRC must move with the times, while striking a balance between current and future employee and business needs.

For the workplace, this means the emergence of a generation of workers with the potential to be highly productive. It also suggests the need to ensure that employees are given the variety of tasks they need to tap into this skill and lead to their fulfilment. Together with information and communication technology (ICT), another important aspect of the world of work is corporate social responsibility (CSR). This is a business management practice that incorporates social and environmental concerns into regular business activities. It encompasses many objectives ranging from the ethical treatment of employees and members of the supply chain, to safe and healthy ingredients, to environment-friendly/sustainable product manufacturing.

Essentially, the WRC's Corporate Services strategy straddles the line between what has traditionally worked and what will work in the future, based on the needs, strengths and mindset of the future workforce. Each new generation is progressively more Internet- and technology-focused, and more social-responsibility focused. With this in mind, the world of work is focused on human resources, information technology, governance and facilities in an integrated approach (Figure 5.). This approach ensures that the WRC is moving to the next level in terms of business success and employee satisfaction.

Figure 5: The Corporate Services function within the WRC



SECTION B

PERFORMANCE OVERVIEW

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 2019/20.

EMPOWERING COMMUNITIES

INCREASING KNOWLEDGE ABOUT THE NOVEL CORONAVIRUS

On 27 March 2020, the WRC held the first of a series of webinars on knowledge regarding the novel coronavirus (COVID-19). The title of this webinar was 'Water quality, sanitation and hygiene in light of COVID-19'. The aim of the event was to share knowledge and explore effective solutions and mechanisms for supplementing Government-led measures for mitigating against the spread of COVID-19 under the prevailing water quality, and levels of water, sanitation and hygiene services provision. Topics discussed included, among others, COVID-19 infection rates and factors to be considered for the containment of the virus; epidemiology of the virus and guidance on the effective mechanisms for virus containment in high-density and low-density communities; recommended hand sanitising formulations and practices for communities without piped water; and risk of infection due to exposure to contaminated water. Additional webinars and other knowledge sharing events have been planned for 2020/21, while research funding was redirected towards fighting the pandemic. This included the provision of laboratory and research work services on the monitoring of SARS-CoV-2 in water and faecal sludge as means of estimating the prevalence and burden of COVID-19 infections in communities.

CULTIVATING PUBLIC KNOWLEDGE ON WATER

With a fast-growing population and recurring droughts, it has become critical for South Africa to plan for an increasing water demand. For a water-scarce country such as South Africa, public participation in water

management and decision-making is therefore vital to ensure water resilience in communities. A WRC study was initiated to determine the status of public knowledge on water and related aspects (including water reuse). Findings from this study showed that public water-related knowledge was very limited and rarely taken into account by local government and water utilities, of which the ultimate result may be lack of participation in the implementation of water projects. The study also provided key insights on the elements and dimensions that need to be considered for the development of public educational material on water and related aspects. Providing education and opportunities for engagement is one way to trigger participation. Against this background and context, several recommendations, including multimedia communications, curriculum outlines and campaigns, have been put forward as key interventions for improving public education on water.

GROWING VEGETABLES IN NEEDY COMMUNITIES

School vegetable gardens play an important role in staving off hunger in needy communities. The WRC partnered with the Agricultural Research Council (ARC) to establish school vegetable gardens at two schools in Mamelodi, Pretoria, as part of its community social responsibility activities. In each school garden, accredited training on basic crop production, seedbed preparation and irrigation maintenance was provided for selected gardening participants from the schools. Irrigation systems were installed, and selected winter and summer vegetable crops were planted.

IMPROVING THE NUTRITION AND HEALTH OF POOR, RURAL COMMUNITIES

The role of water in achieving food and nutrition security for improved human health cannot be understated. A need has been identified, however, to link the concept of 'more crop per drop' with aspects of nutritional value. This could lead to a more holistic approach to linking water, agriculture and nutrition with improving human health. A WRC project aimed to highlight these linkages with a particular focus on poor, rural households. This was done by placing emphasis on the use of nutritional water productivity as a suitable index for assessing the contribution of water use and agriculture to food and nutrition security. An added focus on underutilised crops, as an alternative to major, mainstream crops, was

used to address the need for dietary diversity in poor, rural communities. The study confirmed that, despite several interventions targeted at alleviating household food and nutritional insecurity, poor rural households still suffer unacceptable levels of malnutrition. This is mostly associated with a lack of dietary diversity and limited access to and non-availability of nutrient-dense foods. Agriculture offers an opportunity to address the availability and accessibility of diverse nutrient-dense foods in poor rural communities. Alternative crops have the potential to provide nutrient-dense options; however, they still lack improvement and often produce yields that are lower than those of conventional crops, making them unattractive. This study was the first to benchmark nutritional water productivity of conventional grain legumes to alternative grain legumes under similar conditions. Crop improvement should target improving the yield of these crops.

HARNESSING COMMUNITY INDIGENOUS KNOWLEDGE FOR WATER TREATMENT

Adequate and sustainable supplies of clean water are vital to health, environment and the economy. While the responsibility for provision and delivery of clean water rests with local government (municipalities), it is still important to empower communities to be water self-sufficient, and encourage the use of alternative water sources. The self-supply approach is widespread in South Africa with family wells and boreholes supporting small-scale irrigation as well as other domestic water needs. Indigenous knowledge about water treatment practices, i.e., the use of natural materials to clarify water, has been applied for centuries, but some of these concepts have not been tested and documented. A WRC study was initiated in order to engage communities on known medicinal plants with coagulant (dirt settling/separation) and antimicrobial (disinfection) water treatment properties. Based on the feedback received, a few species were selected for further development and testing in real settings. For this study, the potential use of *Dicerocaryum* sp. (Devil thorn) for water treatment was investigated. The results showed that the plant is very rich in bioactive compounds with potential ability to remove both chemical and microbial contaminants in water. Further work has been commissioned to study the antiviral properties of such medicinal plants. These findings will be key in development of natural products for water treatment as well as sanitizing products against a number of disease-causing microorganisms in future.

INFORMING POLICY AND DECISION-MAKING

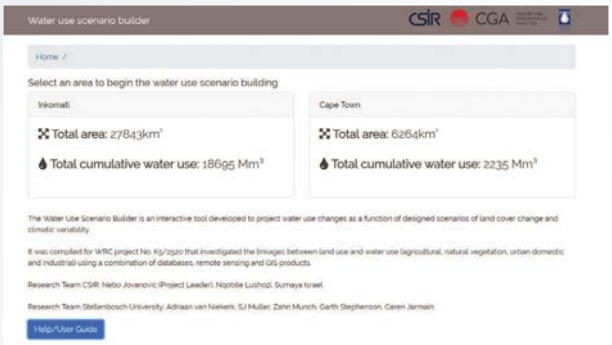
USING REMOTE SENSING TO MONITOR FRESHWATER ECOSYSTEMS

Remote sensing is a valuable tool for monitoring wetland extent and other attributes at a regional scale. It provides a means of automating the mapping of the extent of inundated and palustrine wetlands, and the quantification of soil moisture, above ground biomass, nutrients, phenology and the hydrological regime. If measured at intervals using consistent methods, these values can show changes over time. From 2016 to 2020 the WRC funded a study which assessed the potential of new space-borne sensors, such as Sentinel, for the

inventory and long-term monitoring of palustrine wetlands, as part of freshwater ecosystems, in the face of global change. The study as resulted in deeper understanding of the capabilities of the current, freely-available, space-borne sensors, Sentinel-1 and Sentinel-2, for the detection and monitoring of wetlands.

The findings and data obtained during this project provide valuable information in support of the long-term inventory of wetlands in the National Wetland Maps and the National Wetland Monitoring Programme of South Africa.

IMPROVING WATER RESOURCE MANAGEMENT



The Water USB Homepage.

During the year under review the WRC and its research partners finalised the development of the Water USB (Water Use Scenario Building). The Water USB is an interactive tool for projecting future water use changes as a function of land cover change and designed scenarios of climatic variability. The tool estimates mean consumptive water use and cumulative water use for each land cover and for each month of the year based on the historical 13-year monthly dataset analysed. Monthly estimates are then summed to give an estimate of the annual totals. Impacts of land cover changes can be estimated by changing the area of each land cover class. Impacts of climatic variability are estimated from increases/decreases in vapour pressure deficit, air temperature and rainfall. The tool has three main scenarios: Scenario One is a land cover change scenario; in this scenario the user changes land class area(s) to observe changes in water use. Scenario Two is a climatic change; in this scenario the user selects climatic scenarios (increase/decrease in rainfall, temperature and vapour pressure deficit) to observe changes in water use for all land cover classes. Scenario Three is a land cover and climatic change scenario; in this scenario, the user changes both land cover class area(s) and selects climatic scenarios to observe the combined effect on water use. The tool is complementary to DWS systems such as WARMS (Water Authorisation Registration Management System).

WRC CONTRIBUTION TO CURBING PLASTIC POLLUTION

Plastic production has increased dramatically worldwide over the past 60 years, with a significant portion not being recycled, posing a significant threat to the terrestrial, aquatic and marine environments. In 2019, United Nations member state Environment Ministers (including South Africa) signed a non-binding resolution to reduce the use of plastics by 2030. In particular, the presence of microplastics (plastic pieces less than 5 millimeters in size) in the environment is of concern as these could have adverse health effects on humans as they move through the marine food web. A commissioned WRC study revealed the presence of microplastic particles in surface water, treated drinking water and groundwater sources. Though, at lower levels compared to other developing countries, these findings

signal a potential growing problem. Findings from this project have been used to strengthen the Department of Environmental Affairs, Forestry and Fisheries national plan of action on plastics. Findings on this project have also been presented to the Parliamentary Portfolio Committee on Environmental Affairs.

PROMOTING THE SAFE REUSE OF WATER

The second edition of the National Water Resource Strategy proposes water reuse as one of the strategies to supplement South Africa's water resources. The National Water and Sanitation Master Plan takes this proposal up in its action plan, which states that water reuse is to be increased on an ongoing basis. In both policy documents, the role of capacitating implementation agencies, such as water boards and municipalities, is well recognised. To support this objective, a number of water reuse capacity building projects were initiated by the WRC and its partners during 2019/20. In 2019, the WRC entered into an agreement with the Institute of Municipal Engineers of South Africa (IMESA) for the development of guidelines and training for municipal engineers on the implementation of water reuse projects. A number of engagements were convened with local government under this project during the financial year. Another capacity building initiative for water reuse currently supported through WRC funding is the demonstration of water reuse technologies and capacity building for the Umgeni Water Darvill Water Recovery Plant. In 2019, the inaugural national learning forum on water reuse was convened on site.

ESTABLISHING NATIONAL EXCRETA FLOWS IN SOUTH AFRICA

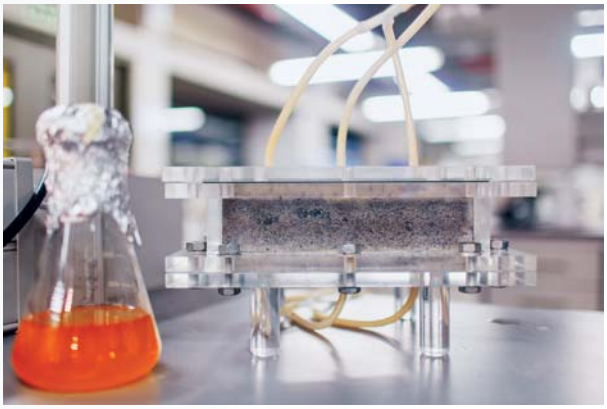
Sanitation has an impact on and influences many of the *Sustainable Development Goals* (SDGs); the SDGs cannot be met unless sanitation is addressed as a priority. Considering this, the development of Shit Flow Diagrams (SFD) for South African municipalities could support and contribute to an improved understanding of the sanitation status in South Africa. The SFD tool and the graphic generated was initially conceptualised by the World Bank in 2012 to better understand excreta management along the sanitation service value chain. Since then, various SFDs have been generated across the developing world for selected cities and towns. The SFD provides an easy visualised representation of excreta flows and serves as an advocacy tool to ensure human excreta is managed safely through the sanitation supply chain including storage, collection, transport, treatment and safe end-use or disposal of faecal sludge. Within South Africa, an SFD had only been developed for eThekwini Municipality prior to WRC research project no. K5/2813. Through the latest WRC project, SFDs were developed for selected towns and cities through a partnership with eThekwini's Municipal Institute of Learning (MILE) Programme and SALGA. Training in the development of SFD reports was assisted by the Centre for Science and Environment (CSE, India). A total of eight SFD reports were generated through these partnerships. From the study, it was shown that no municipality was 100% sewered and that there was a range of sanitation technologies employed. As each town/city will be different as the people served with sanitation, type of sanitation facilitation and how the sanitation waste is handled will be different, the management plan (and therefore the SFD) for each municipality will differ in terms of areas of prioritisation.

WATER FOOTPRINTS – TOWARDS THE SUSTAINABLE USE OF FRESHWATER

During 2019/20 the WRC with its research partners successfully completed a project titled 'Determining the water footprints of selected field and forage crops towards sustainable use of freshwater'. This research addressed important issues in agricultural sustainability and human survival in South Africa. The research established country-specific standardised procedures for calculating blue and green water footprints for irrigated field and forage crops, and this can contribute towards the setting of accurate benchmarks for freshwater use along the lifecycle of crops. The research linked the water footprint applications to economic and social analytical tools. The inclusion of the social and economic impacts of proposed changes in water use behaviour provides detailed insights and understanding of water management. The analysis of consumer awareness, preference and willingness to pay for water footprint information on product labels gives insight into the scope for incentivising water users through price premiums to use freshwater efficiently.

DEVELOPING NEW PRODUCTS AND SERVICES FOR ECONOMIC DEVELOPMENT

BIO-CEMENTS – A NATURE INSPIRED APPROACH



The first bio-brick grown built using human urine was revealed on 24 October 2018 at the Civil Engineering Building at the University of Cape Town (UCT). The research team had previously manufactured a bio-brick from synthetic urine (laboratory-made urine). Further bio-bricks were made from urine during the course of a follow-up WRC research project (no. K5/2810) with the aim of optimising the bio-brick process. The first bio-brick made from urine received attention from global news media. The UCT research team were able to show that bio-bricks could be manufactured using urine collected from the UCT campus. A urinal that used no water (perfect for a drought period), produced a solid fertiliser and allowed the research team to recover an almost endless supply of stabilised urine which they could use for their bio-brick process. A series of experiments was conducted to optimise the brick-making process using urine. The bio-bricks were then subjected to mechanical testing to compare their performance to conventional bricks available commercially. The research team were able to produce urine-derived bio-bricks which are stronger than a 40% limestone brick (0.9 MPa) and a 20% cement brick (2 MPa), but weaker than a non-facing brick (8.8 MPa). The maximum strength that the research team could produce was 5 MPa with potential to further optimise the manufacturing process. By conserving water from flushing and collecting the urine, water usage and potential downstream pollution was limited through recycling urine into value-add products.

INVESTIGATING PITLAKES AS A VIABLE CLOSURE OPTION

South Africa has been mining coal since the early 1800s. Opencast coal mines generally leave a final void because of the mining method. Once mining operations cease, these voids fill with water forming a lake which is generally referred to as a 'pitlake'. It is estimated that there are over 200 pitlakes in the three major South African coalfields. The study evaluated the environmental sustainability of using pitlakes as a closure option for new and proposed coal mines in South Africa. The investigation concentrated on the two major drivers of pitlake sustainability. Four pitlakes were chosen for the study as being representative of the major South African coalfields. The study saw the development of a preliminary manual for the design of coal-mine pitlakes as an environmentally stable closure option for South African mines.

MORE CROP PER DROP – IMPROVING ON-FARM IRRIGATION

Agriculture is the single biggest user of freshwater withdrawals in South Africa, accounting for 60% of existing water use. As the demand for water grows, the competition for water currently used for agricultural production will continue to increase in future. Achieving high irrigation water use efficiency and profitability in irrigated agriculture is, to a large degree, determined by the efficiency of irrigation water management. However, irrigation scheduling generally has left a lot to be desired, despite the fact that very useful research in this regard has been done in the country. A WRC project followed a different approach to the traditional methods of research that have been conducted in irrigation water management. It attempted to include the users of the knowledge (farmers) in its generation and to address real-world problems by using a combination of disciplines. The project introduced simple low-cost tools (the Chameleon sensor and reader together with the Wetting Front Detector) that can be used by any farmer to improve crop yields through better management of irrigation water, soil nutrients and salt. These tools do not require expert knowledge to understand and interpret measurement data. The Virtual Irrigation Academy (VIA) combines these irrigation monitoring tools with an online communication and learning system (https://via.farm/).

DRIVING SUSTAINABLE DEVELOPMENT SOLUTIONS

EMERGING TECHNOLOGY FOR THE REMOVAL OF EDCS IN WASTEWATER SLUDGE

Previous WRC studies indicated that current wastewater treatment plants have a limited capacity to remove emerging contaminants such as endocrine disrupting compounds (EDCs). EDCs are those chemicals, both natural and man-made, that may mimic or interfere with the body's hormones, known as the endocrine system. This prompted the WRC and its research partners to explore alternative technologies for the removal of these contaminants. In this regard, the emerging polymeric carbon solid (PCS) technology was

successfully demonstrated during 2019/20 to effectively remove EDCs from wastewater sludge. A 60-litre pilot-scale plant was installed at the City of Tshwane's Daspoort Wastewater Treatment Plant processing batches of primary sludge, waste activated sludge and anaerobically digested sludge. The plant was shown to remove up to 95% of EDCs. The investigation therefore concluded that the PCS process is a feasible technology for treating sludge to a higher quality than conventional processes and is better positioned to meet the requirements of future legislation on EDCs if implemented. The PCS technology is novel in that it utilises the more effective hydrothermal polymerisation concept instead of the well-established, but less effective, carbonisation concept to convert sludge.

ASSESSING WETLAND REHABILITATION IN SOUTH AFRICA

WET-RehabEvaluate was developed as a framework to guide the application of monitoring and evaluation during wetland rehabilitation projects, but further experience and recent research have identified several potential improvements required for evaluating wetland rehabilitation efforts. To capture these improvements, the WRC compiled a framework that is a user-friendly guide for implementing monitoring and evaluation for wetland rehabilitation in South Africa. WET-RehabEvaluate was used as the starting point for the improved framework, although significant changes were incorporated to address identified shortfalls. Once a draft framework was compiled, which reflected recent experience and research, it was assessed through an iterative process that applied the framework (or parts thereof) to eleven cases during a research process. Lessons learnt after each application were fed back into the framework development process.

NEW STANDARD FOR BETTER SANITATION

In many areas in South Africa, urban populations have to use toilets that aren't connected to sewer mains. For the past few years, the WRC, with the support of the Department of Science and Innovation (DSI), the Bill & Melinda Gates Foundation and others, has evaluated non-sewered sanitation technologies around the country. However, a glaring gap was the lack of criteria and a standard protocol for these solutions. Now South Africa has become one of the first countries in the world to pass such a standard. The new standard, SABS 30500, contains criteria for the safety, functionality, usability, reliability and maintainability of non-sewered sanitation systems, as well as the system's compatibility with environmental protection goals. In addition, the standard enables the development of stand-alone non-sewered sanitation systems that promote economic, social and environmental sustainability. SABS 30500 will give assurance to manufacturers of non-sewered sanitation systems, governments, regulators and end-users that the facilities they use are safe, reliable and of good quality.

PROMOTING TRANSFORMATION AND REDRESS

INNOVATING THE PROVISION OF SANITATION INFRASTRUCTURE

The discussion panel at one of SASTEP's sanitation workshops included Dr Valerie Naidoo (Water Research Commission), Reza Shah, (SABS), Tina Velkushanova (UKZN), Rudolph Opperman (NRCS), and Iris Mathye (DWS).

Water shortages pose a challenge not only to existing sanitation infrastructure and the current sanitation technology paradigm, but also to the ability to roll out appropriate and decent sanitation facilities to sections of the population without adequate sanitation. This poses a challenge as well as opportunities for the local South African sanitation industry. In response to these challenges, the South African Sanitation Technology Evaluation Programme (SASTEP) was initiated by the WRC in conjunction with Department of Science and Innovation and the Bill & Melinda Gates Foundation. The mandate of the programme is to pilot and demonstrate local and international innovative sanitation technologies in South Africa, foster the development of a local sanitation industry (manufacturing and services) that would increase access to proper sanitation, reduce pollution, improve water security, create jobs and entrepreneurial opportunities and contribute to the country's GDP. SASTEP held several successful workshops and stakeholder engagements during the year under review. Following the business-to-business engagement session held during the launch of the programme in November 2019, 24 non-disclosure agreements (NDAs) were signed between participating international reinvented toilet technology (RTT) partners and local SASTEP commercial partners. Through support and facilitation provided by the SASTEP team, some of these preliminary agreements have been translated into full licensing agreements paving the way for the demonstration, commercialisation and, hopefully, local manufacture of these RTT technologies in South Africa. In addition, three licensing agreements were signed during 2019/20.

IMPROVING URBAN GROUNDWATER DEVELOPMENT AND MANAGEMENT

Groundwater use by urban areas urgently needs to shift from lack of active management of groundwater and indirect use (of groundwater's assimilative capacity) with negative implications, to active management leading to the potential for bulk water supply from urban groundwater resources. In cases where urban groundwater will not be used for bulk supply for whatever reason, active management of the urban groundwater is still required to protect the resource for other uses (ecological services, garden irrigation, food gardens). Contributing to this shift is the core motivation for a WRC project published during 2019/20, which was to: understand the status quo of urban groundwater development and management in South Africa; compare these to best practices for urban groundwater management; and develop position papers and a tactical plan to address the gaps.

SUPPORTING MULTIPLE USE WATER SERVICES

Community members during a learning session on multiple-use water services

Multiple-use water schemes (MUS) are low-cost, equitable water-supply systems that provide communities with water for both domestic needs and high-value agricultural production, including rearing livestock. During the 2019/20 financial year, the WRC project, titled 'Operationalising community-driven multiple use water services' set up learning platforms at local, provincial and national levels where project lessons can be shared among stakeholders. The project hosted two successful events, one at local and another at a national level. The local event was held in Tshakuma in Thohoyandou, Limpopo, on 18 July 2019. The event was impactful as policymakers, including national, provincial and municipal officials and mayors of Vhembe District and Makhado local municipalities, could engage and dialogue on the issues that affected water supply in the area. The event included a fieldtrip focusing on all participants working with the community of Tshakhuma to construct a pressure box for the community-owned water scheme. It also created an opportunity for officials to view the community-owned water scheme. This event prompted the mayors to consider replicating the MUS approach with communities accessing similar mountain streams in Vhembe. The MUS team obtained the WRC Knowledge Tree Award for community empowerment, while MUS forum chair of Phiring, Ms Matete Selahle, received the Women and Girls in Science Award.

ENHANCING HUMAN CAPITAL DEVELOPMENT IN THE WATER AND SCIENCE SECTORS

INSPIRING YOUNG SOUTH AFRICAN WATER INNOVATORS

Informed decisions around water-related issues are only possible when adequate qualitative and quantitative data is available, primarily through the process of water monitoring within the system of water resource management. When effective monitoring does not take place, the management of water resources may be adversely affected. The WRC, in collaboration with researchers, science practitioners and implementing agencies, hosted a dialogue on 28 and 29 June 2019 to unpack some of the challenges and opportunities that lie in water monitoring. The event also included a Hackathon for youth, aimed at finding co-created solutions. The objective of the event was to create a platform for all to contribute to the water science agenda.

EXPANDED PROFESSIONAL DEVELOPMENT FOR POSTGRADUATE STUDENTS

The Business Development and Innovations unit at the WRC hosts the Water Research, Development and Innovation (RDI) Roadmap Implementation Unit, an initiative that has emerged from the partnership between the WRC and the Department of Science and Innovation. One of the main pillars and focal areas of the Roadmap is to support high-end human capacity development for water research, development and innovation. The primary focus of the Roadmap's skills development efforts is around postgraduate-level skills (a mandate derived from the DSI's focus areas). Highly skilled individuals are key to enabling faster and more effective development and deployment of context-appropriate solutions to water sector challenges. Similarly, training is seen as a key aspect of driving the deployment of new knowledge and innovation into different implementation contexts. Given this context, the BDI team has worked with a range of partners (DSI, DEAFF, Energy & Water Sector Education Training Authority) to leverage support for postgraduate students undertaking studies and research in topics aligned to water sector needs. In 2019/20, 96 students were supported through these partnerships (in addition to the core group of students that WRC supports on an annual basis through its active research projects).

These Roadmap-linked students have been supported through a range of initiatives. A total of 68 students were provided with funding support. All these students are linked to active research and development projects managed by the WRC to ensure that students are working on topics aligned to priorities and are properly supported by a wider research team. This is a unique approach to providing postgraduate student support that presents additional value to the traditional 'stand-alone bursary' approach. In addition, a cohort of 27 students were linked to the Water Fellows Programme. This is an expanded professional development programme that helps to prepare postgraduate students for the workplace and job market while they are undertaking their studies. This initiative is managed by GreenMatter on behalf of the WRC and DSI. A range of students have also been supported to attend and participate in conferences as an opportunity to expand their networks, understand emerging sectoral trends and learn the dynamics of participation in large research and innovation events.

YOUNG ENGINEERS CHANGEMAKERS PROGRAMME KICKS OFF

YECP
Young engineers changemakers programme

On 6 May 2019, the Water Technologies Demonstration Programme (Wader), a collaboration between the WRC and DSI, launched the Young Engineers Changemakers Programme (YECP). The YECP aims to provide opportunities for young South African engineers currently employed at municipalities across the country to partake in testing potential innovative water and sanitation solutions at real-world sites and gain the necessary skills and knowledge required to drive municipalities of the future which are sustainable, liveable and build socio-technical infrastructure and services. Wader acts as an intermediary for the water sector, focusing on innovative water and sanitation demonstrations and technical verification to fast-track solutions to the market. YECP is one of the initiatives

under Wader which will expose a cohort of young and emerging municipal engineers to a suite of emerging technologies, solutions and processes that will drive municipalities of the future.

GIVING NEW RESEARCHERS A LEG UP THROUGH WRC 101 WORKSHOPS

The WRC has noted an encouraging trend of proposals being submitted by research groups who have not previously applied for funding for water and sanitation research. To further stimulate and assist new and young researchers, the WRC led a series of so-called WRC 101 training workshops during the first quarter of 2019/20. These informative one-day training courses are aimed at assisting aspiring project leaders to understand the WRC research cycle; discover the research priorities of the WRC and the fund allocation for each of these priorities; prepare a comprehensive proposal based on tips to improve the chances of success; manage the technical, administrative and financial aspects of a WRC project; understand the contractual and financial audit requirements; and find out what resources are available to enhance the success of the project. Workshops were held in Limpopo, Gauteng and KwaZulu-Natal.

GROWING LEADERSHIP IN AFRICA AND THE WORLD

UNITING THE WATER SECTOR TOWARDS INNOVATIVE SOLUTIONS

A panel discussion at the WRC Symposium

Deputy Minister of Human Settlements, Water and Sanitation at the WRC Symposium

The WRC held its 4th Symposium at the Sandton Convention Centre in Johannesburg from 11–13 September 2019. Key stakeholders, including award-winning scientists, ground-breaking innovators, renowned academics, policymakers, international development organisations, donor institutions, politicians, and private sector representatives, attended the Symposium under the theme 'Innovation in every drop: Managing uncertainty and building capacity through collaboration'. The Symposium was a successful strategic knowledge, information and solution sharing platform that: acknowledged local scientific solutions with global impact; showcased excellence in the South African water research and development domains; linked various institutions operating in different stages of the water innovation value chain; and ensured that various stakeholders understood their complementary roles as water custodians in the value chain. The WRC

Symposium deliberately focused on innovation as a catalyst for achieving a water-secure future. Among others, the Symposium also served as an opportunity for reflection and to review the progress to date in the water science research sector, as a catalyst to speed up current progress towards achieving the WRC's vision of having 'highly informed water sector decision-making through science and technology at all levels, in all stakeholder groups, and to deliver innovative water solutions through research and development in South Africa, Africa and the world', and as an opportunity for key sector stakeholders, beneficiaries and leaders to come together and take stock, review new benchmarking content, and share ideas. The WRC Symposium also saw the presentation of the WRC Knowledge Tree Awards. The awards honour WRC-funded researchers who have made a significant contribution to the South African water and sanitation sector.

