

NRWDI

NATIONAL RADIOACTIVE WASTE
DISPOSAL INSTITUTE



**PRESENTATION TO THE PORTFOLIO COMMITTEE ON
MINERAL RESOURCES AND ENERGY:**

NRWDI 2020-2021 ANNUAL PERFORMANCE PLAN

PRESENTATION CONTENTS

- **National Radioactive Waste Disposal Institute (NRWDI) Overview**
- **Response to Covid-19 Pandemic**
- **Situational Analysis**
- **Strategic Alignment and Contribution to Government Priorities**
- **Key Strategic Projects**
- **2020/21 Annual Performance Plan**
- **Budget Allocations**
- **Concluding remarks**
- **Question & Answers**

NATIONAL RADIOACTIVE WASTE DISPOSAL INSTITUTE (NRWDI) OVERVIEW



NATIONAL RADIOACTIVE WASTE DISPOSAL INSTITUTE

- The National Radioactive Waste Disposal Institute Act (NRWDIA) (Act no. 53 of 2008) became effective on the 1st of December 2009;
- The National Radioactive Waste Disposal Institute (NRWDI) was established by statute under Section 3 of NRWDIA.
- NRWDI is responsible for discharging an institutional ministerial obligation as per Section 1 of Nuclear Energy Act relating to the disposal and related long term management of radioactive waste on a national basis.
- NRWDI is listed as a Schedule 3A Public Entity in terms of the Public Finance Management Act (Act 1 of 1999 as amended).



Government Gazette

REPUBLIC OF SOUTH AFRICA

Vol. 523 Cape Town 9 January 2009 No. 31786

THE PRESIDENCY

No. 19 9 January 2009

It is hereby notified that the President has assented to the following Act, which is hereby published for general information:—

No. 53 of 2008: National Radioactive Waste Disposal Institute Act, 2008.

MANDATE OF NRWDI

NRWDI draws its mandate from:

(1) Section 24(b) of the Constitution (Act 108 of 1996)

**(2) Section 5 of National Radioactive Waste Disposal Institution Act
(Act 53 of 2008)**

MANDATE OF NRWDI

According to Section 24(b) of the Constitution of the Republic of South:

• Everyone has the right –

(a) To an environment that is not harmful to their health or well-being; and

(b) To have the environment protected for the benefit of present and future generations through reasonable legislative and other measures that:

(i) Prevent pollution and ecological degradation;

(ii) Promote conservation; and

(iii) Secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development.

MANDATE OF NRWDI

According to Section 5 of the NRWDI Act, the functional mandate of NRWDI is:

- **Long term management of radioactive waste, including the disposal, on a national basis;**
- **Operation of the Vaalputs repository;**
- **Develop criteria for accepting and disposing radioactive waste;**
- **Manage, operate and monitor operational radioactive waste disposal facilities**
- **Site, design and construct new disposal and related facilities as required;**
- **Define and conduct research and development aimed at finding solutions for long-term radioactive waste management;**
- **Provide information on all aspects of radioactive waste disposal to the public in general;**
- **Maintain a national radioactive waste database.**

KEY LEGISLATION THAT GOVERNS RADIOACTIVE WASTE DISPOSAL

The following key Acts govern the management and disposal of radioactive waste:

- **Nuclear Energy Act, (Act 46 of 1999);**
- **National Nuclear Regulator Act, 1999 (Act 47 of 1999);**
- **National Radioactive Waste Disposal Institute Act (Act 53 of 2008);**
- **National Environmental Management Act (Act 107 of 1998);**
- **Hazardous Substances Act (Act 15 of 1973);**
- **National Water Act, 1998 (Act 36 of 1998);**
- **Disaster Management Act (Act 57 of 2002); and**
- **Dumping at Sea Control Act, 1980 (Act No. 73 of 1980)**

VISION AND MISSION

VISION

To be a world-class radioactive waste disposal organisation.

MISSION

To provide environmentally safe and technologically innovative radioactive waste disposal solutions for the benefit of current and future generations.

VALUES

N Nurturing

We will make the well-being of people and the environment, priority.

