# Annual Report 2020/21

50 Years

WATER RESEARCH COMMISSION

## 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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ISBN 978-0-621-49370-2
Report No. RP 114/2021

# Annual Report

# 2020/21

50 Years

WATER RESEARCH COMMISSION

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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 |
| **COVID-19** | 2019 novel coronavirus |
| **CR-SSP** | Climate resilient sanitation safety plans |
| **CR-WSP** | Climate resilient water safety plans |
| **CSR** | Corporate social responsibility |
| **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 |
| **FETWater** | Framework Programme for Research, Education and Training in the Water Sector |
| **GE** | Group Executive |
| **HEI** | Higher-education institutions |
| **HDI** | Historically disadvantaged institution |
| **ICT** | Information and communication technology |
| **I&I** | Innovation and impact |
| **IoE** | Internet of everything |
| **IORA** | Indian Ocean Rim Association |
| **IP** | Intellectual property |
| **KPA** | Key performance area |
| **KSA** | Key strategic area |
| **MBDA** | Mandela Bay Development Agency |
| **MTEF** | Medium Term Expenditure Framework |
| **Natsurvs** | National surveys (of water and wastewater management) |
| **NDP** | National Development Plan |
| **NICD** | National Institute for Communicable Diseases |
| **NSSS** | Non-sewered sanitation systems |

| | |
|---|---|
| **NWSMP** | National Water & Sanitation Master 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 |
| **SAMRC** | South African Medical Research Council |
| **SASTEP** | South African Sanitation Technology Enterprise Programme |
| **SER** | Society for Ecological Restoration |
| **SMME** | Small, medium and micro enterprise |
| **SCM** | Supply chain management |
| **SDG** | Sustainable Development Goal |
| **SIPS** | Strategic Integrated Projects |
| **S&T** | Science and technology |
| **UN** | United Nations |
| **UNDP** | United Nations Development Programme |
| **UW** | Umgeni Water |
| **WC/WDM** | Water conservation/water demand management |
| **WEF** | Water-energy-food |
| **WMA** | Water management area |
| **$W_2$RAP** | Wastewater risk abatement planning |
| **WRA** | Water Research Act |
| **WRC** | Water Research Commission |
| **WRL** | Water Research Levy |
| **WRM** | Water resource management |
| **WSA** | Water Services Act |
| **WSP** | Water safety planning |

# Minister's report

**Mr Senzo Mchunu**
Minister of Water and Sanitation

South Africa was one of the first countries in the world to recognise the right to water through its Constitution.

More than ten years later, in 2010, the United Nations General Assembly explicitly recognised the human right to water and sanitation. This right to water entitles every person to have access to sufficient, safe, acceptable, physically accessible and affordable water for personal and domestic use. In turn, the right to sanitation entitles all people to have physical and affordable access to sanitation, in all spheres of life, that is safe, hygienic and secure, and provides privacy and ensures dignity. The ten-year anniversary of this right to water was celebrated during 2020 at a time when the world was experiencing one of the worst pandemics in living history.

The COVID-19 pandemic that raged throughout the world in 2020/21 thrust water service delivery into sharp focus. This global health crisis has placed water squarely on the world agenda. Water, sanitation and hand hygiene, together with physical distancing, are central to preventing the spread of COVID-19, and a first line of defence against this serious threat to lives and health systems.

While short-term measures have been put in place to assist thousands of households across the country, there is a realisation that water tanks and tankers must be replaced by long-term, sustainable measures. The National Development Plan provides a clear vision in this regard: that before 2030, all South Africans must have affordable access to sufficient safe water and hygienic sanitation to live healthy and dignified lives.

Achieving universal access to water and sanitation comes with numerous challenges, not the least of which is a rising demand amid

increasing water scarcity and a changing climate. Achieving sustainable access for all communities will require creativity and innovation to turn risks into opportunities and provide fit-for-purpose solutions and technologies that offer long-term benefits of development and transformation. Ongoing research, development and innovation, and the harnessing of international developments, are critical to successfully meet Government's targets, as is the translation of research and innovation into implementation at scale. Among others, we must expand the water mix through unusual solutions involving groundwater, desalination, fog and cloud harvesting.

In turn, partnerships are critical in meeting water and sanitation targets. We recognise the progress in this regard, such as the Water and Innovation Forum, a partnership between the Water Research Commission (WRC) and the South African Local Government Association (SALGA) that was launched in 2020/21. Similarly, the WRC and its various partners have made good progress with the National Wastewater Surveillance Programme, which is exploring wastewater surveillance as an early warning system for rising COVID-19 hotspots.

The post-COVID road to recovery will be arduous and requires all sectors to take hands. We need to continue to build networks of ideas, individuals and institutions to ensure that no one is left behind. For the sake of our people we must persevere, and we must succeed.

**Mr Senzo Mchunu**
Minister of 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 2020/21.**

During the 4th quarter of 2020/21, the WRC started the celebration of its 50-year anniversary since it was established in 1971 in terms of the Water Research Act. The WRC has firmly established itself as a global and national leader in providing innovative technology solutions for water and sanitation sector challenges.

During the year under review the WRC, together with other institutions around the world, had to adapt to several constraints and challenges presented by the COVID-19 pandemic. The WRC Board, Executive Management and the rest of the staff engaged comprehensively on the COVID-19 issue, ensuring a scientifically-based response, whilst limiting negative impacts due to COVID-19 on the business of the WRC.

The cooperation of all internal and external stakeholders helped the WRC to mitigate the impact of COVID-19 on its operations, to such an extent that it managed to meet the majority of its annual performance targets. During the year under review, the WRC has continued to play its important role as a water sector knowledge hub by ensuring that its research and innovation products contributed to the improvement of sustainable water and sanitation services for all South Africans.

On behalf of the Board I am pleased to note some of the performance highlights for 2020/21 as follows:

- The WRC initiated several research activities in 2020/21 related to various aspects of the COVID-19 pandemic. Most notable of these was the proof-of-concept study to help facilitate the implementation of a nationwide initiative for the surveillance of COVID-19 spread in communities using a water and sanitation-focused approach as a means of supporting current virus surveillance initiatives.

- The WRC successfully moved its knowledge dissemination activities to virtual platforms during 2020/21. 19 Dialogues were held during the year under review, which enabled robust engagement around various critical water management issues.
- On 18 and 19 March 2021, the WRC successfully hosted the 'Women in water and science and the impact of COVID-19' conference. This conference, which was held during National Water Week 2021, formed part of the WRC 50-year campaign and reflected on the role of women in water research science over the past 50 years.
- The WRC launched several initiatives with national and international partners during the year under review. This includes the Water Technology and Innovation Forum, launched in partnership with the South African Local Government Association (SALGA) and the water innovation grants programme launched with the United Nations Development Programme (UNDP).

I wish to thank the Minister of Human Settlements, Water and Sanitation, Deputy Minister and officials of the departments of Human Settlements and 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

# CEO's report

**Dhesigen Naidoo**
WRC CEO

During the last quarter of 2020/21 the WRC entered its fiftieth year. Over the past five decades the Commission has served South Africa as the country's foremost water knowledge and innovation partner.

Having a knowledge partner in the water and sanitation sector to enhance science-based decision-making has never been as important as in 2020/21.

The novel coronavirus (COVID-19) caused significant disruptions around the globe over the past year. While lockdown restrictions disrupted research work some WRC 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 waste-water and faecal sludge as a means of estimating the prevalence and burden of COVID-19 infections in communities. This has not only provided fundamental support to the South African Government in the fight against the pandemic, but has placed the local science community on the global platform.

The pandemic has also highlighted the existing disparities with regards to access to basic services. The WRC remains committed to achieving the international goals of universal access to safe water and sanitation. An important marker in 2020/21 was the launch of the United Nations (UN) Sustainable Development Goal (SDG) 6 Global Acceleration Framework. This framework seeks to support accelerated country progress in five key areas of SDG 6 (clean water and sanitation): financing, data and information, capacity development, innovation and governance.

There is significant convergence in all global analyses that, from an economic, social, environmental, political and security viewpoint, the increase in water scarcity – on the back of decreased availability as well as deteriorating water quality – is a crowning water crisis. South Africa is not immune to this. As a response, 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 into tangible, accessible and affordable products and services for use on the ground. The aim is for research, development and innovation initiatives to, in addition to improving the quality of life of poor communities, create fertile ground for industrialisation and entrepreneurial development in South Africa. In the 2020/21 financial year alone the WRC reported 43 innovations.

Further, in 2020/21 the WRC finalised 84 research projects, indicating a significant contribution to knowledge in the water and sanitation sector. The impact of this research, development and innovation can be seen across the sector, from enhancing communities' resilience to climate change, and improving water and wastewater management in industry and mining, through to aiding transformation through better alignment of land–water reform processes and sharing water knowledge nationally and internationally across virtual networks.

A prominent focus area has been next-generation, non-sewered sanitation. The WRC leads in demonstrating new sanitation solutions that require little to no water and/or beneficiate sanitation waste. This is mainly being done through the South African Sanitation Technology Enterprise Programme (SASTEP), which the WRC manages through the support of national and international partners. A highlight in this regard during 2020/21 was the implementation of next-generation sanitation technology at Tsholetsega Primary School, in Krugersdorp. The Clear recirculating toilet system collects waste from flush-type toilets, which is then treated by a closed system on-site. Water is recovered, treated and reused for flushing purposes.

The Commission's research scope actively involves communities in the research projects and engages key partners to upscale and maintain interventions post-project. In the 2020/21 financial year alone, 37 research projects had a direct impact on the lives and livelihoods of communities through water-related initiatives and capacity building.

For many years, and particularly in the past ten, the WRC has been a beacon of transformation in the sector. The Commission has prioritised the achievement of important milestones, including that of having the majority of project leaders being representative of the categories of black, women and youth. The students on WRC projects are predominantly black and majority female. This has been achieved with the generous mentor contributions of senior researchers and innovators. This has also facilitated an important diversification of the research and innovation enterprise with a higher emphasis on impact and innovation.

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 Water Research Commission entered its fiftieth year in challenging world circumstances, most notably as a result of the outbreak of the COVID-19 pandemic.

In 2020/21, the COVID-19 pandemic posed a significant additional challenge to the science, technological and innovation sector. The pandemic has invigorated institutions, including the WRC, to quickly embrace the 4IR (4th industrial revolution), artificial intelligence, and other appropriate innovations to remain a 'going concern'.

While lockdown restrictions disrupted research work some WRC 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 wastewater and faecal sludge as a means of estimating the prevalence and burden of COVID-19 infections in communities. This has not only provided fundamental support to the South African Government in the fight against the pandemic, but has placed the local science community on the global platform.

The WRC's performance during 2020/21 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. An added dimension which needed to be addressed in 2020/21

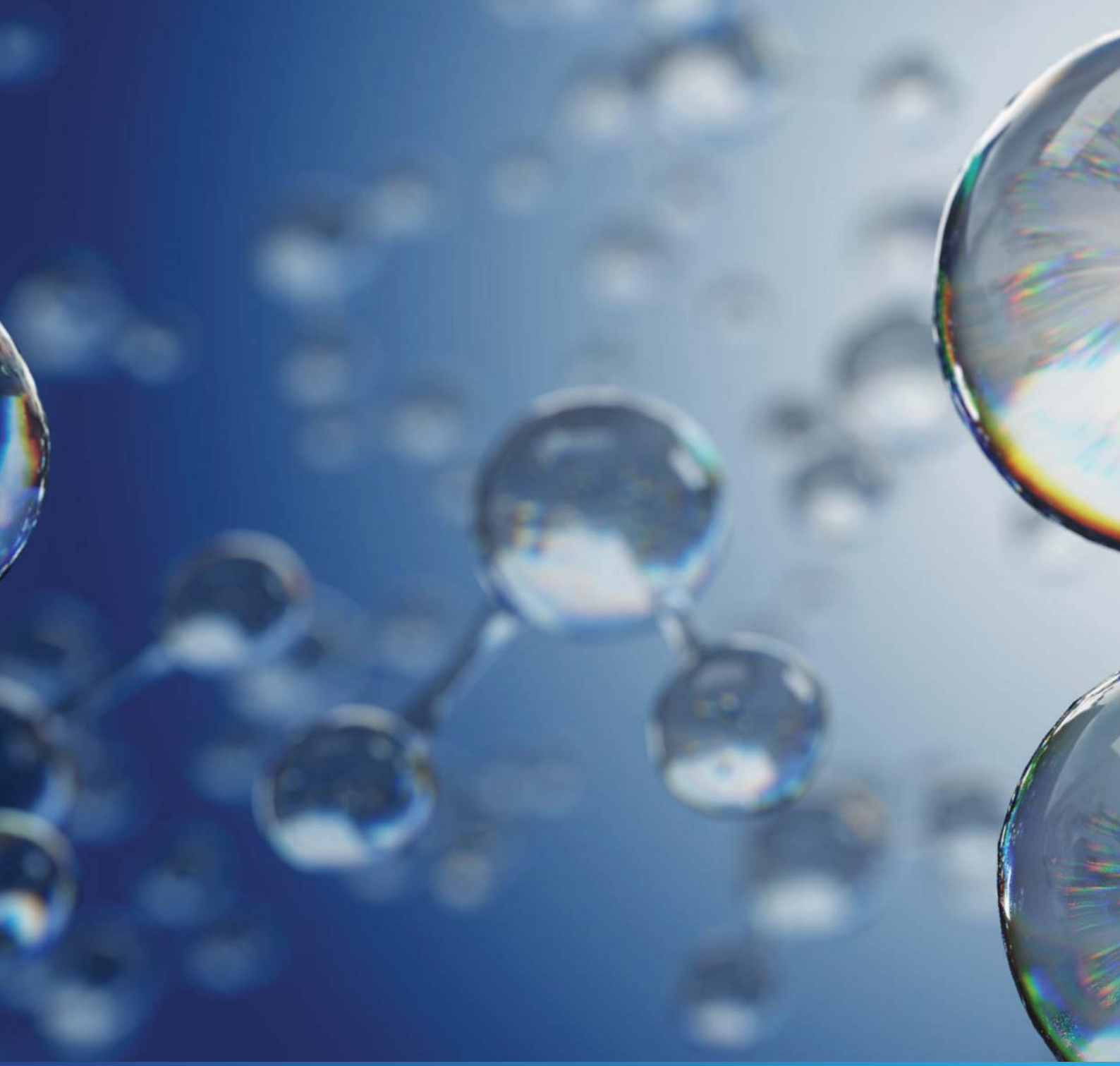
was the novel coronavirus (COVID-19). This pandemic put a magnifying glass on the issues of water security and safe sanitation access. The WRC was prominent in providing analyses, new knowledge and monitoring and evaluating new systems towards curbing the spread of the virus.

Despite the challenges created by COVID-19 and the associated hard lockdown, the WRC counted several performance highlights for 2020/21. A number of research projects were concluded in aid of improved decision-making around South Africa's water resources. This included investigations around climate change impacts on rural communities in the Luvuvhu River system; water management in the pelagic fish processing sector; and determining the water footprint of the Western Cape grape farming sector, among others. Studies were also concluded on water demand management in the mining sector, management of shared groundwater resources, and aligning water and land reform processes.

In terms of the WRC's key performance targets, 122 RDI projects were initiated during 2020/21 while 84 projects were finalised during the same period. Over the past five years the WRC has finalised 484 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 108 WRC research projects in 2020/21 had a direct impact on the lives and livelihoods of communities through water-related interventions and capacity building.

The WRC had a total income (including levy and leverage income) of R344,7 milion during 2020/21. Levies made up 77% of the WRC's income during the past financial year. With regards to the WRC's financial performance, the Water Research Levy is the Commission's main source of revenue.

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. The Commission concluded several important partnerships during the year, including one with the South African Local Government Association (SALGA) to launch a Water Technology and Innovation Forum and one with the United Nations Development Programme (UNDP) to provide grants to water innovators. Several partnerships were also concluded with the eye on facilitating COVID-19 knowledge and information sharing.



# Section A:
## Strategic Overview

# 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 of 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.

There is significant convergence in all global analyses that from an economic, social, environmental, political and security viewpoint the increase of water scarcity on the back of decreased availability as well as deteriorating water quality is a crowning global crisis. South Africa is not immune to this. As a response, 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 aim is for research, development and innovation initiatives to not only improve the quality of life for poor communities, but to create fertile ground for industrialisation and entrepreneur development in South Africa.

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 to 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 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.

*Figure 1. Five actions of the WRC towards achieving its vision*

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

1. Paradigm
2. Partnership
3. Positioning
4. People

***Figure 2. Core principles of the WRC strategy***

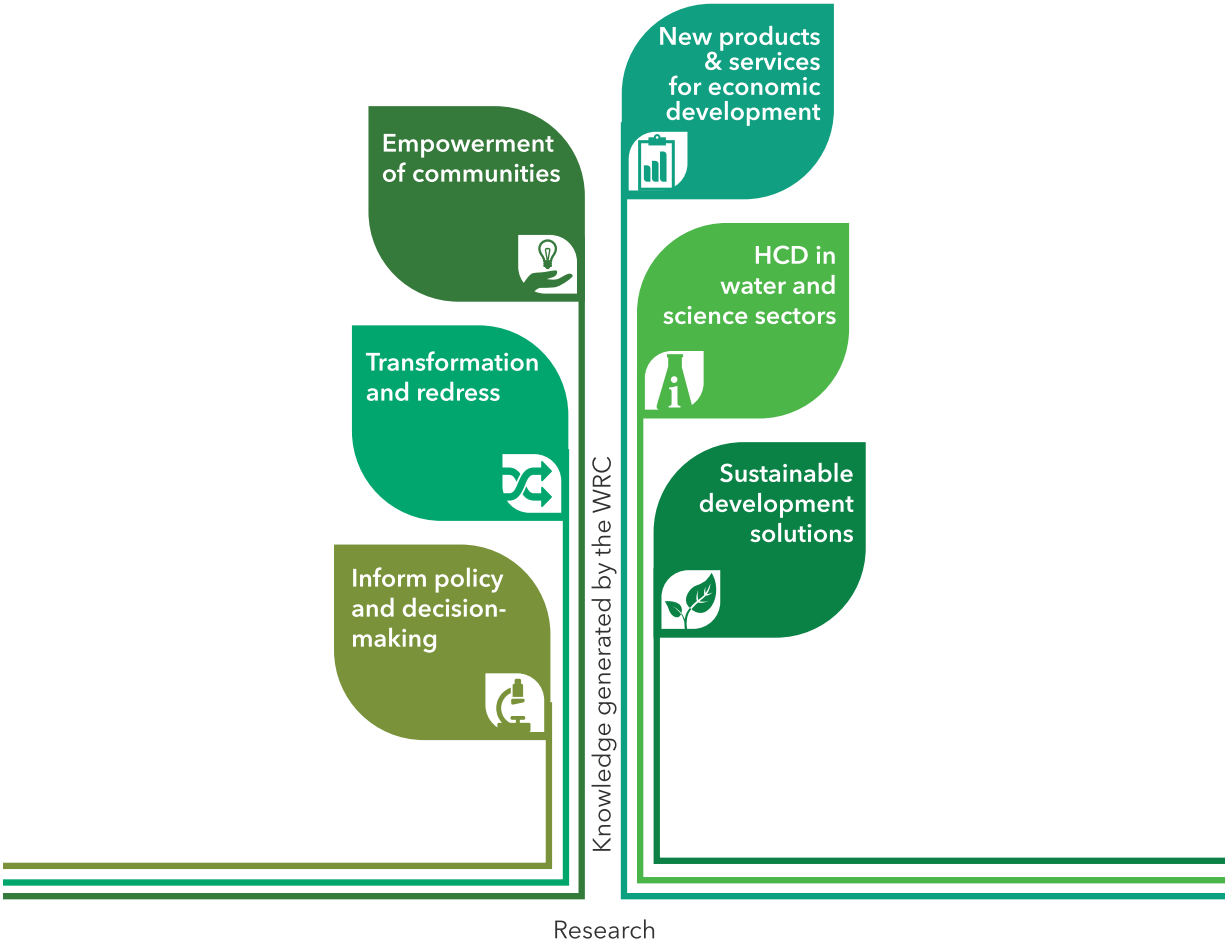
# STRATEGIC OUTCOME-ORIENTED GOALS

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. By 2017/18 the Knowledge Tree had been well entrenched in the WRC's activities, with all research proposals articulating objectives of the Knowledge Tree branches.

***Figure 3. 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: Strategic outcome-oriented goals illustrated by the WRC Knowledge Tree*

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 guide decision-making, influencing the development of policy, practice or service provision, shaping legislation and alters behaviour. Policy and Ministerial briefs are generated that distribute to government departments that 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 research projects, the WRC is able to capitalise on projects that produce new intellectual property or have the ability to 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 to continuously increase the number of Postdoc, PhD and Masters students on its projects. The WRC also focuses on providing support to historically disadvantaged institutions through mentorship. Emphasis is further placed on building capacity in the science community both in South Africa and Africa by encouraging black project leaders to manage WRC projects.

## 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 are active participants in the research. The aim is to have a direct positive impact on the livelihood of the communities in which the research project is conducted by transferring knowledge that builds capacity that would assist with post project sustainability.

## Strategic outcome-oriented goal 5:
### Promote transformation and redress

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 reduces poverty and inequality in communities. In addition, the WRC funds several projects aimed at increasing food security in communities.

## Strategic outcome-oriented goal 6:
### Drive sustainable development solutions

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

# THE WRC LIGHTHOUSES

The purpose of the WRC Lighthouses is 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 its 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, these are 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 this 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 that was 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 sit 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 the 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 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.

*Figure 4. The WRC Lighthouses.*

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.

# 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.

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

The principal aim of the WRA is to provide for the promotion of research in connection with water affairs. The Act requires the establishment of the WRC and the Water Research Fund, and sets the framework within which the WRC operates. It also provides for the establishment of the WRC as a Schedule 3A public entity, thereby requiring compliance with the PFMA Act (Act No. 1 of 1999) and Treasury Regulations.

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

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

### *National Water Act (Act No. 36 of 1998)*

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

### *Water Services Act (Act No. 108 of 1997)*

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

## Planned legislative mandates

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

### *Review of the water-related legislation*

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

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

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

### *Water Research Amendment Bill*

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

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

While the new clauses in the Amendment Bill do not legislate for a change in the relationship between the DWS as the shareholder department and the WRC as a public entity, the process of developing the draft Bill has created a discussion space enabling these two public sector partners to draw closer together and iron out the modalities of governance, cooperation and the complementarity of roles.

# POLICY MANDATE

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

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

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

## Alignment of WRC activities to NWRS-2

The National Water Resource Strategy 2 (NWRS-2) calls for a much larger contribution from R&D to empower the implementation of the Strategy. In addition, the Strategy also engages the further development of water sciences in South Africa. One of the key deliverables that the NWRS-2 emphasises is the Sector Research and Innovation (R&I) Strategy. In support of this, it is incumbent upon the WRC to coordinate the development of the National Water R&D Plan, with the latter also emphasised in the Water Research Amendment Bill. Some of the additional research knowledge contributions that the NWRS-2 requires from the WRC include:

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

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

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

## 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 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 a number of 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 plan 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.

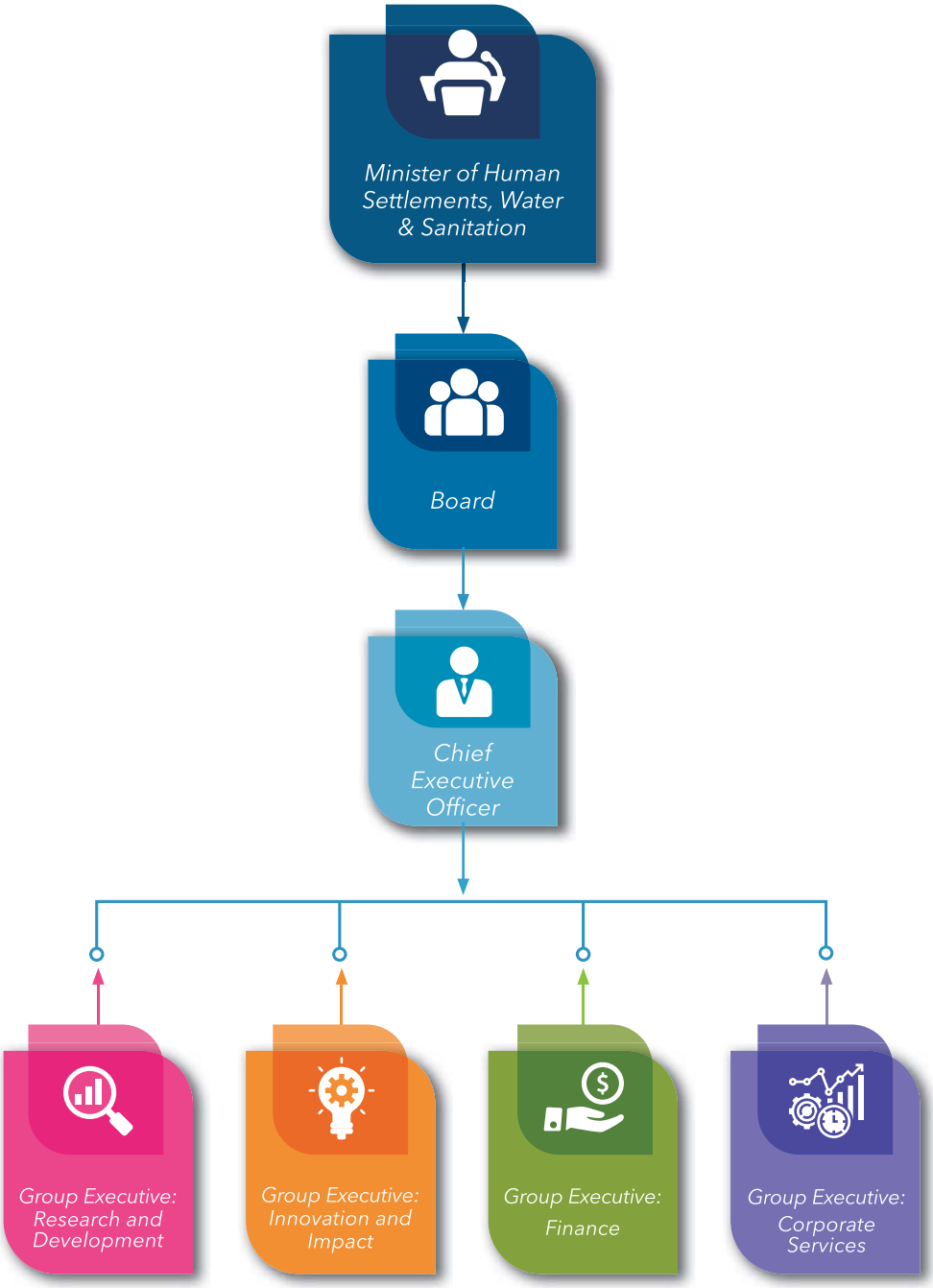
As such, four core teams have been developed:

1. **Research and development (R&D) –** which focuses on the generation of new knowledge as well as the mechanisms needed to support this, including human capital development and skills development
2. **Impact and Innovation (I&I) –** 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.