BRINGING A GLOBAL ECOLOGICAL RESTORATION CONFERENCE TO SOUTH AFRICA

8TH WORLD CONFERENCE ON ECOLOGICAL RESTORATION

SER 2019 | CAPE TOWN SOUTH AFRICA

The WRC was instrumental in bringing the 8th SER World Conference on Ecological Restoration to South Africa. The conference was held from 24–28 September 2019 in Cape Town. This was the first time that the conference, which had the theme, Restoring Land, Water and Community Resilience, was held in Africa. Other important national partners were the South African National Biodiversity Institute (SANBI), and the Departments of Environmental Affairs, Forestry and Fisheries (DEAFF) and Water and Sanitation (DWS). Four members of the WRC served on the organising committee of the conference. The conference attracted an estimated 850 delegates from more than 60 countries.

Delegates represented a range of disciplines, including natural and social sciences, environmental engineering, urban and regional planning, public policy, landscape architecture, and natural resource management, among others. The Society for Ecological Restoration (SER) is an international non-governmental organisation headquartered in Washington, DC, with members and partners in 70 countries. SER advances the science, practice and policy of ecological restoration to sustain biodiversity, improve resilience in a changing climate, and re-establish an ecologically healthy relationship between nature and culture. The SER World Conference on Ecological Restoration is held every two years. The conference fosters knowledge sharing and debate around big-picture issues and broad trends, as well as specific tools, techniques, research and policies for restoration. The Cape Town conference especially allowed South African institutions to share work undertaken in South Africa.

LEADING THE FIGHT AGAINST ALIEN INVASIVE PLANTS

During the year under review, WRC research manager, Mr Bonani Madikizela, was appointed by the SANBI to serve on the Alien Invasive Plant National Advisory Committee. South Africa has an estimated 380 invasive alien plant species. Invasive alien plant species (IAP) are species whose introduction and/or spread outside their natural distribution threaten biological diversity. They are non-native to an ecosystem, and may cause economic or environmental harm, impacting negatively on biodiversity, including decline or elimination of indigenous species – through competition for water and the disruption of local ecosystems and ecosystem functions. IAPs, introduced and/or spread outside their natural habitats, have affected natural biodiversity in almost every ecosystem type on Earth and are one of the greatest threats to biodiversity. The main purpose of the committee is to review and advise on the content of the second version of the DEAFF report, The status of biological invasions and their management in South Africa, which was first published in 2017.

PARTNERING FOR IMPACT

TOWARDS WATER-FOCUSED RESEARCH CHAIRS IN SOUTH AFRICA

The WRC and NRF signed a partnership agreement in March 2020 enabling the establishment of two water-related research chairs, using the well-established South African Research Chairs (SARCHi) model implemented by NRF. This partnership is part of the Water RDI Roadmap Programme of work implemented by the WRC. The research chairs will be funded by DSI, DEA and NRF in partnership with the WRC. The envisaged chairs will focus on two areas, namely, economics for ecological infrastructure, and water services finance and economics. This partnership commits to an initial 5-year collaboration, which aligns to the first cycle of the research chairs (with opportunity for renewal). It clarifies the plan to launch two co-branded research chairs during this period, with calls going out in the 2020 calendar year.

NEW PARTNERSHIPS TOWARDS EXPANDED WATER EDUCATION

During the year under review, the WRC entered a three-year partnership with DWS to implement the second phase of the DWS Water and Sanitation Education Programme starting in 2020. The current programme, 2020 Vision WSEP (VfWSEP), is aimed at educating and empowering both learners and educators about the value of water and rivers for future generations to access safe and clean water, and most importantly to change behaviour in water use. The second phase will have similar objectives. The three-year partnership aims to provide advisory, technical and financial support (R12 000 per annum to be made available towards winners at regional and national level) for the implementation of the second phase of the WSEP. The WRC has also launched a call for the review of the current phase, which was allocated a total budget of R500 000 from DWS.

IMPROVING WATER SECURITY, TACKLING DROUGHT

During 2019/20 the WRC developed and shared a drought information pack with management of the South African Local Government Association (SALGA) and other key stakeholders in the South African water sector. The Commission also signed a memorandum of understanding (MoU) with the DWS and Eastern Cape Disaster Management to mitigate the impact of droughts and floods, and to improve water demand and conservation management in the Eastern Cape Province. Several engagements were held during the year to assist the provincial government in rolling out urgent drought-related interventions. Amongst others, the WRC has committed to implementing the design and development of an appropriate programme and plan to support and lead initiatives towards a more water-secure Eastern Cape through knowledge generation, application and demonstration of water innovations.

SHAPING HUMAN SETTLEMENTS IN SOUTH AFRICA

The WRC was a member of the content steering committee to develop and shape the agenda of the Human Settlements Indaba held on 6 March 2020 at Birchwood Conference Centre in Ekurhuleni. The

Indaba aimed to develop the Department of Human Settlements' position as part of the five-year plan and Government's Social Compact. The WRC played a leading role as a water research partner and collaborated with the Department of Human Settlements' Innovation and Transformative Technologies work stream in harmonising the position paper that finally contributed to the 2020 Human Settlements Indaba Declaration on strengthening strategic partnerships to transform spatial justice and social cohesion. Further, the WRC is a permanent member of the Innovation and Technology Transfer Committee of the Department.

LEADING REGIONAL KNOWLEDGE SHARING IN IRRIGATED AGRICULTURE

The WRC was one of the founding members of the Network on Irrigation Research Extension for Small-scale Agriculture (NIRESA). The network was established in 1996 with the intention to facilitate the exchange of ideas and practices between researchers and advisory agents in different agricultural disciplines. It aims to build a shared understanding of the necessary activities and priority areas for research and extension that seek to effectively address the considerable challenges that face smallholder irrigation schemes. NIRESA hosted a well-attended stakeholder workshop on 19–20 June 2019 at the University of Pretoria. The theme for this year's workshop was 'Agri-Parks'. An 'Agri-Park' is a networked innovation system of agro-production, processing, logistics, marketing, training and extension services. As a network, it enables a market-driven combination and integration of various agricultural activities and rural transformation services. The workshop was based on an ongoing WRC research project conducted by a team of experts from the University of Pretoria, led by Dr Betsie Le Roux.

GROWING INTERNATIONAL PARTNERSHIPS

The WRC made great strides towards growing its international partnerships during 2019/20. Highlights in this regard include the development of the Africa Strategy to guide the WRC African engagement, ensure value-add and position the WRC as a key African knowledge and innovation partner. In the fourth quarter, engagements were initiated with key African partners to explore and form knowledge and innovation partnerships to respond to the COVID-19 pandemic and beyond. In addition, the WRC entered into two MoUs with international partners during the year, namely, the African Academy of Sciences (AAS) and WaterNet.

During 2019/20 several WRC representatives were elected as Board and Steering Committee members of key strategic water and sanitation policy-setting and implementation programmes, including the WaterJPI Advisory Board, Board of FSM Alliance, steering committee on the establishment of the African Sanitation Investment Fund (AUSIF), Lancet Commission on Water, Sanitation, Hygiene (WASH) and Health, the steering committee of the Coalition against Typhoid (CaT), and the Watershare Core Pilot Group to help shape and influence the new strategy of the network.

KEY PERFORMANCE AREAS

The WRC's key performance areas (KPAs) are based on its strategic context and challenges, as well as specific strategic risk areas as identified by the Board and Executive 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 four areas of performance as follows:

1. Research portfolio
2. Impact and partnership portfolio
3. Human resources portfolio
4. Financial wellbeing

PERFORMANCE INDICATORS AND NATIONAL TARGETS

Research portfolio

The main objective of KPAs under this portfolio 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).

In 2019/20, the WRC initiated 92 new projects and completed 120 projects. Over the past five years the WRC has finalised 480 research projects (Figure 7) indicating a significant contribution to knowledge in the water sector. Over the same 5-year period 466 new projects were initiated, ensuring the continuous contribution of new knowledge to the sector. The large number of initiated projects was largely because of the WRC's new and existing funding partnerships.

Various fora are used to disseminate information on WRC projects. Here, Executive Manager, Jay Bhagwan, is discussing the Commission's sanitation initiatives at the WRC Symposium, while Dr Doulaye Kone from the Bill & Melinda Gates Foundation looks on.

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

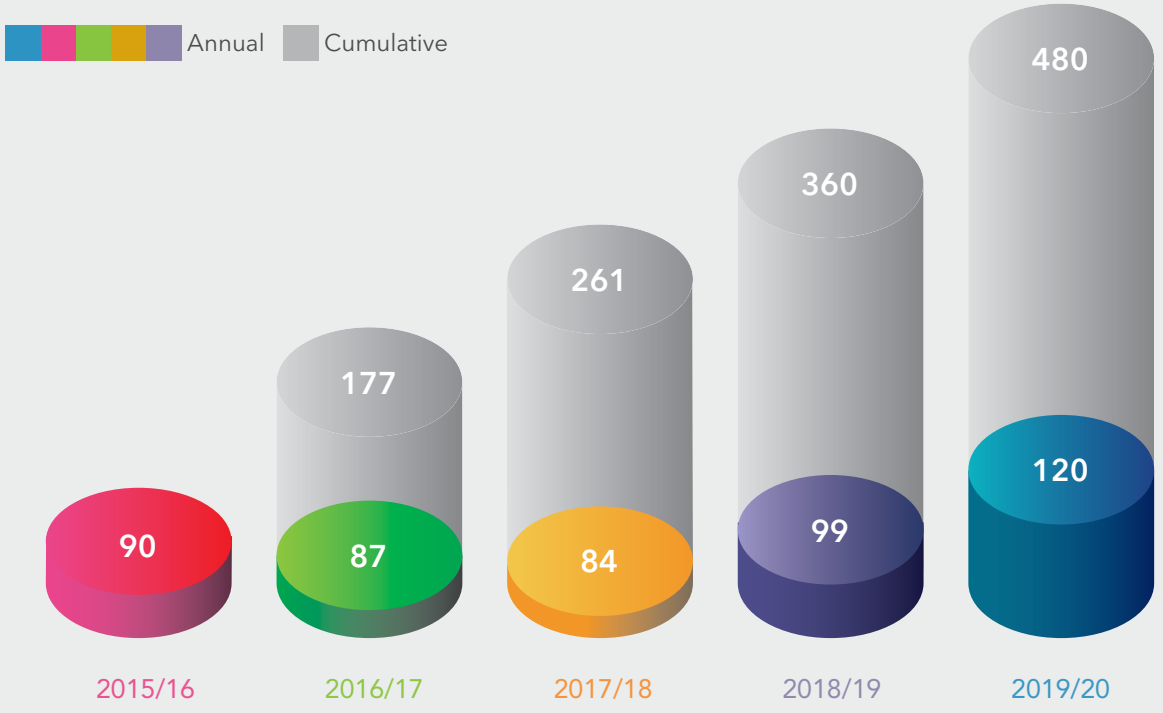
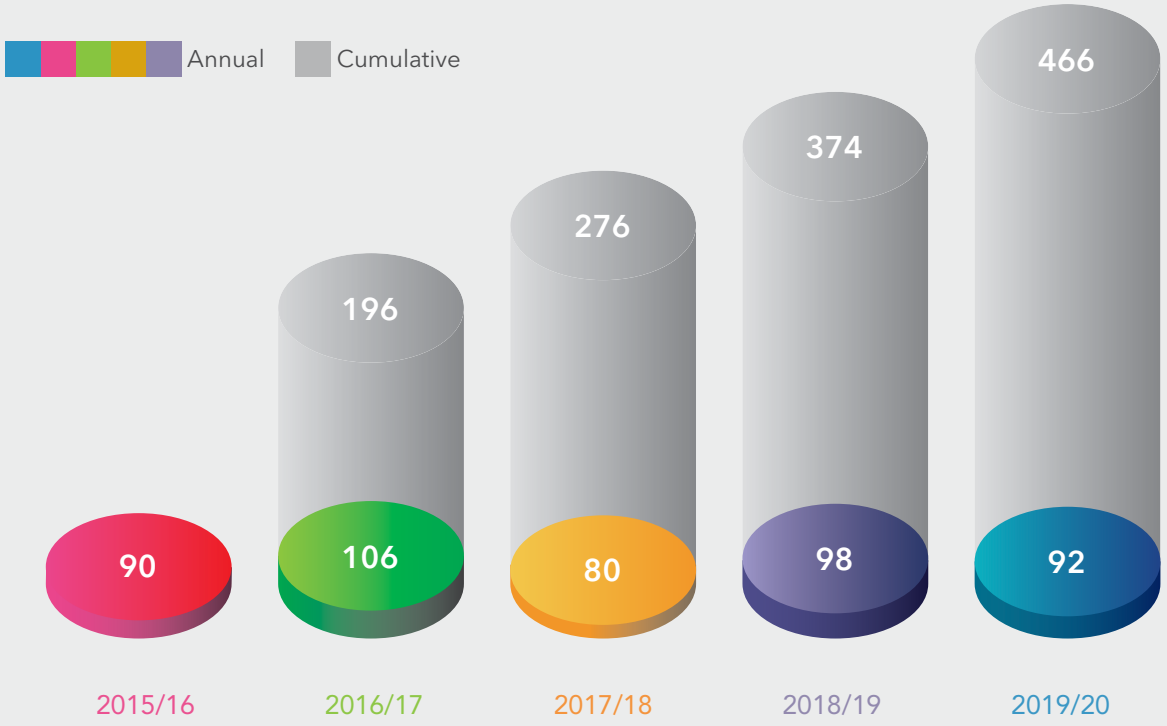


Figure 7: Annual and cumulative number of projects initiated over the past five years



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 several 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

Figure 8: Number of students supported by WRC in 2019/20

Figure 9: Number of PhD and Masters students in 2019/20

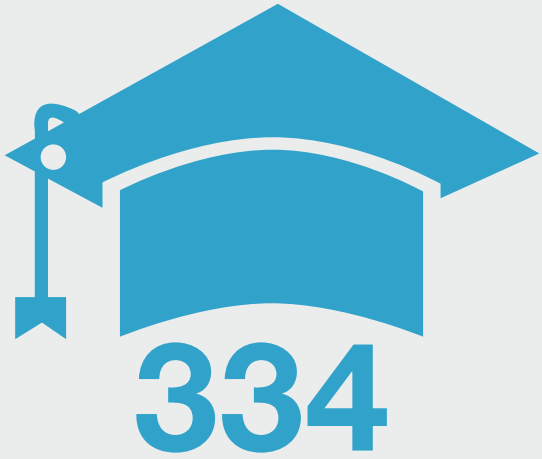


Figure 10: Percentage of black female project leaders supported by the WRC in 2019/20

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.

Table 2: Research portfolio performance targets for 2019/20

OBJECTIVE	PERFORMANCE INDICATOR	TARGET 2019/20	ACHIEVED 2019/20	VARIANCE	COMMENTS
To enhance knowledge through new research projects initiated	The number of new RDI projects initiated in the 2019/20 financial year	70	92	+22	22 more projects were initiated (with stakeholders co-funding) to address new water and sanitation challenges
To maintain a portfolio of RDI projects that enhances water knowledge and the innovation cycle	The total number of RDI projects managed by the WRC in the 2019/20 financial year	250	344	+94	More projects were initiated while projects planned to be finalised in the last financial year were carried to this financial year
To complete and finalise RDI projects scheduled in the financial year	The number of research projects that have been completed in the 2019/20 financial year	80	120	+40	As a result of high demand for knowledge by the water sector, more projects were finalised to avail the research products
Growing a more inclusive water and sanitation science community of practice	The total number of project leaders on WRC managed projects that are female	80	123	+43	Opportunity to initiate new projects afforded female project leaders a chance to lead projects
	Initiated projects led by female project leaders	25	39	+14	
	The total number of project leaders on WRC managed projects that are black male	75	86	+11	The WRC and its partners encouraged project leadership by those from previously disadvantaged groups
	The total number of project leaders on initiated projects that are black male	20	26	+6	The WRC and its partners have encouraged project leadership by those from previously disadvantaged groups
	The total number of female and black project leaders on initiated projects	10	17	+7	The WRC and its partners initiated more projects and encouraged project leadership by those from previously disadvantaged groups
	The number of students supported on all WRC managed research projects distributed as follows:	250	362	+112	

OBJECTIVE	PERFORMANCE INDICATOR	TARGET 2019/20	ACHIEVED 2019/20	VARIANCE	COMMENTS
Growing a more inclusive water and sanitation science community of practice continued...	Postdocs, PhDs and Masters	200	334	+134	The WRC and its partners have encouraged and attracted more interest from postdocs and PhD students. This also means an increase in doctoral production
	Honours and others	50	28	-22	The high number of post-docs and PhD students meant less Honours students participated in WRC projects
	The number of innovations/ products and services produced from WRC research	24	44	+20	High demand for water and sanitation innovation by the sector caused more project finalisations and thus more innovations

Impact portfolio

The main objectives of the KPAs under this portfolio are to develop innovative products and services for economic growth; to drive sustainable development solutions; to inform policy- and decision-making; and to promote transformation and redress in the water and sanitation sector.

Figure 11: The number of innovations supported

Table 3: Impact portfolio performance targets for 2019/20

OBJECTIVE	PERFORMANCE INDICATOR	TARGET 2019/20	ACHIEVED 2019/20	VARIANCE	COMMENTS
To capitalise on projects that develop intellectual property or to introduce innovations which create new or improved technologies, products and services used in the economy	The number of innovations, products and services that have been supported and/ or implemented/ demonstrated / piloted	16	18	+2	Additional innovations were fast-tracked as part of the WRC's response to the drought situation in the Eastern Cape

OBJECTIVE	PERFORMANCE INDICATOR	TARGET 2019/20	ACHIEVED 2019/20	VARIANCE	COMMENTS
To ensure that the WRC increasingly drives sustainable solutions for the water sector by hosting events that promote robust engagement around critical emerging water management issues	The number of WRC dialogues	18	18	0	No variance
To promote the uptake and application of sustainable solutions by the water sector	The number of conferences/ summits with the WRC as a host	2	2	0	No variance
To influence policy and decision-makers with research-based knowledge	The number of policy briefs produced and distributed to relevant government departments and other entities	14	14	0	No variance
	The number of ministerial briefs produced by the WRC and received by the Minister's Office	14	14	0	No variance
To influence policy and decision-makers with research-based knowledge	The number of working papers produced that support decision-makers with research-based knowledge	8	8	0	No variance
	The number of Parliamentary briefs produced and disseminated	8	8	0	No variance

Table 4: Partnership portfolio performance targets for 2019/20

OBJECTIVE	PERFORMANCE INDICATOR	TARGET 2019/20	ACHIEVED 2019/20	VARIANCE	COMMENTS
To enhance the profile of project partnership as part of the national transformation project to promote the ongoing transformation of water research and development	To develop a strategy for engagement with African research institutions that adds value to the water partners	Executive approved strategy in Q4	1	0	No variance
To better enable researchers to participate in WRC funding instruments and specialised contracts	The number of WRC 101 workshops held in the financial year	6	6	0	No variance
To ensure that the WRC invests in projects that result in the multiplier effect by partnering with strategic traditional and non-traditional partners to complement the WRC's mandate on either side of the value chain for water sector and societal impact	The number of workshops held in partnership with other institutions	22	28	+6	The WRC Symposium and the SER Conference provided an attractive opportunity for engagement with our International partners as the registrations were received and WRC took advantage of this development
	The number of partnership agreements signed with partnering institutions	4	7	+3	Three more negotiations were concluded much earlier than expected as the drought situation was getting worse

HUMAN RESOURCES

The KPAs under this portfolio address organisational transformation and focus on the enhancement of effective leadership and an improved level of staff performance.

Table 5: Human resources targets for 2019/20

OBJECTIVE	PERFORMANCE INDICATOR	TARGET 2019/20	ACHIEVED 2019/20	VARIANCE	COMMENTS
To ensure social and corporate responsibility	The total number of WRC managed research and non-research community-based projects	70	109	+39	As a result of drought and other water-security challenges, the WRC used more of its projects to assist affected communities
	The total number of initiated community-based research projects	20	26	+6	More projects initiated were used to address community water and sanitation challenges
	The total number of SMMEs supported on WRC managed projects	70	74	+4	More SMMEs were supported to ensure knowledge and innovation uptake by the sector
	The total number of SMMEs supported on WRC managed initiated research projects	10	11	+1	1 more SMME was funded to ensure knowledge and innovation uptake by the sector
	Initiate contracts with other organisations that increase leverage funding	4	6	+2	The WRC partnership strategy is effective as it attracts more partners to co-fund projects with the WRC
To promote transformation and redress and cultivate a high-performance organisational culture	To maintain or increase the percentage of black, female and employees with a disability at the WRC measured by:				
	The total number of black employees	88%	88% (81)	0	No variance
	The total number of female employees	52%	62% (58)	+10%	Appointments made during the year were predominantly female
	The total number of employees with a disability	3%	5% (5)	+2%	Increased internal disability disclosures and the appointment of disabled applicants
To develop strategies to support business leadership of the organisation	Maintain the number of staff with Masters	22	22	0	No variance
	Maintain the number of staff with PhDs	15	16	+1	Employee appointed with a PhD

FINANCIAL PORTFOLIO

The objective of this KPA is to enhance the financial sustainability of the organisation by increasing income diversification. The key contributors include improving financial planning and management practices, achieving unqualified audit results through meeting the required accounting and auditing standards and complying with legislative prescripts.

Table 6: Summary of financial performance for 2019/20

OBJECTIVE		PERFORMANCE INDICATOR	TARGET 2019/20	ACHIEVED 2019/20	VARIANCE	COMMENTS
Financial performance	Maintain income leverage growth	The total amount of leverage income	R50.86 million	R64.53 million	R13.67 million	The budget variance for the 2019/20 financial year is mainly due to focused efforts of the project teams to meet project deliverables earlier than anticipated
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

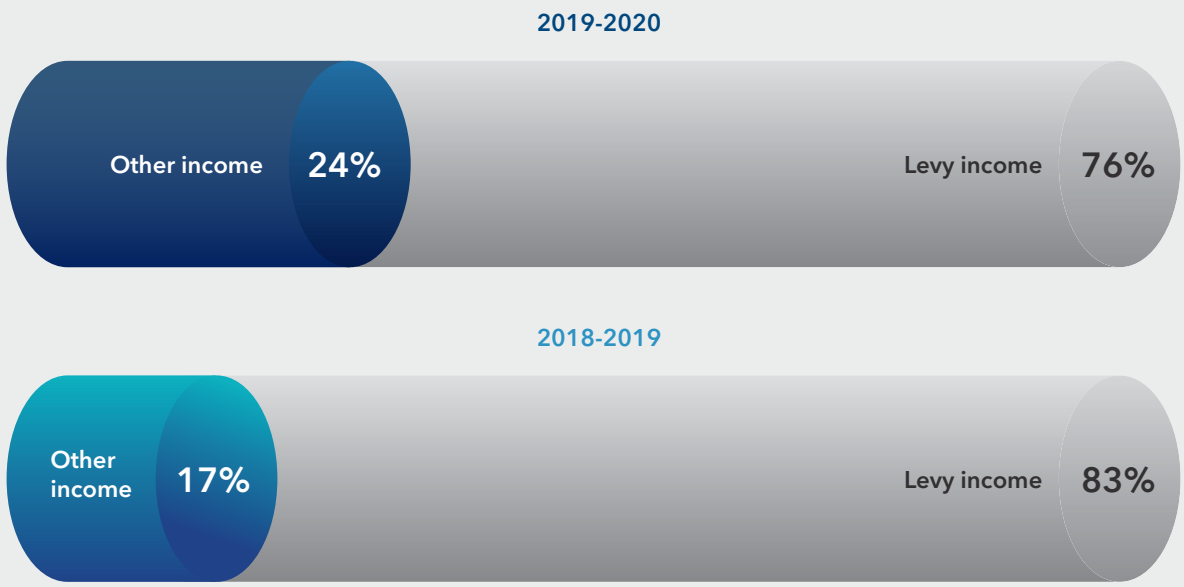
SUMMARY OF FINANCIAL INFORMATION

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 Rand Water Board, Umgeni Water Board and the Department of Water and Sanitation (DWS) collects the WRL on behalf of the WRC from various water users based on their water consumption volumes.

Leverage income arises when the WRC, in partnership with other organisations, undertakes research and innovation projects where it may or may not also be a co-funder. The leverage-funded component of the WRC operations is an important funding mechanism as the Commission moves to an increased impact portfolio. This requires a significant change in the investment strategy that involves pilots and demonstrations of new solutions which includes larger-scale equipment and technology investments at a much higher cost than the traditional research projects.

Investment income arises from interest that the WRC earns on the cash resources that it holds in respect of leverage funding as well as working capital management related to levy income that is paid bi-annually by water boards. This income is not a guaranteed source of funds, and the WRC does not rely on it in any significant manner in its long-term financial planning.

Figure 12: Income indicators for 2019/20 compared to 2018/19



**Other sources of income include leverage income*

As can be seen from the figure above, levy income as a percentage of total income has decreased from 83% to 76%. This is due to the WRC's increased focus on innovation and impact in order to address South Africa's water-related challenges.

The table below provides a summary of the WRC's total revenue.

Table 7: Revenue collection

2019/20			
Sources of revenue	BUDGET (R'000)	ACTUAL AMOUNT COLLECTED (R'000)	(OVER)/UNDER COLLECTION (R'000)
Water Research Levies	259,685	258,967	718
Leverage	50,862	64,529	(13,667)
Investment income	5,167	6,773	(1,606)
Other income	9,445	9,699	(253)
Total	**325,159**	**339,968**	**(14,810)**

EXPLANATIONS FOR THE 2019/20 FINANCIAL YEAR

Leverage income

The leverage income budget targets have been exceeded by some R13,67 million. This is a favourable result for the WRC. This result has been achieved primarily due to project deliverables being met earlier than originally anticipated due to focused efforts of the project teams, specifically in respect of the following:

- DST Roadmap and PMU project performing exceptionally well, resulting in additional leverage income amounting to R6 million
- Funding received in respect of NIPMO that resulted in additional leverage income amounting to R1,8 million
- Following the recent signing of a R43 million (USD3 million) multi-year contract with the Bill and Melinda Gates Foundation, the Gates SASTEP demonstrations have yielded some additional R2,3 million leverage income during the year under review
- Further R3,56 million associated with various leverage funded projects that yielded more project deliverables and associated leverage income than anticipated

Interest received

The budget variance amounting to R1,606,488 in respect of interest income is primarily as a result of higher average cash holdings over the 2019/20 financial year. This resulted in higher interest income earned during the year under review.

Levy income

The budget variance amounting to R717,603 in respect of the levy income for the 2019/20 financial year is as a result of water consumption volumes that have been marginally lower than anticipated coupled with the water research levy tariff increase that was legislated late.

Table 8: Expenditure analysis : Comparison of Budget versus Actuals

2019/20			
Expenditure	BUDGET (R'000)	ACTUAL EXPENDITURE (R'000)	(OVER)/UNDER EXPENDITURE (R'000)
Fixed costs	12,065	12,059	6
Running costs	11,590	9,732	1,859
Human resources	99,222	97,767	1,455
Research and development funding	195,309	175,835	19,473
Corporate expenses	2,612	2,851	(238)
Capital expenditure	4,361	4,452	(91)
Total	**325,159**	**302,695**	**22,463**

EXPLANATIONS FOR THE 2019/20 FINANCIAL YEAR

Running costs

In line with cost-saving initiatives, there were savings on the budget amounting to R1,858,584 during the 2019/20 financial year in respect of professional fees, promotions, publicity and IT-related costs as well as a result of postponed travel due to COVID-19.

Human resource costs

The budget variance in human resources costs of R1,454,907 is mainly as result of delays in appointments in respect of vacancies and timing differences in respect of anticipated spending on training and development of employees.