R Respect

We will respect all and obey the laws and legislation that govern our country and regulates our industry

W Work-Life Balance

We are committed to the creation of a culture that supports the achievement of both life and work

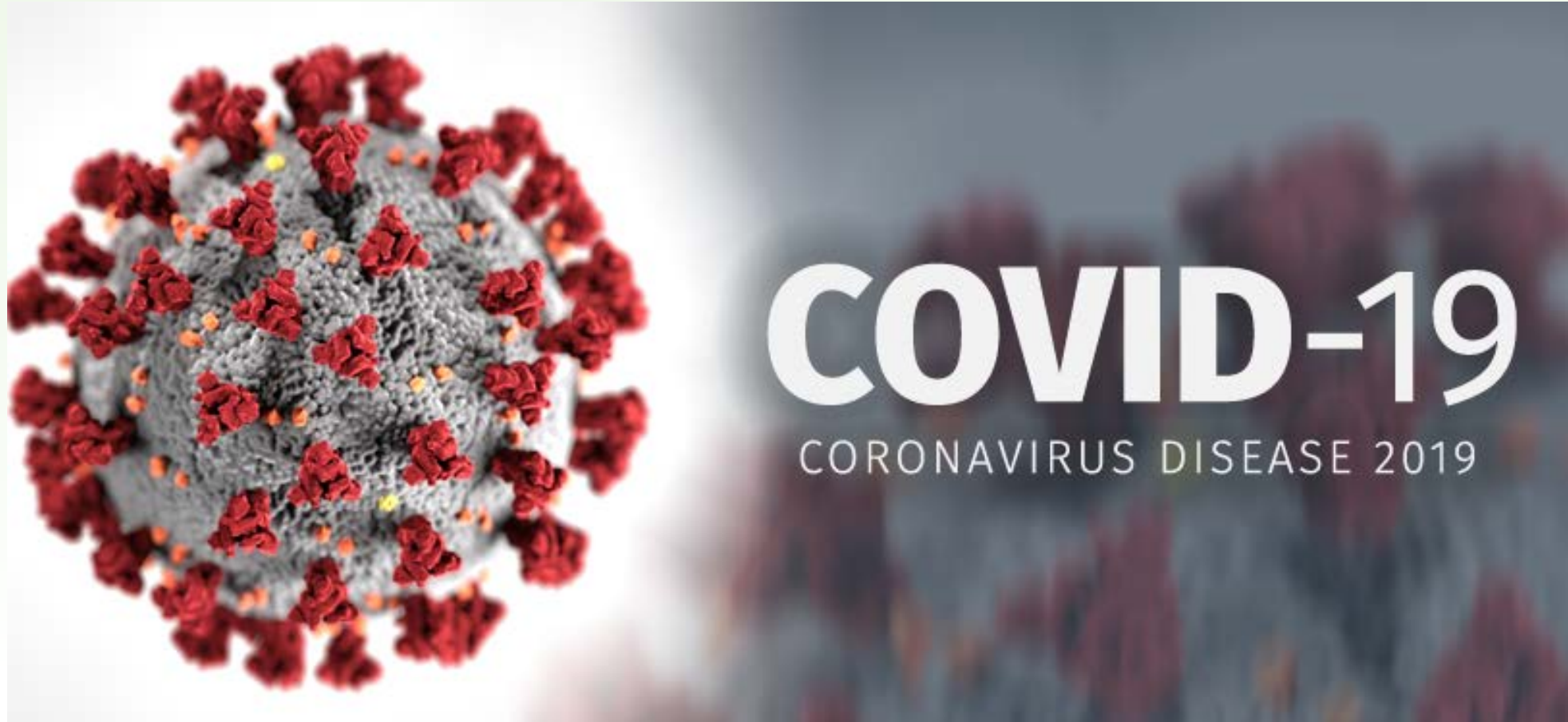
D Dedication

We will demonstrate passion, commitment and care in all that we do being fully aware of the impact that our actions may have on current and future generations