3. **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.

4. **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.

***Figure 5: WRC organisational structure.***



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 Group Executives report directly to the CEO.

## 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, I&I 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, Wastewater and Sanitation Futures, and Water Utilisation in Agriculture (Figure 6).

***Figure 6: 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 have to 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

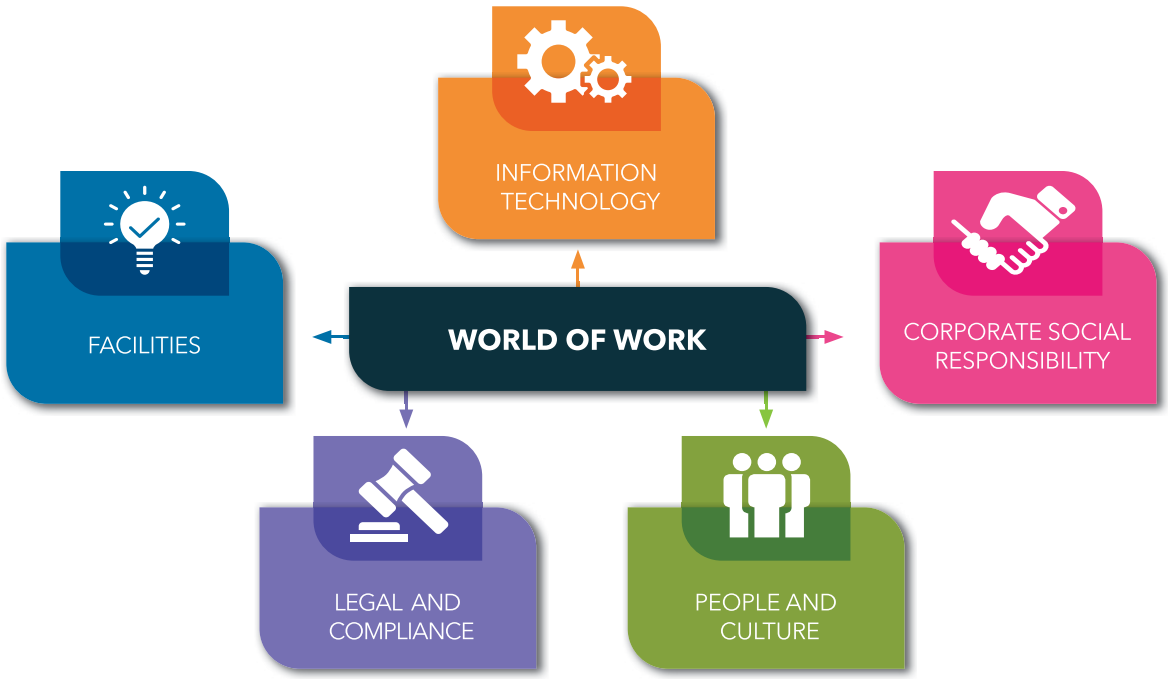
The WRC's workplace is being defined by technology and the employees that are using it, corporate social responsibility, good governance and the physical work environment.

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 may 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 also 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 7). This approach ensures that the WRC is moving to the next level in terms of business success and employee satisfaction.

***Figure 7. The Corporate Services function within the WRC.***




Bh
Hs
Hassium
Meitnerium
Darmstadtium
Rg
Roentgenium
Copernicium
Gadolinium
Terbium
Dysprosium
Holmium
BK


# Section B:
## Performance Overview

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## Performance Overview

The WRC has enjoyed 50 successful years of servicing the water knowledge and innovation needs of South Africa with major contributions to the global environment. It has over this time become a 'glue institution' for the South African water research and innovation community of practice. It has also contributed to global institutional development.

In recent years, in lieu of looming climate change and increasing water scarcity, the WRC has heightened its efforts to not only continue to 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 aim is for research, development and innovation initiatives to not only improve the quality of life for poor communities, but to create fertile ground for industrialisation and entrepreneur development in South Africa.

In 2020/21, the COVID-19 pandemic posed a significant additional challenge to the science, technological and innovation sector. The pandemic has invigorated institutions, including the WRC, to quickly embrace the 4IR (4th industrial revolution), artificial intelligence, and other appropriate innovations to remain a 'going concern'.

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 2020/21.

### Empowering communities

*Advisory panel on weather and climate for the water sector*

The WRC's climate change research programme regularly assesses the role and impact of climate on water resources and also characterises its contribution to climate-induced disasters. This programme is implemented through a flagship programme (Climate Change Lighthouse), which has operationalised collaborative research on priority water-related climate issues with partnerships forged along the innovation value-chain to enhance water research and development to address the water sector challenges in light of the changing climate. During the year under review an advisory panel was established for provision of a regular bulletin which talks to the water situation

in South Africa while providing an outlook and advisory to inform planning, risk reduction and adaptive response to anticipated climate risks. The primary purpose of the panel is to regularly convene a climate and weather summit that discusses, amongst others, weather and climate risks at hand and issues the above-mentioned bulletin. The focus is on a climate-resilient developmental response, over and above fears regarding the impacts of projected future climate. It is always important to act proactively so that adaptive capacity can be continually improved. It is expected that this panel will upscale into a sustained community of practice on climate change. In addition, a virtual Dialogue was held on 4 November 2020 to discuss, among others, weather and climate risks at hand and provide an outlook and advisory in order to inform planning, risk reduction and adaptive response. Experts were drawn from a variety of institutions across South Africa. The Dialogue also provided a reflection of the 2019/20 summer to winter seasons with outlook and reflections from the water security and an agricultural perspective. The aim was to continue examining the predicted changes in an attempt to understand the nature of the future climate with a purpose of recommending the appropriate responses for selected water-linked sectors.

### *Determining the water use of agroforestry systems*

A study concluded during 2020/21 sought to broaden the understanding of the opportunities that agroforestry provides to strengthen smallholder agricultural systems. Factors that other studies have identified as hindrances to the adoption of agroforestry, such as high labour requirements and the lack of available planting material were considered. The research was conducted at a research facility of the Department of Agriculture and Rural Development, Owen Sithole College of Agriculture, and the privately owned Fountainhill Estate at Wartburg, KwaZulu-Natal Province. On-farm sites were also identified for participatory action research with smallholder farmers. The study focused on multi-purpose, short-lived woody legumes. An indigenous species, Sesbania sesban (referred to here as Sesbania) and an agronomic crop, pigeon pea (Cajanus cajan), were selected as the woody species for the trials. Three systems, namely, improved fallow, alley cropping, and silvopastoral systems, were tested. The study concluded that the choice of species and the spatial arrangement is crucial if competition for light and water is to be minimised. Temporal arrangements may be useful in avoiding competition but this requires access to sufficient land for cultivation. The inclusion of drought tolerant woody species, such as pigeon pea, can make farming systems more resilient and better suited to the anticipated effects of climate change (specifically erratic rainfall and higher temperatures). The inclusion of new woody species with which people are unfamiliar may also require changes in their eating habits or will require efforts to access new markets (e.g. pigeon pea grain).

## *Creating awareness on new non-sewered sanitation standards*

On 20 August 2020, the South African Sanitation Enterprise Programme hosted a SANS 30500 Awareness Workshop for policymakers and regulators that interface with sanitation matters at the national government level. As the coordinator of the national system of innovation around emerging and innovative sanitation technologies in South Africa, SASTEP actively strives to create awareness and to foster an enabling environment that aids with the adoption of appropriate and innovative sanitation technologies. Non-sewered sanitation systems (NSSS) offer an opportunity to close the sanitation gap between the sanitation solutions that are currently being deployed, especially given the financial and budgetary constraints and large capital investment required to provided sewer connection to every home. The development of a standard by ISO for non-sewered sanitation systems (NSSS) is not only timeous but provides an opportunity for the development of NSSS technologies that can assist with closing the sanitation gap. The SANS 30500 standard provides general safety and performance requirements for product design and performance testing of prefabricated integrated treatment units that are not attached to a network sewer or drainage system.

## *Investigating the impact of climate change on the communities of the Luvuvhu River catchment*

During 2020/21 the WRC concluded a study which investigated the impact of future climate change scenarios on water availability for agricultural and municipal water uses. The study also developed practical adaptation options for vulnerable communities in the Luvuvhu River catchment, Limpopo Province. Results of the study showed significant changes to the present-day climate of the catchment. Since 2010, mean monthly surface air temperatures have been consistently higher than the 1981 – 2020 long-term mean. This has resulted in significant impacts on evaporation from exposed soils and surface water bodies. The area is also experiencing a prolonged dry season, with

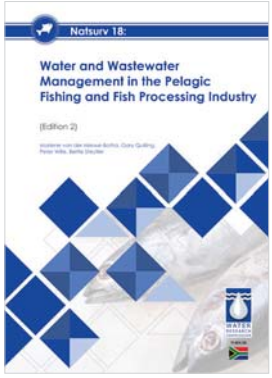
implications for fire regimes in grasslands in the drier lower catchment, which is dominated by smallholder farmers. Projections show an expected increase in future water requirements for three selected crops (banana, maize and tomato). The future anticipated irrigation water requirements will place pressure on available water resources from Albasini Dam. The projected decrease in future rainfall is also expected to reduce crop productivity in rainfed agriculture. An expected increase in domestic water requirements, combined with the need to supplement Giyani regional and Matoks bulk water-supply scheme, is further expected to place severe pressure on the Nandoni Dam system. Water availability will also be experienced by reduced capacity in the dams as a result of sedimentation, and evaporation losses. The findings provide important decision support on aspects of how climate change affects agricultural sustainability and domestic water requirements in the catchment from the present moment until the end of the century. This will contribute significantly to issues of development planning and issues of settlement expansion in relation to water availability. As part of the study a climate change adaptation plan was developed together with stakeholders.

## Informing policy and decision-making

*Wastewater-based surveillance of COVID-19*

The concept of screening municipal wastewater and environmental water quality as an epidemiological tool for viruses is not a new concept, and has been used to help inform broader infectious disease epidemiological surveillance and mitigation efforts such as the Global Polio Eradication Initiative. Studies have shown that environmental surveillance of SARS-CoV-2 (the virus responsible for the COVID-19 disease) signals or biomarkers (typically RNA) can be a low-cost solution for tracking COVID-19 outbreaks in communities. During 2021/21, the WRC with its research partners launched a proof-of-concept study to help facilitate the implementation of a nationwide initiative for the surveillance of COVID-19 spread in communities using a water and sanitation-focused approach as a means of supporting current virus surveillance initiatives. Two virus recovery methods were successfully tested. Phase Two of the initiative – pilot-scale monitoring – started towards the end of 2020. Partnerships for pilot-scale monitoring were established through Phase One between laboratories, municipalities, the Department of Water and Sanitation, private sector and research organisations. This phase saw the scaling up and commissioning of a collaborative monitoring initiative in provincial hotspots using the sampling and testing protocols developed in Phase One.

## *Improving water and wastewater management in the pelagic fishing sector*




During 2020/21 the WRC concluded a review of the status of the South African pelagic fishing and fish-processing industry. The study, which formed part of the Commission's National Surveys (Natsurvs) undertaken for South African industrial sectors, focused on specific water use and effluent generation rates, specific energy consumption rates, and best practices in the management of water and effluent, and follows on from the first study undertaken in 1987. The study provided an overview of the most pertinent norms and standards related to water management in the sector as well as legislation that regulates the industry at international and local levels. It was found that a number of cleaner production technology principles are being implemented to aid in the reduction of water consumption in the factories assessed, such as spill prevention, minimising contact time between fish and water and by raising awareness among staff. Other practices were described to reduce freshwater consumption, e.g., modification of the cutting tables by installing high-pressure cleaning sprayers on the blades which cut off heads and tails. The study concluded that water management within the pelagic fishing industry has improved since the initial report, and that effluent flow and quality were more intensively monitored in 1987 compared to 2020. Several recommendations towards further improvement are made in the final report.

## *Amanzi [water] for Food: Developing a social learning network approach in agriculture*

The WRC with its research partners concluded a project in 2020/21 aimed at developing a strategy for achieving effective knowledge dissemination and practical training to encourage productive water use for food crop production, particularly among smallholder farmers and food growers in South Africa. It is expected that this, in turn, will contribute towards addressing the wider contextual and sustainable development problem of household food insecurity in South Africa. The Knowledge Uptake Strategy was developed out of the experience of working with eight sets of WRC Rainwater Harvesting and Conservation materials with a wide range of stakeholders in the

agricultural sector, and using a variety of media to share the materials and the information contained in them. The learnings from this project and the Knowledge Uptake Strategy developed indicate that a social learning network approach to knowledge dissemination is crucially important for supporting co-learning and a transformative approach in the Agricultural Education, Training and Social Learning system. This approach requires a mix of different iteratively related mediation and support processes that working 'in tandem' to enable and support such an approach.

### *Enhancing resiliency to climate change at local and catchment level*

Climate variability and change are influencing the availability and quality of water resources. Water is crucial for the prosperity and growth of any economy, and to sustain society and the environment. Planning is key in preparing for the future. Effective water safety planning (WSP) and wastewater risk abatement planning (W2RAP) provides a proactive, flexible and robust approach to assess and manage current and future risks (both climate and non-climate related). The WRC appointed Emanti Management (Pty) Ltd to provide guidance to water services institutions to interpret climate-related data/information and integrate climate-change considerations into WSP/W2RAP processes. This is in line with and supports current global trends and, in particular, advocacy for the development and implementation of climate-resilient water safety plans (CR-WSP) and climate-resilient sanitation safety plans (CR-SSP) by the World Health Organisation. Importantly, climate resilience needs to be built and coordinated at both the catchment and local government/water board levels to ensure adaptation measures for water and wastewater systems are effective and integrated. On 23 March 2021, the WRC hosted an online workshop aimed at introducing concepts and principles for improved risk management and planning. This workshop shared project progress, including experiences and lessons learnt from piloting of the methodologies at three municipalities (Uthukela, Witzenberg and Lephalale) across South Africa.

### *Safe sanitation brings dignity to Gauteng school*

Safe sanitation brings dignity to Gauteng school
The provision of safe sanitation in all South African schools remains a critical government priority. During 2020/21, Tsholetsega Primary School, in Krugersdorp, became the first recipient of an innovative, next-generation sanitation technology implemented through the South African Sanitation Technology Enterprise Programme (SASTEP). SASTEP, a programme developed by the WRC in partnership with the Bill & Melinda Gates Foundation and Department of Science and Innovation,

seeks to enable the development of suitable sanitation technologies in South Africa towards the creation of a viable sanitation market. The programme does this by fast-tracking the adoption of innovative and emerging sanitation technologies in South Africa through fostering local manufacturing and commercialisation. The technology selected for Tsholetsega Primary School is the Clear recirculating toilet. The toilet system was originally developed by Clear, a Chinese company, but will be manufactured locally by South African firm, Enviroloo. The system collects waste from flush-type toilets, which is then treated by a closed system on-site. Water is recovered, treated and reused for flushing purposes. The system allows for off-grid set-up, while also allowing for waterborne sanitation in areas with little water supply. Since most of the system is containerised, this negates the need for expensive on-site civil construction. Two models were implemented at the school, namely the TT-5 containerised four toilet seat front and backend treatment plant ablution facility, with a total daily maximum capacity of 600 flushes. In turn, the TT-6 backend treatment plant is connected to an existing 25-seat facility (inclusive of male urinals), with a total maximum capacity of 4 000 flushes. The installed toilets use between 3L and 5L of water per flush. Wash basins for handwashing using potable water have also been provided.

*Water footprint as an indicator of sustainable table and wine grape production*

The water footprint measures the amount of water used to produce each of the goods and services we use, and aids the sustainable management of scarce water resources. The WRC has funded a number of studies to determine the water footprint of agricultural products, in particular, in the last few years. The latest study, completed in 2020/21, was undertaken among grape producers (both table and wine grapes) in the Western Cape where water availability has been severely constrained due to below-average rainfall in recent past. The water footprint considers both direct and indirect water uses needed to produce a crop or product. The study provided a novel approach for determining the water footprint of table grapes and wines, accounting for all the water use components considered across the production process (field and packhouse or cellar). Research aspects showed the progress made in using remote sensing data to delineate field boundaries, in crop-type mapping and to determine whether nets are present. It highlights the challenges still faced in applying these activities operationally.

*Developing scenarios for future agricultural water management*

One of the grand challenges facing South Africa is to meet the food requirements of a growing population in a climate-altered, resource-constrained future. Water scarcity presents one of the greatest risks to South Africa, and to the global economy at large. Demand for water in South Africa is projected to increase with economic growth, increased urbanisation, higher standards of living, and population growth. Climate-change impacts are exacerbating existing water-related challenges, and creating new ones through increased rainfall variability, including more frequent extreme weather events (droughts and floods), changing rainfall seasonality; and overall warming, leading to greater surface water losses to the atmosphere. This is affecting a wide range of economic sectors and livelihoods, impacting on the development of infrastructure, catchment management and demand management into the future. To address these challenges, a WRC project developed knowledge-based scenarios (possible futures) through structured research, which includes an extensive participative process with the different stakeholders involved in the agricultural and other water-related sectors. The scenarios have potential to provide policy and decision-makers with indispensable insights to strengthen strategies aimed at countering undesirable trajectories of change, and to ensure water and food security, the continued relevance of the agricultural sector, and ongoing agricultural development in South Africa. The research addresses a very serious issue relating to future agricultural water management in South Africa. It has guided the development of scenarios necessary to identify feasible prospects for agricultural water management within the context of the political, social, economic and natural environment.

## Driving sustainable development solutions

*Ecosystem responses to the large-scale use of SARS-CoV-2 disinfectants*

To limit transmission of the COVID-19 virus, surfaces are regularly cleaned using disinfectants. However, these disinfection efforts are underway largely without considering environmental risks on biota. Chlorine, its byproducts, adsorbed toxicants, triclosan and triclocarban, or mixtures of these, are known to be toxic to biota. Once dispensed on parking bays, buildings and other public spaces, in large quantities, the chemicals will find their way into natural water courses. However, little is known of the impacts of these disinfectants on aquatic ecosystems. What are the trade-offs in these contexts? The WRC thus initiated a study in 2020/21 with the main aim of generating knowledge critical

to understanding ecosystem responses and the risks of introducing large amounts of disinfectant and anti-viral chemicals (as is the current case with the current COVID-19 interventions) to aquatic ecosystems and biota, such as rivers, estuaries, springs, dams and wetlands. In order to manage disasters, risk assessment methodologies and procedures must be developed or improved in order to avoid expensive restoration efforts at a later stage. The research will develop knowledge needed for environmental risk mitigation and protection.

*Water demand management in the mining industry – A compendium*


Mining plays a significant role in the economy of South Africa, contributing to both the economy and employment. The mining industry utilises approximately 3% of the total water withdrawn in South Africa and, more so, is one of the main industries contributing to the deterioration of water quality. Water demand at a mine can be significantly reduced by using water more efficiently and with careful consideration and implementation of conservation and demand management measures, for example, the reuse and recycling of water. Water management strategies that incorporate efficient use are key to reducing the demand for water in the mining sector. During 2020/21 the WRC completed a project to compile a compendium of best practices and technological innovations in the mining industry with regards to water conservation / water demand management (WC/WDM). The concept of WC/WDM implies the minimisation of water loss or waste for the purpose of water use optimisation and efficient and effective use of water, in an effort to manage (reduce) water demand, thereby protecting South Africa's scarce national water resources. The study found that application of technologies and innovations within the mining industry in South Africa to conserve water and better manage water demand are rare. It is expected that the new compendium will go a long way towards rectifying this situation.

## *Establishing best practices towards improved groundwater management in a shared aquifer*

The Ramotswa Aquifer is shared between Botswana and South Africa, and is considered one of the most important shared aquifers in the Limpopo basin. A WRC project concluded during 2020/21 defined an approach for achieving best practice groundwater management using this aquifer as a case study. The study tested models using dolomite systems where larger datasets are available. Data from all dolomite compartments were collated to identify areas with the greatest density of boreholes with groundwater level readings; where the groundwater level records were the longest and had least data gaps; where weather stations were in close proximity to groundwater data; and where flow-gauge data were available from groundwater-fed springs in the same or hydrogeologically connected compartment. A strategy for sustainable groundwater use (SGS) was then developed. The SGS is essentially a list of actions necessary for achieving sustainable groundwater use and is applicable to any aquifer or group of aquifers. The approach is especially applicable for heavily used aquifers, and in aquifers with sensitive receptors. The actions within the strategy can be met using traditional hydrogeological approaches.

## *Webinar places spotlight on threats to ecotourism*

On 22 September 2020 the WRC placed the spotlight on South Africa's environmental heritage and the threat of deteriorating water quality to ecotourism in the country, through a webinar. The WRC, in partnership with the Institute of Natural Resources, conducted a study to generate possible future scenarios for tourism in the light of increasing water pollution and the impacts of climate change towards 2030 and beyond. Key findings from this research indicate a decline in uMngeni-Dusi canoe marathon participants. Beyond celebrating our tourism heritage, the aim of this event was to provide an early warning to the tourism sector on the risks to the industry and a call to intensify cooperation in restoration of the degrading ecosystems. Similar to all other forms of economic development, tourism activity categories have impacts and dependencies on natural capital, not only on tourism assets and destinations. Water shortages and deteriorating water quality are already a reality in South African municipalities, with climate change making the situation worse.

## Promoting transformation and redress

*COVID-19 epidemiology surveillance for non-sewered communities*

In South Africa, around four million households use pit latrines for their sanitation needs and there is no single metro in South Africa that is 100% sewered. This represents a significant number of the population that cannot be covered by the current COVID-19 wastewater surveillance tool. To address this gap, and understanding that developing countries have cities that have a mixed approach to sanitation technologies, the WRC and the Grundfos Foundation have partnered to develop a water quality–based surveillance tool for non-sewered settlements as part of a city-wide approach that will complement the wastewater surveillance programme and, in turn, provide support to other means of tracking disease outbreaks. Among others, the study aims to determine if the virus' genetic material can be detected in non-sewered locations across South Africa and develop a surveillance approach which could be used by other developing countries. To our knowledge, it is the first large-scale programme being undertaken globally that will monitor SARS-CoV-2 in water and sanitation samples collected from non-sewered settlements as means of developing a COVID-19 surveillance tool.

*Assisting smallholder farmers to cope with drought*

During the year under review, the WRC completed a project which sought to characterise smallholder farmers and to identify the coping and adaptation strategies to which they resort during periods of drought. The study was undertaken in rural parts of the Limpopo and Western Cape Provinces. As the project progressed, smallholder farmer support during drought was also assessed in the Western Cape, while field activities in Limpopo continued beyond the project. The two provinces experienced some of the worst impacts of drought during the period 2015–2018. Several interesting trends were discovered in the provinces investigated. In both provinces, it was the elderly who were

mostly involved in farming, but the dominant gender differed: in Limpopo, about 61% of the farmers were female, while in the Western Cape more than 90% of the farmers were male. Education levels were also different. While about 6% of the farmers in the Western Cape had never been to school, in Limpopo this proportion was about 32%. Most farmers in the Western Cape obtained water from dams. The farmers in Limpopo also drew upon surface water sources. For potable water, boreholes were important sources (about 22%) in both provinces. Coping strategies for reducing agricultural water use by farmers in the Limpopo Province included crop diversification, using drought-tolerant crops and – for livestock farmers – reducing their herds through selling. The Western Cape farmers adopted strategies such as drip irrigation and reducing crop areas. Livestock numbers were also reduced, and some farmers transported water for their livestock from other areas. In both provinces, the drilling of boreholes was seen as a long-term strategy to ensure water supply in the event of future droughts. Changing livestock systems from larger to smaller stock was also mentioned in both provinces. The study showed that there is government provision of fodder for the worst-affected livestock farmers, but the processes are inefficient, and often the assistance comes too late. While many organisations provide support to smallholder farmers, the support is not coordinated and is sometimes duplicated. Support during drought is provided by various government departments, but the Department of Agriculture provides the most. Private organisations' commodity-based assistance is available for some but not all the farmers.