Research, development and innovation (RDI)

The RDI expenditure adverse variance of R19,473,447 as at 31 March 2020 is mainly accounted for as follows:

- Changes in the publishing strategy from print to digital format still in the initial development phase (R2,7 million)
- The late approval of levy increase impacted the planning of deliverables on projects, coupled with normal project related delays including impact of COVID-19 (R6 million)
- Delays in other research-related costs such as workshops, printing and publishing and promotion of research outputs due to the postponed of workshops and travel as a result of COVID-19 (R10,77 million). During the lockdown period, the WRC successfully explored alternative ways of dissemination and promotion of research information and outputs using digital (virtual) platforms, which has proven to be cost effective and enhanced impact in many respects.

ANALYSIS OF RESEARCH AND DEVELOPMENT EXPENDITURE

Table 9: Analysis of research, development and innovation (RDI) expenditure

	2019/20 (ACTUAL) (R'000)	2018/19 (ACTUAL) (R'000)
Research and Development	123,333	131,717
Innovation and Impact	52,502	32,985
Total	**175,835**	**164,702**

Figure 13: Utilisation of research funds

The percentage utilisation of RDI indicates that approximately 30% (compared to 20% in 2018/19) was invested in projects that focused on Innovation and Impact. The total actual amount spent on RDI increased from R165 million to R176 million and the main reasons were detailed above.

The WRC has a focus on achieving impact, as a public entity, the Commission 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, private and third sector organisations
- Improving social welfare and cohesion
- Increasing economic prosperity, wealth, and job creation
- Enhancing cultural enrichment and quality of life

Moving to an increased impact portfolio means a major change in the investment strategy that involves pilots and demonstrations of new solutions, which requires larger scale equipment and technology investments at a much higher cost.

SECTION C

GOVERNANCE

The WRC Board is the Accounting Authority of the WRC, and is supported by the Company Secretary. The Chief Executive Officer (CEO) is the Accounting Officer and is accountable to the WRC Board. The Chief Financial Officer (CFO) and the Group Executives 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 are regularly reviewed and updated to ensure its continued relevance and compliance with legislative and governance requirements.

MEMBERS OF THE WRC BOARD

Dr Nozibele Mjoli (Chairperson)

Prof Sibusiso Vil-Nkomo (Vice-Chairperson)

Dr Aldo Stroebel

Dr Ntombifuthi Nala

Mr Imraan Patel

Dr Mosidi Makgae

Ms Nompumelelo Msezane

Ms Massaccha Khulekelwe Mbonambi

Mr Dhesigen Naidoo (CEO)

MEMBERS OF THE WRC EXECUTIVE

Mr Dhesigen Naidoo (CEO)

Mr Fazel Ismail (CFO)

Ms Reshmili Lutchman
(GE: Corporate Services)

Dr Mandla Msibi
(GE: Innovation and Impact)

Ms Khosi Jonas
(EM: Marketing and Communication)

Dr Stanley Liphadzi
(GE: Research and Development)

Mr Jay Bhagwan
(EM: Water Use and Waste Management)

Dr Shafick Adams
(EM: Water Resources and Ecosystems)

Dr Valerie Naidoo
(EM: Business Development and Innovation)

Dr Sylvester Mpandeli
(EM: Water Utilisation in Agriculture)

PORTFOLIO COMMITTEES

Table 10: WRC Board Portfolio Committees

BOARD & COMMITTEE	NO. OF MEETINGS HELD	NO. OF MEMBERS	NAME OF MEMBERS
Board	8	10	Dr Nozibele Mjoli (Chair) Prof Sibusiso Vil-Nkomo (Vice-Chair) Dr Aldo Stroebel Dr Mosidi Makgae Ms Nompumelelo Msezane Ms Masaccha Mbonambi Mr Imraan Patel Dr Ntombifuthi Nala Mr Dhesigen Naidoo (CEO) Adv Anil Singh (Ex-officio from DWS)
Research and Innovation	4	7	Dr Mosidi Makgae (Chairperson) Dr Aldo Stroebel Mrs Nompumelelo Msezane Dr Ntombifuthi Nala Mr Imraan Patel Ms Ndileka Mohapi Mr Dhesigen Naidoo (CEO)
Human Resources, Social and Ethics	4	5	Dr Mosidi Makgae (Chairperson) Ms Nompumelelo Msezane Dr Ntombifuthi Nala Prof Sibusiso Vil-Nkomo Mr Dhesigen Naidoo (CEO)
Executive Committee	2	4	Dr Nozibele Mjoli Prof Sibusiso Vil Nkomo Ms Nompumelelo Msezane Ms Mosidi Makgae
Audit, Risk and Finance Committee	6	5	Ms Masaccha Mbonambi (Chairperson) Prof Sibusiso Vil-Nkomo Dr Aldo Stroebel Ms Shelly Thomas Mr Dhesigen 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 Board. The Board members, who are appointed by the Minister of Water and Sanitation, are independent, non-executive directors. The CEO and the DWS representative 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
- Considering 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 30 May 2019.

The following Board Committees have been established:

1. Audit Risk and Finance Committee (AR&F)
2. Remuneration Committee (RemCom)
3. Human Resources, Social and Ethics Committee (HRS&E)
4. Executive Committee (Exco)
5. Research and Innovation Committee (RIC)

COMPANY/BOARD SECRETARY

The Company Secretary is responsible for guiding the Board on 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-committee 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)

Table 11: The Board members

NAME OF MEMBER	DATE OF APPOINTMENT	BOARD MEETINGS (TOTAL: 8)	RESEARCH AND INNOVATION COMMITTEE (TOTAL: 4)	HR, SOCIAL & ETHICS COMMITTEE (TOTAL: 4)	BOARD EXECUTIVE COMMITTEE (TOTAL: 2)	AUDIT, RISK & FINANCE COMMITTEE (TOTAL: 6)
Dr Nozibele Mjoli (Chairperson of the Board)	1 February 2016	8	N/A	N/A	1	N/A
Prof Sibusiso Vil Nkomo (Vice Chairperson of the Board)	1 February 2016	5	N/A	3	1	4
Ms Nompumelelo Msezane (Chairperson of the HRSE Committee)	1 February 2016	5	2	2	1	N/A
Mr Imraan Patel	1 February 2016	4	2	N/A	N/A	N/A
Dr Ntombifuthi Nala	1 February 2016	4	2	3	N/A	N/A
Dr Aldo Stroebel	1 February 2016	5	2	N/A	N/A	5
Ms Masaccha Mbonambi (Chairperson of the AR&F Committee)	1 February 2016	3	N/A	N/A	0	4
Dr Mosidi Makgae (Chairperson of the R&IC committee)	1 February 2016	4	3	3	1	N/A
Mr Dhesigen Naidoo (CEO and Ex-officio member)	1 October 2011	5	3	3	N/A	N/A
Ms Shelley Thomas (Co-opted Member of the Audit, Risk & Finance Committee)	1 November 2017	N/A	N/A	N/A	N/A	6
Mr Philani Dlamini (Co-opted Member of the Audit, Risk & Finance Committee)	1 November 2017	N/A	N/A	N/A	N/A	4
Dr Johannes Maree (Co-opted Member of the Research & Innovation Committee)	1 February 2018	N/A	5	N/A	N/A	N/A

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 Human Settlements, Water and Sanitation in consultation with the Minister of Finance. Members that are not remunerated are the CEO and the ex-officio member of DWS. Board members are also paid for travel expenses.

Table 12: Remuneration paid to each Board member in 2019/20 (in respect of preparation for and attendance of meetings)

NAME	REMUNERATION (RATE PER MEETING	TOTAL (R)
Dr Nozibele Mjoli (Chairperson)	R2,632.00	R155,288
Prof Sibusiso Vil-Nkomo (Vice-Chairperson)	R1,990.00	R61,690
Ms Mpumi Msezane	R1,990.00	R35,820
Dr Mosidi Elizabeth Makgae	R1,990.00	R67,660
Dr Ntombifuthi Patience Nala	R1,990.00	R33,830
Dr Aldo Stroebel	R1,990.00	R47,760
Ms Masaccha Khulekelwe Mbonambi	R1,990.00	R33,830
Ms Shelley Thomas	R1,990.00	R31,840
Mr Philani Dlamini	R1,990.00	R27,860
DR JP Maree		R7,960
Mr Imraan Patel	N/A	N/A
Mr Dhesigen Naidoo (CEO)	N/A	N/A

- Table does not include payments in respect of subsistence and travel costs

RISK MANAGEMENT

The WRC Board is accountable for the process of risk management, which is reviewed regularly. Risk management at the WRC is a continuous 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 13: Summary of WRC Risk Register

LOSING COMPETITIVE EDGE (INCREASE COMPETITION FOR AVAILABLE LEVERAGE FUNDING)	CONTROLS (Business process to manage the risk exposure)
Limited availability, continuity and growth of adequate research and innovation expertise to deal with the increasing complexity in the water and sanitation sector, both institutionally and externally	• Partnerships and collaboration with other organisations that have the capability • Capacity building as part of research contracts and research prioritisation, in particular, postgraduate student support to develop skills in the water sector • Engagement and strengthening of relationships with research partners to facilitate implementation • Support publication of training material and marketing of the water sector as a career (through schools, universities, etc.) • Lobby for increased research funds through DWS and DSI and other players, partners • Strengthening of the Lighthouse programmes that accommodate transdisciplinary collaboration; social sciences interdisciplinary programme and other transdisciplinary research programmes to address complexity in the water sector • Technical, policy, ministerial briefs, and parliamentary engagement to ensure faster exposure to research outcomes • Periodic strategic review of research portfolio • Annual reporting for strengthening and monitoring of the Knowledge Tree objectives. Developing a stronger presence in career fairs with good support materials
Financial sustainability	• Renewed MOA (memorandum of agreement) with DWS that provides for monthly payments up to 2022 • Annual Levy escalation provisions governed by legislation whereby annual increase is published in the Government Gazette • Indefinite period agreements for direct collection of WRC levies with the two largest agencies (Rand Water and Umgeni Water) • Strategy to diversify funding to be approved by Executive • Regular interaction with shareholder (Department of Water and Sanitation) and leverage stakeholders on funding issues • Prioritisation of available funds

LOSING COMPETITIVE EDGE (INCREASE COMPETITION FOR AVAILABLE LEVERAGE FUNDING)	CONTROLS (Business process to manage the risk exposure)
Limited application and packaging of research, solutions, and technologies to maintain the water sector primarily but also across sectors (energy, industry, agriculture, mining etc.)	• Development of policy, ministerial and parliamentary briefs to influence decision making • Development of manuals, guidelines, and support tools, e.g., dialogues, symposiums and conferences for implementation and development • Strengthen collaborative platforms with key (primary) stakeholders • Incorporation of research uptake and interventions into WRC research proposal template and Corporate Plan and periodic strategic review of research portfolio • Innovation and Impact Branch created in the WRC to bring business development and innovation into the Research and Development space • De-risking and direct support through demonstrations, pilots, IP and market analysis and standards development through Business Development, Wader, and technology transfer unit to accelerate solutions to the 'market' • Packaging of research to various technical stakeholders vs packaging of solutions for practitioners
Inadequate participation of South Africa in research, development and innovation within SADC and Africa	• Further develop the international strategy and capacity within the WRC • Participation in international conferences and events etc. • Involvement in global, African and SADC-level projects • Interaction with stakeholders on SADC, Africa, and global involvement • Conducting Southern Africa wide projects with donor partners and new donor-funded relationships in Southern Africa • Contracts in place with researchers to acknowledge the WRC • Innovation and Impact unit established in the WRC to focus on business development and innovation • Development of region-wide projects • Increased utilisation of technology (teleconferencing) for improved participation in International meetings

LOSING COMPETITIVE EDGE (INCREASE COMPETITION FOR AVAILABLE LEVERAGE FUNDING)	CONTROLS (Business process to manage the risk exposure)
Inability to recover quickly in the event of a disaster	• WRC continuity plan in place for all areas (virtual operation through multiple locations and sites) • Offsite backups of core systems and data, disaster recovery site and plans • Uninterrupted water and power supply • Anti-virus software (renewed annually and daily updates) and firewalls • Insurance • Emergency response teams • Evacuation plans and procedures • Fully functional virtual private network (VPN) • Logical and physical access controls • Fireproof 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
Fraud and corruption	• 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 workshopped annually • 24-hour fraud hotline • Whistle blowing policy implemented • Code of ethics • Establishment of a SCM unit • Management of intellectual property – establishment of IP Office • Fraud prevention plan

LOSING COMPETITIVE EDGE (INCREASE COMPETITION FOR AVAILABLE LEVERAGE FUNDING)	CONTROLS (Business process to manage the risk exposure)
Losing competitive edge (increase competition for available leverage funding)	• Environmental scanning • Development of a dynamic tactical strategy to enable the ambitions of the Corporate Plan • Development of strategic partnerships to boost talent availability and stretch resources • External reviews • International engagement processes • Local partnership strategy • WRC staff development and retention • WRC positioning strategy
Uncertainty within the tertiary education environment	• Fair number of projects are not on tertiary campuses • Flexibility in projects (project timetables etc.) • Research capacity teams are diverse • WRC student support, e.g. FETwater initiative • Flexibility in project planning to accommodate PhD student support
Non-compliance to Acts, Regulations, Legislations, Policies and Procedures	• Good internal knowledge of the PFMA and other legislation and regulations applicable to the WRC • Good relationship with Treasury and Auditor-General secures continuous updates • Ongoing training • Assessment by means of internal and external audits • Appointment of a Head of Legal and Compliance and Health and Safety representatives • Health and Safety awareness campaigns and reviews • Policies and procedures and associated internal controls exist; these are communicated to staff and compliance is monitored on an ongoing basis • Policies and procedures are reviewed and approved on an annual basis • A compliance checklist covering all relevant legislation has been developed and is planned for roll-out during the year under review

INTERNAL CONTROL FUNCTION

To enable it 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 in-house internal audit function. The WRC in-house function has adopted formal terms of reference as its Internal Audit Charter. The in-house internal audit function prepared a rolling three-year internal audit plan, which on the recommendation of the Audit and Risk Committee was approved by the Board. The in-house internal audit function reports directly to the Audit and Risk Committee. For the 2019/20 financial year it performed the following audits:

- Human Resource review
- Payroll review
- Supply Chain Management review
- Leverage and Levy Income review
- Compliance Review
- Risk Management review
- Performance Information review
- IT review – Governance review on BMS Performance Information review
- Follow-up reviews on previous internal audit reports issued and the Auditor-General report
- Ad-hoc: Supply Chain Management – Observation of bids closing and adjudication thereof for above R500 000
- Ad-hoc: Assets Report Marumati Building
- Ad-hoc: Appointment of EM: Knowledge Management and Communications
- Ad-hoc: Appointment relating to BID WRC 004/2019-20

Table 14: **Audit Committee Member Details**

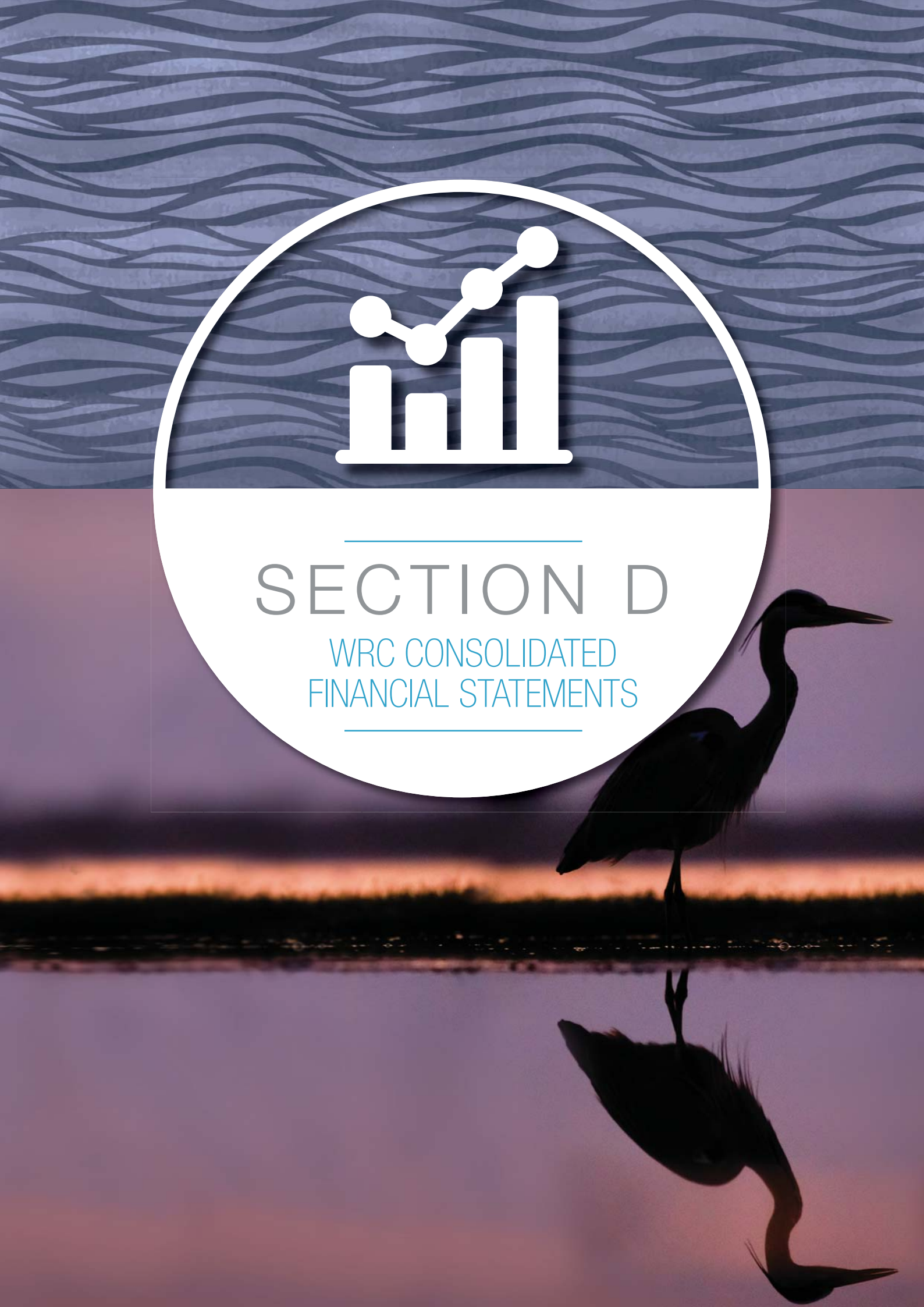
NAME	QUALIFICATIONS	INTERNAL/ EXTERNAL	DATE APPOINTED
Ms Khulekelwe Mbonambi (Chairperson)	B.Com Accounting, B.Com (Hons), a certificate in Board Governance, certificate in Enterprise Risk Management	External	1 February 2016
Ms Shelley Thomas	CA SA	External	1 November 2017
Mr Philani Dlamini	B.Com Accounting (Hons)	External	1 November 2017
Prof Sibusiso Vil-Nkomo	PhD	External	1 February 2016
Dr Aldo Stroebel	PhD, Postdoctoral research at Wageningen University (The Netherlands)	External	1 February 2016
Dhesigen Naidoo	CEO and ex-officio	Internal	1 October 2011

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 detection controls. The WRC has an approved fraud prevention policy and whistleblowing policy to ensure that the Commission's zero-tolerance approach 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. All fraud hotline calls received are reported on a quarterly basis to the Audit Committee.

CODE OF ETHICS AND BUSINESS CONDUCT

The integrity of the employees underlies all 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 regarding human dignity, non-discrimination, and respect for diversity, impartiality and reputation.



SECTION D

WRC CONSOLIDATED FINANCIAL STATEMENTS

INDEX:

WRC CONSOLIDATED FINANCIAL STATEMENTS

The financial statements set out on pages 82 to 141, which have been prepared on the going concern basis, were approved by the Board Members on 30 July 2020 and were signed on its behalf by:

Mr DP Naidoo
Chief Executive Officer

Dr NP Mjoli
Chairperson of the Board

WATER RESEARCH COMMISSION (WRC) AND SUBSIDIARY FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 MARCH 2020

STATEMENT OF RESPONSIBILITY AND CONFIRMATION OF ACCURACY FOR THE ANNUAL REPORT 2019/20

The Accounting Authority is responsible for the preparation of the public entity's Annual Financial Statements and for the judgements 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 2020 have been audited by the external auditors and their report is presented on pp. 77 to 80.

The financial statements set of pp. 82 to 141 which have been prepared on the going concern basis, were approved by the Board members on 30 July 2020 and were signed on its behalf by:

Mr Dhesigen Naidoo
Chief Executive Officer

Dr Nozibele Mjoli
Chairperson of the Board

REPORT OF THE AUDIT AND RISK COMMITTEE

The Audit and Risk Committee (the Committee) is pleased to present its report for the Water Research Commission for the financial year ended 31 March 2020. The Audit and Risk Committee is a Committee of the board formed in terms of the Treasury Regulation 27(1) of the Public Finance Management Act (1999) (PFMA), as amended.

Audit Committee Members and Attendance:

The Committee consists of five independent members; two members of the Committee are not Board members. All members of the Committee have the required expertise and experience in business, internal audit and financial matters. The Committee met six times during the year to 31 March 2020 and have met four times subsequent to the year end, in accordance with its approved terms of reference.

Name of Member	Number of Meetings Attended	
	Year to 31 March 2020	Since 31 March 2020
Ms Khulekelwe Mbonambi (Chairperson)	4	4
Prof Sibusiso Vil-Nkomo	4	4
Dr Aldo Stroebel	5	4
Mr Philani Dlamini *	4	4
Ms Shelley Thomas *	6	4

* *Not a member of the Board*

Representatives of the Auditor-General South Africa (AGSA) have attended all meetings of the Committee.

Responsibility and functions of the Committee

The Committee's roles and responsibilities include its statutory duties as per the PFMA, the requirements of the King IV Code of Governance, and the responsibilities assigned to it by the Board. The Committee reports that it has complied with its responsibilities arising from sections 51(1)(a)(ii) and 76(4)(d) of the Public Finance Management Act and Treasury Regulation 27(1) and 27(2).

The Committee has adopted formal terms of reference (charter), which were approved by the Board. The Committee further reports that it has regulated its affairs and discharged its responsibilities in compliance with this charter and the PFMA, read in conjunction with the National Treasury regulations.

The Committee has carried out its functions through attendance of Committee meetings and discussions with Executive Management, Internal Audit, External Auditors and external advisers, where appropriate. The Committee meets at least four times per annum, with authority to convene additional meetings as circumstances require.

To execute its key functions and discharge its responsibilities as outlined in its terms of reference during the period under review, the Committee:

- Assisted the Board in its evaluation of the adequacy and efficiency of the internal control systems, accounting practices, information systems, risk management and auditing processes applied within the organisation in the day-to-day management of its business
- Reviewed and considered the Annual Financial Statements and Annual Performance Report
- Facilitated and promoted communication between the Board, management, the external auditors and Internal Audit department on matters which are the responsibility of the Committee
- Monitored and supervised the effective operation of the Internal Control and Internal Audit function
- Ensured that an effective, efficient and transparent system of risk management is maintained

- Considered the fees to be paid to the AGSA as well as the auditors' terms of engagement

Internal audit

The Audit Committee is responsible for ensuring that the organisation's Internal Audit function is independent and has the necessary resources, standing and authority within the organisation to enable it to discharge its duties. Furthermore, the Committee oversees cooperation between the internal and external auditors, and serves as a link between the Board of Directors and these functions.

The Audit Committee considered and recommended the internal audit charter for approval by the board. The charter governs the authority and responsibilities of the various role players. The committee has satisfied itself that the internal audit function was appropriately skilled, functional and independent. Internal audit has access to the committee, primarily through its Chairperson.

The Committee has the following responsibilities for internal audit:

- the appointment, performance assessment and/or dismissal of the internal auditor;
- to approve the internal audit charter and the internal audit plan; and
- to ensure that the internal audit function is subject to an independent quality review as and when the committee determines appropriate.

The committee has reviewed the performance, qualifications and expertise of the Internal Audit Manager.

Internal audit work conducted during the year included – Operational, Compliance, Financial, Information Technology and Performance Management information reviews. Weaknesses revealed have been raised with management and the Board. The AGSA has highlighted areas where internal audit support can assist the entity in improving its track record in key areas such as compliance, supply chain management and contract management.

Internal control, financial management and administration

While there has been improvement in all areas of operations, including internal control, financial management, compliance and reporting, the entity has still not attained the desired standard of compliance and proficiency in some areas as pointed out by the AGSA. Focused attention to the analysis flowing from a quarterly dashboard review has been recommended, and this will be closely monitored by the Committee.

Acknowledgement is also given to the AGSA's team who assisted in identifying some control deficiencies.

Implementation of corrective actions

The AGSA's review shows that approximately 88% of the audit recommendations made and accepted in the prior year were implemented with appropriate corrective actions. The organisation would ensure that it can and indeed does take sufficient and effective steps to introduce all the improvements and corrections that are identified.

Going concern

The Committee has considered the going concern status of the organisation and has made recommendations to the Board in this regard. The Board's statement on the going concern status of the organisation is supported by the Committee.

Evaluation of Financial Statements

The Audit Committee has:

- reviewed and discussed the audited annual financial statements and performance report to be included in the annual report with the AGSA, with the Chief Executive Officer and with the Board as the Institute's accounting authority
- reviewed the AGSA's management report on the findings of the audit and management's response, and has reviewed all changes in accounting policies and practices

- has noted and reviewed the AGSA's assessment of the usefulness and reliability of performance information examined.

The Committee concurs with and supports the AGSA's opinion on the annual financial statements and other legal and regulatory matters, and is of the view that the audited annual financial statements can be accepted and read together with the AGSA's report.

Auditor-General South Africa

The Audit Committee confirms that it has met with the Auditor-General South Africa and that there are no unresolved issues.

Ms MK Mbonambi
Chairperson of the Audit and Risk Committee

REPORT OF THE AUDITOR-GENERAL TO PARLIAMENT ON THE WATER RESEARCH COMMISSION

REPORT ON THE AUDIT OF THE CONSOLIDATED AND SEPARATE FINANCIAL STATEMENTS

Opinion

1. I have audited the consolidated and separate financial statements of the Water Research Commission and its subsidiaries (the group) set out on pages 84 to 143, which comprise the consolidated and separate statement of financial position as at 31 March 2020, 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 to the consolidated and separate financial statements, including a summary of significant accounting policies.

2. In my opinion, the consolidated and separate financial statements present fairly, in all material respects, the consolidated and separate financial position of the Water Research Commission as at 31 March 2020, and their financial performance and cash flows for the year then ended in accordance with the Standards of Generally Recognised Accounting Practice (GRAP) and the requirements of the Public Finance Management Act of South Africa, 1999 (Act 1 of 1999) (PFMA).

Basis for opinion

3. I conducted my audit in accordance with the International Standards on Auditing (ISAs). My responsibilities under those standards are further described in the auditor-general's responsibilities for the audit of the consolidated and separate financial statements section of this auditor's report.

4. I am independent of the public entity in accordance with sections 290 and 291 of the Code of ethics for professional accountants and parts 1 and 3 of the International Code of Ethics for Professional Accountants (including International Independence Standards) of the International Ethics Standards Board for Accountants (IESBA codes) as well as the ethical requirements that are relevant to my audit in South Africa. I have fulfilled my other ethical responsibilities in accordance with these requirements and the IESBA codes.

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

Emphasis of matters

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

Property, Plant and Equipment: Disposal of Marumati building

7. We draw attention to note 6 and note 42 to the consolidated and separate financial statements. The disposal of the Marumati Building ("the Property") owned by Erf 706 Rietfontein (Pty) Ltd was approved by the Board and the former Minister of Water and Sanitation on 22 February 2016 and 14 May 2016 respectively. The auctioneer received a written bid for the acquisition of the Marumati Building situated at Erf 706 Rietfontein to the value of R 9,750,000. A written bid to the value of R 9,750,000 was received and accepted by the Board on 16 August 2017. My opinion is not modified in respect of this matter.

Responsibilities of the accounting authority for the financial statements

8. The board of directors, which constitutes the accounting authority is responsible for the preparation and fair presentation of the consolidated and separate financial statements in accordance with the Standards of Generally Recognised Accounting Practice (GRAP) and the requirements of the Public Finance Management Act of South Africa, 1999 (Act 1 of 1999) (PFMA) , 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.