I Integrity

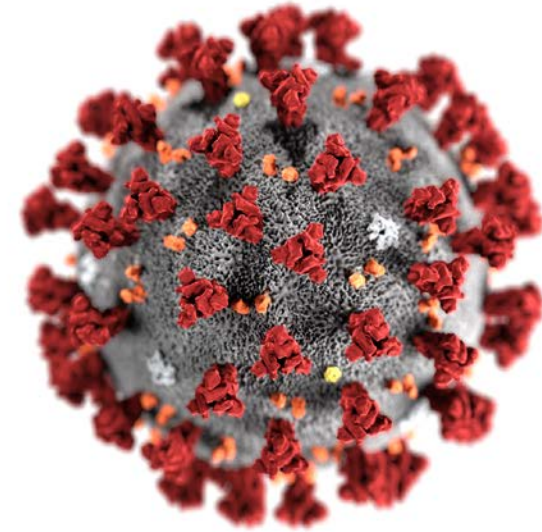
We will conduct ourselves with openness, honesty and respect for all our stakeholders

RESPONSE TO COVID-19 PANDEMIC



RESPONSE TO COVID-19 PANDEMIC

- **NRWDI's overriding priority is the health and wellbeing of our employees, partners, stakeholders, customers, members of the public and the communities surrounding Vaalputs.**
- **In this regard, all employees are currently working from home.**
- **NRWDI has established a Covid-19 Task Team task team to develop and implement plans to curb the spread of the Corona Virus (COVID-19) in the work place.**



RESPONSE TO COVID-19 PANDEMIC

- **COVID-19 Health and Safety Plan has been developed and approved for implementation.**
- **The Health and Safety Plan focuses on:**
 - **Risk Assessments to identify all high risk areas, high risk activities and to assess exposure / potential exposure of staff to COVID-19.**
 - **Engineering measures such as ventilation and physical barriers.**
 - **Administrative controls such as access control, screening, social distancing, work from home, educating and training, reporting and tracing.**
 - **Healthy and safe work practices such as disinfectants, sanitisers and personal hygiene.**
 - **Personal Protection Equipment (PPE) such as masks, gloves and facial shields.**
 - **Safety measures during transport of employees to and from work.**
 - **Emergency plan for responding to COVID-19 cases in the workplace.**

RESPONSE TO COVID-19 PANDEMIC

- **Compliance Officer has been appointed that will be assisted by Health and Safety Representatives.**
- **Currently busy with the preparation of the workplace for the phased return of staff to work which includes, inter alia,**
 - **training and awareness campaigns;**
 - **risk assessments on staff, activities and the workplace;**
 - **social distancing protocol;**
 - **cleaning and sanitizing offices;**
 - **procurement of PPE;**
 - **procurement of cleaning material and hand sanitizers;**
 - **implementing access control;**
 - **symptoms screening and testing; and**
 - **protocol for phased return to work.**