### *Aligning land – water reform processes for transformation in South Africa*

Whilst there has been extensive investment by Government to redress the past imbalances in access to land and water, limited success has been recorded since 1994. Recognising the need to explore these issues and their role in driving transformation, the WRC through its research partners undertook a study to identify opportunities for better alignment between land and water reform processes. The study focused on the Inkomati-Usuthu Water Management Area (IUWMA) and identified two pilot study areas to be involved in the project, namely, Kaap River and Lower Komati River catchments. Among others, the study found that one of the primary challenges to the implementation of successful water reform is the perpetuation of a narrative that views large-scale commercial farming as the only meaningful and impactful water use that benefits the economy while small-scale use is seen as inefficient and environmentally damaging. However, this narrative has not been adequately debated to establish the production and water use efficiencies of large-scale farmers. The context of water scarcity has also further entrenched the status quo, as water use for productive and economically beneficial activities, as well as the need for conservation of water resources, places social development and reform in an inferior position. The current legislative framework does not legally recognise informal water rights under customary law, which many rural black South Africans still operate under, and in some instances can declare such water use illegal, placing further hurdles for the rural poor to overcome. Due to lack of post-settlement support and the absence of water rights on some of these farms, the failure of the land reform programme could be seen as inevitable. Apart from the negative impact on agricultural productivity,

financial institutions, including the Land Bank, refuse to provide loans and/or insurance to beneficiaries without the water rights as collateral. This prompts many land reform beneficiaries to abandon the restituted farm. The study proposes a Theory of Change with three alignment interfaces:

- Harmonising governance frameworks
- Strengthening the enabling environment
- Improving operational delivery

Under each of these interfaces, a suite of interventions has been developed that details the actions to be undertaken to address challenges to alignment of land and water reform.

*Identifying enablers and hindrances to female entrepreneurship in the water sector*

Globally, there is recognition that investing in women-owned businesses and integrating them into supply chains is 'smart economics' and good for business. Despite this, female-owned businesses operating in the water and sanitation sector, and in particular black female-led enterprises, are largely under-represented and significantly lag behind male-owned businesses. Many female-owned businesses struggle to break out of the small- and medium-sized enterprise ceiling. The WRC commissioned a study to understand the barriers to female entrepreneurs in the water sector. The study, which was finalised during 2020/21, culminated in a framework for the empowerment of female entrepreneurs, which provides guidance to both female entrepreneurs in the water sector and to organs of state on ways to improve support for female-owned businesses in the sector. Many of the lessons learned are applicable to all entrepreneurs and in different economic sectors of the country.

## Enhancing human capital development in the water and science sectors

*Hosting a virtual water and sanitation youth hackathon*

The WRC, in partnership with SADC organisation WaterNet, hosted a 48-hour COVID-19 Water and Sanitation Hackathon from 10–11 July 2020 to find digital and technology solutions to water and sanitation problems in a time of COVID-19. Whilst this was not the WRC's first hackathon, it was the organisation's first hackathon to be hosted solely on a virtual platform. During the hackathon, 22 multi-disciplinary teams collaborated to develop innovative solutions that can help address the COVID-19 crisis, by solving one of two challenges within the 48-hour period. The first challenge was generated by the WRC and required the use of technology to enhance communication and drive behaviour change, and the second was developed by WaterNet with the aim of using machine learning and data science to develop a human water footprint tracker. Of the participating teams, 13 made it to the final round. The winning team for the first challenge was Naki Technologies with the 'Smart Tap' solution, followed by Vanga in second place and Greyy Technologies in third place. The winning team for the second challenge was Phanda Pushers with a solution called 'Tweet-a-Leak', followed closely by Glass Half Full in second place and Vividly IT in third place. The event attracted over 25 mentors who are industry experts from various fields such as water science, design thinking and big data analytics, to name a few. These individuals provided mentorship throughout the 48-hour period and remained active on the Slack channel that was created, forming part of the 144 hackathon participants from all over South Africa, as well as Zimbabwe, Eswatini, China, Bangladesh, and Sri Lanka. It is important to note that, of the 70 participants who checked in online, just over a quarter (26%) were female.

*Building capacity towards a better water future*


The Framework Programme for Research, Education and Training in the Water Sector (FETWater) Phase III is a knowledge transfer and capacity building programme linking learning resources and training capacity to integrate water resource management expertise in areas where they are needed most. FETWater Phase III was undertaken by the WRC on behalf of the DWS. The programme supported the National Water Resource Strategy (NWRS-2) by taking an occupationally directed approach to improve curriculum development, quality assurance and uptake protocols focused on key sectoral occupations and training gaps. By facilitating alignment between capacity building agencies, prioritising and developing relevant

occupational qualifications, delivery and quality assurance systems with expert practitioners, FETWater III laid the foundation for a capable and professional workforce for the sector as per National Skills Development Strategy IV and NWRS-2 requirements. The FETWater networks have successfully developed nine occupational qualifications identified as key priority occupations for the water sector, and has setup communities of expert practitioners to register these sector occupational qualifications and pilot the delivery systems for up-scaling. The Quality Council for Trades and Occupations described FETWater Phase III as a flagship sector programme when it comes to sector coherence and collaboration. The assessment methods, tools and competency ladder to develop practical skills in learners was developed following the National Occupational Curriculum Content approach. The learning material has been developed, written and reviewed. The curriculum will be piloted, refined and mainstreamed on a block-release basis for 18 months under the next phase of FETWater. In addition, the WRC has setup a new FETWater website (www.fetwater.co.za) to showcase and market the FETWater programme to the water sector.

*Exploring opportunities for equal access to water science*

The WRC over the years has through its multiplier effect made a huge contribution to the plight of women in research science, not only in South Africa, but on the African continent. Through its different programmes and knowledge dissemination efforts in collaboration with key local and international partners, the WRC has made inroads into changing the water research science landscape and building new images of scientific work. Women are now playing a significant role in ensuring water supply for the country's future needs. This transformation of the role of women in water research science is evidenced in the new roles that women are leading in research, data gathering and analysis as well digital technology. On 18 and 19 March 2021, the WRC held a conference titled 'Women in water and science and the impact of COVID-19'. This conference, which was held during National Water Week 2021, formed part of the WRC 50-year campaign and reflected on the role of women in water research science over the past 50 years. It illustrated the gradual transformation of women from being treated predominantly as 'subjects' in water research science to key drivers of change. The conference not only placed the spotlight on the transforming role of women in water research science but also highlighted the opportunities for investment in the development of women in science and as such catalyse gender equality in water research science. To weave this narrative together, women from across the continent had the opportunity to present research outputs, exhibit, share knowledge and network using some of their key impact programmes, initiatives and innovations in the water research science field.

## Growing leadership in Africa and the world

*Sharing water knowledge across virtual networks*

The WRC co-hosted 10 COVID-19 related webinars and sessions with South African, other African and the Indian Ocean Rim Association (IORA) stakeholders, to facilitate sharing of knowledge and best practices on how WRC partners are responding to the pandemic, to look at the impact of COVID-19 on the water and sanitation research agenda during and post-pandemic, the water–energy–food nexus and water sector skills. These activities ensured that the WRC is still a leading and key partner in the water sector conversation during COVID-19, and will influence decision-making and planning during and beyond the pandemic. The WRC also developed position papers with leading partners following some of the key webinars, to capture the recommendations and way forward. The webinars ranged in theme from exploring the implications of the COVID-19 pandemic on the SADC research agenda, to discussing the water–energy–food nexus in light of the pandemic, as well as water sanitation and hygiene, among others.

## Partnering for impact

*New water tech forum to boost municipal service delivery*

During 2020/21, the South African Local Government Association (SALGA) together with the WRC launched a Water Technology and Innovation Forum, aimed as a platform for sharing how technological innovation can solve today's and future challenges of clean water and improved sanitation service delivery. The forum is set to provide a collaborative platform for municipal partners to share their innovation needs, and mobilise partnerships to jointly conceptualise programmes, projects and funding towards matters related to safe water and sanitation. The forum seeks to set up and expand a network of test beds for ground-breaking water and sanitation technolo-

gies emanating from South African laboratories.

*Supporting innovators for a better, stronger water and sanitation sector*

The United Nations Development Programme (UNDP) in South Africa and the WRC during 2020/21 awarded grants to the value of R3 million to seven innovators. The grants, partially funded by the Government of Japan through the UNDP, are to conduct field testing and further develop their solutions. These solutions are aimed at addressing the country's water challenges, particularly those exacerbated or introduced during COVID-19. These seven innovators were selected from a list of 36 applications. The implementation of this phase will signify the beginning of the next stage of development towards an eventual product that can impact South Africa's water and sanitation landscape. This joint initiative aims to accelerate the rate at which we address South Africa's pressing water need and achieve progress on Sustainable Development Goal 6 on clean water and sanitation. The WRC considers partnerships such as these crucial towards the advancement of the Sustainable Development Goals (SDGs) and the big role that innovation has to play.

*Increasing the employability of water graduates*

According to Statistics South Africa, youth account for 63% of unemployed persons in South Africa with an unemployment rate of 43%. Among this percentage are unemployed graduates with an unemployment rate of 33%. Investing in employment pathways and platforms for unemployed graduates is central to building on past education investments. The vulnerability of unemployed graduates in the South African labour market cannot go unaddressed and should be viewed as a key initiative within South Africa's Economic Recovery Plan. During the last quarter of 2020/21 the WRC in partnership with the Department of Science and Innovation launched the Water Graduate Employment Programme (Water GEP). The programme aims to catalyse the employment potential of 400 unemployed graduates who can contribute towards the water and sanitation sector. The Water GEP objective is to catalyse job creation in three interlinked areas toward sustainable economic development: Academia, SMMEs and industry, and water service institutions.

## *Strengthening local and regional partnerships*

Seven new partnerships were formally signed in 2020/21. This includes partnerships with local and international partners, namely the Finnish Research Institute (SYKE), UNDP, South African Medical Research Council (SAMRC), National Institute for Communicable Diseases (NICD), Mandela Bay Development Agency (MBDA), Magalies Water and Umgeni Water. Some of the partnerships are aimed at facilitating COVID-19 knowledge and information sharing and partnerships during the WRC wastewater and environment surveillance programme while others are looking at positioning the WRC as a key knowledge partner for institutions to influence their decision-making though research and innovation, strengthening their water and sanitation RDI activities and investment to improve overall efficiency and service delivery. The WRC further established an interim Task Team following the first meeting of the Water Institute Alliance in August 2020. The task team comprises of both local and international partners from different stakeholder groups of the WRC (academia, funding institutions, research and networking institution and private sector) contributing to the water RDI sector. The Task Team developed the Alliance value proposition which was presented to the Alliance in October 2020.

## *Contributing knowledge to the UN Decade on Ecosystem Restoration*

Several studies have been conducted on the economic gains to society by investing in restoration. A global estimate is that for every R16 (roughly a dollar) spent on restoration, up to R1 200 (75 dollars) of economic benefits can be recovered. It is for this reason that, globally, economists are paying more attention to green economic recovery strategies post COVID-19. The UN Decade on Ecosystem Restoration aims to speed up collaboration amongst all stakeholders and across all UN member states to invest in restoration. The Society for Ecological Restoration (SER), together with the WRC and Department of Environment, Forestry and Fisheries, hosted the 8th World Conference on Ecological Restoration conference in Cape Town in 2019, attracting more than 900 delegates from more than 60 countries. A statement in support of the UN Decade was collectively issued by members and participants. The WRC was also mandated at this conference by the SER Board to expand the restoration network in the continent, in partnership with society members and interested parties. On 17 November 2020 the WRC and the SER-African restoration network hosted a webinar to demonstrate some of the restoration tools, including environmental flow determinations and their application in India, Pakistan, Kenya, Tanzania, Madagascar, Mozambique and South Africa. The webinar also assessed the readiness of Africa to engage the UN Decade of Ecosystem Restoration.

# 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
3. Human resources and corporate social responsibility
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).

*Table 2: Research portfolio performance targets for 2020/21*

| Key performance indicator | Achieved 2018/19 | Achieved 2019/20 | Target 2020/21 | Achieved 2020/21 | Variance | Comments |
|---|---|---|---|---|---|---|
| The number of new RDI projects initiated in the 2020/21 financial year | 99 | 92 | 70 | 120 | +50 | This target was exceeded due to new projects that were initiated mainly in response to the COVID-19 pandemic and the funding received from leverage projects. |
| The total number of RDI projects managed by the WRC in the 2020/21 financial year | 353 | 344 | 250 | 344 | +94 | Projects planned to be finalised in the last financial year (2019/20) were delayed due to COVID-19 and therefore the WRC had an increased number of projects in 2020/21. |
| The number of research projects that have been completed in the 2020/21 financial year | 104 | 120 | 80 | 84 | +4 | Four additional projects were finalised due to increased project management efforts in reducing the timeline from final deliverable to Executive Committee finalisations. |
| The total number of project leaders on WRC managed projects that are female | 140 | 123 | n/a | n/a | | |
| The total number of WRC managed projects led by female project leaders | n/a | n/a | 80 | 144 | +64 | More female project leaders stepped up to lead WRC projects as a result of the WRC's drive for transformation and the initiation of more new projects. |
| The number of new projects led by female project leaders | n/a | n/a | 31 | 57 | +26 | |
| The total number of project leaders on initiated projects that are female | 42 | 39 | n/a | n/a | | |
| The total number of project leaders on WRC projects that are black male | 90 | 86 | n/a | n/a | | |
| The total number of project leaders on initiated projects that are black male | 31 | 26 | n/a | n/a | | |
| The total number of WRC managed projects led by black male project leaders | n/a | n/a | 70 | 108 | +38 | More male project leaders were recruited to lead WRC projects to promote transformation in the science and technology sector. |
| The number of new projects led by black male project leaders | n/a | n/a | 20 | 32 | +12 | |

| Key performance indicator | Achieved 2018/19 | Achieved 2019/20 | Target 2020/21 | Achieved 2020/21 | Variance | Comments |
|---|---|---|---|---|---|---|
| The total number of WRC managed projects led by black female project leaders | n/a | n/a | 30 | 54 | +2 | More black female project leaders were encouraged to lead initiated WRC projects to promote transformation in the science and technology sector |
| The total number female and black project leaders on initiated projects | 73 | 17 | n/a | n/a | | |
| The number of new projects led by black female project leaders | n/a | n/a | 15 | 21 | +6 | More black female project leaders were recruited to lead WRC projects to promote transformation of the water and science sectors |
| The total number of project leaders on WRC managed projects that are female and black | 228 | n/a | n/a | n/a | | |
| The total number of black male and black female project leaders | n/a | n/a | 150 | 252 | +102 | More project leaders were encouraged to lead WRC projects as seen under the female and black project leader categories above. |
| The total number of black male and black female project leaders on new projects | n/a | n/a | 51 | 89 | +38 | More project leaders led WRC projects as a result of more new projects initiated in response to COVID-19 and other, leverage-funded projects. |
| The total number of students on WRC managed projects | 411<br>354<br>Post-docs, Honours and Master's<br>57<br>Honours and others | 362<br>324<br>Post-docs, Honours and Master's<br>28<br>Honours and others | 300 | 326 | +26 | Due to the drive from the R&D branch on research projects, the WRC was able to accommodate more students. |
| The number of students supported on all WRC managed projects: postgraduate students | n/a | n/a | 270 | 304 | +34 | Due to the drive from the R&D branch on research projects, the WRC was able to accommodate more postgraduate students. |
| The number of emerging project leaders on WRC managed projects | n/a | n/a | 8 | 45 | +37 | More emerging project leaders were supported through WRC projects as more projects were initiated. |
| The number of innovations/ products and services produced from WRC research | 38 | 44 | 24 | 43 | +19 | The research outputs generated from WRC research generated more innovation and were verified for use to address water and sanitation challenges in the country |

In 2020/21, the WRC initiated 120 new projects and also completed 84 projects. Over the past five years the WRC has finalised 446 research projects (Figure 7) indicating a significant contribution to knowledge in the water sector. An average number of 89 projects were finalised per year, over the past 5 years. Over the same 5-year period, 524 new projects were initiated, ensuring the continuous contribution of new knowledge to the sector. The large number of initiated projects was largely as a result of the WRC's new and existing funding partnerships.

***Figure 8. Annual and cumulative number of projects finalised over the past five years***

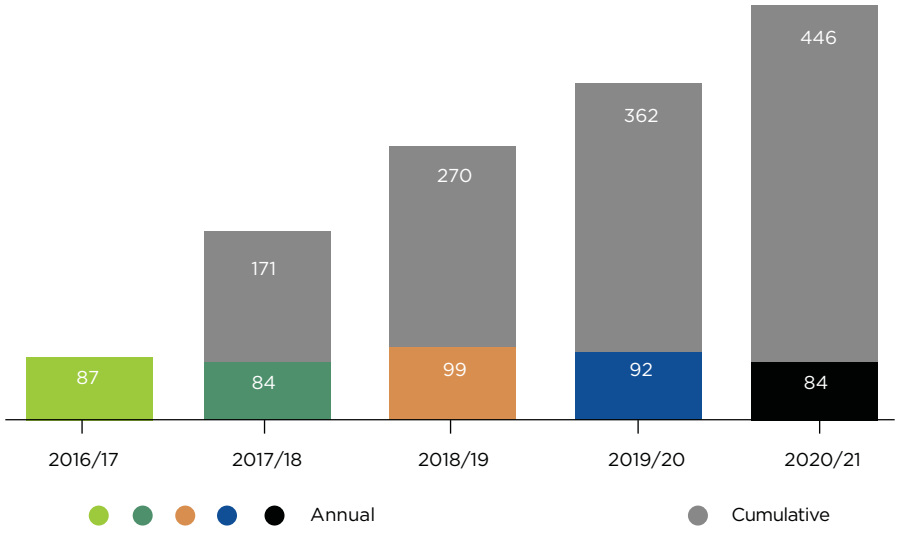
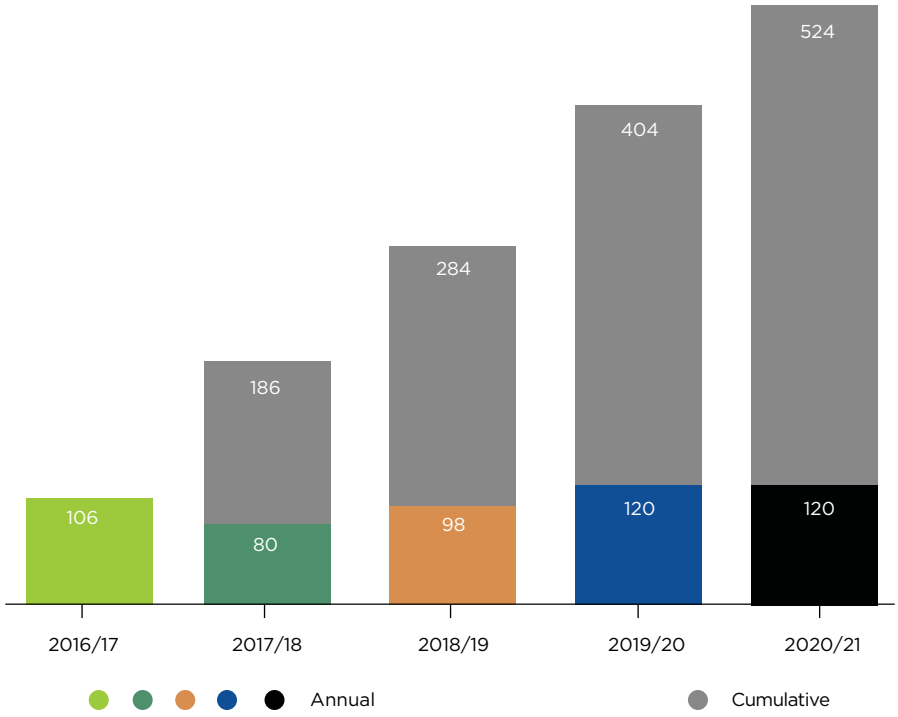



***Figure 9. Annual and cumulative number of projects initiated over the past five years***



## Building capacity

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

***Figure 10: – Number of students supported by WRC in 2020/21***


***Figure 11: Number of PhD and Master's students in 2020/21***


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.

## 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.

***Table 3: Impact portfolio performance targets for 2020/21***

| Key performance indicator | Achieved 2018/19 | Achieved 2019/20 | Target 2020/21 | Achieved 2020/21 | Variance | Comments |
|---|---|---|---|---|---|---|
| The number of innovations, products and services that have been supported and/ or implemented/ demonstrated/piloted | 13 | 18 | n/a | n/a | | |
| The number of WRC 101 workshops held in the financial year | 6 | 6 | 6 | 6 | 0 | None |
| The number of WRC Roadshows to rural communities | n/a | n/a | 4 | 4 | 0 | None |
| A youth strategy approved by Executive | n/a | n/a | 1 | 1 | 0 | None |
| The number of WRC dialogues | 19 | 18 | 12 | 19 | +7 | Annual target was exceeded due to the WRC's enabling infrastructure that supported the use of virtual platforms. |
| The number of conferences/summits with the WRC as a host | 2 | 2 | 2 | 2 | 0 | None |
| The number of policy briefs produced and distributed to relevant government departments and other entities | 12 | 14 | 12 | 12 | 0 | None |
| The number of ministerial briefs produced by the WRC and received by the Minister's Office | 14 | 14 | 12 | 12 | 0 | None |
| The number of Parliamentary briefs produced and disseminated | 8 | 8 | 6 | 6 | 0 | None |

| Key performance indicator | Achieved 2018/19 | Achieved 2019/20 | Target 2020/21 | Achieved 2020/21 | Variance | Comments |
|---|---|---|---|---|---|---|
| The number of working papers produced that support decision-makers with research-based knowledge | 5 | 8 | 12 | 12 | 0 | None |

*Table 4: Partnership portfolio performance targets for 2020/21*

| Key performance indicator | Achieved 2018/19 | Achieved 2019/20 | Target 2020/21 | Achieved 2020/21 | Variance | Comments |
|---|---|---|---|---|---|---|
| To develop an inclusive strategy that assists the tertiary institutions to add value to their activities in the water domain | 1 | n/a | n/a | n/a | | |
| To develop a strategy for engagement with African research institutions that adds value to the water partners | n/a | 1 Exec approved strategy | n/a | n/a | | |
| The number of completed validation and IP due diligence reports issued | n/a | n/a | 8 | 8 | 0 | None |
| The number of demonstrations and pilots initiated through WADER, SASTEP and the RDI portfolio | n/a | n/a | 12 | 12 | 0 | None |
| The number of strategic engagements (meetings, dialogues, hosted delegations, country visits) involving international institutions | n/a | n/a | 3 | 5 | +2 | The use of virtual platforms allowed for more strategic dialogues with international institutions. |
| The number of events completed with municipalities and other utility support services | n/a | n/a | 6 | 7 | +1 | The WRC capitalised on the use of virtual platforms to reach out to more municipalities and other utility support services. |

| Key performance indicator | Achieved 2018/19 | Achieved 2019/20 | Target 2020/21 | Achieved 2020/21 | Variance | Comments |
|---|---|---|---|---|---|---|
| The number of workshops held in partnership with other institutions | 23 | 28 | 20 | 24 | +4 | The use of virtual platforms and the need for increased knowledge sharing enabled the WRC to hold more workshops in partnership with other institutions. |
| The number of agreements signed with partnering institutions | 9 | 7 | 4 | 15 | +11 | The increased focus on water quality due to COVID-19 created a need and opportunities for more strategic partnerships |

## Human resources and corporate social responsibility

The KPAs under this portfolio addresses organisational transformation and focuses on the enhancement of effective leadership and an improved level of staff performance, on the one hand, as well as the empowerment of communities as active participants in research projects, on the other hand.