9. In preparing the consolidated and separate financial statements, the accounting authority is responsible for assessing the Water Research Commission's ability to continue as a going concern, disclosing, as applicable, matters relating to going concern and using the going concern basis of accounting unless the appropriate governance structure either intends to liquidate the public entity or to cease operations, or has no realistic alternative but to do so.

Auditor-general's responsibilities for the audit of the consolidated and separate financial statements

10. My objectives are to obtain reasonable assurance about whether the consolidated and separate financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes my opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with the ISAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated and separate financial statements.

11. A further description of my responsibilities for the audit of the consolidated and separate financial statements is included in the annexure to this auditor's report.

REPORT ON THE AUDIT OF THE ANNUAL PERFORMANCE REPORT

Introduction and scope

12. In accordance with the Public Audit Act of South Africa, 2004 (Act No. 25 of 2004) (PAA) and the general notice issued in terms thereof, I have a responsibility to report material findings on the reported performance information against predetermined objectives for selected portfolios presented in the annual performance report. I performed procedures to identify findings but not to gather evidence to express assurance.

13. My procedures address the reported performance information, which must be based on the approved performance planning documents of the public entity. I have not evaluated the completeness and appropriateness of the performance indicators included in the planning documents. My procedures also did not extend to any disclosures or assertions relating to planned performance strategies and information in respect of future periods that may be included as part of the reported performance information. Accordingly, my findings do not extend to these matters.

14. I evaluated the usefulness and reliability of the reported performance information in accordance with the criteria developed from the performance management and reporting framework, as defined in the general notice, for the following selected portfolios presented in the annual performance report of the public entity for the year ended 31 March 2020:

Portfolio	Pages in annual performance report
Research, development and innovation portfolio	45 – 50
Impact portfolio	50 – 51
Partnership portfolio	52

15. I performed procedures to determine whether the reported performance information was properly presented and whether performance was consistent with the approved performance planning documents. I performed further procedures to determine whether the indicators and related targets were measurable and relevant, and assessed the reliability of the reported performance information to determine whether it was valid, accurate and complete.

16. did not raise any material findings on the usefulness and reliability of the reported performance information for these portfolios.

Other matters

17. I draw attention to the matter below.

Achievement of planned targets

18. Refer to the annual performance report on pages 49 to 58 for information on the achievement of planned targets for the year and explanations provided for the over achievement of a significant number of targets.

REPORT ON THE AUDIT OF COMPLIANCE WITH LEGISLATION

Introduction and scope

19. In accordance with the PAA and the general notice issued in terms thereof, I have a responsibility to report material findings on the compliance of the public entity with specific matters in key legislation. I performed procedures to identify findings but not to gather evidence to express assurance.

20. The material findings on compliance with specific matters in key legislations are as follows:

Expenditure management

21. Effective steps were not taken to prevent fruitless and wasteful expenditure amounting to R137,316 as disclosed in note 37 to the annual financial statements, as required by section 51(1)(b)(ii) of the PFMA. The majority of the fruitless and wasteful expenditure was caused by interest charged on overdue payments.

OTHER INFORMATION

22. The accounting authority is responsible for the other information. The other information comprises the information included in the annual report which includes the chairperson's report, and the CEO's report. The other information does not include the consolidated and separate financial statements, the auditor's report and those selected portfolios presented in the annual performance report that have been specifically reported in this auditor's report.

23. My opinion on the financial statements and findings on the reported performance information and compliance with legislation do not cover the other

information and I do not express an audit opinion or any form of assurance conclusion thereon.

24. In connection with my audit, my responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the consolidated and separate financial statements and the selected portfolios presented in the annual performance report, or my knowledge obtained in the audit, or otherwise appears to be materially misstated.

25. If based on the work I have performed, I conclude that there is a material misstatement in this other information, I am required to report that fact. I have nothing to report in this regard.

INTERNAL CONTROL DEFICIENCIES

26. I considered internal control relevant to my audit of the consolidated and separate financial statements, reported performance information and compliance with applicable legislation; however, my objective was not to express any form of assurance on it. The matters reported below are limited to the significant internal control deficiencies that resulted in the findings on compliance with legislation included in this report.

27. Non-compliance with legislation could have been prevented had compliance been properly reviewed and monitored regarding to payment of suppliers within 30 days of receipt of invoices.

Auditor-General

Auditor-General
Pretoria
30 September 2020

AUDITOR-GENERAL
SOUTH AFRICA

Auditing to build public confidence

ANNEXURE

AUDITOR-GENERAL'S RESPONSIBILITY FOR THE AUDIT

1. As part of an audit in accordance with the ISAs, I exercise professional judgement and maintain professional scepticism throughout my audit of the financial statements, and the procedures performed on reported performance information for selected portfolio and on the public entity's compliance with respect to the selected subject matters.

Financial statements

2. In addition to my responsibility for the audit of the financial statements as described in this auditor's report, I also:

- identify and assess the risks of material misstatement of the financial statements whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for my opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control
- obtain an understanding of internal control relevant to the audit 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 public entity's internal control
- evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the board of directors, which constitutes the accounting authority
- conclude on the appropriateness of the board of directors, which constitutes the accounting authority's use of the going concern basis of accounting in the preparation of the financial statements. I also conclude, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Water Research Commission and its subsidiaries ability to continue as a going concern. If I conclude that a material uncertainty exists, I am required to draw attention in my auditor's report to the related disclosures in the financial statements about the material uncertainty or, if such disclosures are inadequate, to modify the opinion on the financial statements. My conclusions are based on the information available to me at the date of this auditor's report. However, future events or conditions may cause a public entity to cease continuing as a going concern
- evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation
- obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the group to express an opinion on the consolidated financial statements. I am responsible for the direction, supervision and performance of the group audit. I remain solely responsible for my audit opinion

Communication with those charged with governance

3. I communicate with the accounting authority regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that I identify during my audit.

4. I also confirm to the accounting authority that I have complied with relevant ethical requirements regarding independence, and communicate all relationships and other matters that may reasonably be thought to have a bearing on my independence and, where applicable, related safeguards.

STATEMENT OF FINANCIAL POSITION

	Note(s)	Group 2020 R	Group 2019 R	WRC 2020 R	WRC 2019 R
Assets					
Current assets					
Loans to wholly controlled entity	3	-	-	-	7 878 459
Receivables	4	39 788 627	45 352 057	39 779 789	45 430 275
Cash and cash equivalents	5	240 984 237	161 304 984	240 954 437	161 137 834
		280 772 864	**206 657 041**	**280 734 226**	**214 446 568**
Non-current assets					
Property, plant and equipment	6	11 659 284	11 735 229	11 659 284	11 735 229
Intangible assets	7	4 209 857	4 353 817	4 209 857	4 353 817
Investment in wholly controlled entity	8	-	-	1	1
Receivables	4	1 109 363	1 036 560	1 109 363	1 036 560
		16 978 504	**17 125 606**	**16 978 505**	**17 125 607**
Total assets		**297 751 368**	**223 782 647**	**297 712 731**	**231 572 175**
Liabilities					
Current liabilities					
Finance lease obligation	9	499 020	503 385	499 020	503 385
Operating lease liability	10	8 354 066	7 182 228	8 354 066	7 182 228
Payables	11	156 443 107	121 348 442	156 443 107	120 977 531
Accruals - leave and bonus	12	7 169 888	6 670 460	7 169 888	6 670 460
Revolving credit facility	5	106 620	372 288	106 620	372 288
		172 572 701	**136 076 803**	**172 572 701**	**135 705 892**
Non-current liabilities					
Finance lease obligation	9	633 611	-	633 611	-
Employee benefit obligation	13	3 697 390	5 333 109	3 697 390	5 333 109
		4 331 001	**5 333 109**	**4 331 001**	**5 333 109**
Total liabilities		**176 903 702**	**141 409 912**	**176 903 702**	**141 039 001**
Net assets		**120 847 666**	**82 372 735**	**120 809 029**	**90 533 174**
Accumulated surplus		120 847 666	82 372 735	120 809 029	90 533 174

STATEMENT OF FINANCIAL PERFORMANCE

	Note(s)	Group 2020 R	Group 2019 R	WRC 2020 R	WRC 2019 R
Revenue					
Revenue from exchange transactions					
Leverage income	14	64 528 890	42 269 973	64 528 890	42 269 973
Rental received	14	42 284	151 246	-	-
Recovery of expenditure	14	1 929	6 899	-	-
Other income	14	243 174	214 245	243 174	214 245
Interest received	15	6 773 400	5 048 537	6 773 400	5 048 537
Total revenue from exchange transactions		**71 589 677**	**47 690 900**	**71 545 464**	**47 532 755**
Revenue from non-exchange transactions					
Water research levies	16	258 967 111	236 607 699	258 967 111	236 607 699
Total revenue		**330 556 788**	**284 298 599**	**330 512 575**	**284 140 454**
Expenditure					
Depreciation, amortisation and impairment	17	4 630 717	4 573 576	4 630 717	4 573 576
Employee related costs	18	95 557 002	83 243 988	95 557 002	83 243 988
Finance costs	19	542 615	534 980	542 615	534 980
General expenses	20	13 237 074	12 135 598	13 230 681	12 133 189
Impairment loss on financial assets carried at amortised costs	21	-	-	-	72 102
Lease rentals on operating lease	22	11 420 737	11 036 538	11 420 737	11 036 538
Research, development and innovation costs	23	175 835 194	169 022 711	175 835 194	169 022 711
Repairs and maintenance		162 286	240 433	129 800	147 455
Receivable derecognised	24	(12 210)	13 178	-	-
Total expenditure		**301 373 415**	**280 801 002**	**301 346 746**	**280 764 539**
Operating surplus / (deficit)	26	**29 183 373**	**3 497 597**	**29 165 829**	**3 375 915**
Gain/(loss) on disposal of assets and liabilities	25	9 749 192	(157 346)	1 567 660	(157 346)
Actuarial gains/(losses)	13	(457 634)	(2 416 258)	(457 634)	(2 416 258)
		9 291 558	**(2 573 604)**	**1 110 026**	**(2 573 604)**
Surplus/ (deficit) for the year		**38 474 931**	**923 993**	**30 275 855**	**802 311**

STATEMENT OF CHANGES IN NET ASSETS

	Accumulated surplus	Total net assets
	R	R
Group		
Opening balance as previously reported	81 313 094	81 313 094
Prior year adjustments	135 648	135 648
Balance at 1 April 2018 as restated*	**81 488 742**	**81 448 742**
Changes in net assets		
Surplus / (deficit) for the year restated	923 993	923 933
Total changes	923 993	923 993
Balance at 1 April 2019	**82 372 735**	**82 372 735**
Changes in net assets		
Surplus / (deficit) for the year	38 474 931	38 474 931
Total changes	38 474 931	38 474 931
Balance at 31 March 2020	**120 847 666**	**120 847 666**
WRC		
Balance at 1 April 2018	**89 730 863**	**89 730 863**
Changes in net assets		
Surplus / (deficit) for the year	802 311	802 311
Total changes	802 311	802 311
Balance at 1 April 2019	**90 533 174**	**90 533 174**
Changes in net assets		
Surplus / (deficit) for the year	30 275 855	30 275 855
Total changes	30 275 855	30 275 855
Balance at 31 March 2020	**120 809 029**	**120 809 029**

CASH FLOW STATEMENT

	Note(s)	Group 2020 R	Group 2019 R	WRC 2020 R	WRC 2019 R
Cash flows from operating activities					
Receipts					
Cash receipts from customers		336 738 713	302 568 291	335 351 776	302 315 928
Interest income		7 498 683	5 368 587	7 498 683	5 368 587
		344 237 396	307 936 878	342 850 459	307 684 515
Payments					
Cash paid to suppliers		(280 508 378)	(276 998 823)	(278 681 019)	(276 851 036)
Net cash flows from operating activities	29	**63 729 018**	**30 938 055**	**64 169 440**	**30 833 479**
Cash flows from investing activities					
Purchase of property, plant and equipment	6	(2 559 587)	(1 041 613)	(2 559 587)	(1 041 613)
Proceeds from sale of property, plant and equipment	6	9 790 812	-	40 812	-
Purchase of other intangible assets	7	(366 000)	(2 387 697)	(366 000)	(2 387 697)
Loans to wholly controlled entity repaid		-	-	9 446 928	255 000
Net cash flows from investing activities		**6 865 225**	**(3 429 310)**	**6 562 153**	**(3 174 310)**
Cash flows from financing activities					
Employee benefit obligation		(2 467 619)	(3 732 973)	(2 467 619)	(3 732 973)
Finance lease payments		(1 065 948)	(1 193 154)	(1 065 948)	(1 193 154)
Net cash flows from financing activities		**(3 533 567)**	**(4 926 127)**	**(3 533 567)**	**(4 926 127)**
Net increase/(decrease) in cash and cash equivalents		**67 060 676**	**22 582 618**	**67 198 026**	**22 733 042**
Cash and cash equivalents at the beginning of the year		160 932 696	133 860 609	160 765 546	133 543 035
Effect of exchange rate movement on cash balances		12 884 245	4 489 469	12 884 245	4 489 469
Cash and cash equivalents at the end of the year	5	**240 877 617**	**160 932 696**	**240 847 817**	**160 765 546**

STATEMENT OF COMPARISON OF BUDGET AND ACTUAL AMOUNTS

Budget on Cash Basis	Approved budget R	Adjustments R	Final Budget R	Actual amounts on comparable basis R	Difference between final budget and actual R
Revenue					
Revenue from exchange transactions					
Leverage income	50 861 578	-	**50 861 578**	64 528 890	**13 677 312**
Other income	130 814	9 314 659	**9 445 473**	9 698 788	**253 315**
Interest and dividends received – investment	5 166 912	-	**5 166 912**	6 773 400	**1 606 488**
Total revenue from exchange transactions	**56 159 304**	**9 314 659**	**65 473 963**	**81 001 078**	**15 527 115**
Revenue from non-exchange transactions					
Water research levies	261 884 068	(2 199 354)	**259 684 714**	258 967 111	**(717 603)**
Total Revenue	**318 043 372**	**7 115 305**	**325 158 677**	**339 968 189**	**14 809 512**
Expenditure					
Fixed costs	11 047 748	1 016 758	**12 064 506**	12 058 647	**(5 859)**
Running costs	9 959 037	1 631 174	**11 590 211**	9 731 627	**(1 858 584)**
Human resource costs	107 288 306	(8 066 464)	**99 221 842**	97 766 935	**(1 454 907)**
Research, development and innovation costs	182 497 351	12 811 289	**195 308 640**	175 835 193	**(19 473 447)**
Capital expenditure	4 287 025	74 128	**4 361 153**	4 452 433	**91 280**
Corporate expenditure	2 963 905	(351 580)	**2 612 325**	2 850 583	**238 258**
Total expenditure	**318 043 372**	**7 115 305**	**325 158 677**	**302 695 418**	**(22 463 259)**
Actual amount on comparable basis as presented in the budget and actual comparative statement	-	-	-	**37 272 771**	**37 272 771**

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 ANNUAL 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. These financial statements have been prepared based on the expectation that the economic entity will continue to operate as a going concern for at least the next 12 months.

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

These accounting policies are consistent with the previous period.

1.1 CONSOLIDATION

Consolidated financial statements

Consolidated financial statements are the financial statements of an economic entity in which the assets, liabilities, net assets, revenue, expenses and cash flows of the controlling entity and its controlled entities are presented as those of a single economic entity.

The entity determines whether it is a controlling entity by assessing whether it controls the other entity. The entity controls another entity when it is exposed, or has rights, to variable benefits from its involvement with the other entity and has the ability to affect the nature and amount of those benefits through its power over the other entity.

The entity controls another entity if the entity has all three of the following elements of control:

- power over the other entity;
- exposure, or rights, to variable benefits from its involvement with the other entity; and
- the ability to use its power over the other entity to affect the nature or amount of the benefits from its involvement with the other entity.

Accounting requirements

The entity as controlling entity prepares consolidated financial statements using uniform accounting policies for like transactions and other events in similar circumstances. 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.

Consolidation of a controlled entity begins from the date the entity obtains control of the other entity and cease when the entity loses control of the other entity.

Consolidation procedures

Consolidated financial statements:

- Combine like items of assets, liabilities, net assets, revenue, expenses and cash flows of the controlling entity with those of its controlled entities.
- Offset (eliminate) the carrying amount of the controlling entity's investment in each controlled entity and the controlling entity's portion of net assets of each controlled entity.
- Eliminate in full intra-economic entity assets, liabilities, net assets, revenue, expenses and cash flows relating to transactions between entities of the economic entity. Intra-economic entity losses may indicate an impairment that requires recognition in the consolidated financial statements.

Measurement

The entity includes the revenue and expenses of a controlled entity in the consolidated financial statements from the date it gains control until the date when the entity ceases to control the controlled entity. Revenue and expenses of the controlled entity are based on the amounts of the assets and liabilities recognised in the consolidated financial statements at the acquisition date.

Reporting dates

The financial statements of the entity as controlling entity and its controlled entities used in the preparation of the consolidated financial statements are prepared as at the same reporting date. When the end of the reporting dates of the controlling entity is different from that of a controlled entity, the controlled entity prepares, for consolidation purposes, additional financial statements as of the same date as the financial statements of the controlling entity unless it is impracticable to do so. When the financial statements of a controlled entity used in the preparation of consolidated financial statements are prepared as of a 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 controlling entity's financial statements. In any case, the difference between the end of the reporting date of the controlled entity and that of the controlling entity is no more than three months. The length of the reporting periods and any difference between the ends of the reporting dates is the same from period to period.

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:

Receivables

The economic 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, 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 reassesses 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 13.

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, it's 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 - 10 years
Motor vehicles	Straight Line	5 years
Office equipment	Straight Line	3 - 5 years
Computer equipment	Straight Line	3 - 10 years
Leasehold improvements	Straight Line	Years according to lease term
Finance lease assets	Straight Line	Years according to lease term

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

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.

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

An intangible asset arising from development (or from the development phase of an internal project) is recognised when:

- it is technically feasible to complete the asset so that it will be available for use or sale.
- there is an intention to complete and use or sell it.
- there is an ability to use or sell it.
- it will generate probable future economic benefits or service potential.
- there are available technical, financial and other resources to complete the development and to use or sell the asset.
- the expenditure attributable to the asset during its development can be measured reliably.

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

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

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

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

Internally generated goodwill is not recognised as an intangible asset.

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

Item	Depreciation method	Average useful life
Computer software, other	Straight Line	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

Investments in the controlled entity are consolidated in the economic entity financial statements. Refer to the accounting policy on Consolidations (Note 1.1).

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 in accordance with the Standard of GRAP on Financial instruments.

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

The entity applies the same accounting for each category of investment. The entity recognises a dividend or similar distribution in surplus or deficit in its separate financial statements when its right to receive the dividend or similar distribution is established.

Investments in the controlled entity that are accounted for in accordance with the accounting policy on financial instruments in the consolidated financial statements, are accounted for in the same way in the controlling entity's separate financial statements.

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

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

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 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.

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

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.

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 using 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 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 STATUTORY RECEIVABLES

Identification

Statutory receivables are receivables that arise from legislation, supporting regulations, or similar means, and require settlement by another entity in cash or another financial asset.

Carrying amount is the amount at which an asset is recognised in the statement of financial position.

The cost method is the method used to account for statutory receivables that requires such receivables to be measured at their transaction amount, plus any accrued interest or other charges (where applicable) and, less any accumulated impairment losses and any amounts derecognised.

Nominal interest rate is the interest rate and/or basis specified in legislation, supporting regulations or similar means.

The transaction amount (for purposes of this Standard) for a statutory receivable means the amount specified in, or calculated, levied or charged in accordance with, legislation, supporting regulations, or similar means.

Recognition

The economic entity recognises statutory receivables as follows:

- if the transaction is an exchange transaction, using the policy on Revenue from exchange transactions;
- if the transaction is a non-exchange transaction, using the policy on Revenue from non-exchange transactions (Taxes and transfers); or
- if the transaction is not within the scope of the policies listed in the above or another Standard of GRAP, the receivable is recognised when the definition of an asset is met and, when it is probable that the future economic benefits or service potential associated with the asset will flow to the entity and the transaction amount can be measured reliably.

Initial measurement

The economic entity initially measures statutory receivables at their transaction amount.

Subsequent measurement

The economic entity measures statutory receivables after initial recognition using the cost method. Under the cost method, the initial measurement of the receivable is changed subsequent to initial recognition to reflect any:

- interest or other charges that may have accrued on the receivable (where applicable);
- impairment losses; and
- amounts derecognised.

Impairment losses

The economic entity assesses at each reporting date whether there is any indication that a statutory receivable, or a group of statutory receivables, may be impaired.

Derecognition

The economic entity derecognises a statutory receivable, or a part thereof, when:

- the rights to the cash flows from the receivable are settled, expire or are waived;
- the economic entity transfers to another party substantially all of the risks and rewards of ownership of the receivable; or
- the economic entity, despite having retained some significant risks and rewards of ownership of the receivable, has transferred control of the receivable to another party and the other party has the practical ability to sell the receivable 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:
  - » derecognise the receivable; and
  - » recognise separately any rights and obligations created or retained in the transfer.

The carrying amounts of any statutory receivables transferred are allocated between the rights or obligations retained and those transferred on the basis of their relative fair values at the transfer date. The entity considers whether any newly created rights and obligations are within the scope of the Standard of GRAP on Financial Instruments or another Standard of GRAP. Any difference between the consideration received and the amounts derecognised and, those amounts recognised, are recognised in surplus or deficit in the period of the transfer.

1.8 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.

1.9 IMPAIRMENT OF ASSETS

Cash-generating assets are assets managed with the objective of generating a commercial return. An asset generates a commercial return when it is deployed in a manner consistent with that adopted by a profit-oriented entity.

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.

1.10 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 employees render 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.

Actuarial assumptions

Actuarial assumptions are unbiased and mutually compatible.

Financial assumptions are based on market expectations, at the reporting date, for the period over which the obligations are to be settled.

The rate used to discount post-employment benefit obligations (both funded and unfunded) reflect the time value of money. The currency and term of the financial instrument selected to reflect the time value of money is consistent with the currency and estimated term of the post-employment benefit obligations.

Post-employment benefit obligations are measured on a basis that reflects:

- estimated future salary increases;
- the benefits set out in the terms of the plan (or resulting from any constructive obligation that goes beyond those terms) at the reporting date; and
- estimated future changes in
  - » those changes were enacted before the reporting date;
  - » past history, or other reliable evidence, indicates that those stated benefits will change in some predictable manner, for example, in line with future changes in general price levels or general salary levels.

Assumptions about medical costs take account of estimated future changes in the cost of medical services, resulting from both inflation and specific changes in medical costs.

1.11 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.

1.12 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 economic entity has transferred to the purchaser the significant risks and rewards of ownership of the goods;
- the economic 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 economic 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.

The WRC receives leverage income from various sources which is used for research. Revenue received from clients from contracts for undertaking research is recognised by reference to the stage of completion on individual projects. This revenue is recognised in the accounting period in which the research expenditure is incurred.

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.

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

1.13 REVENUE FROM NON-EXCHANGE TRANSACTIONS

Revenue comprises gross inflows of economic benefits or service potential received and receivable by an 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 and Umgeni Water Boards collect levy income on behalf of the WRC. The rate of the levy is approved by the Minister of Human Settlements, Water and Sanitation on an annual basis.

Revenue recognition of levy income represents invoiced amounts receivable from the Department of Water and Sanitation, Rand and Umgeni Water Boards. Provision is made for estimated uncollectable levies by way of an impairment charge.

1.14 BORROWING COSTS

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

1.15 TRANSLATION OF FOREIGN CURRENCIES

Foreign currency transactions

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

At each reporting date:

- foreign currency monetary items are translated using the closing rate;
- non-monetary items that are measured in terms of historical cost in a foreign currency are translated using the exchange rate at the date of the transaction; and

- non-monetary items that are measured at fair value in a foreign currency are translated using the exchange rates at the date when the fair value was determined.

Exchange differences arising on the settlement of monetary items or on translating monetary items at rates different from those at which they were translated on initial recognition during the period or in previous 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.

1.16 RESEARCH AND DEVELOPMENT EXPENDITURE

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

1.17 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.

1.18 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.

1.19 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.

1.20 INCOME TAX EXPENSE

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

1.21 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 39.

1.22 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.

1.23 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 EFFECTIVE AND ADOPTED IN THE CURRENT YEAR

In the current year, the economic entity has adopted the following standards and interpretations that are effective for the current financial year and that are relevant to its operations:

- GRAP 20: Related parties
- GRAP 104: Financial Instruments
- GRAP 108: Statutory receivables

These amendments were adopted and did not have a material impact on the Annual Financial Statements.

2.2 STANDARDS AND INTERPRETATIONS EARLY ADOPTED

The economic entity has chosen to early adopt the following standards and interpretations:

- GRAP 34: Separate Financial Statements - Effective from 1 April 2020
- GRAP 35: Consolidated Financial Statements - Effective from 1 April 2020
- GRAP 38: Disclosure of interest in Other Entities - Effective from 1 April 2020

These amendments did not have a material impact on the Annual Financial Statements.

3. LOANS TO WHOLLY CONTROLLED ENTITY

	Group		WRC	
	2020 R	2019 R	2020 R	2019 R
Controlled entity				
Erf 706 Rietfontein (Pty) Ltd — Loan 1	-	-	-	27 743 769
The unsecured loan bears interest at 0% (2019: 0%). The interest on the loan was suspended from 1 June 2017. The capital repayments were suspended effective 1 July 2018. An agreement was entered into that the capital sum and any interest thereon must be repaid subsequent to the disposal of the Marumati Building.				
Erf 706 Rietfontein (Pty) Ltd — Loan 2	-	-	-	2 264 810
The unsecured loan bears interest at 0% (2019: 0%). The interest on the loan was suspended from 1 June 2017. The capital repayments were suspended effective 1 July 2018. An agreement was entered into that the capital sum and any interest thereon must be repaid subsequent to the disposal of the Marumati Building.				
	-	-	-	30 008 579
Allowance for impairment	-	-	-	(22 130 120)
	-	**-**	**-**	**7 878 459**
Non-current assets	-	-	-	-
Current assets	-	-	-	7 878 459
	-	**-**		**7 878 459**

Credit quality of loans to wholly controlled entity

The entity did not default on capital repayments on loans during the year under review. The terms and conditions of the loans were renegotiated. The Board approved the amendment of the loan agreements which allows ERF 706 to repay the loan after the disposal of the Marumati Building, as well as the suspension of any further interest up to the date of disposal. This amendment was effective from 1 June 2017. The capital repayments was suspended effective 1 July 2018.

The disposal of the Marumati Building situated at Erf 706 Rietfontein was finalised on 12 July 2019. The funds available from the disposal proceeds were utilised by ERF 706 to repay the intercompany loans and balances. Refer to note 25 for further details.

The entity has not reclassified the categories of the above financial assets during the financial year.

4. RECEIVABLES

	Group		WRC	
	2020	2019	2020	2019
	R	R	R	R
Receivables from non-exchange transactions				
Receivables: Water Research Levies	36 184 410	31 999 358	36 184 410	31 999 358
Receivables from exchange transactions				
Receivables: Other	1 748 647	10 114 524	1 748 647	10 201 007
Deposits	1 116 668	1 043 865	1 109 363	1 036 560
Prepaid expenses	1 845 848	3 229 910	1 845 848	3 229 910
Recoverable fruitless and wasteful expenditure	884	-	884	-
VAT receivable	1 533	960	-	-
	40 897 990	**46 388 617**	**40 889 152**	**46 466 835**
Non-current assets	1 109 363	1 036 560	1 109 363	1 036 560
Current assets	39 788 627	45 352 057	39 779 789	45 430 275
	40 897 990	**46 388 617**	**40 889 152**	**46 466 835**

Included in receivables from exchange for the economic entity (group) is a statutory receivable in respect of VAT amounting to R1,533.

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.

During the evaluation of recoverability of receivables, 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 their fair value.

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

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.

Receivables past due but not impaired

Receivables are all considered for impairment. For the current and prior financial year no receivables were past due or impaired for the WRC and the economic entity.

Receivables impaired

For the current and prior financial year no receivables were (reversed) / impaired and provided for in the WRC and the economic entity.

Reconciliation of provision for impairment losses on receivables

There was no movement in the provision for impaired receivables. 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.