SITUATIONAL ANALYSIS



SITUATIONAL ANALYSIS

SWOT: List of Strengths, Weaknesses

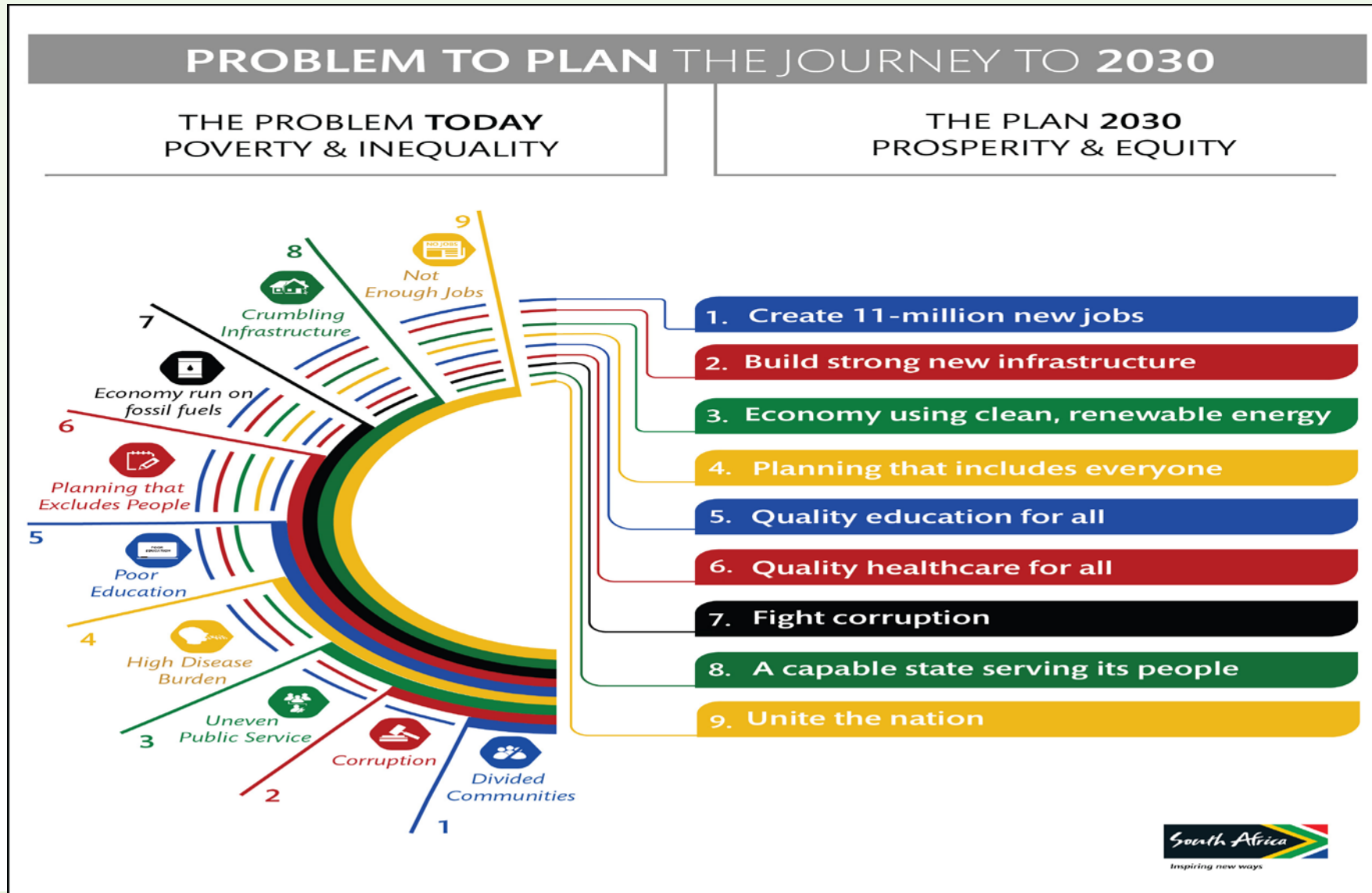
Strengths	Weaknesses
<ul style="list-style-type: none">• NRWDI mandate is legislated and unambiguous.• Core staff is suitably qualified and have generally experienced staff.• Technical expertise in radioactive waste disposal.• World-class low-level waste disposal facility, Vaalputs, which is in operation for more than 30 years.• Board and management are committed to the open, transparent and accountable management of NRWDI• International partnerships and connectedness.• Clean audits as part of good reputation.• ISO 9001 certification.	<ul style="list-style-type: none">• Sustainability of funding – this negatively influences acting on the mandate.• Lack of a Project management capability.• Sustainable leadership.• Lack of brand identity and image.• Internal processes and systems not completely in place.

SITUATIONAL ANALYSIS

SWOT: List of Opportunities and Threats

Opportunities	Threats
<ul style="list-style-type: none">• Evolving culture.• Funding opportunities: offer professional services, project waste consultation services, AFRA training opportunities.• Meaningful contribution to South Africa's socio-economic transformation, NDP and MTSF imperatives.• Centre of excellence in radioactive waste management and disposal.• Render advisory services to the AU and SADC countries with regard to radio-active waste.• Build strong co-operative partnerships with IAEA, global and local waste management organisations to enhance and complement NRWDI's competencies.• Innovation for the disposal of other radioactive waste classes.	<ul style="list-style-type: none">• Possibility to lose highly qualified staff due to brain drain and poaching from other organisations in the very small nuclear industry.• Communication with stakeholders not adequate.• Negative public perception and sentiment regarding nuclear energy and radioactive waste.• Delays in finalisation of Waste Management Fund Bill will compromise sustainability and mandate of NRWDI.• Global nuclear events and accidents increasingly influence government policy and regulation towards the nuclear industry.• Delays in obtaining the Vaalputs Nuclear Installation License and concluding the Vaalputs functional shift.• Lack of critical mass of skilled and suitable qualified individuals in the nuclear energy sector.• Impact of COVID-19 pandemic on our mandate.