*Table 5. Corporate social responsibility targets in 2020/21*

| key performance indicator | Achieved 2018/19 | Achieved 2019/20 | Target 2020/21 | Achieved 2020/21 | Variance | Comments |
|---|---|---|---|---|---|---|
| The total number of research and non-research community-based projects managed by the WRC | 116 | 109 | 60 | 108 | +48 | More community-based projects were implemented as a result of the increased number of new projects. The research teams involved ensured that on project approval the community initiatives were catered for in the project's deliverables. |
| The number of new community-based research projects managed by the WRC | 29 | 26 | 34 | 37 | +3 | More community-based projects were implemented as a result of the increased number of new projects. The research teams involved ensured that on project approval the community initiatives were catered for in the project's deliverables. |
| The total number of SMMEs on WRC research projects | 135 | 74 | 55 | 61 | +6 | The WRC was able to fund 6 more SMMEs on research projects which directly supports addressing socio-economic challenges in the country. |
| The total number of SMMEs on new WRC research projects | 42 | 11 | 15 | 33 | +18 | The WRC was able to fund 18 more SMMEs on new research projects which directly supports addressing socio-economic challenges in the country. |

*Table 6. Human resources targets in 2020/21*

| key performance indicator | Achieved 2018/19 | Achieved 2019/20 | Target 2020/21 | Achieved 2020/21 | Variance | Comments |
|---|---|---|---|---|---|---|
| To maintain the minimum the percentage of black, female and employees with a disability at the WRC measured by: | | | | | | |
| The total number of black employees | 87% | 88% | 88% | 87% | -1% | Variance due to recruitment freeze and resignations in this category. |
| The total number of female employees | 62% | 62% | 52% | 62% | +10% | Annual target exceeded due to proportionally higher female appointments |
| The total number of employees with a disability | 4% | 5% | 3% | 5% | +2% | Annual target exceeded due to increased declared disclosures. |
| Develop and IT governance strategy | 1 strategy approved by the Board | n/a | n/a | n/a | | |
| Implement a leadership and organisational development strategy | 1 strategy approved by the Board | n/a | n/a | n/a | | |
| Maintain the number of staff with Master's degrees | 19 | 22 | 22 | 22 | 0 | None |
| Maintain the number of Staff with PhDs | 15 | 16 | 15 | 16 | +1 | Annual target exceeded due to PhD appointments. |
| The total number of employees in receipt of a study grant for the 2018/19 financial year | 10 | n/a | n/a | n/a | | |
| The total number of training courses held in-house | 21 | n/a | n/a | n/a | | |
| The total number of external training courses attended | 15 | n/a | n/a | n/a | | |

## Financial portfolio

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

*Table 7. Financial portfolio targets for 2020/21*

| Key performance indicator | Achieved 2018/19 | Achieved 2019/20 | Target 2020/21 | Achieved 2020/21 | Variance | Comments |
|---|---|---|---|---|---|---|
| The total amount of leverage income | R42.3 million | R65.2 million | R53.46 million | R73.65 million | R20.19 million | The budget variance for the 2020/21 financial year is mainly due to focused efforts of the project teams to meet project deliverables earlier than anticipated and secure additional funding from key leverage funded partners. |
| Development of a diversification income strategy to maintain financial sustainability | 1 strategy approved by the Board | n/a | n/a | n/a | | |
| Initiate contracts with other organisations that increase leverage funding | 5 | 6 | 4 | 6 | +2 | Two more RDI contracts were signed than anticipated in 2020/21. |
| Improve response to internal audit results | 100% | 100% | 100% | 100% | | |
| Improve response to external audit results | Achieved unqualified audit | Achieved unqualified audit | Achieved unqualified audit | Achieved unqualified audit | | |
| The percentage of previous year's external audit queries fully addressed | 100% | 100% | 100% | 100% | | |
| The percentage of audit findings fully addressed | 100% of all internal audit queries fully addressed | 100% of all internal audit queries fully addressed | 100% of all internal audit queries fully addressed | 100% of all internal audit queries fully addressed | 0 | |
| The achievement of an unqualified audit report vs a qualified audit report | Unqualified audit report achieved | Unqualified audit report achieved | Unqualified audit report achieved | Unqualified audit report achieved | 0 | |
| The percentage of external audit findings fully addressed | 100% of external audit queries fully addressed | 100% of external audit queries fully addressed | 100% of external audit queries fully addressed | 100% of external audit queries fully addressed | 0 | |

# FINANCIAL HIGHLIGHTS

## Income sources for the WRC

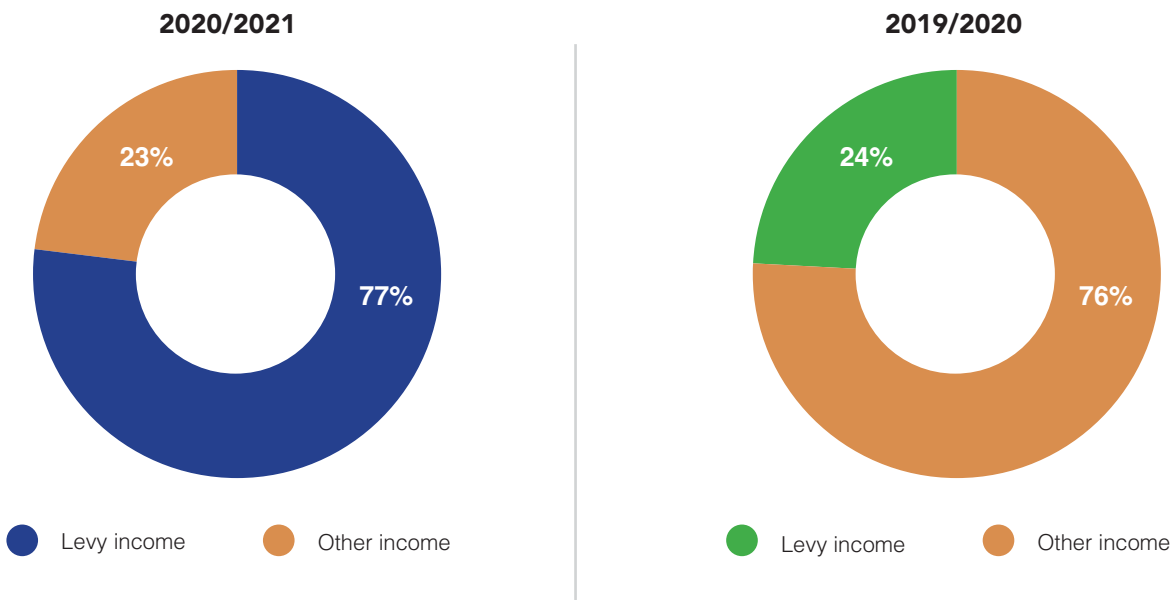
The Water Research Levy (WRL) is the WRC's main source of revenue. It is receivable in terms of the Water Research Act No. 34 of 1971. The Rand Water Board, Umgeni Water Board and the Department of Water and Sanitation (DWS) collects the WRL on behalf of the WRC from various water users based on their 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.

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.

As can be seen from the figure below, levy income as a percentage of total income has increased from 76% to 77%. This is due to the higher water consumption volumes during the 2020/21 financial year.

***Figure 12. Income indicators for 2020/21 compared to 2019/20***




**Other sources of income include leverage income*

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

*Table 8: Revenue collection*

| | 2020/21 | | |
|---|---|---|---|
| **Sources of revenue** | **Budget** | **Actual amount collected** | **(Over)/Under collection** |
| | **(R'000)** | **(R'000)** | **(R'000)** |
| Water Research Levies | 262,352 | 265,579 | 3 227 |
| Leverage | 53,455 | 73,651 | 20,196 |
| Investment income | 4,650 | 5,304 | 654 |
| Other income | 138 | 141 | 3 |
| **Total** | **320,596** | **344,675** | **24,079** |

## Explanations for the 2020/21 financial year

### *Leverage income*

The leverage income budget targets have been exceeded by some R20,2 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 and securing additional funding from key leverage funded partners due to focused efforts of the project teams. This includes:

- Recognition of leverage income to the value of R7.65 million being realised in respect of the Department of Science and Innovation Graduate Programme, which is funded by the Department of Science and Innovation and National Treasury that was not included in the budget.
- Recognition of leverage income to the value of R4.6 million being realised in respect of the Siltation Management Strategy, which is funded by the Department of Water and Sanitation that was not included in the budget.
- The achievement of deliverables earlier than expected in respect of the South African Sanitation Technology Enterprise Programme (SASTEP) (R2.9 million) and the Department of Science and Technology Green Economy (Wader GBS) (R2.4 million).
- Further, R2.65 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 R654 000 in respect of interest income is primarily as a result of higher average cash holdings over the 2020/21 financial year. This resulted in higher interest income earned during the year under review.

### *Levy income*

The budget variance amounting to R3,2 million in respect of the levy income for the 2020/21 financial year is as a result of the actual audited volumes received from the Water Boards being higher than those included in the levy budget. The lower budgeted volumes were based on the anticipated lower water consumption volumes for the period due to lockdown restrictions.

*Table 9: Expenditure analysis: Comparison of Budget versus Actuals*

| | 2020/21 | | |
|---|---|---|---|
| **Expenditure** | **Budget** | **Actual expenditure** | **(Over)/Under expenditure** |
| | **(R'000)** | **(R'000)** | **(R'000)** |
| Fixed costs | 11,701 | 11,550 | 151 |
| Running costs | 13,881 | 7,385 | 6,496 |
| Human resources | 105,912 | 98,942 | 6,970 |
| Research and development funding | 152,724 | 151,203 | 1,521 |
| Corporate expenses | 2,522 | 1,987 | 535 |
| Capital expenditure | 3,477 | 112 | 3,365 |
| **Total** | **290,217** | **271,179** | **19,038** |

## Explanations for the 2020/21 financial year

### *Fixed costs*

The actual and budgeted expenditure were in line with expectations.

### *Running costs*

The budget variance in running costs of R 6.5 million is mainly as a result of:

- Savings in some costs (R1.02 million) in expenses such as electricity, stationery, subsistence and travel due to the remote working arrangements at the WRC.
- IT related software and maintenance costs (R5.48 million) that will only be incurred in the 2021/22 financial year due to some delays in the year under review.

### *Human resource costs*

The budget variance in human resources costs of R6.97 million is mainly as result of:

- The postponement of the annual Top-up payment in respect of the post retirement medical aid employee benefit that was budgeted at some R2.4 million to the 2021/22 financial year. This resulted from Discovery who opted to, in the light of the COVID-19 pandemic, freeze its medical plan price increases for the first six months of 2021, with increases only expected in the second half of 2021 whereafter the actuarial top-up payments will be determined.
- Postponement in some training and employee development (R1.64 million) for the year, due to COVID-19 restrictions.
- Delays in staff appointments (R2.32 million), the implementation of lower than budgeted cost of living increases (R558,000) and (R272,000) in respect of the skills development levy contribution holiday instituted by the Government in terms of clause 11 of the Draft Disaster Management Tax Relief Bill in an attempt to assist entities with cashflow during the COVID-19 pandemic.

*Research, development and innovation (RDI)*

The research, development and innovation expenditure variance of R1.52 million as at 31 March 2021 relates to savings in workshops and conference, promotion of research outputs, subsistence and travel related expenditure and printing and publishing.

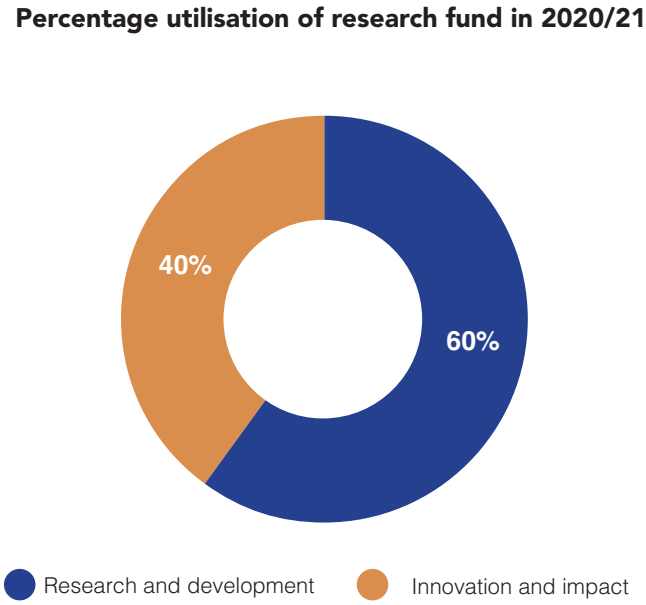
Primarily due to the COVID-19 lockdown restrictions, the WRC has engaged alternative ways of disseminating and promoting its research information and outputs, including use of digital (virtual) platforms, which has proven to be cost-effective whilst enhancing impact in many respects.

*Analysis of research and development expenditure*

***Table 10. Analysis of research, development and innovation (RDI) expenditure***

| | 2020/21 (actual) | 2019/20 (actual) |
|---|---|---|
| | (R'000) | (R'000) |
| Research and Development | 90,543 | 123,288 |
| Innovation and Impact | 60,660 | 52,484 |
| **Total** | **151,203** | **175,772** |

***Figure 13: Utilisation of research funds***



The percentage utilisation of RDI indicates that approximately 40% (compared to 30% in 2019/20) was invested in projects that focused on Innovation and Impact. The total actual amount spent on RDI decreased from R176 million to R151 million due to the following:

- Project related and contracting delays (R9.4 million). This is due to research deliverables being reprioritised and some of the deliverables postponed to future financial periods due to the constraints imposed by the COVID-19 lockdown restrictions.
- In the year under review workshop and conference costs were lower than the prior year by some R8.1 million. The utilisation of digital (virtual) platforms to disseminate research information has proven to be cost-effective in many respects.
- The 2020/21 year saw a reduction of R6.4 million in catering, subsistence and travel (local and international) related expenditure compared to the previous financial year. This was primarily due to virtual working arrangement to adapt to the requirements of COVID-19 restrictions.

### *Corporate expenditure*

The budget variance in corporate expenditure of R0.54 million is mainly as a result of lower expenditure than planned on corporate social responsibility and audit costs.

### *Capital expenditure*

The budget variance in capital expenditure (R3.36 million) is as a result of various delays, including the acquisition of server hardware, software implementation and Azure Setup website and system development which will be implemented during the 2021/22 financial year. Significant component thereof has been included in the 2021/22 procurement plan.

# Section C:
## Governance

# 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 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 EXECUTIVE

**Mr Dhesigen Naidoo**
*CEO*

**Mr Fazel Ismail**
*CFO*

**Ms Reshmili Lutchman**
*GE: Corporate Services*

**Dr Mandla Msibi**
*GE: Innovation and Impact*

**Dr Stanley Liphadzi**
*GE: Research and Development*

**Mr Jay Bhagwan**
*EM: Water Use and Waste Management*

**Ms Khosi Jonas**
*EM: Knowledge Management and Communication*

**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 11. WRC Board Portfolio Committees*

| Board & Committee | No. of meetings held | No. of members | Name of members |
|---|---|---|---|
| Board | 8 | 9 | Dr Nozibele Mjoli (Chair)<br>Prof Sibusiso Vil-Nkomo (Vice-Chair)<br>Dr Aldo Stroebel<br>Dr Mosidi Makgae<br>Ms Nompumelelo Msezane<br>Ms Masaccha Khulekelwe Mbonambi<br>Mr Imraan Patel<br>Dr Ntombifuthi Nala<br>Mr Dhesigen Naidoo (CEO) |
| Research and Innovation | 2 | 7 | Dr Mosidi Makgae (Chairperson)<br>Dr Aldo Stroebel<br>Ms Nompumelelo Msezane<br>Dr Ntombifuthi Nala<br>Mr Imraan Patel<br>Mr Dhesigen Naidoo (CEO)<br>Dr Jannie Maree (co-opted member) |
| HR, Social and Ethics | 4 | 5 | Dr Mosidi Makgae (Chairperson)<br>Ms Nompumelelo Msezane<br>Dr Ntombifuthi Nala<br>Prof Sibusiso Vil-Nkomo<br>Mr Dhesigen Naidoo (CEO) |
| Board Exco *(also serves as Remuneration Committee)* | 3 | 5 | Prof Sibusiso Vil-Nkomo (Chairperson)<br>Dr Nozibele Mjoli<br>Dr Mosidi Makgae<br>Ms Nompumelelo Msezane<br>Ms Masaccha Khulekelwe Mbonambi<br>Mr Dhesigen Naidoo (CEO) |
| Audit, Risk and Finance Committee | 8 | 6 | Ms Masaccha Mbonambi (Chairperson)<br>Prof Sibusiso Vil-Nkomo<br>Dr Aldo Stroebel<br>Ms Shelly Thomas (co-opted member)<br>Mr Philani Dlamini (co-opted member) |

## Board Charter

The Board Charter, which has been developed in alignment with King IV, provides a concise overview of the fiduciary duties and responsibilities of the Board of the WRC, as well as the procedures and structures that will govern how the Board is to function in order to discharge its duties. The Board Charter was last updated on 27 November 2020.

The following Board Committees have been established to assist the Board in discharging its duties. All Committees of the Board are operating in terms of approved terms of references.

1. Audit Risk and Finance Committee (ARFC)
2. Human Resources, Social and Ethics Committee (HRSEC)
3. Board Executive Committee (Board EXCO)
4. Research and Innovation Committee (RIC)

***Table 12. The Board members***

| Name of member | Date of appointment | Board meetings | Research and Innovation Committee | HR, Social & Ethics Committee | **Board EXCO | Audit, Risk & Finance Committee |
|---|---|---|---|---|---|---|
| | | (Total: 8 ) | (Total: 2 ) | (Total: 4) | (Total: 3) | (Total: 8) |
| Dr Nozibele Mjoli (Chairperson of the Board) | 1 February 2016 | 8 | N/A | N/A | 3 | 8 |
| Prof Sibusiso Vil-Nkomo (Deputy Chairperson of the Board) | 1 February 2016 | 8 | N/A | 4 | 3 | 8 |
| Ms Nompumelelo Msezane (Chairperson of the HRSEC) | 1 February 2016 | 8 | 2 | 4 | 3 | N/A |
| Mr Imraan Patel | 1 February 2016 | 4 | 1 | N/A | N/A | N/A |
| Dr Aldo Stroebel | 1 February 2016 | 8 | 2 | N/A | N/A | 8 |
| Ms Masaccha Mbonambi (Chairperson of the ARFC) | 1 February 2016 | 8 | N/A | N/A | 3 | 8 |
| Ms Mosidi Makgae (Chairperson of the RIC) | 1 February 2016 | 8 | 2 | 4 | 3 | N/A |
| Mr Dhesigen Naidoo (CEO and Ex-officio member) | *1 February 2016 | 6 | 2 | 4 | 1 | 8 |

**Appointed as an ex-officio member of this Board.*
***Also serves as a Remuneration Committee*

## Remuneration of Board members

Members of the Board are paid an allowance in respect of the performance of their duties. The allowance is determined by the Minister of Water and Sanitation in consultation with the Minister of Finance.

Members that are not remunerated are the CEO and the ex-officio member of DWS. Board members are also paid for travel expenses.

***Table 13. Remuneration paid to each Board member in 2020/21 (in respect of preparation for and attendance of meetings)***

| Name | Remuneration (rate per meeting | Total (R) |
|---|---|---|
| Dr Nozibele Mjoli (Chairperson of the Board) | R2,632 | R186,872 |
| Prof Sibusiso Vil-Nkomo (Vice-Chairperson) | R1,990 | R186,872 |
| Ms Nompumelelo Msezane | R1,990 | R117,410 |
| Dr Mosidi Elizabeth Makgae | R1,990 | R117,410 |
| Dr Ntombifuthi Patience Nala | R1,990 | R57,710 |
| Dr Aldo Stroebel | R1,990 | R71,640 |
| Ms Masaccha Khulekelwe Mbonambi | R1,990 | R95,520 |
| Ms Shelley Thomas | R1,990 | R35,820 |
| Mr Philani Dlamini | R1,990 | R31,840 |
| Dr Jannie Maree | R1,990 | R3,980 |
| Mr Imraan Patel | N/A | N/A |
| Mr Dhesigen Naidoo (CEO) | N/A | N/A |

## Risk Management

The WRC Board is accountable for the process of risk management, which is reviewed regularly. Risk management at the WRC is 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 while assessing 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.

The Executive Management and the Board of the WRC 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, Risk and Finance Committee.

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

***Table 14. Summary of WRC Risk Register***

| Risk name | Controls (Business process to manage the risk exposure) |
|---|---|
| Limited availability, continuity and growth of adequate research and innovation expertise and infrastructure to deal with the increasing complexity in the water and sanitation sector, both institutionally and externally | • A robust and diversified WRC project portfolio to structure the sector and make it more attractive to work in at multiple levels<br>• Leverage additional bursary and student support funding from partners<br>• Partnerships and collaboration with other organisations that have the capability<br>• Capacity building as part of research contracts and research prioritisation in particular post graduate student support to develop skills in the water sector<br>• Engagement and strengthening of relationships with research partners to facilitate implementation<br>• Support publication and exposure of students and training material and marketing research careers (through schools, universities etc.)<br>• Lobby for increased research funds through the departments of Human Settlements, Water and Sanitation and Science and Innovation and other players /partners<br>• Strengthening of the Lighthouse programmes that accommodate transdisciplinary collaboration. social sciences interdisciplinary programme and other transdisciplinary research programmes to address to complexity in the water sector<br>• Technical, policy, ministerial briefs and parliamentary engagement to ensure faster exposure to research outcomes.<br>• Periodic strategic review of research portfolio<br>• Annual reporting strengthening and monitoring of on the Knowledge Tree objectives<br>• Supporting career fairs through the career guide publication |

| Risk name | Controls (Business process to manage the risk exposure) |
|---|---|
| Financial sustainability | • Renewed MOA (memorandum of agreement) with DWS that provides for monthly payments up to 2022<br>• Annual Levy escalation provisions governed by legislation whereby annual increase are published in the Government Gazette<br>• Indefinite period agreements for direct collection of WRC levies with the two largest agencies (Rand Water and Umgeni Water)<br>• Continuous drive to increase leverage as a way of diversifying Strategy to diversify funding to be approved by Executive<br>• Regular interaction with the DWS and leverage stakeholders on funding issues<br>• Prioritisation of available funds<br>• Implementation of the approved Finance Diversification strategy |
| Limited application and packaging of research, solutions and technologies to maintain the water sector primarily but also across all sectors (energy, industry, agriculture, mining etc) | • Engagement for improved Policy dialogue that accommodate the development of policy, ministerial and parliamentary briefs to influence decision-making<br>• Development of training manuals, guidelines and support tools, e.g., dialogues, symposiums and conferences for implementation and development<br>• Continuously strengthen collaborative platforms with key (primary) stakeholders<br>• Incorporation of research uptake and interventions into WRC research proposal template and Corporate Plan and periodic strategic review of research portfolio<br>• 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<br>• Smart packaging of research outputs, user focused i.e. various technical stakeholders vs packaging of solutions for practitioners<br>• Branding and communication of products (use DWS, DSI and WRC as test sites for technology solutions). WRC Board, EXCO, MANCO and employees also to be used as product samplers – adopt a community. Create water activists. Strengthen website to better showcase and promote technology and water solutions |
| Inadequate participation of South Africa in Research, Development and Innovation activities and projects in Africa | • Regular update of the international strategy and annual development of the implementation plan<br>• Participation in international conferences and events<br>• Increased involvement in African continent, regional or African-global, level projects, engagement and activities<br>• Conducting Africa-wide projects with donor partners and establish funding partnership to fund projects and activities on the continent<br>• Increased utilisation of modern technology for improved participation in international meetings<br>• Development and submission of an annual international travel plan to the Minister of Human Settlements, Water and Sanitation before the beginning of each financial year |

| Risk name | 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 are areas (virtual operation – multiple locations and sites)<br>• Offsite backups of core systems and data, Disaster recovery site and plans. Policy and standard procedures for backing up by individual users<br>• Uninterrupted water and power supply<br>• Anti-virus software (renewed annually and daily updates) and firewalls<br>• Insurance<br>• Emergency response teams<br>• Evacuation plans and procedures and drills<br>• Fully functional virtual private network (vpn)<br>• Logical and physical access controls<br>• Fireproof strong room for research contracts (Offsite)<br>• Digitisation of documentation<br>• 3G and cell phone enablement<br>• 24-hour security with armed response<br>• Outsource courier service provider<br>• Annual simulation testing |
| Fraud and corruption | • Financial and management (reconciliatory, supervisory, etc.) controls<br>• Monitoring daily cash balance<br>• Segregation of duties<br>• Audit trails<br>• Delegation of authority<br>• Change controls<br>• Fraud prevention plan implemented and work shopped annually<br>• 24-hour fraud hotline<br>• Whistle blowing policy implemented<br>• Code of ethics<br>• Ethics compliance for research projects<br>• Effective supply chain management unit |
| Non-compliance to Acts, Regulations, Legislations, Policies and Procedures | • Good relationship with Treasury and Auditor General secures continuous updates<br>• Ongoing training for WRC staff<br>• Assessment by means of internal and external audits<br>• Appointment of a Head of Legal and Compliance and Health and Safety representatives<br>• Health and Safety awareness campaigns and reviews<br>• Policies and procedures and associated internal controls exist, these are communicated to staff and compliance is monitored on an ongoing basis<br>• Policies and procedures are reviewed and approved on an annual basis<br>• Compliance checklists covering all relevant legislation have been developed and are planned for roll-out<br>• Implementing of the compliance checklists |

## 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, Risk and Finance 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, Risk and Finance Committee. For the 2020/21 financial year it performed the following audits:

- Research development review
- Asset management review
- Supply chain management review
- Financial control review
- Risk management review
- Performance information review
- IT general control review
- Follow-up reviews on previous internal audit reports issued and the Audit-General report
- Ad-hoc: Supply chain management – Observation of bids closing and adjudication thereof for tenders above R500 000
- Quality assessment readiness review on the internal audit unit

Tables 15 discloses relevant information on the Audit committee members:

*Table 15. Audit Committee Member Details*

| Name | Qualifications | Internal/ External | Date appointed |
|---|---|---|---|
| Ms Khulekelwe Mbonambi (Chairperson) | B.Com Accounting, B.Com (Hons), a certificate in Board Governance, certificate in Enterprise Risk Management | External | 1 February 2016 |
| 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 detections controls. The WRC has an approved fraud prevention policy and whistle blowing policy to ensure that the Commission's tolerance to fraud and corruption is integrated into the day-to-day activities of the organisation. Further to that the WRC has a 24-hour ethics hotline hosted by an external service provider. All fraud hotline calls received are reported on a quarterly basis to the Audit, Risk and Finance Committee.