GRAP 104 states that a financial asset is past due when a counterparty has failed to make a payment when contractually due. None of the receivables listed above are past due. As a result, no provision has been made for impairment.

5. CASH AND CASH EQUIVALENTS

Cash and cash equivalents consist of:

	Group		WRC	
	2020	2019	2020	2019
	R	R	R	R
Cash on hand	510	1 001	510	1 001
Bank balances	162 615 763	113 576 276	162 585 963	113 409 126
Short-term deposits	78 367 964	47 727 707	78 367 964	47 727 707
Revolving credit facility	(106 620)	(372 288)	(106 620)	(372 288)
	240 877 617	**160 932 696**	**240 847 817**	**160 765 546**
Current assets	240 984 237	161 304 984	240 954 437	161 137 834
Current liabilities	(106 620)	(372 288)	(106 620)	(372 288)
	240 877 617	**160 932 696**	**240 847 817**	**160 765 546**

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.

Level 1				
Cash and cash equivalents	240 984 237	161 304 984	240 954 437	161 137 834

6. PROPERTY, PLANT AND EQUIPMENT

	2020			2019		
GROUP	Cost R	Accumulated depreciation and accumulated impairment R	Carrying value R	Cost R	Accumulated depreciation and accumulated impairment R	Carrying value R
Buildings	-	-	-	8 691 522	(8 691 522)	-
Furniture and fixtures	4 576 426	(3 164 775)	1 411 651	4 462 672	(2 325 286)	2 137 386
Motor vehicles	300 391	(300 391)	-	300 391	(300 391)	-
Office equipment	2 713 945	(1 573 745)	1 140 200	1 507 244	(1 271 856)	235 388
IT equipment	6 551 061	(3 870 835)	2 680 226	7 230 886	(5 257 241)	1 973 645
Leasehold improvements	10 208 859	(3 781 652)	6 427 207	10 103 126	(2 714 316)	7 388 810
Total	**24 350 682**	**(12 691 398)**	**11 659 284**	**32 295 841**	**(20 560 612)**	**11 735 229**

WRC	2020 Cost R	2020 Accumulated depreciation and accumulated impairment R	2020 Carrying value R	2019 Cost R	2019 Accumulated depreciation and accumulated impairment R	2019 Carrying value R
Furniture and fixtures	4 576 426	(3 164 775)	1 411 651	4 462 672	(2 325 286)	2 137 386
Motor vehicles	300 391	(300 391)	-	300 391	(300 391)	-
Office equipment	2 713 945	(1 573 745)	1 140 200	1 507 244	(1 271 856)	235 388
IT equipment	6 551 061	(3 870 835)	2 680 226	7 230 886	(5 257 241)	1 973 645
Leasehold improvements	10 208 859	(3 781 652)	6 427 207	10 103 126	(2 714 316)	7 388 810
Total	**24 350 682**	**(12 691 398)**	**11 659 284**	**23 604 319**	**(11 869 090)**	**11 735 229**

Reconciliation of property, plant and equipment - Group - 2020

	Opening Balance R	Additions R	Disposals R	Depreciation R	Impairment loss/write off R	Total R
Furniture and fixtures	2 137 386	159 772	-	(884 070)	(1 437)	1 411 651
Office equipment	235 388	1 546 709	-	(641 897)	-	1 140 200
IT equipment	1 973 645	2 274 219	(41 621)	(1 526 017)	-	2 680 226
Leasehold improvements	7 388 810	105 733	-	(1 067 336)	-	6 427 207
Total	**11 735 229**	**4 086 433**	**(41 621)**	**(4 119 320)**	**(1 437)**	**11 659 284**

The impairment loss amounting to R1,437 for the economic entity and the WRC is in respect of assets that were broken.

The disposal amounting to R41,621 for the economic entity and the WRC is in respect of leased assets (laptops) that were damaged or stolen and an insurance claim lodged.

Computer equipment with a cost of R2,803,863 (carrying value nil) were returned to the supplier during the current financial year as the lease term had expired.

Reconciliation of property, plant and equipment - Group - 2019

	Opening Balance R	Additions R	Disposals R	Depreciation R	Impairment loss/write off R	Total R
Furniture and fixtures	2 941 137	65 443	-	(866 193)	(3 001)	2 137 386
Motor vehicles	57 939	-	-	(57 939)	-	-
Office equipment	527 634	62 173	-	(354 419)	-	235 388
IT equipment	2 929 915	880 397	(13 756)	(1 822 911)	-	1 973 645
Leasehold improvements	8 409 923	33 600	-	(1 054 713)	-	7 388 810
Total	**14 866 548**	**1 041 613**	**(13 756)**	**(4 156 175)**	**(3 001)**	**11 735 229**

The impairment loss amounting to R3,001 for the economic entity and the WRC is in respect of assets that were broken.

The disposal amounting to R13,756 for the economic entity and the WRC is in respect of leased laptops that were stolen and an insurance claim lodged.

During the 2018/19 financial year, the balance of the redundant furnitures and fixtures located at Marumati Building with a carrying value of zero were disposed of through donations to non-profit organisations.

Reconciliation of property, plant and equipment - WRC - 2020

	Opening Balance R	Additions R	Disposals R	Depretiation R	Impairment loss/write off R	Total R
Furniture and fixtures	2 137 386	159 772	-	(884 070)	(1 437)	1 411 651
Office equipment	235 388	1 546 709	-	(641 897)	-	1 140 200
IT equipment	1 973 645	2 274 219	(41 621)	(1 526 017)	-	2 680 226
Leasehold improvements	7 388 810	105 733	-	(1 067 336)	-	6 427 207
	11 735 229	**4 086 433**	**(41 621)**	**(4 119 320)**	**(1 437)**	**11 659 284**

Reconciliation of property, plant and equipment - WRC - 2019

	Opening Balance R	Additions R	Disposals R	Depretiation R	Impairment loss/write off R	Total R
Furniture and fixtures	2 941 137	65 443	-	(866 193)	(3 001)	2 137 386
Motor vehicles	57 939	-	-	(57 939)	-	-
Office equipment	527 634	62 173	-	(354 419)	-	235 388
IT equipment	2 929 915	880 397	(13 756)	(1 822 911)	-	1 973 645
Leasehold improvements	8 409 923	33 600	-	(1 054 713)	-	7 388 810
	14 866 548	**1 041 613**	**(13 756)**	**(4 156 175)**	**(3 001)**	**11 735 229**

Pledged as security

None of the assets were or are pledged as security.

	Group		WRC	
	2020 R	2019 R	2020 R	2019 R
Assets subject to finance lease (net carrying value)				
Office equipment	1 068 094	-	1 068 094	-
IT equipment	-	426 656	-	426 656
	1 068 094	**426 656**	**1 068 094**	**426 656**
Property, plant and equipment fully depreciated and still in use (Cost)				
Furniture and fixtures	94 471	137 365	94 471	137 365
Office equipment	973 148	387 587	973 148	387 587
IT equipment	1 938 808	783 753	1 938 808	783 753
Building	-	8 691 522	-	-
Motor Vehicles	300 391	300 391	300 391	300 391
	3 306 818	**10 300 618**	**3 306 818**	**1 609 096**

Details of building

	Group		WRC	
	2020 R	2019 R	2020 R	2019 R
Erf 706 Rietfontein				
– Purchase price	-	615 855	-	-
– Additions since purchase or valuation	-	8 075 667	-	-
	-	**8 691 522**	**-**	**-**

The disposal of the Marumati Building ("the Property") owned by Erf 706 Rietfontein (Pty) Ltd was approved by the Board and the former Minister of Water and Sanitation on 22 February 2016 and 14 May 2016 respectively. The

auctioneer received a written bid for the acquisition of the Marumati Building situated at ERF 706 Rietfontein to the value of R9,750,000. A written bid to the value of R9,750,000 was received and accepted by the Board on 16 August 2017. The transfer and sale of the Marumati building situated at Erf 706 Rietfontein was finalised on 12 July 2019. The proceeds received from the sale of the Marumati Building ("the Property") with a carrying value of zero, resulted in a gain on disposal of R9,750,000.

A register containing the information required by the PFMA is available for inspection.

7. INTANGIBLE ASSETS

	2020			2019		
	Cost	Accumulated amortisation and accumulated impairment	Carrying value	Cost	Accumulated amortisation and accumulated impairment	Carrying value
GROUP	R	R	R	R	R	R
Computer software, other	7 375 625	(3 165 768)	4 209 857	8 021 431	(3 667 614)	4 353 817

	2020			2019		
	Cost	Accumulated amortisation and accumulated impairment	Carrying value	Cost	Accumulated amortisation and accumulated impairment	Carrying value
WRC	R	R	R	R	R	R
Computer software, other	7 375 625	(3 165 768)	4 209 857	8 021 431	(3 667 614)	4 353 817

Reconciliation of intangible assets

	Opening Balance	Additions	Disposals	Amortisation	Total
GROUP – 2020					
Computer software, other	4 353 817	366 000	-	(509 960)	4 209 857
GROUP – 2019					
Computer software, other	2 524 109	2 387 697	(143 589)	(414 400)	4 353 817

	Opening Balance	Additions	Disposals	Amortisation	Total
WRC – 2020					
Computer software, other	4 353 817	366 000	-	(509 960)	4 209 857
WRC – 2019					
Computer software, other	2 524 109	2 387 697	(143 589)	(414 400)	4 353 817

Pledged as security

None of the intangible assets are pledged as security.

Amortisation of Intangible Assets is included in Depreciation, Amortisation and Impairment as reflected in the Statement of Financial Performance.

Other information

	Group		WRC	
	2020	2019	2020	2019
	R	R	R	R
Fully amortised intangible assets still in use	1 992 401	3 004 207	1 992 401	3 004 207

8. INVESTMENT IN WHOLLY CONTROLLED ENTITY

	WRC	
	Carrying amount 2020 R	Carrying amount 2019 R
Name of company		
An ordinary share in Erf 706 Rietfontein (Pty) Ltd (100% holding)	1	1

The carrying amount of the investment in the controlled entity is shown net of impairment losses. The carrying amount of the investment is reflected at its nominal share capital value of R 1.

The WRC holds 100% of the ordinary shares in Erf 706 Rietfontein (Pty) Ltd, a property company. The main business of the company was 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. The immovable property was disposed of during the financial year.

The disposal of the Marumati Building ("the Property") owned by Erf 706 Rietfontein (Pty) Ltd was approved by the Board and the former Minister of Water and Sanitation on 22 February 2016 and 14 May 2016 respectively. Cahi Auctioneers was appointed on 7 April 2017 through a competitive bidding process to dispose of the property by means of an auction. The auction took place on 20 July 2017. The auctioneer received a written bid to the value of R9,750,000. The Board accepted the bid on 16 August 2017. The transfer of the Marumati Building situated at Erf 706 Rietfontein had been delayed by a number of events beyond the WRC's control but was finalised on 12 July 2019.

The Water Research Commission is still considering the repurposing of Erf 706 Rietfontein.

Controlled entity pledged as security

The investment is not pledged as security.

9. FINANCE LEASE OBLIGATION

	Group		WRC	
	2020 R	2019 R	2020 R	2019 R
Minimum lease payments due				
- within one year	614 850	514 121	614 850	514 121
- in second to fifth year	677 872	-	677 872	-
	1 292 722	514 121	1 292 722	514 121
less: future finance charges	(160 091)	(10 736)	(160 091)	(10 736)
Present value of minimum lease payments	**1 132 631**	**503 385**	**1 132 631**	**503 385**
Present value of minimum lease payments due				
- within one year	499 020	503 385	499 020	503 385
- in second to fifth year	633 611	-	633 611	-
	1 132 631	**503 385**	**1 132 631**	**503 385**
Current liabilities	499 020	503 385	499 020	503 385
Non-current liabilities	633 611	-	633 611	-
Present value of minimum lease payments	**1 132 631**	**503 385**	**1 132 631**	**503 385**

It is the economic entity's policy to lease certain IT equipment under finance leases. The finance leases are effective for a period of thirty-six (36) months and the average effective borrowing rate is 13.5% (2019:12%).

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 in respect of any of the finance leases.

10. OPERATING LEASE LIABILITY

	Group		WRC	
	2020 R	2019 R	2020 R	2019 R
Balance at year end				
Operating lease liability	8 354 066	7 182 228	8 354 066	7 182 228
	8 354 066	**7 182 228**	**8 354 066**	**7 182 228**
Minimum operating lease liability payments				
Within 12 months	9 247 784	8 431 890	9 247 784	8 431 890
Between 12 - 60 months	44 101 459	40 678 541	44 101 459	40 678 541
Longer than 60 months	13 114 480	25 297 889	13 114 480	25 297 889
	66 463 723	**74 408 320**	**66 463 723**	**74 408 320**

The WRC entered into a ten-year lease agreement during the 2016/17 financial year with Lynnwood Bridge Office Park (Pty) Ltd whereafter the tenancy is subject to renewal at the landlord's discretion. The monthly lease payments comprise of the following based on area occupied:

- rental of the two (2) floors in the building escalated at 7.5% per annum over the lease period
- rental of ninety (90) parking bays escalated at 7.5% per annum over the lease period
- operating costs escalated at 8.5% per annum over the lease period
- rates and taxes pro-rated according to area occupied.

The WRC entered into a three-year lease agreement during the current financial year with Apex Business Systems to lease five printers, whereafter the printers will be returned to Apex Business Systems.

No contingent rent is payable and there are no restrictions on the lease.

11. PAYABLES

	Group		WRC	
	2020 R	2019 R	2020 R	2019 R
Payables from exchange transactions				
Income received in advance	119 302 857	88 908 745	119 302 857	88 908 745
Payables	29 851 832	20 310 892	29 851 832	20 301 479
Accruals	7 288 418	12 117 308	7 288 418	11 767 307
Deposits received	-	11 498	-	-
	156 443 107	**121 348 443**	**156 443 107**	**120 977 531**

The comparative year has been restated as a result of a prior period misstatement. Refer to note 42 (correction of error) for further details.

Leverage Income and the associated liability (Income received in advance) has been reclassified from revenue from non-exchange transactions to revenue from exchange transacions to ensure compliance with GRAP 9: Revenue from exchange transactions.

Revenue received from clients from contracts for undertaking science and technology research is recognised by reference to the stage of completion on individual projects. Income received in advance is therefore recognised as leverage income in the statement of financial performance when research deliverables are realised and achieved in respect of projects funded by leverage funded partners.

The entity did not default on interest or capital on any payables. None of the items attached to the 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.

12. ACCRUALS - LEAVE AND BONUS

Reconciliation of accruals — leave and bonus

GROUP - 2020	Opening Balance	Additions	Utilised during the year	Payments during the year	Re-measurement	Total
Accruals for leave	6 651 421	8 851 331	(6 875 188)	(2 131 354)	666 017	7 162 227
Accruals for bonuses	19 039	7 661	-	(37 926)	18 887	7 661
	6 670 460	**8 858 992**	**(6 875 188)**	**(2 169 280)**	**684 904**	**7 169 888**

GROUP - 2019	Opening Balance	Additions	Utilised during the year	Payments during the year	Re-measurement	Total
Accruals for leave	6 962 881	7 654 006	(6 491 853)	(1 882 428)	408 815	6 651 421
Accruals for bonuses	17 192	19 039	-	(34 327)	17 135	19 039
	6 980 073	**7 673 045**	**(6 491 853)**	**(1 916 755)**	**425 950**	**6 670 460**

WRC - 2020	Opening Balance	Additions	Utilised during the year	Payments during the year	Re-measurement	Total
Accruals for leave	6 651 421	8 851 331	(6 875 188)	(2 131 354)	666 017	7 162 227
Accruals for bonuses	19 039	7 661	-	(37 926)	18 887	7 661
	6 670 460	**8 858 992**	**(6 875 188)**	**(2 169 280)**	**684 904**	**7 169 888**

WRC - 2019	Opening Balance	Additions	Utilised during the year	Payments during the year	Re-measurement	Total
Accruals for leave	6 962 881	7 654 006	(6 491 853)	(1 882 428)	408 815	6 651 421
Accruals for bonuses	17 192	19 039	-	(34 327)	17 135	19 039
	6 980 073	**7 673 045**	**(6 491 853)**	**(1 916 755)**	**425 950**	**6 670 460**

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.

Three employees were appointed on a cost plus benefits basis. These employees are entitled to a service bonus (13th cheque). Accruals are made for the payment of service bonuses which are paid to employees on their birthdays. Only one employee is remained on the cost plus benefits basis at year-end.

There are uncertainties regarding the amount and timing of the cash outflows relating to the accrual for leave. Leave days may be accumulated by employees and there are uncertainties related to the amount of leave days that will be taken in the next 12 months and 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 resignations or due to accumulated leave reaching the upper limit before capitalisation is required). The cost of the actual 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 since the WRC pays employees a service bonus in the month of their 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.

13. EMPLOYEE BENEFIT ASSET/(OBLIGATION)

Medical aid scheme

Defined benefit plan:
The WRC 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 2020.

The WRC carries the legal and related financial obligation to subsidise (100% subsidy level) the medical aid benefit of certain 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 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 buyout (i.e. liability capping) the disclosed liability in order to manage the WRC's exposure to the associated costs and risks. In the 2010/11 financial year, the WRC offered voluntary buyouts to all in service members. Members that did not accept the buyout offer and the pensioners already receiving the benefit have had the liability ringfenced through an insurance cover administered by Momentum Group Limited.

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

	Group		WRC	
	2020 R	2019 R	2020 R	2019 R
Carrying value				
Present value of the defined benefit obligation-partly funded	(36 756 305)	(42 477 696)	(36 756 305)	(42 477 696)
Fair value of plan assets	33 058 915	37 144 587	33 058 915	37 144 587
Employee benefit asset/ (obligation) recognised	**(3 697 390)**	**(5 333 109)**	**(3 697 390)**	**(5 333 109)**
Movement for the year - medical aid fund				
Opening balance	(5 333 109)	(6 201 425)	(5 333 109)	(6 201 425)
Contributions by employer	2 467 619	3 732 973	2 467 619	3 732 973
Net expense recognised in the statement of financial performance	(831 900)	(2 864 657)	(831 900)	(2 864 657)
	(3 697 390)	**(5 333 109)**	**(3 697 390)**	**(5 333 109)**
Net expense recognised in the statement of financial performance - medical aid fund				
Current service cost	-	65 953	-	65 953
Interest cost	3 711 168	3 338 698	3 711 168	3 338 698
Actuarial (gains)/losses	457 634	2 416 258	457 634	2 416 258
Expected return on plan assets	(3 336 902)	(2 956 252)	(3 336 902)	(2 956 252)
	831 900	**2 864 657**	**831 900**	**2 864 657**

The current service cost represents the cost of one additional year of service for current employees.

The interest cost reflects the reducing discounting period from one year to the next (i.e. the unwinding of the discount rate over time) and allows for actual benefit payments.

Actuarial gains and losses arise when actual experience differs from the assumptions made at the previous valuation (e.g. actual medical contribution increases higher than those assumed will lead to an actuarial loss).

The expected return on plan assets is restated for actual benefit payments from the plan assets and contributions from the company.

	Group		WRC	
	2020	2019	2020	2019
	R	R	R	R
Reconciliation of the defined benefit obligation				
Opening balance	42 477 696	40 030 373	42 477 696	40 030 373
Current service cost	-	65 953	-	65 953
Interest cost	3 711 168	3 338 698	3 711 168	3 338 698
Benefits paid	(3 659 262)	(3 264 718)	(3 659 262)	(3 264 718)
Net actuarial losses/ (gains)	(5 773 297)	2 307 390	(5 773 297)	2 307 390
	36 756 305	**42 477 696**	**36 756 305**	**42 477 696**

The liabilities were valued using the Projected Unit Credit Method.

The liability in respect of current continuation members is fully accounted for.

It is assumed that the continuation members will remain on the Discovery Health Classic Saver plan post retirement.

	Group		WRC	
	2020	2019	2020	2019
	R	R	R	R
Reconciliation of the plan assets				
Opening balance	37 144 587	33 828 948	37 144 587	33 828 948
Expected return	3 336 902	2 956 252	3 336 902	2 956 252
Actuarial gains/(losses)	(6 230 931)	(108 868)	(6 230 931)	(108 868)
Contributions by employer	2 467 619	3 732 973	2 467 619	3 732 973
Benefits paid	(3 659 262)	(3 264 718)	(3 659 262)	(3 264 718)
	33 058 915	**37 144 587**	**33 058 915**	**37 144 587**

The WRC holds an annuity insurance policy with Momentum in respect of the benefits, which guarantees CPI increases to benefits in payment under the policy.

The WRC has a partially funded plan. The balance is to be funded by the WRC through a Company contribution.

This policy meets the definition of a "qualifying insurance policy" stated in paragraph .115 of GRAP25, which sets out that the fair value of the policy is deemed to be the present value of the related obligations.

This is the same methodology as per the previous valuation.

The breakdown of the asset into categories should be reflected as 100% invested in Insurance Policies.

The information provided reflects a top-up annuity purchase rebasing the payments from the insurer to the actual 2020 medical contribution rates. Furthermore, the purchased amount makes allowance for a year's contributions in respect of the one remaining eligible child whose eligibility will cease after December 2020 or when their studies end since they are over age 21; allowance for 9 months' contribution for them was added to the liabilities, the expected benefit payments and the assets.

The plan asset was valued using the same methodology as the liabilities for continuation members, but assuming increases equal to inflation only, as this represents the obligation that is covered by the policy.

The net actuarial losses/(gains) as per Statement of Financial Performance consist of

	2020 R
Economic/financial assumptions	(823 229)
Demographic assumptions	(797 436)
Exit experience	(9 657)
Benefits experience	2 054 816
Other experience	33 140
Total	**457 634**

Actuarial (gain)/loss on the economic/financial assumptions

The difference in the liability resulting from the financial valuation assumptions is an actuarial gain of R4,561,579 on the defined benefit obligation and an actuarial loss of R3,738,350 on the plan assets. The key financial assumptions are the discount rate and the rate of increase of the medical aid contributions.

Actuarial (gain)/loss on the demographic assumptions

The previous valuation methodology used a 3-year age difference between spouses rather than the actual age difference. Furthermore the previous methodology assumed that non-disabled dependents would be subsidised for life rather than until they reach the age of 25. The combined impact of these changes is an actuarial gain of R3,095,706 on the defined benefit obligation and an actuarial loss of R2,298,270 on the plan assets.

Actuarial (gain)/loss on exit experience

The difference in exit experience resulted in an actuarial loss of R442,167 on the defined benefit obligation and an actuarial gain of R451,824 on the plan assets which was due to fewer pensioners passing away than expected and one minor becoming ineligible to continue their subsidy.

Actuarial (gain)/loss on benefits experience

The difference in benefits experience resulted in an actuarial loss of R1,400,091 on the defined benefit obligation and an actuarial loss of R654,725 on the plan assets. The actual medical contribution inflation was higher than expected, hence benefits are higher than expected.

Actuarial (gain)/loss on other experience items

The difference in other factors that affect the defined obligation to a lesser degree, resulted in an actuarial loss of R41,729 on the defined benefit obligation and an actuarial gain of R8,589 on the plan assets.

Key assumptions used

The financial assumptions, which is the same for the economic entity and the WRC, at the current and previous valuation dates are shown below:

	2020 R	2019 R
Financial Valuation Assumptions		
Discount rates used	11.40%	9.13%
Medical contribution inflation	7.90%	7.16%
Net discount rate for calculating liabilities	**3.24%**	**1.84%**
Expected return on assets	11.40%	9.13%
Inflation	6.40%	5.66%
Net discount rate for calculating assets	**4.70%**	**3.29%**

Financial valuation assumptions

GRAP 25 requires that the financial assumptions shall be based on market expectations, at the reporting date, for the period over which the obligations are to be settled.

The assumptions used are based on statistics and market data as at 31 March 2020 and are consistent with the requirements of GRAP 25.

Discount rate assumption

The discount rate required by GRAP 25 should be set with reference to the market yield on government bonds. GRAP 25 places emphasis on matching the discount rate to the duration of the liabilities.

The discount rate was determined by taking the yield from the zero-coupon SA Government bond curve with a duration of 8 years. The recommended discount rate as at 31 March 2020 is 11.40%. The source is the Johannesburg Stock Exchange and obtained from Thompson Reuters.

The duration for the previous valuation was 9 years which resulted in a discount rate of 9.13%.

Future inflation assumption

To determine an estimate of long-term future inflation consistent with the discount rate, the implied future inflation in South Africa was based on the yield at the same duration as the discount rate and at the same date on the South African real yield curve.

The inflation assumption used for the current valuation is 6.4% and 5.66% for the previous valuation.

Future medical subsidy inflation assumption

The medical aid plan contributions are assumed to increase annually with medical contribution inflation. Increases have historically been above general inflation limits, so the previously adopted assumption of long-term inflation +1.5% was applied.

Net discount rate to value liabilities

The net discount rate for medical subsidy inflation is assumed to be 3.24% p.a. The net discount rate as per the previous valuation was 1.84% p.a.

Net discount rate to value assets

The net discount rate for general inflation is assumed to be 4.70% p.a. The net discount rate as per the previous valuation was 3.29% p.a.

Demographic valuation assumptions

Estimates (actuarial valuation assumptions) are also required to be made about demographic variables (such as employee turnover and mortality).

These assumptions are as follows:

- **Post-retirement mortality:** The post-retirement mortality assumption is based on the PA (90) mortality tables, rated down two years. This assumption is consistent with that of the previous valuation.

- **Age of spouse:** The current valuation uses the actual spouses' ages. The previous valuation methodology used a 3 year age difference between spouses rather than the actual age difference.

- **Continuation of membership and family profile:** The purchased amount makes allowance for a year's contributions in respect of the one remaining eligible child whose eligibility will cease after December 2020 or when their studies end since they are over age 21. An allowance for 9 months' contribution for this child was added to the liabilities, the expected benefit payments and the assets.

Sensitivity analysis

The results of the valuation are dependent on the underlying assumptions made. The assumptions present the best estimate of future experience. The actual cost of the long-service award benefits will however be dependent on the actual experience.

The sensitivity of the main results to changes in the medical inflation rate, discount rate and mortality table have been estimated. The changes in the 31 March 2020 Defined Benefit Obligation, Plan Asset and projected Interest Cost are reflected below:

The tables below illustrate the likely impact on results after certain changes to the underlying assumptions. These values are determined by assuming that all other relevant assumptions remain constant. These tables set out the impact on results relating to changes of the following assumptions (in isolation) – all other assumptions are to be held constant:

- The discount rate (1% increase and decrease);
- Mortality (1 year increase and decrease).
- The medical inflation rate (1% increase and decrease).

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

Discount Rate	Discount rate (R)	Discount rate -1% (R)	Discount rate +1% (R)
Defined Benefit Obligation	(36 756 304)	(39 618 183)	(34 254 118)
Projected interest cost	(3 975 254)	(3 924 182)	(4 013 689)
Plan asset	33 058 915	35 424 560	30 974 814

Mortality	PA (90) - 2 R	PA (90) - 3 R	PA (90) - 1 R
Defined Benefit Obligation	(36 756 304)	(38 141 365)	(35 384 253)
Projected interest cost	(3 975 254)	(4 132 772)	(3 819 252)
Plan asset	33 058 915	34 194 793	31 926 414

Medical Inflation rate	Inflation rate R	Inflation rate -1% R	Inflation rate +1% R
Defined Benefit Obligation	(36 756 304)	(34 220 503)	(39 614 574)
Projected interest cost	(3 975 254)	(3 686 684)	(4 300 584)
Plan asset	33 058 915	30 923 388	35 451 149

Employee Statistics

Continuation members	31 March 2020	31 March 2019	Change
Number	38	41	(3)
Average Age	75	72	3
Average Subsidy (R per month)	8 021	7 328	693

Developments since the previous valuation:

Three continuation members (two deaths and one ineligible child) as per the previous report have been discontinued.

The current valuation uses the actual spouses' ages. The previous valuation methodology used a 3 year age difference between spouses rather than the actual age difference.

There were no other significant developments over the valuation period relating to the benefits or membership.