STRATEGIC ALIGNMENT AND CONTRIBUTION TO GOVERNMENT PRIORITIES



STRATEGIC ALIGNMENT

NATIONAL DEVELOPMENT PLAN
(Chapter 13)
Building a Capable and Developmental State

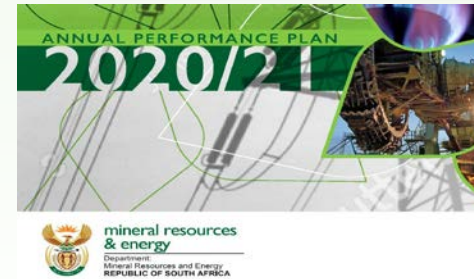


2019 - 2024
MEDIUM TERM STRATEGIC FRAMEWORK
(Priority 1)
Building a Capable, Ethical and Developmental State



DMRE PLANS

- 2020 - 2025 Strategic Plan
- 2020/2021 Annual Performance Plan



NRWDI PLANS

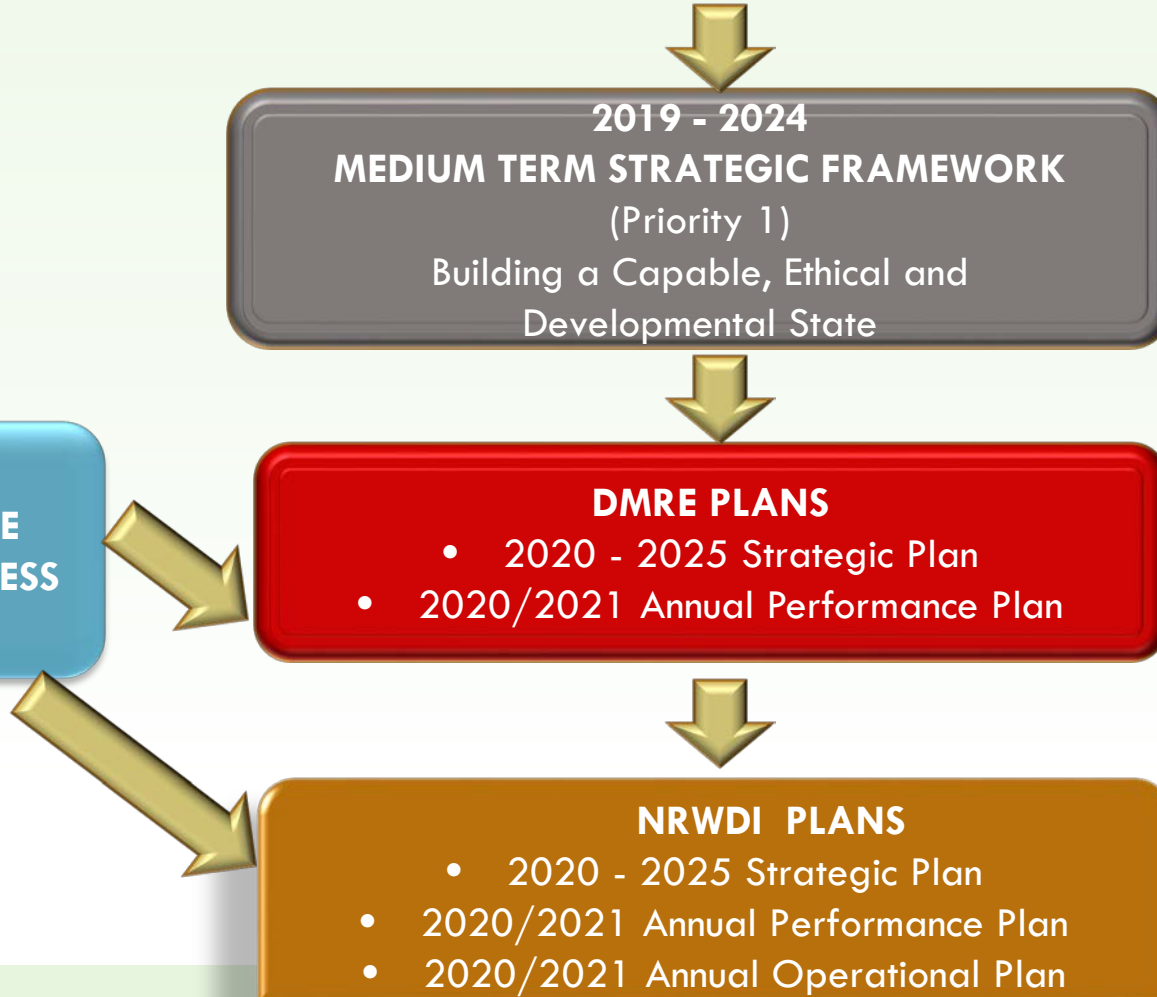
- 2020 - 2025 Strategic Plan
- 2020/2021 Annual Performance Plan
- 2020/2021 Annual Operational Plan