## Code of ethics and business conduct

The sustainability of the WRC starts with a value system and a principles-based approach to doing business. This means operating in ways that, at a minimum, meet fundamental responsibilities in the areas of human rights, labour, environment, legal compliance and anti-corruption. The WRC Code of Ethics and business conduct is aligned to the South African Constitution and is implemented through "The Ten Principles of the Un Global Compact".

By incorporating these principles into strategies, policies and procedures, and establishing a culture of integrity, the WRC not only upholds the basic responsibilities to its people and planet, but also ensures the sustainability of the organisation.

The Code of Ethics is the WRC's promise to operate with candour and truthfulness in its dealings and communications. The WRC expects that the organisation will be operated in accordance with the principles set forth in this Code and that all WRC employees, from the members of the Board, the Executive to each individual WRC employee, will be held accountable for meeting these standards.

## 1. *Guiding Principles – Adapted from the UN Global Compact*

The WRC has aligned the Code of Ethics to the 10 principles of Un Global Compact and has categorised these principles into 4 categories below:

### 1.1. Human Rights

*1.1.1 Principle 1: The WRC supports and respects the protection of internationally proclaimed human rights; and*

*1.1.2 Principle 2: Makes sure that the WRC is not complicit in human rights abuse.*

### 1.2. Labour

*1.2.1 Principle 3: The WRC upholds the freedom of association and the effective recognition of the right to collective bargaining;*

*1.2.2 Principle 4: The elimination of all forms of forced and compulsory labour;*

*1.2.3 Principle 5: The effective abolition of child labour; and*

*1.2.4 Principle 6: The elimination of discrimination in respect of employment and occupation.*

### 1.3. Environment

*1.3.1 Principle 7: The WRC supports a precautionary approach to environmental challenges;*

*1.3.2 Principle 8: Undertakes initiatives to promote greater environmental responsibility; and*

*1.3.3 Principle 9: Encourages the development and diffusion of environmentally friendly technologies.*

### 1.4. Anti-Corruption

*1.4.1 Principle 10: The WRC will work against corruption in all its forms, including extortion and bribery.*

Employees may not engage in any activity that could raise questions as to the WRC's integrity, respect for diversity, impartiality or reputation. Ethical business conduct includes workplace relationships between employees in terms of the Constitution and requires respect for constitutional rights in employment, particularly with regard to human dignity, non-discrimination, and respect for diversity, impartiality and reputation.

# Section D:

## WRC and subsidiary Annual Financial Statements for the year ended 31 March 2021

# CONTENTS



## WRC Annual Financial Statements

# Water Research Commission (WRC) and subsidiary Annual Financial Statements

for the year ended 31 March 2021

The reports and statements set out below comprise the annual financial statements:

Statement of Financial Position

Statement of Financial Performance

Statement of Changes in Net Assets

Cash Flow Statement

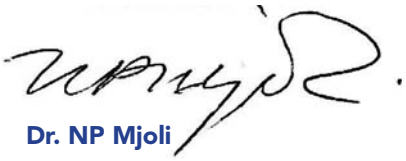
Statement of Comparison of Budget and Actual Amounts

Summary of significant Accounting Policies

Notes to the Annual Financial Statements

The annual financial statements set out on pages 100 to 165, which have been prepared on the going concern basis, were approved by the board of members on 28 May 2021 and were signed on its behalf by:

**Mr. DP Naidoo**
Chief Executive Officer



**Dr. NP Mjoli**
Chairperson of the Board

# Statement of responsibility

## and confirmation of accuracy for the Annual Report 2020/21

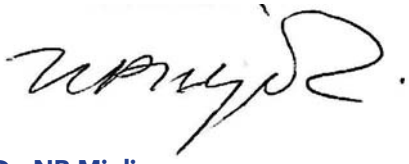
The Accounting Authority is responsible for the preparation of the public entity's Annual Financial Statements and for the judgements made in this information.

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 2021 have been audited by the external auditors and their report is presented on pp. 91 to 100.

The financial statements set of pp. 100 to 170 which have been prepared on the going concern basis, were approved by the Board members on 29 July 2021 and were signed on its behalf by:

**Mr. DP Naidoo**
Chief Executive Officer



**Dr. NP Mjoli**
Chairperson of the Board

# Report of the Audit and Risk Committee

We are pleased to present the Annual Report of the Audit, Risk and Finance Committee of the Water Research Commission for the financial year ended 31 March 2021.

**Audit Committee responsibilities**

The report of the Audit, Risk and Finance Committee is required by the Public Finance Management Act, Act 1 of 1999, as amended and the Treasury regulations 27.1.7 and 27.1.10. The Committee has adopted the formal terms of reference as its Audit, Risk and Finance Committee Charter and has discharged all of its responsibilities for the year under review, in compliance with the charter.

**Effectiveness of internal control systems**

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

The Internal Audit (IA) is responsible for evaluating the control environment and assisting the Committee to fulfil its responsibilities. The IA operated satisfactorily during the 2020/21 financial year. The function has remained effective and objective in executing their mandate, in line with internal audit standards.

The three-year rolling and annual internal audit plan was tabled and approved at the beginning of the financial year. The Committee is satisfied that the plan represented a clear alignment with key risks the WRC is faced with and a good balance across the different categories of audits, i.e. risk-based, mandatory, performance, ICT and follow-up audits.

The Committee is satisfied that the internal audit function has addressed the high risks pertinent to the WRC in its audit.

**Evaluation of the Annual Financial Statements**

The Committee has reviewed the draft annual financial statements prepared by Management and has advised the Chief Executive Officer to ensure that all review notes of Internal Audit and the Committee are fully addressed prior to submission of the annual financial statements to the Auditor-General South Africa (AGSA). Subsequent to the audit process, the audited annual financial statements were also reviewed when the report of the AGSA was discussed with the Committee.

# Report of the Audit and Risk Committee

**Evaluation of the Annual Performance Information**

The Committee has reviewed the draft annual performance report to be included in the Annual Report prepared by Management to ensure that review notes and comments of the Internal Audit and the Committee are fully addressed prior to submission to AGSA. The Committee has discussed the external audit outcomes on the reporting on annual performance report.

**Auditor-General South Africa**

We have reviewed the implementation plan for audit issues raised in the previous financial year and based on the interaction with management, internal audit reports and the Auditor-General South Africa (AGSA) audit report, significant matters have been adequately addressed. The Committee has met with AGSA and is not aware of any unresolved issues with respect to the current audit. The Committee concurs and accepts the conclusions of AGSA on the Annual Financial Statements and is of the opinion that the audited Annual Financial Statements be accepted and read together with the report of AGSA.

**Ms K Mbonambi**

Chairperson of the Audit and Risk Committee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# Report of the Auditor-General to Parliament

## Report of 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 pages 98 to 165, which comprise the consolidated and separate statement of financial position as at 31 March 2021, 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 2021, and their financial performance and cast 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 no. 1 of 1999) (PFMA).

### *Basis for opinion*

3. I conducted my audit in accordance with the International Standards of 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 my report.

4. I am independent of the public entity in accordance with the International Ethics Standards Board for Accountants' International code of ethics for professional accounts (including International Independence Standards) (IESBA code) as well as other 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 code.

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

### *Emphasis of matter*

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

### *Restatement of comparative figures*

7. As disclosed in note 40 to the consolidated and separate financial statements, corresponding figures for 31 March 2020 were restated as a result of errors in the consolidated and separate financial statements of the public entity at, and for the year ended, 31 March 2021.

### *Responsibilities of the accounting authority for the consolidated and separate financial statements*

8. The board of directors, which constitute 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 no. 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.

# Report of the Auditor-General to Parliament

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, individual or in aggregate, they could reasonable 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 disclosure 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 2021:

# Report of the Auditor-General to Parliament

| Portfolio | Pages in annual report |
|---|---|
| Research, development and innovation portfolio | 54 to 58 |
| Impact portfolio | 59 to 60 |
| Partnership portfolio | 60 to 61 |

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. I 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 54 to 69 for information on the achievement of planned targets for the year and explanation provided for the overachievement 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 in terms thereof, I have a responsibility to report material findings on the compliance of the public entity with specific matter in key legislation. I performed procedures to identify findings but not to gather evidence to express assurance.

20. I did not identify any material findings on compliance with the specific matters in key legislation set out in the general notice issued in terms of the PAA.

### *Other information*

21. The accounting authority is responsible for the other information. The other information comprises the information included in the annual 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.

# Report of the Auditor-General to Parliament

22. My opinion on the consolidated and separate 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.

23. 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.

24. 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*

25. 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. I did not identify any significant deficiencies in internal control.

Auditor - General

Pretoria

30 July 2021

AUDITOR-GENERAL

# 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 consolidated and separate financial statements and the procedures performed on reported performance information for selected portfolios and on the Water Research Commission's compliance with respect to the selected subject matters.

## Consolidated and separate financial statements

2. In addition to my responsibility for the audit of the consolidated and separate financial statements as described in this auditor's report, I also:
   - Identify and assess the risks of material misstatement of the consolidated and separate 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 is 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 Water Research Commission'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 consolidated and separate 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's 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 consolidated and separate financial statements about the material uncertainty or, if such disclosures are inadequate, to modify the opinion on the consolidated and separate 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.

# Annexure –
## Auditor-general's responsibility for the audit

- Evaluate the overall presentation, structure and content of the consolidated and separate financial statements, including the disclosures, and whether the consolidated and separate 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 and separate 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

1. 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.

2. I also provide the accounting authority with a statement that I have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may be reasonably be thought to bear on my independence and, where applicable, actins taken to eliminate threats or safeguards applied.

# Statement of Financial Position

as at 31 March 2021

| | Note(s) | Group 2021 | Group 2020 | WRC 2021 | WRC 2020 |
|---|---|---|---|---|---|
| **Assets** | | | | | |
| Current assets | | | | | |
| Receivables | 3 | 53 382 689 | 39 788 627 | 53 375 964 | 39 779 789 |
| Cash and cash equivalents | 4 | 300 323 629 | 240 984 237 | 300 293 167 | 240 954 437 |
| | | **353 706 318** | **280 772 864** | **353 669 131** | **280 734 226** |
| Non-current assets | | | | | |
| Property, plant and equipment | 5 | 7 888 123 | 11 659 284 | 7 888 123 | 11 659 284 |
| Intangible assets | 6 | 3 704 877 | 4 209 857 | 3 704 877 | 4 209 857 |
| Investment in wholly controlled entity | 7 | - | - | 1 | 1 |
| Receivables | 3 | 1 164 764 | 1 109 363 | 1 164 764 | 1 109 363 |
| | | **12 757 764** | **16 978 504** | **12 757 765** | **16 978 505** |
| **Total assets** | | **366 464 082** | **297 751 368** | **366 426 896** | **297 712 731** |
| **Liabilities** | | | | | |
| Current liabilities | | | | | |
| Finance lease obligation | 8 | 570 717 | 499 020 | 570 717 | 499 020 |
| Operating lease liability | 9 | 8 900 199 | 8 354 066 | 8 900 199 | 8 354 066 |
| Payables | 10 | 154 678 966 | 155 663 101 | 154 678 966 | 155 663 101 |
| Accruals - leave and service bonus (13th cheque) | 11 | 9 289 434 | 7 169 888 | 9 289 434 | 7 169 888 |
| Provision for performance bonus | 13 | 10 322 076 | 9 660 279 | 10 322 076 | 9 660 279 |
| Revolving credit facility | 4 | 162 842 | 106 620 | 162 842 | 106 620 |
| | | **183 924 234** | **181 452 974** | **183 924 234** | **181 452 974** |
| Non-current liabilities | | | | | |
| Finance lease obligation | 8 | 62 894 | 633 611 | 62 894 | 633 611 |
| Employee benefit obligation | 12 | 4 047 692 | 3 697 390 | 4 047 692 | 3 697 390 |
| | | **4 110 586** | **4 331 001** | **4 110 586** | **4 331 001** |
| **Total liabilities** | | **188 034 820** | **185 783 975** | **188 034 820** | **185 783 975** |
| **Net assets** | | **178 429 262** | **111 967 393** | **178 392 076** | **111 928 756** |
| Accumulated surplus | | 178 429 262 | 111 967 393 | 178 392 076 | 111 928 756 |
| **Total net assets** | | **178 429 262** | **111 967 393** | **178 392 076** | **111 928 756** |

# Statement of Financial Performance

for the year ended 31 March 2021

| | Note(s) | Group 2021 | Group 2020 | WRC 2021 | WRC 2020 |
|---|---|---|---|---|---|
| **Revenue** | | | | | |
| **Revenue from exchange transactions** | | | | | |
| Leverage income | 14 | 73 651 170 | 65 235 235 | 73 651 170 | 65 235 235 |
| Rental received | 14 | - | 42 284 | - | - |
| Recovery of expenditure | 14 | - | 1 929 | - | - |
| Other income | 14 | 139 774 | 243 174 | 139 774 | 243 174 |
| Interest received | 15 | 5 303 926 | 6 773 400 | 5 303 926 | 6 773 400 |
| **Total revenue from exchange transactions** | | **79 094 870** | **72 296 022** | **79 094 870** | **72 251 809** |
| **Revenue from non-exchange transactions** | | | | | |
| Water research levies | 16 | 265 578 717 | 258 967 111 | 265 578 717 | 258 967 111 |
| **Total revenue** | | **344 673 587** | **331 263 133** | **344 673 587** | **331 218 920** |
| **Expenditure** | | | | | |
| Depreciation, amortisation and impairment | 17 | 4 388 620 | 4 630 717 | 4 388 620 | 4 630 717 |
| Employee-related costs | 18 | 101 656 694 | 94 801 301 | 101 656 694 | 94 801 301 |
| Finance costs | 19 | 537 331 | 542 615 | 537 331 | 542 615 |
| General expenses | 20 | 9 285 541 | 13 226 708 | 9 283 122 | 13 220 315 |
| Lease rentals on operating lease | 21 | 11 024 352 | 11 420 737 | 11 024 352 | 11 420 737 |
| Repairs and maintenance | | 189 086 | 162 286 | 189 086 | 129 800 |
| Research, development and innovation | 22 | 151 202 261 | 175 771 899 | 151 202 261 | 175 771 899 |
| Interest and penalties recovered | 23 | (968) | (12 210) | - | - |
| **Total expenditure** | | **278 282 917** | **300 544 053** | **278 281 466** | **300 517 384** |
| **Operating surplus / (deficit)** | 25 | **66 390 670** | **30 719 080** | **66 392 121** | **30 701 536** |
| Gain/(loss) on disposal of assets and liabilities | 24 | - | 9 749 192 | - | 1 567 660 |
| Actuarial gains/(losses) | 12 | 71 199 | (457 634) | 71 199 | (457 634) |
| | | **71 199** | **9 291 558** | **71 199** | **1 110 026** |
| **Surplus / (deficit) for the year** | | **66 461 869** | **40 010 638** | **66 463 320** | **31 811 562** |

# Statement of Changes in Net Assets

for the year ended 31 March 2021

| | Accumulated surplus | Total net assets |
|---|---|---|
| **Group** | | |
| **Balance at 01 April 2019** | **71 956 755** | **71 956 755** |
| Changes in net assets | | |
| Surplus/(deficit) for the year | 40 010 638 | 40 010 638 |
| Total changes | 40 010 638 | 40 010 638 |
| **Balance at 01 April 2020** | **111 967 393** | **111 967 393** |
| Changes in net assets | | |
| Surplus/(deficit) for the year | 66 461 869 | 66 461 869 |
| Total changes | 66 461 869 | 66 461 869 |
| **Balance at 31 March 2021** | **178 429 262** | **178 429 262** |
| **WRC** | | |
| **Balance at 01 April 2019** | **80 117 194** | **80 117 194** |
| Changes in net assets | | |
| Surplus/(deficit) for the year | 31 811 562 | 31 811 562 |
| Total changes | 31 811 562 | 31 811 562 |
| **Balance at 01 April 2020** | **111 928 756** | **111 928 756** |
| Changes in net assets Surplus/(deficit) for the year | 66 463 320 | 66 463 320 |
| Total changes | 66 463 320 | 66 463 320 |
| **Balance at 31 March 2021** | **178 392 076** | **178 392 076** |

# Cash Flow Statement

for the year ended 31 March 2021

| | Note(s) | Group 2021 | Group 2020 | WRC 2021 | WRC 2020 |
|---|---|---|---|---|---|
| **Cash flows from operating activities** | | | | | |
| **Receipts** | | | | | |
| Cash receipts from customers | | 347 039 769 | 336 738 713 | 347 038 075 | 335 351 776 |
| Interest income | | 5 782 171 | 7 498 683 | 5 782 171 | 7 498 683 |
| | | 352 821 940 | 344 237 396 | 352 820 246 | 342 850 459 |
| **Payments** | | | | | |
| Cash paid to suppliers | | (281 319 372) | (280 508 378) | (281 318 340) | (278 681 019) |
| **Net cash flows from operating activities** | 28 | **71 502 568** | **63 729 018** | **71 501 906** | **64 169 440** |
| **Cash flows from investing activities** | | | | | |
| Purchase of property, plant and equipment | 5 | (73 473) | (2 559 587) | (73 473) | (2 559 587) |
| Proceeds from sale of property, plant and equipment | 5 | - | 9 790 812 | - | 40 812 |
| Purchase of other intangible assets | 6 | (39 006) | (366 000) | (39 006) | (366 000) |
| Loans to wholly-controlled entity repaid | | - | - | - | 9 446 928 |
| **Net cash flows from investing activities** | | **(112 479)** | **6 865 225** | **(112 479)** | **6 562 153** |
| **Cash flows from financing activities** | | | | | |
| Employee benefit obligation | | - | (2 467 619) | - | (2 467 619) |
| Finance lease payments | | (614 850) | (1 065 948) | (614 850) | (1 065 948) |
| **Net cash flows from financing activities** | | **(614 850)** | **(3 533 567)** | **(614 850)** | **(3 533 567)** |
| **Net increase/(decrease) in cash and cash equivalents** | | **70 775 239** | **67 060 676** | **70 774 577** | **67 198 026** |
| Cash and cash equivalents at the beginning of the year | | 240 877 617 | 160 932 696 | 240 847 817 | 160 765 546 |
| Effect of exchange rate movement on cash balances | | (11 492 069) | 12 884 245 | (11 492 069) | 12 884 245 |
| **Cash and cash equivalents at the end of the year** | 4 | **300 160 787** | **240 877 617** | **300 130 325** | **240 847 817** |

# Statement of Comparison of Budget and Actual Amounts

for the year ended 31 March 2021

| | Budget on Cash Basis | | | | |
|---|---|---|---|---|---|
| | Approved budget | Adjustments | Final Budget Actual amounts | Actual amounts on comparable basis | Difference between final budget and actual |
| **Group** | | | | | |
| **Statement of Financial Performance** | | | | | |
| **Revenue** | | | | | |
| **Revenue from exchange transactions** | | | | | |
| Leverage income | 53 455 518 | - | **53 455 518** | 73 651 170 | **20 195 652** |
| Other income | 137 799 | - | **137 799** | 140 742 | **2 943** |
| Interest received – investment | 4 650 220 | - | **4 650 220** | 5 303 926 | **653 706** |
| **Total revenue from exchange transactions** | **58 243 537** | **-** | **58 243 537** | **79 095 838** | **20 852 301** |
| **Revenue from non-exchange transactions** | | | | | |
| Levy income | **273 740 816** | **(11 388 828)** | **262 351 988** | **265 578 717** | **3 226 729** |
| **Total revenue** | **331 984 353** | **(11 388 828)** | **320 595 525** | **344 674 555** | **24 079 030** |
| **Expenditure** | | | | | |
| Fixed costs | 12 286 461 | (585 622) | **11 700 839** | 11 550 318 | **(150 521)** |
| Running costs | 14 048 371 | (167 525) | **13 880 846** | 7 385 191 | **(6 495 655)** |
| Human resource costs | 121 792 376 | (15 880 434) | **105 911 942** | 98 942 298 | **(6 969 644)** |
| Research, development and innovation costs | 175 286 681 | (22 562 095) | **152 724 586** | 151 202 261 | **(1 522 325)** |
| Corporate expenditure | 2 903 151 | (380 808) | **2 522 343** | 1 986 740 | **(535 603)** |
| Capital expenditure | 5 667 313 | (2 190 507) | **3 476 806** | 112 479 | **(3 364 327)** |
| **Total expenditure** | **331 984 353** | **(41 766 991)** | **290 217 362** | **271 179 287** | **(19 038 075)** |
| **Actual Amount on Comparable Basis as Presented in the Budget and Actual Comparative Statement** | **-** | **30 378 163** | **30 378 163** | **73 495 268** | **43 117 105** |

Refer to note 37 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 38 for a reconciliation of budget surplus/deficit with the surplus/deficit in the Statement of Financial Performance.

# Summary of significant **Accounting Policies**

for the year ended 31 March 2021

## 1. Presentation of Annual Financial Statements

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

These annual financial statements have been prepared on an accrual basis of accounting and are in accordance with 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 annual financial statements, are disclosed below.

These accounting policies are consistent with the previous period.

### *1.1 Consolidation*

**Consolidated financial statements**

Consolidated annual financial statements are the annual 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.

**Accounting requirements**

The entity as controlling entity prepares consolidated annual 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 annual 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 annual 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 the 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.

## *1.2 Significant judgements and sources of estimation uncertainty*

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

**Receivables**

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

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

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

**Fair value estimation**

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

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

**Impairment testing**

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

surplus or deficit, the entity makes judgements as to whether there is any observable data indicating a measurable decrease in the estimated future cash flows from the financial asset.

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

**Useful lives and residual values**

The entity reassesses the useful lives and residual values of property, plant and equipment on an annual basis. In reassessing 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 (income) 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 12.

**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 cashflows discounted at the original effective interest rate.

## *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 |
|---|---|---|
| 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.

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

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

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

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 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 category) as reflected on the face of the statement of financial position or in the notes thereto:

| Class | Category |
|---|---|
| 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 category) 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.

**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 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 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 a cash-generating 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 an entity in exchange for services 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
- estimated future changes in the level of any state benefits that affect the benefits payable under a defined benefit plan, if, and only if, either:

- those changes were enacted before the reporting date; or
- past history, or other reliable evidence, indicates that those state 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 surplus/(deficit). 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 Commitments*

Items are classified as commitments when an entity has committed itself to future transactions that will normally result in the outflow of cash.

Disclosures are required in respect of unrecognised contractual commitments.

Commitments for which disclosure is necessary to achieve fair presentation should be disclosed in a note to the financial statements.

General commitments relate to contractual obligations that the WRC entered into before year end. Research project commitments comprise of

research projects approved for funding by the WRC executive management and include those for which contracts have been signed at year end and those that are in the process of being signed.

### *1.13 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
- 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 economic entity
- the stage of completion of the transaction at the reporting date can be measured reliably
- 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.

### *1.14 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 Water 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 Water and Umgeni Water Boards.

### *1.15 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.

### *1.16 Translation of foreign currencies*

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

At each reporting date:

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

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

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

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

### *1.17 Research and development expenditure*

Expenditure on research is recognised as an expense when it is incurred.

### *1.18 Fruitless and wasteful expenditure*

Section 1 of the PFMA defines fruitless and wasteful expenditure as 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.

If the expenditure is recoverable it is treated as an asset until it is recovered from the responsible person or written off as irrecoverable in the statement of financial performance.

### *1.19 Irregular expenditure*

Irregular expenditure is defined in section 1 of the PFMA as 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 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 dis-

closed 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.

### 1.20 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.

### 1.21 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).

### 1.22 Budget information

The annual 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 have been included in the annual financial statements. Refer to note 21 & 37.

### 1.23 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.

### 1.24 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)
- 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.

# Notes to the Annual Financial Statements

for the year ended 31 March 2021

## 2. New standards and interpretations

### 2.1 Standards and interpretations effective and adopted in the current year

In the prior year, the economic entity chose to early adopt the following standards and interpretations that are effective for the current financial year and that are relevant to its operations:

- 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.