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

	2020 R	2019 R	2018 R	2017 R	2016 R
Defined benefit obligation	(36 756 304)	(42 477 696)	(40 030 373)	(34 055 937)	(32 854 000)
Plan assets	33 058 915	37 144 587	33 828 948	29 016 011	25 994 000
Net employee benefit asset/(liability)	(3 697 390)	(5 333 109)	(6 201 425)	(5 039 936)	(6 860 000)
Net expense recognised in the statement of financial performance	831 900	2 864 657	2 439 176	3 546 777	4 683 164

14. REVENUE FROM EXCHANGE TRANSACTIONS

	Group		WRC	
	2020 R	2019 R	2020 R	2019 R
Leverage income	64 528 890	42 269 973	64 528 890	42 269 973
Other income	243 174	214 245	243 174	214 245
Rental received	42 284	151 246	-	-
Recovery of expenditure	1 929	6 899	-	-
	64 816 277	**42 642 363**	**64 772 064**	**42 484 218**

The comparative year has been restated as a result of prior period misstatements. Refer to note 42 (correction of error) for further details.

Leverage income is recognised on the basis of research deliverables being realised in respect of projects funded by leverage funded partners.

Investment revenue is disclosed separately in note 15.

15. INVESTMENT REVENUE

	Group		WRC	
	2020	2019	2020	2019
Interest revenue	R	R	R	R
Bank and fixed deposits	6 773 400	5 047 344	6 773 400	5 047 344
Staff loans	-	1 193	-	1 193
	6 773 400	**5 048 537**	**6 773 400**	**5 048 537**

16. REVENUE FROM NON-EXCHANGE TRANSACTIONS

	Group		WRC	
	2020	2019	2020	2019
	R	R	R	R
Water research levies	258 967 111	236 607 699	258 967 111	236 607 699

The comparative year has been restated as a result of a prior period misstatement. Refer to the correction of error (note 42) for further details.

17. DEPRECIATION, AMORTISATION AND IMPAIRMENT

	Group		WRC	
	2020	2019	2020	2019
	R	R	R	R
Property, plant and equipment – Depreciation	4 119 320	4 156 175	4 119 320	4 156 175
Property, plant and equipment – Impairment loss	1 437	3 001	1 437	3 001
Intangible assets - amortisation	509 960	414 400	509 960	414 400
	4 630 717	**4 573 576**	**4 630 717**	**4 573 576**

18. EMPLOYEE RELATED COSTS

	Group		WRC	
	2020	2019	2020	2019
	R	R	R	R
Basic salary	79 438 917	72 760 385	79 438 917	72 760 385
Merit bonus	10 415 980	6 191 707	10 415 980	6 191 707
Directors emoluments	503 538	542 371	503 538	542 371
Workmen's compensation- Department of Labour	434 715	384 718	434 715	384 718
Skills development levies	916 617	826 832	916 617	826 832
Company contributions – UIF	161 631	158 558	161 631	158 558
Company contributions – other	180 268	188 865	180 268	188 865
Post-employment medical aid	-	65 953	-	65 953
Leave and bonus provision	2 668 708	1 607 143	2 668 708	1 607 143
Staff bursaries	836 628	517 456	836 628	517 456
	95 557 002	**83 243 988**	**95 557 002**	**83 243 988**

The Board approved the shortfall in respect of the CEO and the Executive bonuses to the value of R3,617,026 in respect of 2015/16 (R829,628), 2017/18 (R1,118,526) and 2018/19 (R1,668,827). This was based on a legal opinion provided by Edward, Nathan, Sonnenberg (ENS) to ensure compliance with the WRC Conditions of Service and the WRC HR Policy.

19. FINANCE COSTS

	Group		WRC	
	2020	2019	2020	2019
	R	R	R	R
Finance leases	168 349	123 192	168 349	123 192
Interest on legal proceedings	-	29 342	-	29 342
Employee benefit obligations	374 266	382 446	374 266	382 446
	542 615	**534 980**	**542 615**	**534 980**

20. GENERAL EXPENSES

		Group		WRC	
		2020	2019	2020	2019
	Note(s)	R	R	R	R
Auditors remuneration	28	2 120 129	1 224 502	2 120 129	1 224 502
Bank charges		87 991	91 438	84 934	89 624
Catering costs		505 820	440 838	505 820	440 838
Cleaning		246 532	302 802	246 531	302 802
Consumables		201 795	62 709	201 795	62 709
Contingent rent		-	19 285	-	19 285
Corporate social responsibility		209 719	97 300	209 719	97 300
IT expenses		4 189 303	3 379 209	4 189 303	3 379 209
Insurance		225 797	345 445	225 797	345 445
Security		711 312	733 723	711 312	733 723
Leadership development, including training		241 743	165 055	241 743	165 055
Motor vehicle expenses		17 178	7 539	17 178	7 539
Postage and courier		69 716	127 404	69 716	127 404
Professional fees		738 512	764 665	735 177	764 070
Promotions		152 263	268 430	152 263	268 430
Recruitment costs		35 078	104 394	35 078	104 394
Staff welfare		52 968	48 852	52 968	48 852
Stationery and other purchases		211 548	175 466	211 548	175 466
Storage costs		28 424	47 574	28 424	47 574
Subscriptions and membership fees		821 560	763 533	821 560	763 533
Telephone and fax		1 021 982	970 349	1 021 982	970 349
Travel – local		356 006	682 639	356 006	682 639
Utilities		991 698	1 312 447	991 698	1 312 447
		13 237 074	**12 135 598**	**13 230 681**	**12 133 189**

The comparative year has been restated as a result of a reclassification and a prior period misstatement. Refer to note 41 (comparative figures) and note 42 (correction of error) for further details.

21. IMPAIRMENT OF ASSETS

	Group		WRC	
	2020	2019	2020	2019
Impairments	R	R	R	R
Loans to wholly controlled entity	-	-	-	72 102

22. LEASE RENTALS ON OPERATING LEASE

	Group		WRC	
	2020	2019	2020	2019
	R	R	R	R
Rent payable in respect of Lynnwood Bridge Office Park lease	9 860 530	9 191 059	9 860 530	9 191 059
Rent payable in respect of additional parking	22 769	-	22 769	-
Operating lease liability – Straight-lining of lease	1 171 837	1 769 981	1 171 837	1 769 981
Rental of equipment	365 601	75 498	365 601	75 498
	11 420 737	**11 036 538**	**11 420 737**	**11 036 538**

23. RESEARCH, DEVELOPMENT AND INNOVATION

	Group		WRC	
	2020	2019	2020	2019
	R	R	R	R
Research, development and innovation costs	153 090 410	146 020 904	153 090 410	146 020 904
Media and marketing (printing and publishing)	2 520 911	4 962 893	2 520 911	4 962 893
Workshops and conferences	11 122 796	5 822 151	11 122 796	5 822 151
Other research related costs	2 301 237	5 977 831	2 301 237	5 977 831
Patent registrations	385 863	350 541	385 863	350 541
Local travel: Research related meetings	3 590 413	3 304 646	3 590 413	3 304 646
International travel: Research related meetings	2 391 770	2 398 307	2 391 770	2 398 307
Catering: Research related meetings	431 794	185 438	431 794	185 438
	175 835 194	**169 022 711**	**175 835 194**	**169 022 711**

The comparative year has been restated as a result of a reclassification and a prior period misstatement. Refer to note 41 (comparative figures) and note 42 (correction of error) for further details.

24. RECEIVABLE DERECOGNISED/(RECOVERED)

	Group		WRC	
	2020	2019	2020	2019
	R	R	R	R
Receivable - interest and penalties	(12 210)	13 178	-	-

The South African Revenue Services (SARS) refunded R12,210 interest and penalties that were previously disallowed and reported as fruitless and wasteful expenditure. Refer to note 37 for further details.

25. GAIN/(LOSS) ON DISPOSAL OF ASSETS AND LIABILITIES

	Group		WRC	
	2020	2019	2020	2019
	R	R	R	R
Gain on disposal of Marumati Building	9 750 000	-	-	-
Property, plant and equipment	(808)	(157 346)	(808)	(157 346)
Financial assets	-	-	1 568 468	-
	9 749 192	**(157 346)**	**1 567 660**	**(157 346)**

Gain on disposal of financial assets comprises of:	2020 R
Inter-entity loans and balances	
ERF Inter-company debtor	1 103 073
Inter-entity debtor at settlement date	**1 103 073**
Loan 1: ERF 706	27 743 769
Loan 2: ERF 706	2 264 810
Allowance for impairment as at 31 March 2019	(22 130 120)
Carrying amount of loans receivable at settlement date	**7 878 459**
Total amount receivable at settlement date	**8 981 532**
Less: Proceeds received from ERF in respect of settlement	10 550 000
Gains from the disposal of financial assets	**(1 568 468)**

The disposal of the Marumati Building situated at Erf 706 Rietfontein was finalised on 12 July 2019. The proceeds received from the sale of the Marumati Building ("the Property") with a carrying value of zero, resulted in a gain on disposal of R9,750,000 for the economic entity. Refer to note 6 for further details.

The Board approved the amendment of the loan agreements which allows ERF 706 to repay the loan after the disposal of the Marumati Building, as well as the suspension of any further interest up to the date of disposal. This amendment was effective from 1 June 2017. The capital repayments was suspended effective 1 July 2018. The disposal of the Marumati Building situated at Erf 706 Rietfontein was finalised on 12 July 2019. The funds available from the disposal proceeds was utilised to repay the intercompany loans and balances. The funds received for the settlement of the inter-entity loans and balances was greater than the carrying amount of the inter-entity loans and balances, net of impairment losses previously recognised. This resulted in a gain from the derecognition of financial assets measured at amortised costs to the value of R1,568,468.

26. OPERATING SURPLUS

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

	Group		WRC	
	2020 R	2019 R	2020 R	2019 R
Operating lease charges				
Premises				
• Contractual amounts	11 055 136	10 961 040	11 055 136	10 961 040
Equipment				
• Contractual amounts	365 601	75 498	365 601	75 498
	11 420 737	**11 036 538**	**11 420 737**	**11 036 538**
Gain (loss) on sale of property, plant and equipment	9 749 192	(157 346)	(808)	(157 346)
Gain on disposal of financial assets	-	-	1 568 468	-
Impairment on loans to economic entities	-	-	-	72 102
Amortisation on intangible assets	509 959	414 400	509 959	414 400
Depreciation and impairment losses on property, plant and equipment	4 120 757	4 159 176	4 120 757	4 159 176
Employee costs	95 557 002	83 243 988	95 557 002	83 243 988
Research, development and innovation costs	175 835 194	169 022 711	175 835 194	169 022 711

27. TAXATION

No provision has been made for Income taxation as the economic entity is exempt from company income tax in terms of Section 10(1)(cA)(i) of the Income Tax Act.

28. AUDITORS' REMUNERATION

	Group		WRC	
	2020 R	2019 R	2020 R	2019 R
Fees – external auditors	1 749 244	1 046 362	1 749 244	1 046 362
Fees – internal auditors	370 885	178 140	370 885	178 140
	2 120 129	**1 224 502**	**2 120 129**	**1 224 502**

29. CASH GENERATED FROM (USED IN) OPERATIONS

	Group		WRC	
	2020 R	2019 R	2020 R	2019 R
Surplus/(Deficit)	38 474 929	923 993	30 275 853	802 311
Adjustments for:				
Depreciation, amortisation and impairment	4 630 717	4 573 576	4 630 717	4 573 576
(Gain)/loss on sale of assets and liabilities	(9 749 192)	157 346	(1 567 660)	157 346
Finance costs – Finance leases	168 349	123 192	168 349	123 192
Finance costs – retirement benefit	374 266	382 446	374 266	382 446
Impairment on wholly controlled entity loans and investment	-	-	-	72 102
Movements in operating lease assets	1 171 837	1 769 981	1 171 837	1 769 981
Other movements in retirement benefit assets and liabilities	-	65 953	-	65 953
Non-cash movement in leave and bonus provision	499 428	(309 613)	499 428	(309 613)
Actuarial gains and losses	457 634	2 416 258	457 634	2 416 258
Receivable de-recognised/recovered	-	13 178	-	-
Non-cash movement of finance lease	-	14 530	-	14 530
Foreign exchange (profit)/loss on foreign bank accounts	(12 884 245)	(4 489 469)	(12 884 245)	(4 489 469)
Changes in working capital:				
Receivables	5 490 627	(1 609 991)	5 577 684	(1 651 804)
Payables	35 094 668	27 544 175	35 465 577	27 544 170
Provision	-	(637 500)	-	(637 500)
	63 729 018	**30 938 055**	**64 169 440**	**30 833 479**

30. COMMITMENTS

	Group		WRC	
	2020 R	2019 R	2020 R	2019 R
Commitments				
• General	6 553 319	8 029 013	6 553 319	8 029 013
Commitments				
• Research projects	229 889 354	240 114 147	229 889 354	240 114 147
Total capital commitments				
General commitments	6 553 319	8 029 013	6 553 319	8 029 013
Research project commitments	229 889 354	240 114 147	229 889 354	240 114 147
	236 442 673	**248 143 160**	**236 442 673**	**248 143 160**

The comparative year for general commitments and research commitments has been restated by R600,735 and R240,542 respectively.

General commitments relate to contractual obligations that the WRC entered into before 31 March 2020.

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 2020 commitments relating to research projects with signed contracts amounted to R157,740,529 (2019: R194,206,108) and projects for which contracts are in the process of signing amount to R72,148,825 (2019: R45,908,039).

31. RELATED PARTIES

	WRC	
	2020 R	2019 R
Relationships		
Controlling entity – Erf 706 Rietfontein (Pty) Ltd	Refer to note 8	
Related party balanes		
Loan accounts – Owing (to) by related parties		
Erf 706 Rietfontein (Proprietary) Limited	-	7 878 459
Amounts included in Receivables (Payables) regarding related parties		
Erf 706 Rietfontein (Proprietary) Limited	-	86 483
Outstanding levy income (Debtor at year end)		
Rand Water Board	27 879 914	25 231 032
Umgeni Water Board	8 304 491	6 768 323
Related party transactions		
Utilities paid on behalf of related parties		
Erf 706 Rietfontein (Proprietary) Limited	152 207	552 092
Levy Income		
Department of Water and Sanitation	117 363 663	109 175 500
Rand Water Board	108 181 296	99 317 212
Umgeni Water Board	33 422 152	28 114 987
Impairment Loss		
Erf 706 Rietfontein (Pty Ltd)	-	72 102
Gain from the derecognition of financial assets		
ERF 706 Rietfontein (Proprietary) Limited	(1 568 468)	-

WRC derives its main source of income (Water research levy) from the Department of Water and Sanitation and the two Water Boards in terms of the Water Research Act. The Department of Water and Sanitation, Rand Water and Umgeni Water Board collect levy income on behalf of the WRC. The rate of the levy is approved by the Minister of Human Settlements, Water and Sanitation on an annual basis.

The Department of Water and Sanitation pays WRC the water research levy on a monthly basis in accordance with the agreement. The two Waterboards are invoiced bi-annually upon which they pay the WRC.

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

The Water Research Commission and Erf 706 Rietfontein (Pty) Ltd terminated their lease agreement during the 2016/17 financial year. A condition of the early termination of the lease agreement was that no rent will be payable by the Water Research Commission as from 1 April 2016 until the time of disposal of the building. In lieu thereof the Water Research Commission will be liable for the expenditure incurred by ERF Rietfontein (Pty) Ltd in respect of the maintenance and operations (including all security and utility costs) of the property.

The funds received for the settlement of the inter-entity loans and balances was greater than the carrying amount of the inter-entity loans and balances, net of impairment losses previously recognised. This resulted in a gain from the derecognition of financial assets measured at amortised costs to the value of R1,568,468. Refer to note 25 for further details.

Compensation to directors and other key management are disclosed separately in note 32.

32. EMOLUMENTS OF EXECUTIVE MANAGEMENT, BOARD OF DIRECTORS (NON-EXECUTIVE) AND CO-OPTED BOARD SUB-COMMITTEE MEMBERS

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

	Group		WRC	
	2020 R	2019 R	2020 R	2019 R
Total emoluments				
Fees for services as non-executive directors	455 325	487 704	455 325	487 704
Fees for co-opted board sub-committee members	74 670	82 566	74 670	82 566
Basic salary	22 057 915	19 183 212	22 057 915	19 183 213
Bonuses and performance payments	4 701 120	1 484 353	4 701 120	1 484 353
Travel allowance	1 003 000	777 000	1 003 000	777 000
	28 292 030	**22 014 835**	**28 292 030**	**22 014 835**

	Basic salary R	Bonuses and performance payments R	Travel allowance R	Total R
Executive				
2020				
Mr. DP Naidoo - CEO	3 721 152	802 271	-	4 523 423
Mr. F Ismail - CFO	2 199 326	599 634	420 000	3 218 960
Dr. MS Liphadzi	2 439 815	592 878	150 000	3 182 693
Ms. R Lutchman	2 351 977	538 430	-	2 890 407
Dr. M Msibi	2 232 172	289 452	128 000	2 649 624
Dr. S Adams	2 154 832	497 461	-	2 652 293
Mr. JN Bhagwan	2 137 561	548 239	180 000	2 865 800
Dr. V Naidoo	2 050 133	473 290	-	2 523 423
Prof. NS Mpandeli (Appointed 1 April 2019)	1 750 824	207 533	125 000	2 083 357
Ms. K Jonas (Appointed 1 August 2019)	1 020 123	151 932	-	1 172 055
	22 057 915	**4 701 120**	**1 003 000**	**27 762 035**

The Board approved the shortfall in respect of the CEO and the Executive and the Executive bonuses to the value of R3,617,026 in respect of 2015/16 (R829,628), 2017/18 (R1,118,526) and 2018/19 (R1,668,872). This was based on a legal opinion provided by Edward, Nathan, Sonnenberg (ENS) to ensure compliance with the WRC Conditions of Service and the WRC HR policy.

	Basic salary R	Bonuses and performance payments R	Travel allowance R	Total R
Executive				
2019				
Mr. DP Naidoo - CEO	3 425 421	258 857	-	3 684 278
Mr. F Ismail - CFO	1 964 174	182 210	420 000	2 566 384
Dr. MS Liphadzi	2 261 312	180 157	96 000	2 537 469
Ms. R Lutchman	2 140 827	163 612	-	2 304 439
Dr. M Msibi	2 098 586	105 240	81 000	2 284 826
Dr. S Adams	1 961 380	149 898	-	2 111 278
Dr. G Backeberg (Retired January 2019)	1 474 422	135 172	-	1 609 594
Mr. JN Bhagwan	1 991 009	166 592	180 000	2 337 601
Dr. V Naidoo	1 866 081	142 615	-	2 008 696
	19 183 212	**1 484 353**	**777 000**	**21 444 565**

Non-executive

	Members' fees R	Other fees R	Total R
2020			
Dr. NP Mjoli - Chairperson	155 288	4 870	160 158
Prof. SV Nkomo - Deputy Chairperson	61 690	2 069	63 759
Dr. ME Makgae	67 660	4 435	72 095
Ms. MK Mbonambi	33 830	4 491	38 321
Ms. N Msezane	35 820	1 340	37 160
Dr. NP Nala	33 830	1 959	35 789
Dr. A Stroebel	47 760	283	48 043
	435 878	**19 447**	**455 325**
2019			
Dr. NP Mjoli - Chairperson	102 592	2 765	105 357
Prof. SV Nkomo - Deputy Chairperson	71 879	1 416	73 295
Dr. ME Makgae	77 484	5 035	82 519
Ms. MK Mbonambi	47 718	6 007	53 725
Ms. N Msezane	57 626	2 332	59 958
Dr. NP Nala	60 336	3 596	63 932
Dr. A Stroebel	48 184	734	48 918
	465 819	**21 885**	**487 704**

Co-opted Board sub-committee members

	Members' fees R	Other fees R	Total R
2020			
Mr. P Dlamini	27 860	3 363	31 223
Ms. S Thomas	31 840	3 574	35 414
Dr. J Maree	7 960	73	8 033
	67 660	**7 010**	**74 670**
2019			
Mr. P Dlamini	30 316	2 279	32 595
Ms. S Thomas	30 316	3 689	34 005
Dr. J Maree	11 940	46	11 986
Dr. B Sehlapelo	3 980	-	3 980
	76 552	**6 014**	**82 566**

33. FINANCIAL INSTRUMENTS DISCLOSURE

Categories of financial instruments

GROUP - 2020	At fair value R	At amortised cost R	Total R
Financial assets			
Receivables	-	39 050 609	39 050 609
Cash and cash equivalents	240 984 237	-	240 984 237
	240 984 237	**39 050 609**	**280 034 846**
Financial liabilities			
Payables	-	156 443 107	156 443 107
Revolving credit facility	106 620	-	106 620
Finance lease oblibation	-	1 132 631	1 132 631
Accruals – leave and bonus	-	7 169 888	7 169 888
	106 620	**164 745 626**	**164 852 246**

GROUP - 2019	At fair value R	At amortised cost R	Total R
Financial assets			
Receivables	-	43 157 748	43 157 748
Cash and cash equivalents	161 304 984	-	161 304 984
	161 304 984	**43 157 748**	**204 462 732**
Financial liabilities			
Payables	-	121 348 442	121 348 442
Revolving credit facility	372 288	-	372 288
Finance lease oblibation	-	503 385	503 385
Accruals – leave and bonus	-	6 670 460	6 670 460
	372 288	**128 522 287**	**128 894 575**

WRC - 2020	At fair value R	At amortised cost R	Total R
Financial assets			
Receivables	-	39 043 304	39 043 304
Cash and cash equivalents	240 954 437	-	240 954 437
	240 954 437	**39 043 304**	**279 997 741**
Financial liabilities			
Payables	-	156 443 107	156 443 107
Revolving credit facility	106 620	-	106 620
Finance lease obligation	-	1 132 631	1 132 631
Accruals – leave and bonus	-	7 169 888	7 169 888
	106 620	**164 745 626**	**164 852 246**

WRC - 2019	At fair value R	At amortised cost R	Total R
Financial assets			
Loans to wholly controlled entity	-	7 878 459	7 878 459
Receivables	-	43 236 925	43 236 925
Cash and cash equivalents	161 137 834	-	161 137 834
	161 137 834	**51 115 384**	**212 253 218**
Financial liabilities			
Payables	-	120 977 531	120 977 531
Revolving credit facility	372 288	-	372 288
Finance lease obligation	-	503 385	503 385
Accruals – leave and bonus	-	6 670 460	6 670 460
	372 288	**128 151 376**	**128 523 664**

Receivables above do not include prepayments and vat receivable due to the fact that it is not a financial asset.

34. 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.

GROUP	Less than 1 year R	Between 1 and 2 years R	Between 2 and 5 years R	Over 5 years R
At 31 March 2020				
Trade and other payables	156 443 107	-	-	-
Finance lease oblibation	499 020	633 611	-	-
At 31 March 2019				
Trade and other payables	121 348 442	-	-	-
Finance lease oblibation	503 385	-	-	-

WRC	Less than 1 year R	Between 1 and 2 years R	Between 2 and 5 years R	Over 5 years R
At 31 March 2020				
Trade and other payables	156 443 107	-	-	-
Finance lease oblibation	499 020	633 611	-	-
At 31 March 2019				
Trade and other payables	120 977 531	-	-	-
Finance lease oblibation	503 385	-	-	-

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 the financial results.

At year end, financial instruments exposed to interest rate risk were as follows:

- Balances with banks
- Deposits with the Corporation for Public Deposits.

Credit risk

Credit risk consists mainly of cash deposits, cash equivalents and trade debtors. The entity only deposits cash with major banks with high quality credit standing and limits exposure to any one counterparty.

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

	Group		WRC	
	2020 R	2019 R	2020 R	2019 R
Financial instrument				
Corporation for Public Deposits	78 367 964	47 727 707	78 367 964	47 727 707
Bank balances	162 615 763	113 576 276	162 585 963	113 409 126

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.

The bank accounts below, denominated in foreign currency, are held on behalf of leverage funded partners. The WRC is exposed to foreign currency risk to the extent that a devaluation in the foreign currency, reduces the amount available in respect of projects already entered into by the WRC with service providers in South African Rands.

Foreign currency exposure at statement of financial position date

	Group		WRC	
	2020 R	2019 R	2020 R	2019 R
Current assets				
Cash and cash equivalents, USD 3,751,737 (2019: 987,150)	66 128 122	14 103 912	66 128 122	14 103 912
Cash and cash equivalents, Euro 200,952 (2019: 904,492)	3 890 709	14 495 755	3 890 709	14 495 755

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.

35. DEFINED CONTRIBUTION PLANS

	Group		WRC	
	2020 R	2019 R	2020 R	2019 R
Medical fund scheme				
Contributions	4 109 339	3 923 474	4 109 339	3 923 474

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.

Included in the contributions above is an amount of R115,218 (2019: R121,423) that was contributed by the Water Research Commission (employer) to the medical fund scheme. These contributions are in respect of the employees that have been appointed on the cost plus benefits basis.

	Group		WRC	
	2020 R	2019 R	2020 R	2019 R
Pension fund scheme				
Contributions	7 433 816	6 820 431	7 433 816	6 820 431

Defined contribution plan – Pension fund:

The WRC has a pension fund scheme covering all employees in the form of a defined contribution fund. The WRC migrated from a stand-alone fund administered by ABSA Consultants and Actuaries to an Umbrella Fund Scheme. As from 1 February 2018, Alexander Forbes Life is managing this Umbrella Fund Scheme on behalf of the WRC.

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. The above contributions have been included as part of the personnel cost expense.

Included in the contributions above is an amount of R61,968 (2019: R64,195) that was contributed by the Water Research Commission (employer) to the pension and provident fund scheme. These contributions are in respect of the employees that have been appointed on the cost plus benefits basis.

36. IRREGULAR EXPENDITURE

	Group		WRC	
	2020 R	2019 R	2020 R	2019 R
Opening balance	2 072 201	1 278 757	1 898 571	1 198 105
Adjustments: Correction of errors	(106 029)	-	(106 029)	-
Opening balance as restated	**1 966 172**	**1 278 757**	**1 792 542**	**1 198 105**
Add: Irregular Expenditure - current year	37 358	1 327 733	-	1 234 755
Less: Amounts condoned	-	(534 289)	-	(534 289)
Closing balance	**2 003 530**	**2 072 201**	**1 792 542**	**1 898 571**

Adjustments: Correction of errors

The 2018/19 irregular expenditure was overstated by an amount of R106,029, as such appropriate amendments and disclosures to the 2019/20 financial statements were necessary. Irregular expenditure as disclosed per the financial statements comprised of the total amount paid to the service provider amounting to R533,379 less contract value R427,350 equals R106,029. Upon further review, it appeared that the WRC erroneously did not exclude a two months contract extension amounting to R55,050 from the disclosed irregular expenditure of R106,029 in the 2018/19 financial year. Furthermore, the reported paid amount of R533,379 was overstated by an amount of R66,398. Therefore, as at 31 March 2019, an unspent amount of R15,419 (R55,050 plus R 66,398 less R106,029) remains available on the contract. Based on the above, it was determined that there was in fact no irregular expenditure incurred on this contract.

The transactions for the 2018/19 and 2019/20 financial year can be summarised as follows:

Other payments in respect of expired contracts:				
Other payments in respect of expired contracts	-	473 019	-	380 041
Delays in transfer of Marumati Building (expired contracts)	37 358	854 714	-	854 714
	37 358	**1 327 733**	**-**	**1 234 755**

Delays in transfer of Marumati Building (Maintenance of the elevators at the Marumati Building) - 2019/20 financial year

The supplier contract for the maintenance between OTIS and ERF commenced from 31 March 1997 and expired on 30 April 2017. The WRC moved offices from Marumati Building to Bloukrans during September 2016, while at the same time the WRC started the sale of the Marumati Building process which would have resulted in the responsibility for the lift maintenance transferring to the new owner. There was however considerable delay in the finalisation of the transfer of the building to the new owner, the maintenance contract was essential and continued beyond the expiry date until July 2019 when the building was finally transferred to the new owner. The elevators continued to be serviced as there were tenants occupying the building until the time the building was finally transferred to the new owner. An amount of R37,358 was incurred as irregular expenditure during the period 1 April 2019 to 31 July 2019. This was a sole source supplier.