**Strategic Plan
2020-2025**

**Annual Performance Plan
2020-2021**

**STATE OF THE
NATION ADDRESS**



NRWDI's CONTRIBUTION TO GOVERNMENT PRIORITIES

Medium Term Strategic Framework

- **Priority 1:** Economic Transformation and Job Creation
- **Priority 2:** Education, Skills and Health
- **Priority 6:** A Capable, Ethical and Developmental State
- **Priority 7:** A better Africa and World

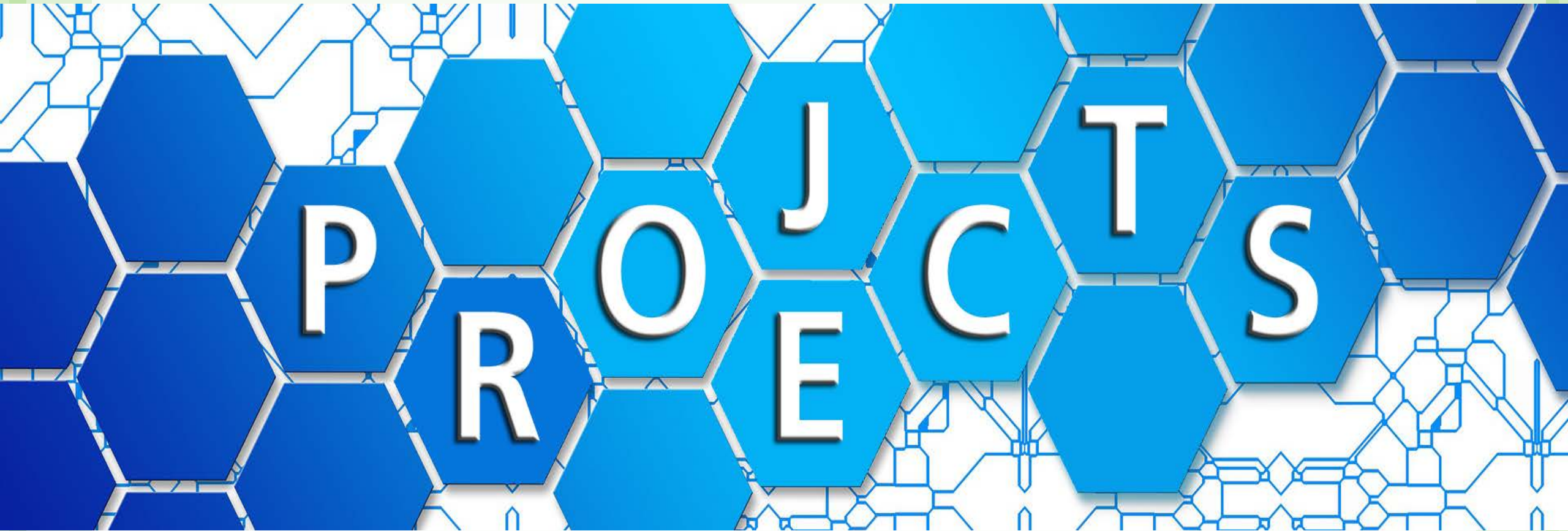
Cross Cutting Focus Areas

- Women
- Youth