### 2.2 Standards and Interpretations early adopted

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

- GRAP 20: Related Parties – Effective from 1 April 2021
- GRAP 108: Statutory Receivables – Effective from 1 April 2021

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

| | Group | | WRC | |
|---|---|---|---|---|
| | 2021 | 2020 | 2021 | 2020 |
| **3. Receivables** | | | | |
| **Receivables from non-exchange transactions** | | | | |
| Receivables: Water Research Levies | 46 198 992 | 36 184 410 | 46 198 992 | 36 184 410 |
| **Receivables from exchange transactions** | | | | |
| Receivables: Other | 3 012 259 | 1 748 647 | 3 012 939 | 1 748 647 |
| Deposits | 1 172 069 | 1 116 668 | 1 164 764 | 1 109 363 |
| Prepaid expenses | 4 164 033 | 1 845 848 | 4 164 033 | 1 845 848 |
| Recoverable fruitless and wasteful expenditure | - | 884 | - | 884 |
| VAT receivable | 100 | 1 533 | - | - |
| | **54 547 453** | **40 897 990** | **54 540 728** | **40 889 152** |
| Non-current assets | 1 164 764 | 1 109 363 | 1 164 764 | 1 109 363 |
| Current assets | 53 382 689 | 39 788 627 | 53 375 964 | 39 779 789 |
| | **54 547 453** | **40 897 990** | **54 540 728** | **40 889 152** |

Included in receivables from exchange for the economic entity (group) is a statutory receivable in respect of VAT amounting to R100 (2020: 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 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 loan 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.

## 4. Cash and cash equivalents

| | Group | | WRC | |
|---|---|---|---|---|
| | 2021 | 2020 | 2021 | 2020 |
| **Cash and cash equivalents consist of:** | | | | |
| Cash on hand | 1 326 | 510 | 1 326 | 510 |
| Bank balances | 157 845 252 | 162 615 763 | 157 814 790 | 162 585 963 |
| Short-term deposits | 142 477 051 | 78 367 964 | 142 477 051 | 78 367 964 |
| Revolving credit facility | (162 842) | (106 620) | (162 842) | (106 620) |
| | **300 160 787** | **240 877 617** | **300 130 325** | **240 847 817** |
| Current assets | 300 323 629 | 240 984 237 | 300 293 167 | 240 954 437 |
| Current liabilities | (162 842) | (106 620) | (162 842) | (106 620) |
| | **300 160 787** | **240 877 617** | **300 130 325** | **240 847 817** |

**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 | 300 323 629 | 240 984 237 | 300 293 167 | 240 954 437 |

## 5. Property, plant and equipment

| Group | 2021 | | | 2020 | | |
|---|---|---|---|---|---|---|
| | Cost | Accumulated depreciation and accumulated impairment | Carrying value | Cost | Accumulated depreciation and accumulated impairment | Carrying value |
| Furniture and fixtures | 4 565 512 | (4 050 950) | 514 562 | 4 576 426 | (3 164 775) | 1 411 651 |
| Motor vehicles | 300 391 | (300 391) | - | 300 391 | (300 391) | - |
| Office equipment | 2 782 967 | (2 132 412) | 650 555 | 2 713 945 | (1 573 745) | 1 140 200 |
| IT equipment | 5 980 639 | (4 613 706) | 1 366 933 | 6 551 061 | (3 870 835) | 2 680 226 |
| Leasehold improvements | 10 208 859 | (4 852 786) | 5 356 073 | 10 208 859 | (3 781 652) | 6 427 207 |
| **Total** | **23 838 368** | **(15 950 245)** | **7 888 123** | **24 350 682** | **(12 691 398)** | **11 659 284** |

| WRC | 2021 | | | 2020 | | |
|---|---|---|---|---|---|---|
| | Cost | Accumulated depreciation and accumulated impairment | Carrying value | Cost | Accumulated depreciation and accumulated impairment | Carrying value |
| Furniture and fixtures | 4 565 512 | (4 050 950) | 514 562 | 4 576 426 | (3 164 775) | 1 411 651 |
| Motor vehicles | 300 391 | (300 391) | - | 300 391 | (300 391) | - |
| Office equipment | 2 782 967 | (2 132 412) | 650 555 | 2 713 945 | (1 573 745) | 1 140 200 |
| IT equipment | 5 980 639 | (4 613 706) | 1 366 933 | 6 551 061 | (3 870 835) | 2 680 226 |
| Leasehold improvements | 10 208 859 | (4 852 786) | 5 356 073 | 10 208 859 | (3 781 652) | 6 427 207 |
| **Total** | **23 838 368** | **(15 950 245)** | **7 888 123** | **24 350 682** | **(12 691 398)** | **11 659 284** |

**Reconciliation of property, plant and equipment - Group - 2021**

| | Opening balance | Additions | Depreciation | Impairment loss/write off | Total |
|---|---|---|---|---|---|
| Furniture and fixtures | 1 411 651 | 1 000 | (896 507) | (1 582) | 514 562 |
| Office equipment | 1 140 200 | 72 473 | (562 118) | - | 650 555 |
| IT equipment | 2 680 226 | - | (1 313 293) | - | 1 366 933 |
| Leasehold improvements | 6 427 207 | - | (1 071 134) | - | 5 356 073 |
| | **11 659 284** | **73 473** | **(3 843 052)** | **(1 582)** | **7 888 123** |

The impairment loss amounting to R1 582 for the economic entity and the WRC is in respect of assets that were broken amounting to R788 and assets not found on the premises amounting to R794.

**Reconciliation of property, plant and equipment – Group – 2020**

| | Opening balance | Additions | Disposals | Depreciation | Impairment loss/write off | Total |
|---|---|---|---|---|---|---|
| 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 as the lease term had expired.

**Reconciliation of property, plant and equipment - WRC – 2021**

| | Opening balance | Additions | Depreciation | Impairment loss/write off | Total |
|---|---|---|---|---|---|
| Furniture and fixtures | 1 411 651 | 1 000 | (896 507) | (1 582) | 514 562 |
| Office equipment | 1 140 200 | 72 473 | (562 118) | - | 650 555 |
| IT equipment | 2 680 226 | - | (1 313 293) | - | 1 366 933 |
| Leasehold improvements | 6 427 207 | - | (1 071 134) | - | 5 356 073 |
| | **11 659 284** | **73 473** | **(3 843 052)** | **(1 582)** | **7 888 123** |

**Reconciliation of property, plant and equipment - WRC - 2020**

| | Opening balance | Additions | Disposals | Depreciation | Impairment loss/write off | Total |
|---|---|---|---|---|---|---|
| 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** |

**Pledged as security**

None of the assets were or are pledged as security.

**Assets subject to finance lease (Net carrying value)**

| | Group | | WRC | |
|---|---|---|---|---|
| | 2021 | 2020 | 2021 | 2020 |
| Office equipment | 559 146 | 1 068 094 | 559 146 | 1 068 094 |

**Property, plant and equipment fully depreciated and still in use (Cost)**

| | | | | |
|---|---|---|---|---|
| Furniture and fixtures | 94 471 | 94 471 | 94 471 | 94 471 |
| Office equipment | 1 055 213 | 973 148 | 1 055 213 | 973 148 |
| IT equipment | 1 411 720 | 1 938 808 | 1 411 720 | 1 938 808 |
| Motor vehicles | 300 391 | 300 391 | 300 391 | 300 391 |
| | **2 861 795** | **3 306 818** | **2 861 795** | **3 306 818** |

The transfer and sale of the Marumati building situated at Erf 706 Rietfontein was finalised on 12 July 2019. A register containing the information required by the PFMA is available for inspection.

## 6. Intangible assets

| Group | 2021 | | | 2020 | | |
|---|---|---|---|---|---|---|
| | Cost | Accumulated depreciation and accumulated impairment | Carrying value | Cost | Accumulated depreciation and accumulated impairment | Carrying value |
| Computer software, other | 7 414 630 | (3 709 753) | 3 704 877 | 7 375 625 | (3 165 768) | 4 209 857 |

| WRC | 2021 | | | 2020 | | |
|---|---|---|---|---|---|---|
| | Cost | Accumulated depreciation and accumulated impairment | Carrying value | Cost | Accumulated depreciation and accumulated impairment | Carrying value |
| Computer software, other | 7 414 630 | (3 709 753) | 3 704 877 | 7 375 625 | (3 165 768) | 4 209 857 |

**Reconciliation of intangible assets - Group - 2021**

| | Opening balance | Additions | Amortisation | Total |
|---|---|---|---|---|
| Computer software, other | 4 209 857 | 39 006 | (543 986) | 3 704 877 |

**Reconciliation of intangible assets - Group - 2020**

| | Opening balance | Additions | Amortisation | Total |
|---|---|---|---|---|
| Computer software, other | 4 353 817 | 366 000 | (509 960) | 4 209 857 |

**Reconciliation of intangible assets - WRC - 2021**

| | Opening balance | Additions | Amortisation | Total |
|---|---|---|---|---|
| Computer software, other | 4 209 857 | 39 006 | (543 986) | 3 704 877 |

**Reconciliation of intangible assets - WRC - 2020**

| | Opening balance | Additions | Amortisation | Total |
|---|---|---|---|---|
| Computer software, other | 4 353 817 | 366 000 | (509 960) | 4 209 857 |

**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 | |
|---|---|---|---|---|
| | 2021 | 2020 | 2021 | 2020 |
| Fully amortised intangible assets still in use | 1 992 401 | 1 992 401 | 1 992 401 | 1 992 401 |

## 7. Investment in wholly controlled entity

**Name of company**

| | Carrying amount 2021 | Carrying amount 2020 |
|---|---|---|
| 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 R1.

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 WRC to place the property at the disposal of the WRC as their main place of business.

The immovable property was disposed of on 12 July 2019.

The WRC is still considering the repurposing of Erf 706 Rietfontein.

**Controlled entity pledged as security**
The investment is not pledged as security.

## 8. Finance lease obligation

| | Group | | WRC | |
|---|---|---|---|---|
| | 2021 | 2020 | 2021 | 2020 |
| **Minimum lease payments due** | | | | |
| - within one year | 614 850 | 614 850 | 614 850 | 614 850 |
| - in second to fifth year | 63 023 | 677 872 | 63 023 | 677 872 |
| | 677 873 | 1 292 722 | 677 873 | 1 292 722 |
| less: future finance charges | (44 262) | (160 091) | (44 262) | (160 091) |
| **Present value of minimum lease payments** | **633 611** | **1 132 631** | **633 611** | **1 132 631** |
| **Present value of minimum lease payments due** | | | | |
| - within one year | 570 717 | 499 020 | 570 717 | 499 020 |
| - in second to fifth year | 62 894 | 633 611 | 62 894 | 633 611 |
| | **633 611** | **1 132 631** | **633 611** | **1 132 631** |
| Current liabilities | 570 717 | 499 020 | 570 717 | 499 020 |
| Non-current liabilities | 62 894 | 633 611 | 62 894 | 633 611 |
| | **633 611** | **1 132 631** | **633 611** | **1 132 631** |

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% (2020:13.5%).

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.

## 9. Operating lease liability

| | Group | | WRC | |
|---|---|---|---|---|
| | 2021 | 2020 | 2021 | 2020 |
| **Balance at year end** | | | | |
| Operating lease liability | 8 900 199 | 8 354 066 | 8 900 199 | 8 354 066 |
| **Minimum operating lease liability payments** | 9 940 964 | 9 247 784 | 9 940 964 | 9 247 784 |
| Within 12 months | | | | |
| Between 12 - 60 months | 47 274 976 | 44 101 459 | 47 274 976 | 44 101 459 |
| Longer than 60 months | - | 13 114 480 | - | 13 114 480 |
| | **57 215 940** | **66 463 723** | **57 215 940** | **66 463 723** |

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.

## 10. Payables

| | Group | | WRC | |
|---|---|---|---|---|
| | 2021 | 2020 | 2021 | 2020 |
| **Payables from exchange transactions** | | | | |
| Income received in advance | 126 587 840 | 118 596 512 | 126 587 840 | 118 596 512 |
| Payables | 23 583 915 | 29 995 584 | 23 583 915 | 29 995 584 |
| Accruals | 4 507 211 | 7 071 005 | 4 507 211 | 7 071 005 |
| | **154 678 966** | **155 663 101** | **154 678 966** | **155 663 101** |

The comparative year has been restated as a result of a prior period misstatement. Refer to the correction of error (note 40) for further details.

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.

## 11. Accruals - leave and service bonus (13th cheque)

**Reconciliation of accruals - leave and service bonus (13th cheque) - Group - 2021**

| | Opening Balance | Additions | Utilised during the year | Payments during the year | Re- measurement | Total |
|---|---|---|---|---|---|---|
| Accruals for leave | 7 162 227 | 9 127 072 | (6 206 581) | (1 529 738) | 736 454 | 9 289 434 |
| Accruals for service bonuses (13th cheque) | 7 661 | - | - | (14 479) | 6 818 | - |
| | **7 169 888** | **9 127 072** | **(6 206 581)** | **(1 544 217)** | **743 272** | **9 289 434** |

**Reconciliation of accruals - leave and service bonus (13th cheque) - 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 service bonuses (13th cheque) | 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** |

**Reconciliation of accruals - leave and service bonus (13th cheque) - WRC - 2021**

| | Opening Balance | Additions | Utilised during the year | Payments during the year | Re- measurement | Total |
|---|---|---|---|---|---|---|
| Accruals for leave | 7 162 227 | 9 127 072 | (6 206 581) | (1 529 738) | 736 454 | 9 289 434 |
| Accruals for service bonuses (13th cheque) | 7 661 | - | - | (14 479) | 6 818 | - |
| | **7 169 888** | **9 127 072** | **(6 206 581)** | **(1 544 217)** | **743 272** | **9 289 434** |

**Reconciliation of accruals - leave and service bonus (13th cheque) - 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 service bonuses (13th cheque) | 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** |

Accruals are made for the number of accumulated leave days at the reporting date at the applicable salary rate. In line with the conditions of employment these accumulated leave days may be used by staff in lieu of days off or paid out in cash.

Three employees were appointed on a cost plus benefits basis. These employees were entitled to a service bonus (13th cheque). Accruals were made for the payment of service bonuses which was paid to employees annually on their birthdays. There are no employees remaining on the cost plus benefits basis at year-end.

There is no expected reimbursement in respect of the provisions.

## 12. Employee benefit obligations

*Medical aid scheme*

**Defined benefit plan**

The WRC has made provision for a medical aid scheme covering retired employees and active employees before 1 April 2008. These funds are actuarially valued at intervals of not more than three years using the projected unit credit method. The scheme was last actuarially valued at 31 March 2021.

The WRC carries the legal and related financial obligation to subsidise (100% subsidy level) the medical aid benefit of certain of its 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 (i.e. risk ringfencing) and/or buy out (i.e. liability capping) the disclosed liability in order to manage the WRC's exposure to the associated costs and risks. In the 2010/11 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 | |
|---|---|---|---|---|
| | 2021 | 2020 | 2021 | 2020 |
| **Carrying value** | (38 832 313) | (36 756 305) | (38 832 313) | (36 756 305) |
| Present value of the defined benefit obligation- partly funded Fair value of plan assets | 34 784 621 | 33 058 915 | 34 784 621 | 33 058 915 |
| **Employee benefit asset/ (obligation) recognised** | **(4 047 692)** | **(3 697 390)** | **(4 047 692)** | **(3 697 390)** |
| **Movement for the year - medical aid fund** | | | | |
| Opening balance | (3 697 390) | (5 333 109) | (3 697 390) | (5 333 109) |
| Contributions by employer | - | 2 467 619 | - | 2 467 619 |
| Net expense recognised in the statement of financial performance | (350 302) | (831 900) | (350 302) | (831 900) |
| | **(4 047 692)** | **(3 697 390)** | **(4 047 692)** | **(3 697 390)** |

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

| | Group | | WRC | |
|---|---|---|---|---|
| | 2021 | 2020 | 2021 | 2020 |
| Interest cost | 3 983 550 | 3 711 168 | 3 983 550 | 3 711 168 |
| Actuarial (gains) losses | (71 199) | 457 634 | (71 199) | 457 634 |
| Expected return on plan assets | (3 562 049) | (3 336 902) | (3 562 049) | (3 336 902) |
| | **350 302** | **831 900** | **350 302** | **831 900** |

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.

**Reconciliation of the defined benefit obligation**

| | Group | | WRC | |
|---|---|---|---|---|
| | 2021 | 2020 | 2021 | 2020 |
| Opening balance | 36 756 305 | 42 477 696 | 36 756 305 | 42 477 696 |
| Interest cost | 3 983 550 | 3 711 168 | 3 983 550 | 3 711 168 |
| Benefits paid | (3 726 290) | (3 659 262) | (3 726 290) | (3 659 262) |
| Net actuarial losses/(gains) | 1 818 748 | (5 773 297) | 1 818 748 | (5 773 297) |
| | **38 832 313** | **36 756 305** | **38 832 313** | **36 756 305** |

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.

**Reconciliation of the plan assets**

| | Group | | WRC | |
|---|---|---|---|---|
| | 2021 | 2020 | 2021 | 2020 |
| Opening balance | 33 058 915 | 37 144 587 | 33 058 915 | 37 144 587 |
| Expected return | 3 562 049 | 3 336 902 | 3 562 049 | 3 336 902 |
| Actuarial gains (losses) | 1 889 947 | (6 230 931) | 1 889 947 | (6 230 931) |
| Contributions by employer | - | 2 467 619 | - | 2 467 619 |
| Benefits paid | (3 726 290) | (3 659 262) | (3 726 290) | (3 659 262) |
| | **34 784 621** | **33 058 915** | **34 784 621** | **33 058 915** |

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 GRAP 25, 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 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.

**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:

| **Financial Valuation assumptions** | 2021 | 2020 |
|---|---|---|
| Discount rates used | 10,65 % | 11,40 % |
| Medical contribution inflation | 8,21 % | 7,90 % |
| Net discount rate for calculating liabilities | 2,25 % | 3,24 % |
| | | |
| Expected return on assets | 10,65 % | 11,40 % |
| Inflation | 6,71 % | 6,40 % |
| Net discount rate for calculating assets | 3,69 % | 4,70 % |

**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 2021 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 9 years. The recommended discount rate as at 31 March 2021 is 10,65%. The source is the Johannesburg Stock Exchange and obtained from Thompson Reuters.

The duration for the previous valuation was 8 years which resulted in a discount rate of 11.40%.

**Future Inflation Assumption**

The general inflation assumption is used to estimate the base rate for determining the rate at which the future healthcare subsidies will increase.

An estimate of the market's pricing of inflation was made by comparing the yields on nominal bonds to the yields on real bonds on the yield curve for bonds with a duration of 9 years. The implied inflation assumption is therefore 6.71% per annum for future inflation. The source is the Johannesburg Stock Exchange through Inet BFA data service.

The inflation assumption used for the previous valuation was 6.40%

**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.

The implied medical inflation assumption is therefore 8.21% per annum.

**Net Discount Rate to Value Liabilities**

The net discount rate for medical subsidy inflation is assumed to be 2.25% p.a. (Derived from a discount rate of 10.65% and the expected medical subsidy inflation rate of 8.21%).

The net discount rate as per the previous valuation was 3.24% p.a.

**Net Discount Rate to Value Assets**

The net discount rate for general inflation is assumed to be 3.69% p.a. (Derived from a discount rate of 10.65% and the expected general inflation rate of 6.71%). The net discount rate as per the previous valuation was 4.70% 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. This assumption is consistent with that of the previous valuation.

- Continuation of Membership and Family Profile

There are currently 37 continuation members. There was one termination over the valuation period relating to a child pensioner.

**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 2021 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 | 38 832 313 | 41 918 760 | 36 136 745 |
| Projected interest cost | 3 927 352 | 3 855 812 | 3 982 775 |
| Plan asset | 34 784 621 | 37 329 149 | 32 545 652 |

| **Mortality** | PA (90) - 2 (R) | PA (90) - 1 (R) | PA (90) + 1 (R) |
|---|---|---|---|
| Defined benefit obligation | 38 832 313 | 40 462 502 | 37 228 291 |
| Projected interest cost | 3 927 352 | 4 100 922 | 3 756 567 |
| Plan asset | 34 784 621 | 36 118 568 | 33 463 260 |

| **Medical Inflation rate** | Inflation rate (R) | Inflation rate (R) -1% | Inflation rate (R) +1% |
|---|---|---|---|
| Defined benefit obligation | 38 832 313 | 36 056 070 | 41 962 281 |
| Projected interest cost | 3 927 352 | 3 632 266 | 4 260 100 |
| Plan asset | 34 784 621 | 32 447 740 | 37 403 314 |

| Employee Statistics | 31 March 2021 | 31 March 2020 | Difference |
|---|---|---|---|
| Continuation members Number | 37 | 38 | (1) |
| Average Age | 76 | 75 | 1 |
| Average Subsidy (R per month) | 8 532 | 8 021 | 511 |

**Developments since the previous valuation**

One active member as per the previous report has retired over the valuation period and is now a pensioner of the fund.

An allowance was made to the Average subsidy per month to account for the increase in the Discovery rates effective 1 July 2021.

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

**Contributions**

The medical aid premiums used for the current and previous valuations are summarised below:

| | Main member | Adult dependent | Child dependent |
|---|---|---|---|
| 1 January 2020 to 1 January 2021 | 5 954 | 5 633 | 1 188 |
| 1 January 2021 to 1 January 2022* | 6 186 | 5 853 | 1 234 |

The Council for Medical Schemes (CMS) has issued a circular encouraging medical schemes to keep their contribution increases for 2021 flat or in line with inflation. In cases where schemes are unable to freeze their contribution increase for 2021, the CMS recommends that they limit their increases to 3.9%, in line with CPI.

To date Discovery have not increased their contributions in 2021. They have however indicated that the contributions will be reviewed effective 1 July 2021.

For purposes of the valuation, alllowance was made for an increase of 3,9% in the contributions.

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

| | 2021 | 2020 | 2019 | 2018 | 2017 |
|---|---|---|---|---|---|
| | R | R | R | R | R |
| Defined benefit obligation | (38 832 313) | (36 756 304) | (42 477 696) | (40 030 373) | (34 055 937) |
| Plan assets | 34 784 621 | 33 058 915 | 37 144 587 | 33 828 948 | 29 016 011 |
| Net employee benefit asset/ (liability) | (4 047 692) | (3 697 390) | (5 333 109) | (6 201 425) | (5 039 936) |
| Net expense recognised in the statement of financial performance | 350 302 | 831 900 | 2 864 657 | 2 439 176 | 3 546 777 |

## 13. Provision for performance bonus

### Group and WRC

**Reconciliation of provision for performance bonus - 2021**

| | Opening Balance | Additions | Payments duration for the year | Total |
|---|---|---|---|---|
| Provision for performance bonus | 9 660 279 | 10 322 076 | (9 660 279) | 10 322 076 |

### Group and WRC

**Reconciliation of provision for performance bonus - 2020**

| | Opening Balance | Additions | Payments duration for the year | Total |
|---|---|---|---|---|
| Provision for performance bonus | 10 415 980 | 9 660 279 | (10 415 980) | 9 660 279 |

The comparative year has been restated as a result of a prior period misstatement. Refer to the correction of error (note 40) for further details.

Employees are entitled to a performance bonus in terms of the WRC Performance Management Policy. Performance bonuses are measured annually for the period 1 April - 31 March of the ensuing year and performance bonuses are paid when approved to qualifying employees.

## 14. Revenue from exchange transactions

| | Group | | WRC | |
|---|---|---|---|---|
| | 2021 | 2020 | 2021 | 2020 |
| Leverage income | 73 651 170 | 65 235 235 | 73 651 170 | 65 235 235 |
| Other income | 139 774 | 243 174 | 139 774 | 243 174 |
| Rental received | - | 42 284 | - | - |
| Recovery of expenditure | - | 1 929 | - | - |
| | **73 790 944** | **65 522 622** | **73 790 944** | **65 478 409** |

The comparative year has been restated as a result of a prior period misstatement. Refer to the correction of error (note 40) 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

| **Interest revenue** | Group | | WRC | |
|---|---|---|---|---|
| | 2021 | 2020 | 2021 | 2020 |
| Bank and fixed deposits | 5 303 926 | 6 773 400 | 5 303 926 | 6 773 400 |

## 16. Revenue from non-exchange transactions

| | | | | |
|---|---|---|---|---|
| Water research levies | 265 578 717 | 258 967 111 | 265 578 717 | 258 967 111 |

## 17. Depreciation, amortisation and impairment

| | | | | |
|---|---|---|---|---|
| Property, plant and equipment – Depreciation | 3 843 052 | 4 119 320 | 3 843 052 | 4 119 320 |
| Property, plant and equipment – Impairment loss | 1 582 | 1 437 | 1 582 | 1 437 |
| Intangible assets – amortisation | 543 986 | 509 960 | 509 960 | 543 986 |
| | **4 388 620** | **4 630 717** | **4 388 620** | **4 630 717** |

## 18. Employee related costs

| | Group | | WRC | |
|---|---|---|---|---|
| | 2021 | 2020 | 2021 | 2020 |
| Basic salary | 85 327 113 | 79 438 917 | 85 327 113 | 79 438 917 |
| Merit bonus | 10 322 076 | 9 660 279 | 10 322 076 | 9 660 279 |
| Directors emoluments | 809 742 | 503 538 | 809 742 | 503 538 |
| Workmen's compensation – Department of Labour | 405 423 | 434 715 | 405 423 | 434 715 |
| Skills Development Levies | 696 082 | 916 617 | 696 082 | 916 617 |
| Company contributions – UIF | 157 845 | 161 631 | 157 845 | 161 631 |
| Company contributions – other | 42 571 | 180 268 | 42 571 | 180 268 |
| Leave and bonus provision | 3 663 764 | 2 668 708 | 3 663 764 | 2 668 708 |
| Staff bursaries | 232 078 | 836 628 | 232 078 | 836 628 |
| | **101 656 694** | **94 801 301** | **101 656 694** | **94 801 301** |

The comparative year has been restated as a result of a prior period misstatement. Refer to the correction of error (note 40) for further details.