Other payments in respect of expired contracts - 2018/19 financial year

Prior to the expiry of some of the critical IT services related to cloud hosting, supply chain management (SCM) processes were followed to obtain competitive bids. However, during the evaluation and adjudication process it was found that the Bidders who submitted bids did not meet the required minimum technical standards, resulting in the procurement process being restarted and delaying the regularising of contracts. Subsequent SCM processes resulted in the qualifying Bidders pricing being significantly higher than the WRC's available budget allocated for these services. One of the Service Providers subsequent to winning the bid for cloud hosting was unable to successfully migrate the services and eventually the WRC had to terminate their contract. Due to the critical nature of the cloud hosting services for the WRC operations it is paramount that the services are not interrupted and therefore whilst the WRC was facing challenges with appointing a qualifying and capable service provider these services had to be continued.

Delays in respect of transfer of Marumati Building (Expired Contracts) - 2018/19 financial year

The transfer of the Marumati Building owned by ERF 706 had been delayed by a number of events beyond the WRC control. The required Ministerial and Board approvals for the disposal was finalised on the 16 August 2017 and there was an expectation that the transfer would be finalised within three months (by November 2017). The WRC thus ensured that the important contracts related to essential services remained in place and are valid up to the date of transfer. These include security, cleaning and hygiene services that are required to continue until ownership is transferred otherwise the building will be at risk of being vandalised if there is no security, there is also cleaning and hygiene services that tenants must be provided.

The delays related to the transfer were caused by the Purchaser who experienced challenges to provide all the required funding guarantees to the Conveyancing attorneys, SARS challenged the VAT status of the transaction causing further financial strain on the Purchaser and delay, obtaining municipality clearance certificates was delayed due to meter reading issues within the municipality.

The WRC was unable to issue a public invitation for service providers as there was uncertainty regarding the contract terms that would be applicable due to the uncertainty in the timing of the change of ownership. There is also a risk of entering into a contract with the possibility of early termination and then facing legal challenges from service providers. Potential Service Providers have also indicated their reluctance to bid for a contract and incur set up costs for a contract that may be terminated at any time.

The transfer has been completed and the WRC have managed to secure the services through a competitive process and thus regularised these expenditures.

Investigation in respect of irregular expenditure incurred

In line with the guideline on Irregular Expenditure an investigation was undertaken in respect of the irregular expenditure incurred in prior years 2017/18, 2018/19 and 2019/20. The results of the investigation were presented to the Accounting Authority (WRC Board) and is being considered for submission to National Treasury for a condonement request.

Consequence management

Consequence management is currently in progress in line with the National Treasury Framework on Irregular Expenditure.

37. FRUITLESS AND WASTEFUL EXPENDITURE

	Group		WRC	
	2020 R	2019 R	2020 R	2019 R
Opening balance	29 342	13 176	29 342	-
Add: Expenditure identified - current year	137 316	29 342	137 266	29 342
Less: Amounts recoverable - current year	(50)	-	-	-
Less: Amount written off	-	(13 176)	-	-
Less: Amounts transferred to receivables due to recoverability	(884)	-	(884)	-
Closing balance	**165 724**	**29 342**	**165 724**	**29 342**

Expenditure identified in the current year include those listed below:

Penalties	77 446	29 342	77 396	29 342
Interest on overdue payments	59 870	-	59 870	-
	137 316	**29 342**	**137 266**	**29 342**

The transactions for the 2019/2020 financial year can be summarised as follows:

Penalties		
Compensation Commissioner: Late submission of 2018 Annual return	38 040	38 040
Compensation Commissioner: Late payment of 2018 Annual return	38 472	38 472
CIPC lodgement	50	-
Renewal of the WRC motor vehicle licence	884	884
	77 446	**77 396**
Interest on overdue payments		
Compensation Commissioner: Late payment of 2018 Annual return	59 870	59 870
	59 870	**59 870**

Fruitless and Wasteful Expenditure: 2019/20 Financial Year

- A penalty of R38,040 for the late submission of the Compensation Commissioner's 2018 Annual Return of Earnings. The Compensation Commissioner's Office had system challenges on 31 May 2018 (submission date), therefore whilst the WRC submitted the return on 31 May 2018, the Compensation Commissioner only recorded the submissions for the said date on the next working day 3 June 2018, as a result the WRC is engaging the Office of the Compensation Commissioner with the view of reversing this penalty.
- A penalty of R38,472 for late payment of the Compensation Commissioner's 2018 Annual Return of Earnings Assessment invoice for the period March 2017 to February 2018. The Compensation Commissioner's 2018 Annual Return of Earnings assessment invoice was due for payment on the 28 June 2018; however, the assessment invoice was paid post the due date which then attracted penalty charges.
- The lodgment of the 2019 ERF 706 annual return to the Company and Intellectual Property Commission ("CIPC") was due on the 30 April 2019. The return was, however, submitted late on the 12 June 2019 and as a result the CIPC levied a late submission fee of R50. The official responsible for the late lodgment has refunded the R50 penalty.
- The renewal of the WRC motor vehicle license and license disc was due by 28 February 2019, however, the license disc was only renewed on 22 November 2019, as a result the renewal attracted a late renewal fee of R884 disclosed as part of penalties. The official responsible for the late renewal agreed to refund the R884 penalty. The deduction form was signed in March 2020 and the amount was refunded by the employee in April 2020.
- Interest charges of R59,870 for late payment of the Compensation Commissioner's 2018 Annual Return of Earnings Assessment invoice for the period March 2017 to February 2018. The Compensation Commissioner's 2018 Annual Return Earnings assessment invoice was due for payment on the 28 June 2018; however, the assessment invoice was paid post the due date which then attracted interest charges.

Fruitless and Wasteful Expenditure: 2018/19 Financial Year

- During the 2017/18 financial year, a former employee of the WRC took the entity to the Commission for Conciliation, Mediation and Arbitration (CCMA) on the grounds of unfair dismissal. On 23 April 2018, the CCMA issued an award of R637,500 in favour of the dismissed employee. Upon assessment of the award it was concluded that all merits of the case were not considered by the Commissioner and a decision was taken that the matter be taken to Labour Court. The Board recommended that the WRC accept the award issued by the CCMA. This assessment resulted in a delay in payment within the time period specified in the CCMA award with interest amounting to R29,342 disclosed as fruitless and wasteful expenditure as a consequence.

Consequence management

Consequence management is currently being undertaken in line with the National Treasury Framework on Fruitless and Wasteful expenditure.

38. BUDGET DIFFERENCES

Material differences between budget and actual amounts

Leverage income

The leverage income budget targets have been exceeded by some R13,67 million and this is a favourable result for the WRC.

This result has been achieved primarily due to project deliverables being met earlier than originally anticipated due to focused efforts of the project teams, specifically in respect of the following:

- DST Roadmap and PMU project performing exceptionally well and resulted in additional leverage income amounting to R6 million;
- Funding received in respect of NIPMO that resulted in additional leverage income amounting to R1,8 million;
- Following the recent signing of a R43 million (USD3 million) multi-year contract with the Bill and Melinda Gates Foundation, the Gates SASTEP demonstrations have yielded some additional R2,3 million leverage income during the current financial year;
- Further R3,56 million associated with various leverage funded projects that yielded more project deliverables and associated leverage income than anticipated.

Interest received

The budget variance amounting to R1,606,488 in respect of interest income is primarily as a result of higher average cash holdings over the 2019/2020 financial year which resulted in higher interest income earned during the year under review.

Levy income

The budget variance amounting to R717,603 in respect of the levy income for the 2019/2020 financial year is as a result of water consumption volumes that have been marginally lower than anticipated coupled with the water research levy tariff increase that was legislated late.

Running costs

In line with cost saving initiatives, there were savings on the budget amounting to R1,858,584 during the 2019/20 financial year in respect of professional fees, promotions, publicity and IT related costs as well as a result of postponed travel due to COVID-19.

Human Resource costs

The budget variance in Human Resources costs of R1,454,907 is mainly as result of delays in appointments in respect of vacancies and timing differences in respect of anticipated spending on training and development of employees.

Research, development and innovation (RDI)

The RDI expenditure adverse variance of R19,473,447 as at 31 March 2020 is mainly accounted for as follows:

- Changes in the publishing strategy from print to digital format still in the initial development phase (R2,7 million)

- The late approval of levy increase impacted the planning of deliverables on projects, coupled with normal project related delays including impact of COVID1-9 (R6 million)
- Delays in other research related costs such as workshops, printing and publishing and promotion of research outputs due to the postponed of workshops and travel as a result of COVID-19 (R10,77 million). During the lockdown period, the WRC have successfully explored alternative ways of dissemination and promotion of research information and outputs using digital (virtual) platforms which has proven to be cost effective and enhanced impact in many respects.

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:

	R
Net surplus per the statement of financial performance	38 474 929
Adjusted for:	
Depreciation, amortisation and impairment	4 630 717
Employee benefit obligation	374 226
Employee benefit payments	(2 467 619)
Actuarial (gains)/losses	457 634
Accrual - leave and bonus	2 668 707
Actual leave payout	(2 169 280)
Operating lease: Movement in straight-lining of operating leases	1 171 837
Capital expenditure incurred	(4 452 433)
Fixed costs - rental of equipment	(1 065 948)
Commission paid on sale of property	(350 000)
	37 272 771

The budget is approved on a cash basis by nature classification. The approved budget covers the fiscal period from 1 April 2019 to 31 March 2020 and is in respect of the Water Research Commission and its subsidiary.

The above reconciling items is as a result of the financial statements being prepared on an accrual basis, whilst the budget is prepared on a cash basis.

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 2020 is presented above. The Financial Statements and budget documents are prepared for the same reporting period.

40. GOING CONCERN

We draw attention to the fact that as at 31 March 2020, the economic entity and the WRC had an accumulated surplus and that total assets exceed its liabilities by R120,847,666 and R120,809,029 respectively.

Management have assessed the existing and anticipated effects of COVID-19 (refer to note 44, Events after the reporting date) on the company's activities and the appropriateness of the use of the going concern basis and after consideration 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. COMPARATIVE FIGURES

Certain comparative figures have been restated. Refer to note 42 for further details.

During the 2018/19 financial year R1,036,525 comprised of security, cleaning and storage costs were included under repairs and maintenance costs. In order to improve comparability and cost management these expenses were reclassified from repairs and maintenance costs to relevant expense categories and disclosed under general expenditure.

During the 2018/19 financial year R5,888,391 comprised of research related travel and catering costs were included under general expenditure and has been reclassified under reserach, development and innovation to correctly reflect the underlying nature of the transactions.

42. PRIOR PERIOD ERRORS

Presented below are those items contained in the statement of financial position and statement of financial performance that have been affected by prior-year adjustments:

Statement of financial position

GROUP 2020	Note	As previously reported	Correction of error and reclassification	Restated
Payables	11	(121 484 090)	135 648	(121 348 442)
Accumulated surplus		(82 237 087)	(135 648)	(82 372 735)

Statement of financial performance

GROUP 2020	Note	As previously reported	Correction of error and reclassification	Restated
Revenue from exchange transactions: Leverage Income	14	-	(42 269 973)	(42 269 973)
Revenue from non-exchange transactions	16	(278 877 672)	42 269 973	(236 607 699)
General expenditure	20	16 987 464	(4 851 866)	12 135 598
Repairs and maintenance		1 276 958	(1 036 525)	240 433
Research, development and innovation costs	23	163 134 320	5 888 391	169 022 711
(Deficit) Surplus for the year		**(97 478 930)**	**-**	**(97 478 930)**

WRC 2020	Note	As previously reported	Correction of error and reclassification	Restated
Revenue from exchange transactions: Leverage Income	14	-	(42 269 973)	(42 269 973)
Revenue from non-exchange transactions	16	(278 877 672)	42 269 973	(236 607 699)
General expenditure	20	16 985 055	(4 851 866)	12 133 189
Repairs and maintenance		1 183 980	(1 036 525)	147 455
Research, development and innovation costs	23	163 134 320	5 888 391	169 022 711
(Deficit) Surplus for the year		**(97 574 317)**	**-**	**(97 574 317)**

Errors

R1,036,525 was reclassified between repairs and maintenance and general expenditure (refer to note 41 for details).

R5,888,391 was reclassified between general expenditure and research, development and innovation costs (refer to note 41 for details).

The details of the prior period errors are summarised below:

Payables - Accruals (Group)

Cahi Auctioneers was appointed by ERF 206 Rietfontein on 7 April 2017 through a competitive bidding process to dispose of the Marumati Building situated at Erf 706 Rietfontein by means of an auction. The auction took place on 20 July 2017. Commission and marketing related costs to the value of R485,648 (excluding VAT) were accrued for in the 2017/2018 financial year in terms of the Service Level Agreement with Cahi Auctioneers. From the Service Level Agreement it appeared that the Auctioneer was entitled to both commission and also to recoup its advertising (marketing) cost. Based on this interpretation marketing costs of R135,648 was accrued during the 2017/18 financial year.

During the 2019/20 financial year the transfer of the Marumati Building situated at Erf 706 Rietfontein was finalised. The proceeds from the disposal of the ERF 706 Rietfontein building was received in July 2019. The final statement of account received from the attorneys reflected that CAHI Auctioneers only deducted the commission of R350,000 (excluding VAT) from the proceeds received. The Service Level Agreement (SLA) was poorly phrased and as a result marketing costs to the value of R135,648 were erroneously accrued for in the 2017/2018 financial year resulting in an overstatement of expenditure and payables. This was an isolated occurrence.

The impact of the above can be summarised as follows:

	R
Statement of Financial Position Items:	
Accruals (Payables)	R 135,648
Statement of Financial Position Items:	
Retained Earnings	(R 135,648)

Revenue from exchange: Leverage and Interest income (Group and WRC)

Historically, the WRC considered the general definition of exchange transactions which states that exchange transactions are those where the entity receives assets or services, or has liabilities extinguished, and directly gives approximately equal value (primarily in the form of cash, goods, services, or use of assets) to another entity in exchange. As a result, leverage income and the associated liability (Income received in advance) was classified as non-exchange transactions due to the fact that the WRC often does not receive equal value for its research as it is often a co-funder together with its leverage partners. During the current financial year, whilst revisiting the nature of the leverage partnership and agreements, it was identified that a specific provision is included in GRAP 9 (Revenue from exchange transactions) in respect of funds received for undertaking research which regards such research funds received as Revenue from exchange transactions. During the current financial year leverage income has now been reclassified and reflected as exchange transactions in line with the specific provision included in GRAP 9.

The impact of the above can be summarised as follows:

	R
Statement of Financial Performance Items:	
Non exchange revenue: Leverage income	R 42,269,973
Exchange revenue: Leverage income	(R 42,269,973)

43. CONTINGENT ASSETS

The WRC-Rhodes University contractual agreement was terminated on 16 October 2018 by the WRC and the WRC is currently laying claim to R7,233,325 (inclusive of interest as at 31 March 2020).

The WRC is pursuing a claim through available legal and contractual processes, but the outcome is still uncertain.

Rhodes University remains willing to reach a settlement.

44. EVENTS AFTER THE REPORTING DATE

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

Since 31 December 2019, the spread of COVID-19 has severely impacted many local economies around the globe. In many countries, businesses are being forced to cease or limit operations for long or indefinite periods of time. Measures taken to contain the spread of the virus, including travel bans, quarantines, social distancing, and closures of non- essential services have triggered significant disruptions to businesses worldwide, resulting in an economic

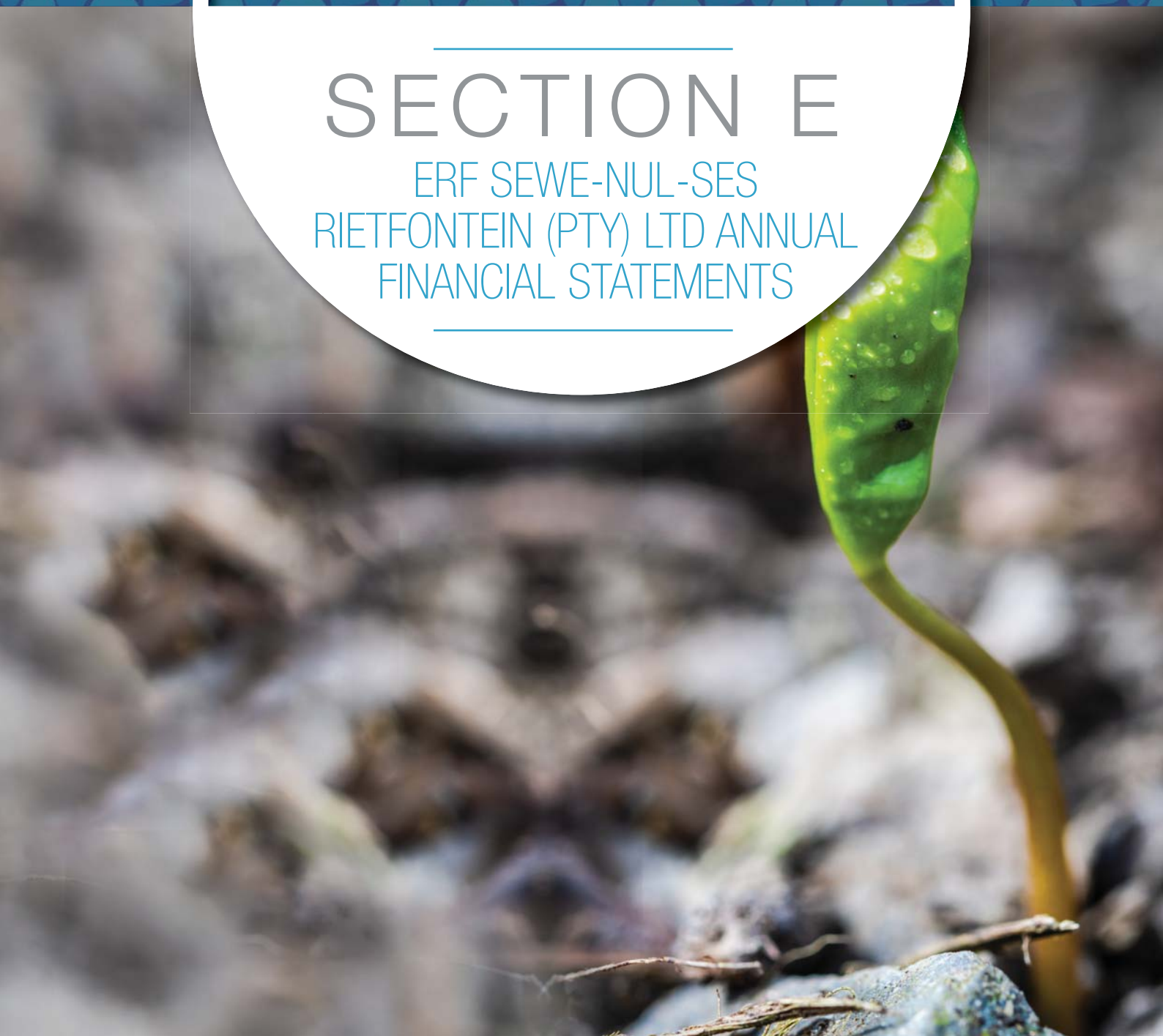
slowdown. Global stock markets have also experienced great volatility and a significant weakening. Governments and central banks have responded with monetary and fiscal interventions to stabilise economic conditions.

The management of the WRC implemented plans to deal with the effects of the COVID-19 outbreak. The WRC's performance (as reflected in the Budget versus Actual comparison, note 38), have been affected due to the unique circumstances brought about by the COVID-19 pandemic and the nationwide lockdown intitiated. The ongoing impact of the COVID-19 lockdown on the WRC income and expenditure and working capital, will be assessed on a continuous basis but currenlty there is no uncertainty over the entity's ability to continue as a going concern.

The WRC has considered the impact and has determined that it is not possible to reliably estimate the duration and severity of the consequences associated with the COVID-9 pandemic, as well as the impact on the financial position and results of the WRC for future periods. Accordingly, the financial position and results of operations as of and for the year ended 31 March 2020 have not been adjusted to reflect the impact.

SECTION E

ERF SEWE-NUL-SES RIETFONTEIN (PTY) LTD ANNUAL FINANCIAL STATEMENTS



INDEX:

ERF SEWE NUL SES RIETFONTEIN (PROPRIETARY) LIMITED FINANCIAL STATEMENTS

The financial statements set out on pages 147 - 172, which have been prepared on a liquidation basis, were approved by the Board of Directors on 30 July 2020 and were signed on its behalf by:

Mr DP Naidoo
Chief Executive Officer

Dr NP Mjoli
Chairperson of the Board

GENERAL INFORMATION

COUNTRY OF INCORPORATION AND DOMICILE
South Africa

NATURE OF BUSINESS AND PRINCIPAL ACTIVITIES
The main business of the company was 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. The immovable property was disposed of during the financial year. The Water Research Commission is still considering the re-purposing of Erf 706 Rietfontein.

DIRECTORS
Mr. DP Naidoo
Dr. N Mjoli (Chairperson)

REGISTERED OFFICE
Marumati Building
491 18th Avenue
Rietfontein
Pretoria
0084

CONTROLLING ENTITY
Water Research Commission

BANKERS
ABSA Bank

AUDITORS
Auditor-General of South Africa

COMPANY REGISTRATION NUMBER
1984/003566/07

REPORT OF THE AUDITOR-GENERAL TO PARLIAMENT ON ERF 706 RIETFONTEIN (PTY) LTD

REPORT ON THE AUDIT OF THE FINANCIAL STATEMENTS

Opinion

1. I have audited the financial statements of the ERF 706 Rietfontein (Pty) Ltd set out on pages 152 to 176, which comprise the statement of financial position as at 31 March 2020, the statement of financial performance, statement of changes in net assets and cash flow statement for the year then ended, as well as the notes to the financial statements, including a summary of significant accounting policies.

2. In my opinion, the financial statements present fairly, in all material respects, the financial position of the ERF 706 Rietfontein (Pty) Ltd as at 31 March 2020, and its financial performance and cash flows for the year then ended in accordance with Standard of Generally Recognised Accounting Practise (GRAP) and the requirements of the Public Finance Management Act (Act no. 1 of 1999) (PFMA).

Basis for opinion

3. I conducted my audit in accordance with the International Standards on Auditing (ISAs). My responsibilities under those standards are further described in the auditor-general's responsibilities for the audit of the financial statements section of this auditor's report.

4. I am independent of the company in accordance with sections 290 and 291 of the International Ethics Standards Board for Accountants' Code of ethics for professional accountants (IESBA code), parts 1 and 3 of the International Ethics Standards Board for Accountants' International Code of Ethics for Professional Accountants (including International Independence Standards) and the ethical requirements that are relevant to my audit in South Africa. I have fulfilled my other ethical responsibilities in accordance with these requirements and the IESBA codes.

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

Emphasis of matters

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

The disposal of the Investment property - Marumati building

7. We draw attention to note 3 and 21 of the financial statements which deals with disposal of Marumati Building ("the Property") which was the primary source of income of ERF 706 Rietfontein. Consequently, ERF will not be able to offer and provide office accommodation to the WRC or other potential tenants and would therefore the financial statements are prepared on a liquidation basis as described in note 21 of the financial statements. My opinion is not modified in respect of this matter.

Responsibilities of the accounting authority for the financial statements

8. The board of directors, which constitutes the accounting authority is responsible for the preparation and fair presentation of the financial statements in accordance with the Standard of Generally Recognised Accounting Practise (GRAP)

and the requirements of the Public Finance Management Act (Act no. 1 of 1999) (PFMA), and for such internal control as the accounting authority determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

9. In preparing the financial statements, the accounting authority is responsible for assessing the ERF 706 Rietfontein (Pty) Ltd.'s ability to continue as a going concern, disclosing, as applicable, matters relating to going concern and using the going concern basis of accounting unless the appropriate governance structure either intends to liquidate the company or to cease operations, or has no realistic alternative but to do so.

Auditor-general's responsibilities for the audit of the financial statements

10. My objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes my opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with the ISAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

11. A further description of my responsibilities for the audit of the financial statements is included in the annexure to this auditor's report.

REPORT ON THE AUDIT OF THE ANNUAL PERFORMANCE REPORT

12. In terms of section 55(2)(a) of the PFMA, the company is required to prepare an annual performance report. The performance information of the company was reported in the annual performance report of Water Research Commission. The usefulness and reliability of the reported performance information was audited as part of the audit of Water Research Commission and any audit findings are included in the management and auditor's reports of Water Research Commission.

REPORT ON THE AUDIT OF COMPLIANCE WITH LEGISLATION

Introduction and scope

13. In accordance with the PAA and the general notice issued in terms thereof, I have a responsibility to report material findings on the compliance of the company with specific matters in key legislation. I performed procedures to identify findings but not to gather evidence to express assurance.

OTHER INFORMATION

14. The accounting authority is responsible for the other information. The other information comprises the information included in the annual report which includes the chairperson's report. The other information does not include the financial statements.

15. My opinion on the financial statements and findings on the reported performance information and compliance with legislation do not cover the other information and I do not express an audit opinion or any form of assurance conclusion thereon.

16. In connection with my audit, my responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the financial statements, or my knowledge obtained in the audit, or otherwise appears to be materially misstated.

17. If based on the work I have performed, I conclude that there is a material misstatement in this other information, I am required to report that fact. I have nothing to report in this regard.

INTERNAL CONTROL DEFICIENCIES

18. I considered internal control relevant to my audit of the financial statements, reported performance information and compliance with applicable legislation; however, my objective was not to express any form of assurance on it. I have nothing to report in this regard.

Auditor-General
Pretoria
30 September 2020

AUDITOR-GENERAL
SOUTH AFRICA

Auditing to build public confidence

ANNEXURE

AUDITOR-GENERAL'S RESPONSIBILITY FOR THE AUDIT

1. As part of an audit in accordance with the ISAs, I exercise professional judgement and maintain professional scepticism throughout my audit of the financial statements, and the procedures performed on reported performance information for selected portfolio and on the public entity's compliance with respect to the selected subject matters.

Financial statements

2. In addition to my responsibility for the audit of the financial statements as described in this auditor's report, I also:

- identify and assess the risks of material misstatement of the financial statements whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for my opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control
- obtain an understanding of internal control relevant to the audit 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 public entity's internal control
- evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the board of directors, which constitutes the accounting authority
- conclude on the appropriateness of the board of directors, which constitutes the accounting authority's use of the going concern basis of accounting in the preparation of the financial statements. I also conclude, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Water Research Commission and its subsidiaries ability to continue as a going concern. If I conclude that a material uncertainty exists, I am required to draw attention in my auditor's report to the related disclosures in the financial statements about the material uncertainty or, if such disclosures are inadequate, to modify the opinion on the financial statements. My conclusions are based on the information available to me at the date of this auditor's report. However, future events or conditions may cause a public entity to cease continuing as a going concern
- evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation
- obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the group to express an opinion on the financial statements. I am responsible for the direction, supervision and performance of the group audit. I remain solely responsible for my audit opinion

Communication with those charged with governance

3. I communicate with the accounting authority regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that I identify during my audit.

4. I also confirm to the accounting authority that I have complied with relevant ethical requirements regarding independence, and communicate all relationships and other matters that may reasonably be thought to have a bearing on my independence and, where applicable, related safeguards.

DIRECTORS' REPORT

1. GENERAL REVIEW

In order for Stakeholders 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. These statements clearly reflect the business of the company, its results and state of affairs.

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. The material matters and circumstances that occurred during the period under review are contained in the specific matters below.

2. SPECIFIC MATTERS

The main aim of the company was 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.

The Board of the Water Research Commission approved its relocation to new premises on 28 September 2015 whereafter a letter was submitted to the Minister of Water and Sanitation for the approval of the relocation. On 2 January 2016 the WRC obtained official written approval from the Minister of Water and Sanitation to relocate to new premises in the Pretoria East vicinity within the Science precinct. Following Ministerial approval to relocate to the new premises, the disposal of the Marumati Building ("the Property") owned by Erf 706 Rietfontein (Pty) Ltd was approved by the Board and the Minister of Water and Sanitation on 22 February 2016 and 14 May 2016 respectively.

Cahi Auctioneers was appointed on 7 April 2017 through a competitive bidding process to dispose of the property by means of an auction. The auction took place on 20 July 2017. The auctioneer received a written bid to the value of R9,750,000. The Board accepted the bid on 16 August 2017. The transfer of the Marumati Building situated at Erf 706 Rietfontein had been delayed by a number of events beyond the WRC's control but was finalised on 12 July 2019. This disposal of the property effectively means that the company is not able to continue its main business of renting property for use by the Water Research Commission.