- People with Disabilities

National Development Plan

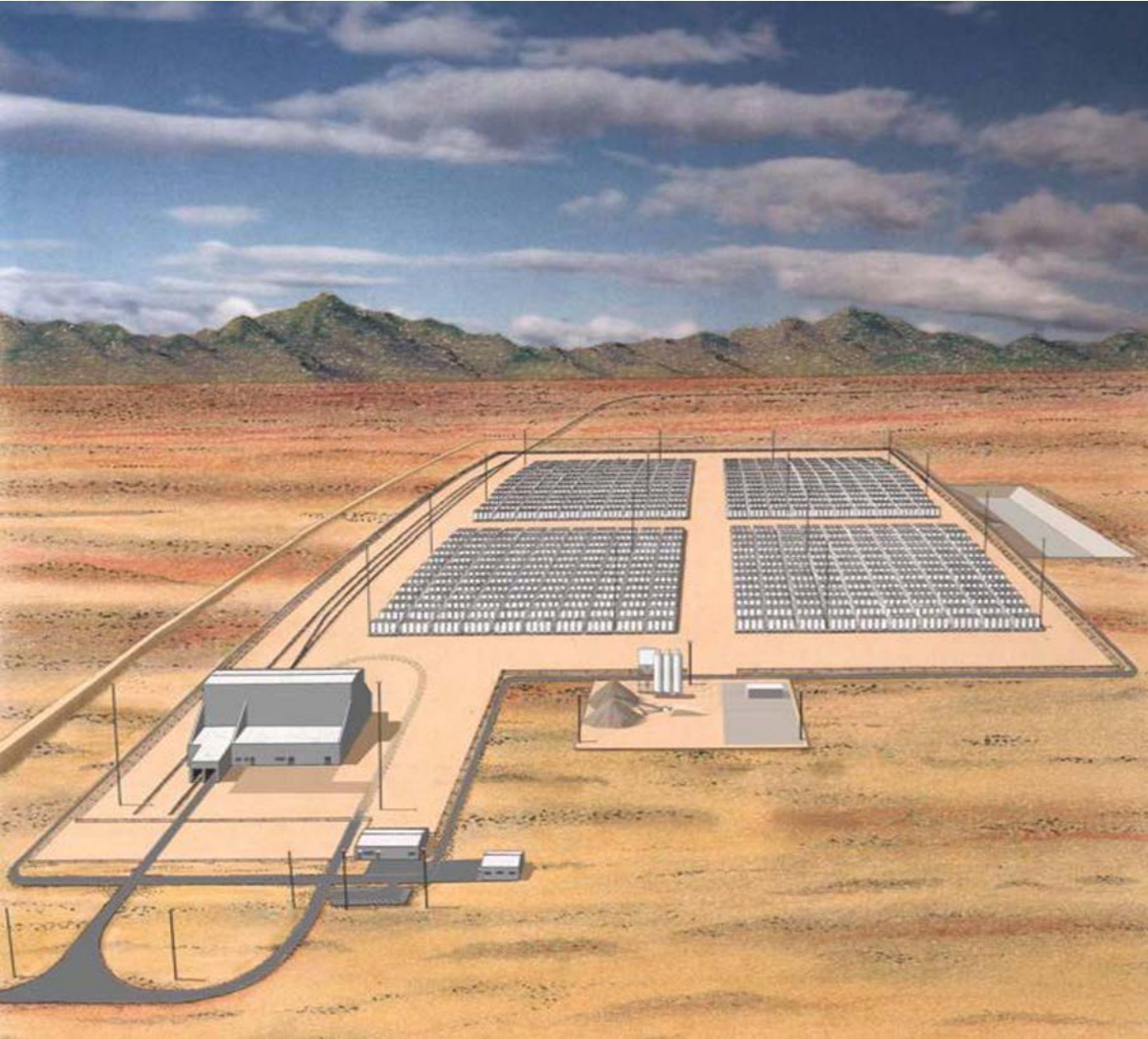
- Chapter 3, '**Economy and employment**', sets out the achievement for full employment, decent work and sustainable livelihoods
- Chapter 13, '**Building a Capable State**', sets out a vision of the transformative and developmental role of the state.
- Chapter 14, '**Promoting accountability and fighting corruption**', sets out a vision which has zero tolerance for corruption.