## 19. Finance costs

| | | | | |
|---|---|---|---|---|
| Employee benefit obligations | 421 501 | 374 266 | 421 501 | 374 266 |
| Finance leases | 115 830 | 168 349 | 115 830 | 168 349 |
| | **537 331** | **542 615** | **537 331** | **542 615** |

## 20. General expenses

| | Notes | Group | | WRC | |
|---|---|---|---|---|---|
| | | 2021 | 2020 | 2021 | 2020 |
| Auditors' remuneration | 27 | 890 052 | 2 120 129 | 890 052 | 2 120 129 |
| Bank charges | | 76 063 | 87 991 | 74 324 | 84 934 |
| Catering costs | | 36 612 | 505 820 | 36 612 | 505 820 |
| Cleaning | | 374 954 | 246 532 | 374 954 | 246 532 |
| Consumables | | 18 513 | 201 795 | 18 513 | 201 795 |
| Corporate social responsibility | | 85 921 | 209 719 | 85 921 | 209 719 |
| IT expenses | | 3 513 845 | 4 189 303 | 3 513 845 | 4 189 303 |
| Insurance | | 202 414 | 225 797 | 202 414 | 225 797 |
| Security | | 573 080 | 711 312 | 573 080 | 711 312 |
| Leadership development, including training | | 66 947 | 241 743 | 66 947 | 241 743 |
| Motor vehicle expenses | | 3 876 | 17 178 | 3 876 | 17 178 |
| Postage and courier | | 10 805 | 69 716 | 10 805 | 69 716 |
| Professional fees | | 598 362 | 738 512 | 597 682 | 735 177 |
| Promotions | | 137 233 | 152 263 | 137 233 | 152 263 |
| Recruitment costs | | 194 959 | 35 078 | 194 959 | 35 078 |
| Staff welfare | | 11 953 | 52 968 | 11 953 | 52 968 |
| Printing and stationery | | 38 136 | 211 548 | 38 136 | 211 548 |
| Storage costs | | 25 312 | 28 424 | 25 312 | 28 424 |
| Subscriptions and membership fees | | 727 847 | 821 560 | 727 847 | 821 560 |
| Telephone and fax | | 896 864 | 1 021 982 | 896 864 | 1 021 982 |
| Travel – local | | 7 387 | 345 639 | 7 387 | 345 639 |
| Utilities | | 794 406 | 991 698 | 794 406 | 991 698 |
| | | **9 285 541** | **13 226 707** | **9 283 122** | **13 220 315** |

The comparative year has been restated as a result of a prior period misstatement. Refer to the correction of error (note 40) for further details.

## 21. Lease rentals on operating lease

| | Group | | WRC | |
|---|---|---|---|---|
| | 2021 | 2020 | 2021 | 2020 |
| **Premises** | | | | |
| Rent payable in respect of Lynnwood Bridge | 10 283 622 | 9 860 530 | 10 283 622 | 9 860 530 |
| Rent payable in respect of additional parking | 45 540 | 22 769 | 45 540 | 22 769 |
| Operating lease liability – Straight-lining of lease | 546 134 | 1 171 837 | 546 134 | 1 171 837 |
| Rental of equipment | 149 056 | 365 601 | 149 056 | 365 601 |
| | **11 024 352** | **11 420 737** | **11 024 352** | **11 420 737** |

## 22. Research, development and innovation

| | | | | |
|---|---|---|---|---|
| Research, development and innovation costs | 143 662 088 | 153 090 410 | 143 662 088 | 153 090 410 |
| Media and marketing (printing and publishing) | 2 398 732 | 2 520 911 | 2 398 732 | 2 520 911 |
| Workshops and conferences | 2 999 308 | 11 122 796 | 2 999 308 | 11 122 796 |
| Other research related costs | 1 926 272 | 2 301 237 | 1 926 272 | 2 301 237 |
| Patent registrations | 175 369 | 385 863 | 175 369 | 385 863 |
| Local travel: Research related meetings | 34 034 | 3 527 118 | 34 034 | 3 527 118 |
| International travel: Research related meetings | (3 952) | 2 391 770 | (3 952) | 2 391 770 |
| Catering: Research-related meetings | 10 410 | 431 794 | 10 410 | 431 794 |
| | **151 202 261** | **175 771 899** | **151 202 261** | **175 771 899** |

The comparative year has been restated as a result of a prior period misstatement. Refer to the correction of error (note 40) for further details.

## 23. Interest and penalties recovered

| | | | | |
|---|---|---|---|---|
| Interest and penalties recovered | (968) | (12 210) | - | - |

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.

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 2018/19 financial year.

After further deliberation, SARS refunded the WRC R12,210 in the 2019/20 financial year and the remaining amount of R968 in the 2020/21 financial year.

## 24. Gain/(loss) on disposal of assets and liabilities

| | Group | | WRC | |
|---|---|---|---|---|
| | 2021 | 2020 | 2021 | 2020 |
| Gain on disposal of Marumati Building | - | 9 750 000 | - | - |
| Property, plant and equipment | - | (808) | - | (808) |
| Financial assets | - | - | - | 1 568 468 |
| | **-** | **9 749 192** | **-** | **1 567 660** |

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.

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.

## 25. Operating surplus

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

| | Group | | WRC | |
|---|---|---|---|---|
| | 2021 | 2020 | 2021 | 2020 |
| **Operating lease charges** | | | | |
| Premises | | | | |
| - Contractual amounts Equipment | 10 875 296 | 11 055 136 | 10 875 296 | 11 055 136 |
| - Contractual amounts | 149 056 | 365 601 | 149 056 | 365 601 |
| | **11 024 352** | **11 420 737** | **11 024 352** | **11 420 737** |
| Gain (loss) on sale of property, plant and equipment | - | 9 749 192 | | (808) |
| Gain on disposal of financial assets | - | - | - | 1 568 468 |
| Amortisation on intangible assets | 543 986 | 509 959 | 543 986 | 509 959 |
| Depreciation and impairment losses on property, plant and equipment | 3 844 634 | 4 120 757 | 3 844 634 | 4 120 757 |
| Employee costs | 100 994 897 | 95 557 002 | 100 994 897 | 95 557 002 |
| Research, development and innovation costs | 151 202 261 | 175 771 899 | 151 202 261 | 175 771 899 |

## 26. 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.

## 27. Auditors' remuneration

| | | | | |
|---|---|---|---|---|
| Fees – external auditors | 771 717 | 1 749 244 | 771 717 | 1 749 244 |
| Fees – internal auditors | 118 335 | 370 885 | 118 335 | 370 885 |
| | **890 052** | **2 120 129** | **890 052** | **2 120 129** |

## 28. Cash generated from (used in) operations

| | Group | | WRC | |
|---|---|---|---|---|
| | 2021 | 2020 | 2021 | 2020 |
| Surplus / Deficit) | 67 123 664 | 39 254 936 | 67 125 115 | 31 055 860 |
| **Adjustments for:** | | | | |
| Depreciation, amortisation and impairment | 4 388 620 | 4 630 717 | 4 388 620 | 4 630 717 |
| (Gain) / loss on disposal of assets and liabilities | - | (9 749 192) | - | (1 567 660) |
| Finance costs – Finance leases | 115 830 | 168 349 | 115 830 | 168 349 |
| Finance costs – retirement benefit | 421 501 | 374 266 | 421 501 | 374 266 |
| Movements in operating lease assets and accruals | 546 133 | 1 171 837 | 546 133 | 1 171 837 |
| Non-cash movement in leave and bonus provision | 2 119 546 | 499 428 | 2 119 546 | 499 428 |
| Actuarial (gains) and losses | (71 199) | 457 634 | (71 199) | 457 634 |
| Foreign exchange (profit)/loss on foreign bank accounts | 11 492 069 | (12 884 245) | 11 492 069 | (12 884 245) |
| Non-cash movement in performance bonus provision | 661 797 | (755 701) | 661 797 | (755 701) |
| **Changes in working capital:** | | | | |
| Receivables | (13 649 462) | 5 490 627 | (13 651 575) | 5 577 684 |
| Payables | (984 134) | 34 314 661 | (984 134) | 34 685 570 |
| | **71 502 568** | **63 729 018** | **71 501 906** | **64 169 440** |

## 29. Commitments

| | | | | |
|---|---|---|---|---|
| **Commitments** | | | | |
| - General | 12 681 239 | 6 553 319 | 12 681 239 | 6 553 319 |
| **Commitments** | | | | |
| - Research Projects | 253 521 909 | 229 889 354 | 253 521 909 | 229 889 354 |
| **Total commitments** | | | | |
| General commitments | 12 681 239 | 6 553 319 | 12 681 239 | 6 553 319 |
| Research project commitments | 253 521 909 | 229 889 354 | 253 521 909 | 229 889 354 |
| | **266 203 148** | **236 442 673** | **266 203 148** | **236 442 673** |

General commitments relate to contractual obligations that the WRC entered into before 31 March 2021.

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 2021, commitments relating to research projects with signed contracts amounted to R197,355,059 (2020: R157,740,529 ) and projects for which contracts are in the process of signing amount to R56,166,850 (2020: R 72,148,825).

## 30. Related parties

| | | WRC | |
|---|---|---|---|
| | | 2021 | 2020 |
| **Relationships** | | | |
| Controlled entity | ERF 706 Rietfontein (Pty) Ltd; Refer note 7 | | |
| **Related party balances** | | | |
| **Amounts included in Trade receivable (Trade Payable) regarding related parties** | | | |
| | | | - |
| Erf 706 Rietfontein (Proprietary) Limited | | 680 | |
| Secretarial fees of R680 incurred during the current year was paid by the WRC on behalf of Erf 706 Rietfontein. | | | |
| Outstanding levy income (Debtor at year end) | | 27 092 425 | 27 879 914 |
| Rand Water Board | | 9 098 808 | 8 304 491 |
| Umgeni Water Board | | 10 007 754 | - |
| Department of Water and Sanitation | | | |
| **Related party transactions** | | | |
| **Utilities paid on behalf of related parties** | | | |
| Erf 706 Rietfontein (Proprietary) Limited | | - | 152 207 |
| **Levy income** | | | |
| Department of Water and Sanitation | | 120 093 050 | 117 363 663 |
| Rand Water Board | | 109 239 733 | 108 181 296 |
| Umgeni Water Board | | 36 245 934 | 33 422 152 |
| **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 water boards are invoiced bi-annually upon which they pay the WRC.

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

The transfer and sale of the Marumati building situated at Erf 706 Rietfontein was finalised on 12 July 2019. 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 24 for further details. Compensation to directors and other key management are disclosed separately in note 31.

## 31. Emoluments of Executive management, Board members (Non-executive) and Co-opted Board Sub-Committees members

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

| | Group | | WRC | |
|---|---|---|---|---|
| | 2021 | 2020 | 2021 | 2020 |
| **Total Emoluments** | | | | |
| Fees for services as Board members (non-executive) | 738 369 | 455 325 | 738 369 | 455 325 |
| Fees for co-opted Board sub-committee members | 71 640 | 74 670 | 71 640 | 74 670 |
| Basic salary | 24 378 146 | 22 057 915 | 24 378 146 | 22 057 915 |
| Bonuses and performance payments | 2 913 959 | 4 701 120 | 2 913 959 | 4 701 120 |
| Travel allowance | 1 128 000 | 1 003 000 | 1 128 000 | 1 003 000 |
| | **29 230 114** | **28 292 030** | **29 230 114** | **28 292 030** |

**Executive**

| **2021** | Basic salary | Bonus and performance payments | Travel allowance | Total |
|---|---|---|---|---|
| Mr DP Naidoo – CEO | 4 057 407 | 461 109 | - | 4 518 516 |
| Mr F Ismail – CFO | 2 436 017 | 324 575 | 420 000 | 3 180 592 |
| Dr MS Liphadzi | 2 703 839 | 320 918 | 120 000 | 3 144 757 |
| Ms R Lutchman | 2 564 510 | 291 447 | - | 2 855 957 |
| Dr M Msibi | 2 396 079 | 291 398 | 168 000 | 2 855 477 |
| Dr S Adams | 2 349 550 | 267 017 | - | 2 616 567 |
| Mr JN Bhagwan | 2 238 043 | 283 977 | 180 000 | 2 702 020 |
| Dr V Naidoo | 2 235 390 | 254 043 | - | 2 489 433 |
| Prof NS Mpandeli | 1 787 502 | 230 418 | 240 000 | 2 257 920 |
| Ms K Jonas | 1 609 809 | 189 057 | - | 1 798 866 |
| | **24 378 146** | **2 913 959** | **1 128 000** | **28 420 105** |

| 2020 | Salary | Bonus and performance payments | Travel allowance | Total |
|---|---|---|---|---|
| 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 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.

**Board members (Non-executive) 2021**

| | Members' fees | Other fees | Total |
|---|---|---|---|
| Dr NP Mjoli – Chairperson | 186 872 | - | 186 872 |
| Prof SV Nkomo – Deputy Chairperson | 137 310 | - | 137 310 |
| Dr ME Makgae | 117 410 | - | 117 410 |
| Ms MK Mbonambi | 95 520 | - | 95 520 |
| Ms N Msezane | 71 640 | - | 71 640 |
| Dr NP Nala | 57 710 | 267 | 57 977 |
| Dr A Stroebel | 71 640 | - | 71 640 |
| | **738 102** | **267** | **738 369** |

**2020**

| | Members' fees | Other fees | Total |
|---|---|---|---|
| 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** |

**Co-opted Board sub-committee members**

**2021**

| | Members' fees | Total |
|---|---|---|
| Mr P Dlamini | 31 840 | 31 840 |
| Ms S Thomas | 35 820 | 35 820 |
| Dr J Maree | 3 980 | 3 980 |
| | **71 640** | **71 640** |

**2020**

| | Members' fees | Other fees | Total |
|---|---|---|---|
| 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** |

## 32. Defined contribution plans

**Medical fund scheme**

| | Group | | WRC | |
|---|---|---|---|---|
| | 2021 | 2020 | 2021 | 2020 |
| Contributions | 4 183 994 | 4 109 339 | 4 183 994 | 4 109 339 |

**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 R28,579 (2020: R115,218) that was contributed by the WRC (employer) to the medical fund scheme. These contributions are in respect of the employees that have been appointed on the cost plus benefits basis.

**Pension fund scheme**

| | | | | |
|---|---|---|---|---|
| Contributions | 8 148 907 | 7 433 816 | 8 148 907 | 7 433 816 |

**Defined contribution plan – Pension fund**

The WRC has a pension fund scheme covering all employees in the form of a defined contribution fund. Alexander Forbes Life is managing the 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 R13,331 (2020: R61,968) 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.

## 33. Financial instruments disclosure

### Categories of financial instruments

#### Group - 2021

| Financial assets | At fair value | At amortised cost | Total |
|---|---|---|---|
| Receivables | - | 50 383 320 | 50 383 320 |
| Cash and cash equivalents | 300 323 629 | - | 300 323 629 |
| | **300 323 629** | **50 383 320** | **350 706 949** |

| Financial liabilities | At fair value | At amortised cost | Total |
|---|---|---|---|
| Payables | - | 154 678 966 | 154 678 966 |
| Revolving credit facility | 162 842 | - | 162 842 |
| Finance lease obligation | - | 570 717 | 570 717 |
| Accruals – leave and bonus | - | 9 289 434 | 9 289 434 |
| | **162 842** | **164 539 117** | **164 701 959** |

#### Group - 2020

| Financial assets | At fair value | At amortised cost | Total |
|---|---|---|---|
| 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 | At fair value | At amortised cost | Total |
|---|---|---|---|
| Payables | - | 155 663 101 | 155 663 101 |
| 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** | **163 965 620** | **164 072 240** |

## WRC - 2021

| Financial assets | At fair value | At amortised cost | Total |
|---|---|---|---|
| Receivables | | 50 376 695 | 50 376 695 |
| Cash and cash equivalents | 300 293 167 | - | 300 293 167 |
| | **300 293 167** | **50 376 695** | **350 669 862** |

| Financial liabilities | At fair value | At amortised cost | Total |
|---|---|---|---|
| Payables | - | 154 678 966 | 154 678 966 |
| Revolving credit facility | 162 842 | - | 162 842 |
| Finance lease obligation | - | 570 717 | 570 717 |
| Accruals – leave and bonus | - | 9 289 434 | 9 289 434 |
| | **162 842** | **164 539 117** | **164 701 959** |
| | - | | |

## WRC - 2020

| Financial assets | At fair value | At amortised cost | Total |
|---|---|---|---|
| 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 | At fair value | At amortised cost | Total |
|---|---|---|---|
| Payables | - | 155 663 101 | 155 663 101 |
| 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** | **163 965 620** | **164 072 240** |

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

| At 31 March 2021 | Less than 1 year | Between 1 and 2 years | Between 2 and 5 years | Over 5 years |
|---|---|---|---|---|
| Trade and other payables | 154 678 966 | - | - | - |
| Finance lease obligation | 570 717 | - | - | - |

| At 31 March 2020 | Less than 1 year | Between 1 and 2 years | Between 2 and 5 years | Over 5 years |
|---|---|---|---|---|
| Trade and other payables | 155 663 101 | - | - | - |
| Finance lease obligation | 499 020 | 633 611 | - | - |

-

### WRC

| At 31 March 2021 | Less than 1 year | Between 1 and 2 years | Between 2 and 5 years | Over 5 years |
|---|---|---|---|---|
| Trade and other payables | 154 678 966 | - | - | - |
| Finance lease obligation | 570 717 | - | - | - |

| At 31 March 2020 | Less than 1 year | Between 1 and 2 years | Between 2 and 5 years | Over 5 years |
|---|---|---|---|---|
| Trade and other payables | 155 663 101 | - | - | - |
| Finance lease obligation | 499 020 | 633 611 | - | - |

**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:

| | Group | | WRC | |
|---|---|---|---|---|
| **Financial instrument** | 2021 | 2020 | 2021 | 2020 |
| Corporation for Public Deposits | 142 477 051 | 78 367 964 | 142 477 051 | 78 367 964 |
| Bank balances | 157 845 252 | 162 615 763 | 157 845 252 | 162 585 963 |

These balances represent the maximum exposure to credit risk.

**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.

**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 Rand.

**Foreign currency exposure at statement of financial position date**

| | Group | | WRC | |
|---|---|---|---|---|
| **Current assets** | 2021 | 2020 | 2021 | 2020 |
| Cash and cash equivalents, USD 4,300,557 (2020: 3,751,737) | 62 626 860 | 66 128 122 | 62 626 860 | 66 128 122 |
| Cash and cash equivalents, Euro 240,888 (2020: 200,952) | 4 111 725 | 3 890 709 | 4 111 725 | 3 890 709 |

**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. Irregular expenditure

| | Group | | WRC | |
|---|---|---|---|---|
| | 2021 | 2020 | 2021 | 2020 |
| Opening balance | 2 003 530 | 2 072 201 | 1 792 542 | 1 898 571 |
| Adjustments: Correction of errors | - | (106 029) | - | (106 029) |
| **Opening balance as restated** | **2 003 530** | **1 966 172** | **1 792 542** | **1 792 542** |
| Add: Irregular Expenditure - current year Less: | (2 003 530) | 37 358 | - | - |
| Amounts condoned | - | - | (1 792 542) | - |
| **Closing balance** | **-** | **2 003 530** | **-** | **1 792 542** |

**Irregular expenditure: 2020/21**

There was no irregular expenditure incurred during the 2020/21 financial year. The irregular expenditure of R2 003 530 incurred during prior years (2017/18, 2018/19 and 2019/ 20) has been finalised in as far as consequence management is concerned and has, as a result, also been approved for condonement by National Treasury during the year under review.

**Irregular expenditure: 2019/20**

*Adjustments: Correction of errors – 2019/20 financial year*

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-month 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 R66,398 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.

**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 Lynnwood Bridge Office Park 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. An amount of R37 358 has been condoned by the National Treasury on 15 October 2020.

**Analysis of expenditure awaiting condonation per age classification:**

| | Group | | WRC | |
|---|---|---|---|---|
| | 2021 | 2020 | 2021 | 2020 |
| Current year | - | 37 358 | - | - |
| Prior years | - | 1 966 172 | - | 1 966 172 |
| | **-** | **2 003 530** | **-** | **1 966 172** |

**Consequence management**

Consequence management has been concluded on all irregular expenditure items in line with the National Treasury Framework on Irregular Expenditure and an amount of R2 003 530 has been condoned by the National Treasury.

## 36. Fruitless and wasteful expenditure

| | Group | | WRC | |
|---|---|---|---|---|
| | 2021 | 2020 | 2021 | 2020 |
| Opening balance | 165 724 | 29 342 | 165 724 | 29 342 |
| Add: Expenditure identified – current year | - | 137 316 | - | 137 266 |
| Less: Amounts recovered – current year | - | (50) | - | - |
| Less: Amounts transferred to receivables due to recoverability | - | (884) | - | (884) |
| Less: Reversal of interest and penalties | (136 382) | - | (136 382) | - |
| **Closing balance** | **29 342** | **165 724** | **29 342** | **165 724** |
| **Expenditure identified in the current year include those listed below:** | | | | |
| Penalties | - | 77 446 | - | 77 396 |
| Interest on overdue payments | - | 59 870 | - | 59 870 |
| | **-** | **137 316** | **-** | **137 266** |

**Fruitless and wasteful expenditure: 2020/21**

There was no fruitless and wasteful expenditure incurred during the 2020/21 financial year.

During the 2019/20 financial year, the Compensation Commissioner charged the WRC penalties and interest amounting to R136,382 for the late submission and payment of the Compensation Commissioner's 2018 Annual Return of Earnings. The WRC engaged the Office of the Compensation Commissioner with the view of reversing this penalty and interest. After further deliberation in the current year the Compensation Commissioner has reversed all interest and penalties.

The remaining R29,342 has been proposed to the Board for write off.

**The transactions for the 2019/20 financial year can be summarised as follows:**

| | Group | | WRC | |
|---|---|---|---|---|
| | 2021 | 2020 | 2021 | 2020 |
| **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 license | | 884 | | 884 |
| | **-** | **77 446** | **-** | **77 396** |

| | | | | |
|---|---|---|---|---|
| **Interest on overdue payments** | | | | |
| Compensation Commissioner: Late payment of 2018 Annual return | - | 59 870 | - | 59 870 |
| | **-** | **137 316** | **-** | **137 266** |

**Consequence management**

Consequence management regarding the R934 has been undertaken with the responsible officials in line with the National Treasury Framework on Fruitless and Wasteful expenditure and the amount has been recovered.

Consequence management regarding the R136 382 late payment and submission penalties from the Compensation Commissioner has been undertaken with the responsible official.

**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 lodgement of the 2019 Erf 706 Rietfontein 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. As a result, the CIPC levied a late submission fee of R50. The official responsible for the late lodgement has refunded the R50 penalty and the consequence management process has been concluded, with the official signing an acknowledgement of accountability letter.
- 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 28 June 2018; however, the assessment invoice was paid post the due date which then attracted interest charges.

## 37. Budget differences

**Material differences between budget and actual amounts**

**Leverage income**

The WRC put a renewed emphasis on leverage funding amidst the uncertainties regarding availability of funds due to the economic impact of the COVID-19 pandemic and managed to secure additional funding from key leverage funded partners.

The positive budget variance of R20.2 million is as a result of the achievement of some leverage funded deliverables at an earlier stage than expected due to the renewed emphasis on leverage funding.

This includes the following:

- Recognition of leverage income to the value of R7.65 million being realised in respect of the Department of Science and Innovation Graduate Programme which is funded by the Department of Science and Innovation and National Treasury that was not included in the budget
- Recognition of leverage income to the value of R4.6 million being realised in respect of the Siltation Management Strategy which is funded by the Department of Water and Sanitation that was not included in the budget
- The achievement of deliverables earlier than expected in respect of the Gates Demonstration South African Sanitation Technology Enterprise Programme (SASTEP) (R 2.9 million) and the Department of Science and Innovation Green Economy (Wader GBS) (R 2.4 million).
- A further R2.65 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 R653,706 in respect of interest income is primarily as a result of higher average cash holdings over the 2020/21 financial year, which resulted in higher interest income earned during the year under review.

**Levy income**

The R3.2 million positive variance reflected on the revised levy income budget for the 2020/21 financial year arose as a result of the actual audited volumes received from the water boards being higher than those included in the levy budget. The lower budgeted volumes were based on the anticipated lower water consumption volumes for the period due to lockdown restrictions associated with the COVID-19 pandemic.

**Running costs**

The variance in running costs of R6.5 million results from actual expenditure that is lower than the budget.

The budget variance is mainly as a result of the following:

- Savings in some costs (R1.02 million) due to the remote working arrangements at the WRC such as elec-

tricity, stationery, subsistence and travel.

- IT-related software and maintenance costs (R5.48 million) that will only be incurred in the 2021/22 financial year due to some delays in the current year. A significant component of the IT-related software and maintenance costs relate to contracting with service providers which have been included in the 2021/22 procurement plan, as well as the implementation and roll-out of the SAGE 300 contract which will be in the 2021/22 financial year.