The Water Research Commission is in the process of evaluating the potential of re-purposing ERF 706 Rietfontein or alternatively its liquidation. It is however anticipated that this process will be delayed due to the restrictions in the operating environment that have been necessitated by the advent of the COVID-19 pandemic.

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 we 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 party was involved in managing the entity.

The names of the directors are shown below:

- Mr. DP Naidoo
- Dr. N Mjoli

There were no changes in directors during the period under review.

4. COMPANY SECRETARY

The company's secretary is Rene Vorster.

STATEMENT OF FINANCIAL POSITION

	Note(s)	2020 R	2019 R
Assets			
Current assets			
Investment property	3	-	9 750 000
Receivables from exchange transactions	4	8 838	8 265
Cash and cash equivalents	5	29 800	167 150
		38 638	**9 925 415**
Non-current assets			
Deferred tax	6	-	5 599 682
Total Assets		**38 638**	**15 525 097**
Liabilities			
Current liabilities			
Other financial liabilities	7	-	30 008 580
Payables from exchange transactions	8	-	457 394
		-	**30 465 974**
Non-current liabilities			
Deferred tax	6	-	1 453 913
Total liabilities		**-**	**31 919 887**
Net assets		**38 638**	**(16 394 790)**
Share capital	9	1	1
Accumulated surplus / (deficit)		38 637	(16 394 791)
Total net assets		**38 638**	**(16 394 790)**

STATEMENT OF FINANCIAL PERFORMANCE

	Note(s)	2020 R	2019 R
Revenue			
Revenue from exchange transactions			
Other income	10	44 213	158 145
Total revenue from exchange transactions		**44 213**	**158 145**
Revenue from non-exchange transactions			
Revenue arising from debt waiving	11	20 561 653	-
Total revenue from non-exchange transactions		**20 561 653**	**-**
Total revenue		**20 605 866**	**158 145**
Expenditure			
Receivable derecognised/(recovered)	12	(12 210)	13 178
General expenses	13	6 393	2 409
Repairs and maintenance		32 486	92 978
Total expenditure		**26 669**	**108 565**
Surplus/(deficit) before taxation		**20 579 197**	**49 580**
Taxation	14	4 145 769	17 573
Surplus/(deficit) before taxation		**16 433 428**	**32 007**

STATEMENT OF CHANGES IN NET ASSETS

	Share capital R	Accumulated surplus/deficit R	Total net assets R
Opening balance as previously reported	1	(16 562 446)	(16 562 445)
Adjustments	-	-	-
Correction of errors	-	135 648	135 648
Balance at 1 April 2018 as restated*	**1**	**(16 426 798)**	**(16 426 797)**
Changes in net liabilities			
Surplus / (Deficit) for the year	-	32 007	32 007
Total changes	-	32 007	32 007
Balance at 1 April 2019	**1**	**(16 394 791)**	**(16 394 790)**
Changes in net liabilities			
Surplus / (Deficit) for the year	-	16 433 428	16 433 428
Total changes	-	16 433 428	16 433 428
Balance at 31 March 2020	**1**	**38 637**	**38 638**
Note	9		

CASH FLOW STATEMENT

	Note(s)	2020 R	2019 R
Cash flows from operating activities			
Receipts			
Cash receipts from customers		1 386 937	214 181
Payments			
Cash paid to suppliers		(1 827 361)	(109 605)
Net cash flows from operating activities	**15**	**(440 424)**	**104 576**
Cash flows from investing activities			
Proceeds from sale of investment property	3	9 750 000	-
Cash flows from financing activities			
Repayments of other financial liabilities		(9 446 926)	(255 000)
Net cash flows from financing activities		**(9 446 926)**	**(255 000)**
Net increase/(decrease) in cash and cash equivalents		**(137 350)**	**(150 424)**
Cash and cash equivalents at the beginning of the year		167 150	317 574
Cash and cash equivalents at the end of the year	**5**	**29 800**	**167 150**

SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

1. PRESENTATION OF ANNUAL FINANCIAL STATEMENTS

The financial statements have been prepared in accordance with the accounting policies below which considers the Standards of Generally Recognised Accounting Practice (GRAP), issued by the Accounting Standards Board (ASB) with regard to the basic recognition, measurement and disclosure requirements, taking into account the circumstances that will impact the amounts that will be recovered or settled, where relevant.

The company has disposed of its immovable property and as a result will not be able to continue as a going concern. The auction took place on 20 July 2017 whereafter a written bid was received to the value of R9,750,000. The Board approved the bid on 16 August 2017. The transfer of the Marumati Building situated at Erf 706 Rietfontein had been delayed by a number of events beyond the WRC's control but was finalised on 12 July 2019. These financial statements have therefore been prepared on a liquidation 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. The Water Research Commission is still considering the re-purposing of Erf 706 Rietfontein.

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

1.1 GOING CONCERN ASSUMPTION

These financial statements were not prepared on a going concern basis due to Erf 706 Rietfontein (Pty) Ltd ceasing its operating activities. Accordingly, assets are measured at their liquidation values (representing the impaired values thereof) and liabilities are measured at their exit values. The going concern difficulties faced by the entity are further explained in note 21.

Judgement is required in determining whether a change in the carrying value of assets and liabilities is needed. When the going concern assumption is no longer appropriate, it is also necessary to consider whether the change in circumstances leads to the creation of additional liabilities or triggers clauses in debt contracts leading to the reclassification of certain debts as current liabilities.

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:

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 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 fair value and 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 to note 6 – Deferred tax.

1.3 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.

1.4 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 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 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.

1.5 STATUTORY RECEIVABLES

Identification

Statutory receivables are receivables that arise from legislation, supporting regulations, or similar means, and require settlement by another entity in cash or another financial asset.

Carrying amount is the amount at which an asset is recognised in the statement of financial position.

The cost method is the method used to account for statutory receivables that requires such receivables to be measured at their transaction amount, plus any accrued interest or other charges (where applicable) and, less any accumulated impairment losses and any amounts derecognised.

Nominal interest rate is the interest rate and/or basis specified in legislation, supporting regulations or similar means.

The transaction amount (for purposes of this Standard) for a statutory receivable means the amount specified in, or calculated, levied or charged in accordance with, legislation, supporting regulations, or similar means.

Recognition

The entity recognises statutory receivables as follows:

- if the transaction is an exchange transaction, using the policy on Revenue from exchange transactions;
- if the transaction is a non-exchange transaction, using the policy on Revenue from non-exchange transactions (Taxes and transfers); or
- if the transaction is not within the scope of the policies listed in the above or another Standard of GRAP, the receivable is recognised when the definition of an asset is met and, when it is probable that the future economic benefits or service potential associated with the asset will flow to the entity and the transaction amount can be measured reliably.

Initial measurement

The entity initially measures statutory receivables at their transaction amount.

Subsequent measurement

The entity measures statutory receivables after initial recognition using the cost method. Under the cost method, the initial measurement of the receivable is changed subsequent to initial recognition to reflect any:

- interest or other charges that may have accrued on the receivable (where applicable);
- impairment losses; and
- amounts derecognised.

Derecognition

The entity derecognises a statutory receivable, or a part thereof, when:

- the rights to the cash flows from the receivable are settled, expire or are waived;
- the entity transfers to another party substantially all of the risks and rewards of ownership of the receivable; or
- the entity, despite having retained some significant risks and rewards of ownership of the receivable, has transferred control of the receivable to another party and the other party has the practical ability to sell the receivable 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:
  - » derecognise the receivable; and
  - » recognise separately any rights and obligations created or retained in the transfer.

The carrying amounts of any statutory receivables transferred are allocated between the rights or obligations retained and those transferred on the basis of their relative fair values at the transfer date. The entity considers whether any newly created rights and

obligations are within the scope of the Standard of GRAP on Financial Instruments or another Standard of GRAP. Any difference between the consideration received and the amounts derecognised and, those amounts recognised, are recognised in surplus or deficit in the period of the transfer.

1.6 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 a 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 and 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.

1.7 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.

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 the statement of financial performance.

1.8 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.

1.9 CONTINGENCIES

Contingent assets and contingent liabilities are not recognised. Contingencies are disclosed in note 18.

1.10 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.

1.11 BORROWING COSTS

Borrowing costs are interest and other expenses incurred by an entity in connection with the borrowing of funds.

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

1.12 COMPARATIVE FIGURES

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

1.13 RELATED PARTIES

A related party is a person or an entity with the ability to control or jointly control the other party, or exercise significant influence over the other party, or vice versa, or an entity that is subject to common control, or joint control.

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

The entity is exempt from disclosure requirements in relation to related party transactions if that transaction occurs within normal supplier and/or client/recipient relationships on terms and conditions no more or less favourable than those which it is reasonable to expect the entity to have adopted if dealing with that individual entity or person in the same circumstances and terms and conditions are within the normal operating parameters established by that reporting entity's legal mandate.

1.14 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 EFFECTIVE AND ADOPTED IN THE CURRENT YEAR

In the current year, the entity has adopted the following standards and interpretations that are effective for the current financial year and that are relevant to its operations:

The following standards had amendments that are effective from 1 April 2019:

- GRAP 20: Related parties
- GRAP 104: Financial Instruments
- GRAP 108: Statutory receivables

These amendments were adopted and did not have a material impact on the Annual Financial Statements.

2.2 STANDARDS AND INTERPRETATIONS EARLY ADOPTED

The entity has chosen to early adopt the following standards and interpretations:

- GRAP 34: Separate Financial Statements - Effective from 1 April 2020

These amendments did not have a material impact on the Annual Financial Statements.

3. INVESTMENT PROPERTY

	2020			2019		
	Valuation R	Accumulated depreciation and accumulated impairment R	Carrying value R	Valuation R	Accumulated depreciation and accumulated impairment R	Carrying value R
Investment property	-	-	-	9 750 000	-	9 750 000

	Opening balance R	Fair value adjustments R	Total R
Reconciliation of investment property - 2020			
Investment property	9 750 000	(9 750 000)	-

	Opening balance R	Total R
Reconciliation of investment property - 2019		
Investment property	9 750 000	9 750 000
Fair value of investment properties	-	9 750 000

	2020 R	2019 R
Details of property		
ERF 706 RIETFONTEIN, PRETORIA		
- Purchase price	-	615 855
- Additions since purchase	-	8 075 667
- Fair value adjustments	-	1 058 478
	-	**9 750 000**

A register containing the information required by the PFMA is available for inspection.

Details of valuation

In terms of GRAP 16, the 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 disposal of the Marumati Building ("the Property") owned by Erf 706 Rietfontein (Pty) Ltd was approved by the Board and the Minister of Water and Sanitation on 22 February 2016 and 14 May 2016 respectively. Cahi Auctioneers was appointed on 7 April 2017 through a competitive bidding process to dispose of the property by means of an auction. The auction took place on 20 July 2017 whereafter a written bid was received to the value of R9,750,000. The Board accepted the bid on 16 August 2017. The fair value of the property is based on the approved bid of R9,750,000 resulting in the fair value of investment property reflecting the market conditions as at 31 March 2019.

The transfer and sale of the Marumati building situated at Erf 706 Rietfontein was finalised on 12 July 2019.

Amounts recognised in surplus and deficit for the year:

	2020 R	2019 R
Rental revenue from investment property (including recovery of expenditure)	44 213	158 145

Current assets	-	9 750 000

4. RECEIVABLES FROM EXCHANGE TRANSACTIONS

	2020 R	2019 R
Deposits	7 305	7 305
VAT receivables	1 533	960
	8 838	**8 265**

Included in receivables from exchange is a statutory receivable in respect of VAT amounting to R1,533 and a financial asset in respect of deposits amounting to R7,305.

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. The receivables represent deposits that will become due and receivable on demand and therefore no change is required in the carrying value of the assets.

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 2020, R NIL (2019: R NIL) were past due but not impaired.

Receivables impaired

As of 31 March 2020, trade and other receivables of R NIL (2019: R NIL) were impaired and provided for. The amount of the provision was R NIL as of 31 March 2020 (2019: R NIL).

GRAP 104 states that a financial asset is past due when a counterparty has failed to make a payment when contractually due. None of the receivables listed above is past due. As a result, no provision has been made for impairment.

5. CASH AND CASH EQUIVALENTS

Cash and cash equivalents consist of:

	2020 R	2019 R
Bank balances	29 800	167 150

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 has 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 1

Cash and Cash Equivalents	29 800	167 150

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

Management considers that the above cash and cash equivalents category is 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. This balance represents highly liquid funds that is available for use by the entity at any point in time. 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.

6. DEFERRED TAX

	2020 R	2019 R
Deferred tax liability		
Investment property	-	(1 453 913)
Deferred tax asset		
Tax losses available for set off against future taxable income	-	5 599 682
Deferred tax liability	-	(1 453 913)
Deferred tax asset	-	5 599 682
Total net deferred tax asset (liability)	**-**	**4 145 769**
Reconciliation of deferred tax asset \ (liability)		
At beginning of year	4 145 769	4 163 342
Increase (decrease) in tax loss available for set off against future taxable income – gross of valuation allowance	(5 599 682)	104 109
Deferred tax on fair value adjustments on investment property	1 453 913	(121 682)
	-	**4 145 769**

Recognition of deferred tax asset

An entity may recognise deferred tax assets only when it is probable that taxable profits will be available against which the deductible temporary differences can be utilised. As the entity will not be able to continue to operate as a going concern or generate any further income due to the disposal of its primary source of income, the immovable property known as ERF 706 Rietfontein, it is improbable that future taxable profits will be available against which the deductible temporary differences can be utilised.

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 22,40% (2019: 22,40%) is used. If the expected manner of recovery is through indefinite use the normal tax rate of 28% (2019: 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 Nil (2019: R1,058,478) at the capital gains tax rate
R Nil (2019: R4,345,761) at the normal tax rate.

7. OTHER FINANCIAL LIABILITIES

	2020 R	2019 R
At amortised cost		
Loan No. 1 – Water Research Commission	-	27 743 769
The unsecured loan bears interest at 0% (2019: 0%). The interest on the loan was suspended from 1 June 2017. The capital repayments was suspended effective 1 July 2018. An agreement was entered into that the capital sum and any interest thereon must be repaid subsequent to the disposal of the Marumati building.		
Loan No. 2 – Water Research Commission	-	2 264 811
The unsecured loan bears interest at 0% (2019: 0%). The interest on the loan was suspended from 1 June 2017. The capital repayments was suspended effective 1 July 2018. An agreement was entered into that the capital sum and any interest thereon must be repaid subsequent to the disposal of the Marumati building.		
Total other financial liabilities	**-**	**30 008 580**
Current liabilities		
At amortised cost	-	30 008 580

The maximum exposure to credit risk at the reporting date is the fair value of the loan mentioned above.

The entity did not default on capital repayments on loans during the year under review. The terms and conditions of the loans were renegotiated. The Board members approved the amendment of the loan agreements which allows ERF 706 to repay the loan after the disposal of the Marumati building, as well as the suspension of any further interest up to the date of disposal. This amendment was effective from 1 June 2017. The capital repayments was suspended effective 1 July 2018.

The disposal of the Marumati building situated at Erf 706 Rietfontein was finalised on 12 July 2019. The funds available from the disposal proceeds was utilised to repay the intercompany loans and balances and the remaining unpaid loan balance was written-off. Refer to note 17 for further details.

8. PAYABLES FROM EXCHANGE TRANSACTIONS

	2020 R	2019 R
Trade payables	-	95 895
Accrued expenses	-	350 000
Deposits received	-	11 499
	-	**457 394**

The comparative year has been restated as a result of a prior period misstatement. Refer to the correction of error (note 25) for further details.

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. The entity has not reclassified the categories of any financial liabilities during the financial year.

All liabilities were settled subsequent to the disposal of the ERF 706 Rietfontein building.

9. SHARE CAPITAL

	2020 R	2019 R
Authorised		
4 000 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.

10. REVENUE FROM EXCHANGE TRANSACTIONS

	2020 R	2019 R
Rental received	42 284	151 246
Recovery of expenditure	1 929	6 899
	44 213	**158 145**

There was an agreement in place, that the remaining tenant will occupy the building and continue to pay lease rentals up until disposal of the building. The building was disposed of on 12 July 2019 whereafter the lease rentals ceased from this date.

11. REVENUE FROM NON-EXCHANGE TRANSACTIONS

	2020 R	2019 R
Revenue arising from debt waiving	20 561 653	-

The disposal of the Marumati building situated at Erf 706 Rietfontein was finalised on 12 July 2019.
On 29 November 2019, the Board approved the repayment of the intercompany (Erf 706 and WRC) loans and balances using the funds available from the disposal proceeds and the write-off of any associated remaining unpaid balance due to the fact that there was insufficient funds to settle the inter-entity loans payable in full and the inability to generate any further income. Refer to note 17 for further details.

12. RECEIVABLE DERECOGNISED/(RECOVERED)

	2020 R	2019 R
Receivable – interest and penalties	(12 210)	13 178

The South African Revenue Services (SARS) refunded R12,210 interest and penalties that were previously disallowed. Refer to note 22 for further details.

13. GENERAL EXPENSES

	2020 R	2019 R
Bank charges	3 057	1 814
Commission and marketing related costs	2 706	-
Professional fees	630	595
	6 393	**2 409**

14. TAXATION

	2020 R	2019 R
Major components of taxation		
Deferred		
Originating and reversing temporary differences	4 145 769	17 573

Deferred taxation was reversed as it is improbable that future taxable profits will be available against which the deductible temporary differences can be utilised.

Refer to note 6 - Deferred tax.

No provision has been made for 2020 tax as the entity has no taxable income.

15. CASH (USED IN) GENERATED FROM OPERATIONS

	2020 R	2019 R
Surplus/ (deficit)	16 433 429	32 007
Adjustments for:		
Revenue arising from debt waiving	(20 561 653)	-
Debt impairment	-	13 178
Annual charge for deferred tax	4 145 769	17 573
Changes in working capital:		
Receivables from exchange transactions	(574)	3 640
Payables from exchange transactions	(457 395)	38 178
	(440 424)	**104 576**

16. RELATED PARTIES

	2020 R	2019 R
Relationships		
Holding company: Water Research Commission		
Related party balances		
Loan accounts – Owing (to) by related parties		
Water Research Commission	-	(30 008 580)
Amounts included in Receivables (Payables) regarding related parties		
Water Research Commission: Payable	-	(86 483)
Related party transactions		
Debt waiving - non-exchange revenue (received from) related parties		
Water Research Commission	(20 561 653)	-
Utilities paid by related parties		
Water Research Commission	(152 207)	(552 092)

Loan accounts to related parties:

The disposal of the Marumati building situated at Erf 706 Rietfontein was finalised on 12 July 2019. Due to insufficient funds to settle the inter-entity loans payable in full and the inability to generate any further income, the Board approved the repayment of the intercompany (Erf 706 and WRC) loans and balances using the funds available from the disposal proceeds and the write-off of any associated remaining unpaid balance, thus releasing Erf of the primary responsibility of the liability. Refer to note 17 for further details.

Utilities paid by related parties:

The Water Research Commission and Erf 706 Rietfontein (Pty) Ltd terminated their lease agreement during the 2016/17 financial year. A condition of the early termination of the lease agreement was that no rent will be payable by the Water Research Commission as from 1 April 2016 until the time of disposal of the building. In lieu thereof the Water Research Commission will be liable for the expenditure incurred by ERF Rietfontein (Pty) Ltd in respect of the maintenance and operations (including all security and utility costs) of the property. The disposal and transfer of the Marumati building situated at Erf 706 Rietfontein was finalised on 12 July 2019 and no further costs were incurred from this date.

17. DISPOSAL OF PROPERTY, SETTLING AND WAIVING OF INTER-ENTITY BALANCES

	R
Inter-entity balances	
Inter-entity creditor	1 103 073
Other fiinancial liability: Water Research Commission Loan 1	27 743 769
Other fiinancial liability: Water Research Commission Loan 2	2 264 811
Total balances owing	**31 111 653**
Consideration paid	10 550 000
Debt waived	**20 561 653**

The disposal of the Marumati building situated at Erf 706 Rietfontein was finalised on 12 July 2019. The proceeds from the disposal of the ERF 706 Rietfontein building was received in July 2019. On 29 November 2019, the Board approved the repayment of the intercompany (Erf 706 and WRC) loans and balances using the funds available from the disposal proceeds and the write-off of any associated remaining unpaid balance due to the fact that there was insufficient funds to settle the inter-entity loans payable in full and the inability to generate any further income.

The financial liability (loans owed to Water Research Commission) were therefore extinguished, by discharging a part of the liability (by paying the Water Research Commission) and the remaining debt being waived by the Water Research Commission.The difference (R20,561,653) between the carrying amount of the financial liability extinguished and the consideration paid was recognised in surplus or deficit and the liability was removed from the statement of financial position.

18. CONTINGENCIES

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

19. FINANCIAL INSTRUMENTS DISCLOSURE

Categories of financial instruments

	At Fair Value R	At amortised cost R	Total R
2020			
Financial assets			
Receivables from exchange transactions	-	7 305	7 305
Cash and cash equivalents	29 800	-	29 800
	29 800	**7 305**	**37 105**

	At amortised cost R	Total R
Financial liabilities		
Other financial liabilities	-	-
Payables from exchange transactions	-	-
	-	-

	At Fair Value R	At amortised cost R	Total R
2019			
Financial assets			
Receivables from exchange transactions	-	7 305	7 305
Cash and cash equivalents	167 150	-	167 150
	167 150	**7 305**	**174 455**

	At amortised cost R	Total R
Financial liabilities		
Other financial liabilities	30 008 580	30 008 580
Payables from exchange transactions	457 394	457 394
	30 465 974	**30 465 974**

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.

VAT payable/receivable is not included in the disclosure above due to the fact that it is not a financial asset/liability.

20. 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. Liquidity risk is the risk that a company may be unable to meet short term financial demands.

The table below provides an analysis of the entity's 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 R	Between 1 and 2 years R	Between 2 and 5 years R	Over 5 years R
At 31 March 2020				
Trade and other payables	-	-	-	-
Loan 1: Water Research Commission	-	-	-	-
Loan 2: Water Research Commission	-	-	-	-
At 31 March 2019				
Payables	457 394	-	-	-
Loan 1: Water Research Commission	27 743 769	-	-	-
Loan 2: Water Research Commission	2 264 811	-	-	-

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.

Credit risk

Credit risk consists mainly of cash deposits, cash equivalents 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:

	2020 R	2019 R
Financial instrument		
ABSA Bank	29 800	167 150
Receivables	7 305	7 305

21. GOING CONCERN

These financial statements were not prepared based on the expectation that the entity will be able to continue to operate as a going concern. The disposal of the primary source of income, the immovable property known as ERF 706 Rietfontein was finalised on 12 July 2019, as a result ERF will not be able to offer and provide office accommodation to the WRC or other potential tenants and would therefore not be able to continue as a going concern in the forseeable future. Accordingly assets are measured at their liquidation values (representing the impaired values thereof) and liabilities are measured at their exit values. The WRC as shareholder is in the process of considering what viable options exist for the potential re-purpose of the ERF 706 company.

22. FRUITLESS AND WASTEFUL EXPENDITURE

	2020 R	2019 R
Opening balance as previously reported	-	13 176
Add: Expenditure identified - current	50	-
Less: Amounts recoverable - current	(50)	-
Less: Amount written off - prior period	-	(13 176)
Closing balance	**-**	**-**

Expenditure identified in the current year and recovered from employee

Penalty incurred for late lodgment	50	-

Penalty incurred for the late lodgment of the Company Annual Return with CIPC for 2019:

The lodgment of the 2019 ERF 706 annual return to the Company and Intellectual Property Commission ("CIPC") was due on 30 April 2019. The return was however submitted late on 12 June 2019 and as a result the CIPC levied a late submission fee of R50. The official responsible for the late lodgment has refunded the R50 penalty and the appropriate consequence management has been undertaken and is in the process of being finalised.

Amounts written-off - prior period

During the 2016/17 financial year, the South African Revenue Services (SARS) performed an audit on the VAT matters of ERF 706 Rietfontein (Pty) Ltd and determined that the entity was claiming input VAT on invoices from City of Tshwane which did not reflect the entity's VAT number. SARS initially disallowed the claims and levied penalties and interest. ERF 706 Rietfontein (Pty) Ltd objected and the claims were refunded but the interest and penalties were not reversed.

The WRC on behalf of ERF 706 engaged various officials at the City of Tshwane and after intense and often frustrating interactions was able to obtain revised invoices from them that contained the required ERF 706 VAT number for submission to SARS.

ERF 706 submitted numerous objections and appeals to SARS to have the interest and penalties waived and refunded. In terms of section 223(3) of the Tax Administration Act No.28 of 2011 SARS indicated that they only waive penalties and interest for a "substantial understatement". Therefore, SARS Objection Committee ruled that the penalty did not relate to a "substantial understatement" and thus the amount was considered irrecoverable and was written off in the prior year. After further deliberation and discussion in the current year SARS agreed to pay R12,210 of the amount previously deemed as irrecoverable and written off (Refer to note 12).

23. IRREGULAR EXPENDITURE

	2020 R	2019 R
Opening balance as previously reported	173 630	80 652
Add: Irregular Expenditure - current year	37 358	92 978
	210 988	**173 630**
Analysis of expenditure awaiting condonation per age classification		
Current year	37 358	92 978
Prior years	173 630	80 652
	210 988	**173 630**
Details of irregular expenditure for the year		
Incident		
Payments in respect of expired contract	37 358	92 978
	37 358	**92 978**

During the current and prior financial years payments were made in respect of maintenance of the elevators in the Marumati Building owned by Erf 706 Rietfontein (Pty) Ltd without a valid contract as the original supplier contract had expired. This was a sole source supplier.

24. COMPARATIVE FIGURES

Certain comparative figures have been restated as a result of prior period errors.

25. PRIOR PERIOD ERRORS

Cahi Auctioneers was appointed on 7 April 2017 through a competitive bidding process to dispose of the Marumati building situated at Erf 706 Rietfontein by means of an auction. The auction took place on 20 July 2017. Commission and marketing related costs the value of R 485 648 (excluding VAT) were accrued for in the 2017/18 financial year in terms of the Service level agreement with Cahi Auctioneers, which stated that the auctioneer shall be entitled to allocate to himself from the deposit any amount that is due and payable to the auctioneer by the seller in respect of total cost of advertising and conducting the sale of the property, i.e. commission and advertising costs. From this Service Level Agreement it appeared that the Auctioneer was entitled to both commission and also to recoup its advertising (marketing) cost. Based on this interpretation marketing costs of R135 648 was accrued during the 2017/18 financial year.

During the 2019/20 financial year the transfer of the Marumati building situated at Erf 706 Rietfontein was finalised. The proceeds from the disposal of the ERF 706 Rietfontein building was received in July 2019. The final statement of account received from the attorneys reflected that CAHI Auctioneers only deducted the commission of R350,000 (excluding VAT) from the proceeds received. The Service level agreement (SLA) was poorly phrased and as a result marketing costs to the value of R135 648 were erroneously accrued for in the 2017/18 financial year resulting in an overstatement of expenditure and payables. This was an isolated occurrence.

The correction of the error results in adjustments as follows:

Statement of financial position

	As previously reported	Correction of error	Restated
Payables from exchange transactions	593 042	(135 648)	457 394
Accumulated Surplus	(16 530 439)	135 648	(16 394 791)
	(15 937 397)	-	**(15 937 397)**

26. EVENTS AFTER THE REPORTING DATE

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

TAX COMPUTATION

	R
Net income per income statement	20 579 198
Capital gain on sale of building	459 447
Temporary differences	
Write off of inter-entity loans	(20 561 653)
Recoupment of Section 13 quin allowance previously deducted	4 345 761
Impairment of VAT receivable	(12 210)
Interest recouped on loan write - off	13 361 653
Selling expenses previously deducted	485 648
	(2 380 801)
Taxable income for 2020	**18 657 844**
Assessed loss brought forward	(19 998 865)
Tax loss carried forward	**(1 341 021)**
Tax thereon @ 28%	

WATER
RESEARCH
COMMISSION

WATER RESEARCH COMMISSION

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