**Human Resource costs**

The variance in human resource costs of R6.97 million results from the following:

- The postponement of the Top-up of the post-medical aid employee benefit budgeted at some R2.4 million by Momentum as Discovery has opted to, in the light of the COVID-19 pandemic, freeze its medical plan prices for the first six months of 2021, with increases only expected in the second half of 2021 whereafter the Actuarial top-up payments will be determined.
- Savings on in training and employee development (R1.64 million) for the year,
- Delays in the appointment of vacant positions (R995,000), employees who terminated their employment at the WRC (R410,000), employees who were anticipated to be levy funded but are now funded by leverage funding (R911,000), the implementation of lower than budgeted cost of living increases (R558,000) and (R272,000) in respect of the skills development levy contribution holiday instituted by the Government in terms of clause 11 of the Draft Disaster Management Tax Relief Bill in an attempt to assist entities with cashflow during the COVID-19 pandemic.

**Research,development and innovation**

The research,development and innovation expenditure variance of R1.52 million as at 31 March 2021 relates to savings in workshops and conference, promotion of research outputs, subsistence and travel related expenditure and printing and publishing.

This is due to the WRC using alternative ways of dissemination and promotion of research information and outputs such as digital (virtual) platforms, which have proven to be cost-effective whilst enhancing impact in many respects.

**Corporate expenditure**

The variance in corporate expenditure of R535,603 is due to actual corporate expenditure being lower than the budget and is mainly as a result of lower expenditure than planned on corporate social responsibility and Internal audit costs, as well as external audit fees that were anticipated to be paid within the month of March 2021, whilst the audit only commenced subsequent to year-end.

**Capital expenditure**

The budget variance in capital expenditure (R3.36 million) is as a result of various delays, including the acquisition of server hardware, software implementation and Azure Setup website and system development which will be postponed to the 2021/22 financial year. A significant component thereof has been included in the 2021/22 procurement plan.

**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.

## 38. Reconciliation between budget and statement of financial performance

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

| | |
|---|---|
| Net surplus per the statement of financial performance | 66 461 869 |
| **Adjusted for:** | |
| Depreciation, amortisation and impairment | 4 388 620 |
| Actuarial (gains)/losses | (71 199) |
| Accrual – leave and bonus | 3 663 764 |
| Actual leave payout | (1 544 218) |
| Operating lease: Movement in straight-lining of operating leases | 546 134 |
| Capital expenditure incurred | (112 479) |
| Fixed costs – rental of equipment | (499 020) |
| Provision - performance bonus | 10 322 076 |
| Actual bonus payment | (9 660 279) |
| **Net surplus per approved budget** | **73 495 268** |

## 39. Going concern

We draw attention to the fact that at 31 March 2021, the entity had an accumulated surplus/(deficit) of R178 392 076 and that the entity's total assets exceeded its liabilities by R178 392 076.

Management has assessed the existing and anticipated effects of COVID-19 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.

## 40. 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.

*Figures in Rand*

### Group

| Statement of financial position | | As previously reported | Correction of error | | Restated |
|---|---|---|---|---|---|
| Payables | 10 | (156 443 107) | 780 006 | - | (155 663 101) |
| Provision for performance bonus | 13 | - | (9 660 279) | - | (9 660 279) |
| Accumulated Surplus | | (120 847 666) | 8 880 273 | - | (111 967 393) |

| Statement of financial performance | | As previously reported | Correction of error | | Restated |
|---|---|---|---|---|---|
| Leverage income | 14 | (64 528 890) | (706 344) | - | (65 235 234) |
| General expenditure | 20 | 13 237 074 | (10 367) | - | 13 226 707 |
| Research, development and innovation costs | 22 | 175 835 194 | (63 295) | - | 175 771 899 |
| Employee cost | 18 | 95 557 002 | (755 701) | - | (94 801 301) |
| | | **220 100 380** | **(1 535 707)** | **-** | **218 564 673** |

### WRC

| Statement of financial position | | As previously reported | Correction of error | | Restated |
|---|---|---|---|---|---|
| Payables | 10 | (156 443 107) | 780 006 | - | (155 663 101) |
| Provision for performance bonus | 13 | - | (9 660 279) | - | (9 660 279) |
| Accumulated Surplus | | (120 809 029) | 8 880 273 | - | (111 928 756) |

| Statement of financial performance | | As previously reported | Correction of error | | Restated |
|---|---|---|---|---|---|
| Leverage income | 14 | (64 528 890) | (706 344) | - | (65 235 234) |
| General expenditure | 20 | 13 237 074 | (10 367) | - | 13 226 707 |
| Research, development and innovation costs | 22 | 175 835 194 | (63 295) | - | 175 771 899 |
| Employee costs | 18 | 95 557 002 | (755 701) | - | 94 801 301 |
| | | **220 093 987** | **(1 535 707)** | **-** | **218 558 280** |

**Errors**

**Revenue from exchange – Leverage income**

As per the budget obtained from the Bill & Melinda Gates Foundation, the WRC was entitled to claim a management fee for the 2019/20 financial year. During the current financial year, whilst revisiting the budget for the project it was discovered that the WRC erroneously did not include the said management fee in its 2019/20 annual financial statements.

The impact of the above can be summarised as follows:

| **Statement of Financial Performance Items:** | |
|---|---|
| Non exchange revenue: Leverage income | (R706,344) |

| **Statement of Financial Position items:** | |
|---|---|
| Payables: Income received in advance | R706,344) |

**Payables – Accruals and Subsistence and travel**

During the current year transactions were identified that were accrued for twice in respect of subsistence and travel costs relating to the 2019/2020 financial year.

The impact of the above can be summarised as folllows:

| **Statement of Financial Position Items:** | |
|---|---|
| Accruals (Payables) | R73,662 |

| **Statement of Financial Performance:** | |
|---|---|
| General expenses – Travel local | (R10,367) |
| Research, development and innovation costs (Local travel – research-related meetings) | (R63,295) |

**Provision for performance bonus:**

GRAP 25 states that an entity should recognise the expected cost of bonus, incentive and performance related payments when it 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. During the current year it was identified that the WRC paid merit bonuses but did not make a provision for the possibility that performance bonuses will be paid in the 2019/20 and prior financial years.

The impact of the above can be summarised as folllows:

| | |
|---|---|
| **Statement of Financial Position Items:** | |
| Provision for performance bonus | (R9,660,279) |
| Accumulated Surplus | R10,415,980 |
| | |
| **Statement of Financial Performance:** | |
| Employee-related - Merit bonus | (R755,701) |

## 41. Events after the reporting date

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

# Section E:

## ERF sewe-nul-ses Rietfontein (proprietary) limited
## Annual financial statements
## for the year ended 31 March 2021

# GENERAL INFORMATION

| | |
|---|---|
| COUNTRY OF INCORPORATION AND DOMICILE | South Africa |
| LEGAL FORM OF ENTITY | 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 and the Water Research Commission is still considering the repurposing of Erf 706 Rietfontein. |
| DIRECTORS | Mr DP Naidoo |
| | Dr NP Mjoli |
| POSTAL ADDRESS | Private Bag X03. Gezina, 0003 |
| CONTROLLING ENTITY | Water Research Commission |
| BANKERS | ABSA Bank |
| AUDITORS | Auditor-General of South Africa |
| COMPANY REGISTRATION NUMBER | 1984/003566/07 |

# CONTENTS

## Erf sewe-nul-ses Rietfontein (proprietary) limited Annual Financial Statements

for the year ended 31 March 2021



The annual financial statements set out on pages 175 to 199, which have been prepared on the going concern basis, were approved by the board of members on 28 May 2021 and were signed on its behalf y:

**Mr DP Naidoo**
Chief Executive Officer

**Dr NP Mjoli**
Chairperson of the Board

# REPORT OF THE AUDITOR-GENERAL
## to Parliament on ERF 706 Rietfontein (Pty) Ltd

### Opinion

1. I have audited the financial statements of ERF 706 Rietfontein (Pty) Ltd set out on pages 174 to 199 which comprise the statement of financial position as at 31 March 2021, 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 2021, and its financial performance and cash flows for the year then ended in accordance with Standards of Generally Recognised Accounting Policies (GRAP) and the requirements of the Public Finance Management Act (Act no. 1 of 1999) (PFMA) and the Companies Act of South Africa, 2008 (Act no. 71 of 2008) (the Companies Act).

### 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 my report.

4. I am independent of the company in accordance with the International Ethics Standards Board for Accountants' *International code of ethics for professional accountants (including International Independence Standards)* (IESBA code) as well as other 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 code.

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

### Material uncertainty related to going concern

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

7. I draw attention to note 19 to the financial statements, which indicates that the entity disposed of immovable property in the prior year, which was the primary source of revenue. As stated in note 19, this indicates that a material uncertainty exists that may cast significant doubt on the entity's ability to continue as a going concern.

### 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 Standard of Generally Recognised Accounting Practice (GRAP) and the requirements of the Public Finance Management Act (Act no. 1 of 1999) (PFMA) and the Companies Act of South Africa, 2008 (Act no. 71 of 2008) (Companies Act), and for such internal control as the accounting authority determine is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

# REPORT OF THE AUDITOR-GENERAL
## to Parliament on ERF 706 Rietfontein (Pty) Ltd

9. In preparing the financial statements, the accounting authority is responsible for assessing the company'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 the auditor's report.

#### *Performance information reporting*

12. As the company was dormant for the year under review, no work was performed on the audit of performance information.

#### *Audit of compliance with legislation*

13. As the company was dormant for the year under review, no work was performed on the audit of compliance with legislation.

#### *Other information*

14. The ERF 706 Rietfontein (Pty) Ltd accounting authority is responsible for the other information. The other information comprises the information in the annual report which includes the director's report, the audit committee's report and the company secretary's certificate as required by the Companies Act. The other information does not include the financial statements and the auditor's report thereon.

15. My opinion on the financial statements does 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. I did not receive the other information prior to the date of this auditor's report. When I do receive and read this information, if I conclude that there is a material misstatement therein, I am required to communicate the matter to those charged with governance and request

that the other information be corrected. If the other information is not corrected, I may have to retract this auditor's report and re-issue an amended report as appropriate. However, if it is corrected this will not be necessary.

### *Internal control deficiencies*

18. I considered internal control relevant to my audit of the financial statements; however, my objective was not to express any form of assurance thereon. I did not identify any significant deficiencies in internal control.

Auditor - General

Pretoria

30 July 2021

AUDITOR-GENERAL

# 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, Act no. 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 disposal of the Marumati Building ("the Property") owned by Erf 706 Rietfontein (Pty) Ltd, was finalised on 12 July 2019. This disposal of the property, including the relocation of the Water Research Commission offices, 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 (as the shareholder and holding company) is in the process of evaluating options to either re-purpose Erf 706 Rietfontein or alternatively consider its liquidation. Although significant progress has been made in respect of this evaluation process the advent of the COVID-19 pandemic and associated restrictions on the operating environment has delayed its finalization. The decision related to the future use or otherwise of the Erf 706 Rietfontein (Pty) Ltd company is likely to be decided upon within the next twelve months in line with the Water Research Commission's Corporate Plan 2021.

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

as at 31 March 2021

| | Note(s) | 2021 | 2020 |
|---|---|---|---|
| **Assets** | | | |
| **Current assets** | | | |
| Investment property | 3 | - | - |
| Receivables from exchange transactions | 4 | 7 405 | 8 838 |
| Cash and cash equivalents | 5 | 30 462 | 29 800 |
| | | **37 867** | **38 638** |
| **Non-current assets** | | - | - |
| Deferred tax | | | |
| **Total assets** | 6 | **37 867** | **38 638** |
| | | | |
| **Liabilities** | | | |
| **Current liabilities** | | | |
| Other financial liabilities | | - | - |
| Payables from exchange transactions | 7 | 680 | - |
| | | **680** | **-** |
| **Non-current liabilities** | | - | - |
| Deferred tax | 6 | 680 | - |
| **Total liabilities** | | | |
| **Net assets** | | **37 187** | **38 638** |
| Share capital | | 1 | 1 |
| Accumulated surplus/(deficit) | | 37 186 | 38 637 |
| **Total net assets** | | **37 187** | **38 638** |

# Statement of Financial Performance

as at 31 March 2021

| | Note(s) | 2021 | 2020 |
|---|---|---|---|
| **Revenue** | | | |
| **Revenue from exchange transactions** | 9 | | |
| Other income | | - | 44 213 |
| **Total revenue from exchange transactions** | | **-** | **44 213** |
| | | | |
| **Revenue from non-exchange transactions** | | | |
| Revenue arising from debt waiving | 10 | - | 20 561 653 |
| **Total revenue from non-exchange transactions** | | **-** | **20 561 653** |
| **Total revenue** | | **-** | **20 605 866** |
| | | | |
| **Expenditure** | | | |
| Interest and penalties recovered | 11 | (968) | (12 210) |
| General expenses | 12 | 2 419 | 6 393 |
| Repairs and maintenance | | - | 32 486 |
| **Total expenditure** | | **1 451** | **26 669** |
| **Surplus/(deficit) before taxation** | 13 | **(1 451)** | **20 579 197** |
| Taxation | | - | 4 145 769 |
| **Surplus/(Deficit) for the year** | | **(1 451)** | **16 433 428** |

# Statement of Changes in Net Assets

as at 31 March 2021

| | Share capital | 2021 | 2020 |
|---|---|---|---|
| **Balance at 01 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 01 April 2020** | **1** | **38 637** | **38 638** |
| Changes in net liabilities Surplus / (Deficit) for the year | - | (1 451) | (1 451) |
| Total changes | **-** | **(1 451)** | **(1 451)** |
| **Balance at 31 March 2021** | **1** | **37 186** | **37 187** |
| Note | 8 | | |

# Cash Flow Statement

as at 31 March 2021

| | Note(s) | 2021 | 2020 |
|---|---|---|---|
| **Cash flows from operating activities** | | | |
| **Receipts** | | | |
| Cash receipts from customers | | 1 694 | 1 386 937 |
| **Payments** | 14 | (1 032) | (1 827 361) |
| Cash paid to suppliers | | **662** | **(440 424)** |
| **Net cash flows from operating activities** | | | |
| **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) |
| **Net cash flows from financing activities** | | **-** | **(9 446 926)** |
| **Net increase/(decrease) in cash and cash equivalents** | | **662** | **(137 350)** |
| Cash and cash equivalents at the beginning of the year | | 29 800 | 167 150 |
| **Cash and cash equivalents at the end of the year** | 5 | **30 462** | **29 800** |

# Summary of significant **Accounting Policies**

for the year ended 31 March 2021

## 1. Presentation of Annual Financial Statements

The annual 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 of which the transfer was finalised on 12 July 2019 and, as a result, will not be able to continue as a going concern. 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 (WRC) 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.

These accounting policies are consistent with the previous period.

### *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 19.

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

**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 company 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 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 :

  - derecognise the asset; and
  - recognise 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 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 taxable surplus will be available against which the deductible temporary difference can be utilised. A deferred tax asset is not recognised when it arises from the initial recognition of an asset or liability in a transaction at the time of the transaction, affects neither accounting surplus nor taxable profit (tax loss).

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

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

**Tax expenses**

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

### *1.7 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 16.

### *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 or similar distributions 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 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.

### *1.13 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

for the year ended 31 March 2021

## 2. New standards and interpretations

### *2.1 Standards and interpretations effective in the current year*

In the prior year, the entity chose to early adopt the following standards and interpretations that are effective for the current financial year and that are relevant to its operations:

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

These amendments 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 20: Related Parties – Effective from 1 April 2021

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

## 3. Investment property

| | 2021 | | | 2020 | | |
|---|---|---|---|---|---|---|
| | Valuation | Accumulated depreciation and accumulated impairment | Carrying value | Valuation | Accumulated depreciation and accumulated impairment | Carrying value |
| Investment property | - | - | - | - | - | - |

| **Reconciliation of investment property - 2021** | Opening balance | Total |
|---|---|---|
| Investment property | - | - |

| **Reconciliation of investment property - 2020** | Opening balance | Disposals | Total |
|---|---|---|---|
| Investment property | 9 750 000 | (9 750 000) | - |

**Fair value of investment properties**

A register containing the information required by the Public Finance Management Act is available for inspection.

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 fair value of the Marumati Building ("the Property") owned by Erf 706 Rietfontein (Pty) Ltd was based on the approved bid of R9,750,000.

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

| **Amounts recognised in surplus or deficit for the year:** | 2021 | 2020 |
|---|---|---|
| Rental revenue from Investment property (including recovery of expenditure) | - | 44 213 |

## 4. Receivables from exchange transactions

| | 2021 | 2020 |
|---|---|---|
| Deposits | 7 305 | 7 305 |
| VAT receivable | 100 | 1 533 |
| | **7 405** | **8 838** |

Included in receivables from exchange is a statutory receivable in respect of VAT amounting to R100 (2020: R1 533) and a financial asset in respect of deposits amounting to R7 305 (2020: 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 2021, R NIL (2020: R NIL) were past due but not impaired.

**Receivables impaired**

As of 31 March 2021, trade and other receivables of R NIL (2020: R NIL) were impaired and provided for. The amount of the provision was R NIL as of 31 March 2021 (2020: 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:** | 2021 | 2020 |
|---|---|---|
| Bank balances | 30 462 | 29 800 |

**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** | 2021 | 2020 |
|---|---|---|
| Cash and Cash Equivalents | 30 462 | 29 800 |

**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

| | 2021 | 2020 |
|---|---|---|
| Deferred tax liability | - | - |
| Deferred tax asset | - | - |
| Total net deferred tax asset | - | - |

**Reconciliation of deferred tax asset \ (liability)**

| | 2021 | 2020 |
|---|---|---|
| At beginning of year | - | 4 145 769 |
| Increases (decrease) in tax loss available for set off against future taxable income - gross of valuation allowance | - | (5 599 682) |
| Deferred tax on fair value adjustments on investment property | - | 1 453 913 |
| | - | - |

**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.

## 7. Payables from exchange transactions

| | 2021 | 2020 |
|---|---|---|
| Trade payables | 680 | - |

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.

## 8. Share capital Authorised

| | 2021 | 2020 |
|---|---|---|
| 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.

## 9. Revenue from exchange transactions

| | 2021 | 2020 |
|---|---|---|
| Rental received | - | 42 284 |
| Recovery of expenditure | - | 1 929 |
| | **-** | **44 213** |

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.

## 10. Revenue from non-exchange transactions

| | 2021 | 2020 |
|---|---|---|
| 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 (R31,111,653) using the funds available from the disposal proceeds (R10,550,000) and the write-off of any associated remaining unpaid balance (R20,561,653) due to the fact that there were insufficient funds to settle the inter-entity loans payable in full and the inability to generate any further income.

## 11. Interest and penalties recovered

| | 2021 | 2020 |
|---|---|---|
| Interest and penalties recovered | (968) | (12 210) |

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.

Erf 706 Rietfontein 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 2018/19 financial year.

After further deliberation, SARS refunded the WRC R12,210 in the 2019/20 financial year and the remaining amount of R968 in the 2020/21 financial year.

## 12. General expenses

| | 2021 | 2020 |
|---|---|---|
| Bank charges | 1 739 | 3 057 |
| Commission and marketing related costs | - | 2 706 |
| Professional fees | 680 | 630 |
| | **2 419** | **6 393** |

## 13. Taxation

**Major components of taxation**

**Deferred**

| | 2021 | 2020 |
|---|---|---|
| Originating and reversing temporary differences | - | 4 145 769 |

Deferred taxation was reversed in the prior period 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 tax as the entity has no taxable income. As at 31 March 2021 there is an assessed loss of R1 343 441.

## 14. Cash (used in) generated from operations

| | 2021 | 2020 |
|---|---|---|
| Surplus/ (deficit) | (1 451) | 16 433 429 |
| **Adjustments for:** | | |
| Revenue arising from debt waiving | - | (20 561 653) |
| Annual charge for deferred tax | - | 4 145 769 |
| **Changes in working capital:** | | |
| Receivables from exchange transactions | 1 433 | (574) |
| Payables from exchange transactions | 680 | (457 395) |
| | **662** | **(440 424)** |

## 15. Related parties

**Relationships**

| | |
|---|---|
| Holding company | Water Research Commission |

**Related party balances**

**Amounts included in Receivable (Payable) regarding related parties**

| | | |
|---|---|---|
| Water Research Commission: Payable | (680) | - |

Secretarial fees of R680 incurred during the current year was paid by the WRC on behalf of Erf 706 Rietfontein.

**Related party transactions**

| | 2021 | 2020 |
|---|---|---|
| **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) |

**Debt waiving – non-exchange revenue (received from) 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 creditor and loans payable balance in full and the inability to generate any further income, the Board approved the repayment of the intercompany (Erf 706 Rietfontein and WRC) loans and balances (R31,111,653) using the funds available from the disposal proceeds (R10,550,000) and the write-off of any associated remaining unpaid balance (R20,561,653), thus releasing Erf 706 Rietfontein of the primary responsbility of the liability.

**Utilities paid by related parties:**
The WRC and Erf 706 Rietfontein 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 WRC as from 1 April 2016 until the time of disposal of the building. In lieu thereof the Water Research Commission was liable for the expenditure incurred by ERF Rietfontein 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.

## 16. Contingencies

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

## 17. Financial instruments disclosure

**Categories of financial instruments 2021**

**2021**

| **Financial assets** | At fair value | At amortised cost | Total |
|---|---|---|---|
| Receivables from exchange transactions | - | 7 305 | 7 305 |
| Cash and cash equivalents | 30 462 | - | 30 462 |
| | **30 462** | **7 305** | **37 767** |

| **Financial liabilities** | At amortised cost | Total |
|---|---|---|
| Payables from exchange transactions | 680 | 680 |

**2020**

| **Financial assets** | At fair value | At amortised cost | Total |
|---|---|---|---|
| Receivables from exchange transactions | - | 7 305 | 7 305 |
| Cash and cash equivalents | 29 800 | - | 29 800 |
| | **29 800** | **7 305** | **37 105** |

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

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.

## 18. Risk management

**Liquidity risk**

Prudent liquidity risk management implies maintaining sufficient cash and marketable securities, the availability of funding through an adequate amount of committed credit facilities and the ability to close out market positions. Due to the dynamic nature of the underlying businesses, entity treasury maintains flexibility in funding by maintaining availability under committed credit lines.

The entity's risk to liquidity is a result of the funds available to cover future commitments. Liquidity risk is the risk that a company may be unable to meet short-term financial demands. The entity manages liquidity risk through an ongoing review of future commitments and credit facilities.

These financial statements were not prepared based on the expectation that the entity will be able to continue to operate as a going concern. Accordingly, assets are measured at their liquidation values (representing the impaired values thereof) and liabilities are measured at their exit values. Refer to note 19 for further details.

**Market risk**

**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:

| **Financial instrument** | 2021 | 2020 |
|---|---|---|
| ABSA Bank | 30 462 | 29 800 |
| Receivables | 7 305 | 7 305 |

## 19. 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 706 Rietfontein 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. The WRC as shareholder is in the process of considering what viable options exist for the potential re-purpose of the Erf 706 Rietfontein company.

## 20. Fruitless and wasteful expenditure

| | 2021 | 2020 |
|---|---|---|
| Opening balance as previously reported | - | - |
| Add: Expenditure identified - current | - | 50 |
| Less: Amounts recoverable - current | - | (50) |
| **Closing balance** | **-** | **-** |

**Expenditure identified in the current year and recovered from employee**

| | | |
|---|---|---|
| Penalty incurred for late lodgement | - | 50 |

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

The lodgement of the 2019 Erf 706 Rietfontein 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 lodgement has refunded the R50 penalty and the consequence management process has been concluded, with the official signing an acknowledgement of accountability letter.

## 21. Irregular expenditure

| | 2021 | 2020 |
|---|---|---|
| Opening balance as previously reported | 210 988 | 173 630 |
| **Opening balance as restated** | **210 988** | **173 630** |
| Add: Irregular Expenditure - current year | - | 37 358 |
| Less: Amounts condoned - prior period | (210 988) | 37 358 |
| **Closing balance** | **-** | **210 988** |

**Analysis of expenditure awaiting condonation per age classification**

| | 2021 | 2020 |
|---|---|---|
| Current year | - | 37 358 |
| Prior years | - | 173 630 |
| | **-** | **210 988** |

Details of irregular expenditure for the year

| **Incident** | 2021 | 2020 |
|---|---|---|
| Payments in respect of expired contracts | - | 37 358 |
| | **-** | **37 358** |

During the 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. The total amount of R210 988 was condoned by National Treasury during the current year.

The appropriate consequence management was undertaken, and the responsible officials have been issued with warning letters.

## 22. 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

for the year ended 31 March 2021

| | |
|---|---|
| Net loss per statement of financial performance | (1 451) |
| | |
| **Temporary differences** | |
| Less: recovery on impairment of VAT receivable | (968) |
| **Assessed loss for 2021 - carried forward** | **(2 419)** |
| Assessed loss brought forward | (1 341 022) |
| **Assessed loss at year end** | **(1 343 441)** |
| | |
| Tax thereon @ 28% | - |

# Notes


28
Ni
Nickel
29
Cu
Copper
47
Ag
Silver
48
Cd
Cadmium
32
Ge
Germanium
50
Sn
Tin
80
Hg
Mercury
81
Tl
Thallium
82
Pb
Lead
83
Bi
Bismuth
Tm
70

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