KEY STRATEGIC PROJECTS



OFF-SITE ABOVE GROUND STORAGE FACILITY FOR SPENT FUEL

Establishment of off-site above ground Centralized Interim Storage Facility (CISF) for spent fuel by 2025.



MINISTERIAL APPROVAL FOR CISF

- **Ministerial approval has been obtained for the establishment of CISF for the long-term storage of spent nuclear fuel on a national basis, in terms of Sections 46(2) and 46(3) of the Nuclear Energy Act No.46 of 1999.**
- **NRWDI will use this critical and national infrastructure project as a catalyst and an enabler to forge durable partnerships and social compacts between government, business, labour, communities and civil society that will result in job creation, skills development, inclusive growth and economic transformation in order to give impetus to the creation of a capable, ethical and developmental state that is at the cutting-edge of the Fourth Industrial Revolution.**

SUPPORT KOEBERG NUCLEAR POWER PLANT LIFE TIME EXTENSION

- **Global trend to extend the operating life time of nuclear power plants.**
- **Koeberg Nuclear Power Plant will be extended by another 20 years to 2045**
- **Replacement of key critical components necessary that will result in disposal of large nuclear components such as Original Steam Generators (OSGs).**
- **NRWDI to develop new disposal solutions for these waste categories.**



SUPPORT KOEBERG NUCLEAR POWER PLANT LIFE TIME EXTENSION



ORIGINAL STEAM GENERATOR



REACTOR PRESSURE VESSEL HEAD

2020/21 ANNUAL PERFORMANCE PLAN



PROGRAMME 1: ADMINISTRATION

The purpose of the programme is to ensure that NRWDI is operationally efficient, cost-effective, properly managed and complies with good corporate governance principles.

Programme 1 makes a contribution to the MTSF's priority 6 which is "Capable, Ethical and Developmental State" by contributing to the following:

- A functional, efficient and integrated government**
- A professional , meritocratic and ethical administration**
- A social compact and engagement with key stakeholders**
- Mainstreaming of gender, empowerment of youth and persons with disability.**

PROGRAMME 1: ADMINISTRATION

The core outcome is achieved through the provision of key corporate functions under the following sub-programmes:

- **Strategic planning, monitoring and evaluation and reporting;**
- **Risk Management;**
- **Internal Audit;**
- **Board Secretariat;**
- **Communications and stakeholder;**
- **Finance and Supply Chain;**
- **Corporate Services (Human Capital Management; Information and Communications Technology Management; Legal Services Management; and General Administration and Facilities Management).**

PERFORMANCE INFORMATION: PROGRAMME 1

Programme 1: Outcomes, Outputs, Performance Indicators and Targets

Outcome	Outputs	Output indicators	Annual targets						
			Audited actual performance			Estimated performance	MTEF period		
			2016/17	2017/18	2018/19	2019/2020	2020/21	2021/22	2022/23
Effective, Efficient and Responsive NRWDI	Implemented finance strategic plan	Percentage implementation of 5-year finance strategic plan	N/A	N/A	N/A	N/A	80% implementation of year 1 plan of finance strategic plan	80% implementation of year 2 plan of finance strategic plan	80% implementation of year 3 plan of finance strategic plan
	Implemented human capital strategic plan	Percentage implementation of 5-year human capital strategic plan	N/A	N/A	N/A	N/A	80% implementation of year 1 plan of human capital strategic plan	80% implementation of year 2 plan of human capital strategic plan	80% implementation of year 3 plan of human capital strategic plan
	Unqualified Audit Report	Unqualified audit report	N/A	N/A	N/A	N/A	Unqualified audit report	Unqualified audit report	Unqualified audit report

PROGRAMME 2: RADIOACTIVE WASTE DISPOSAL OPERATIONS

The purpose of the program is to provide radioactive waste disposal and related services on a national basis by managing and operating various waste disposal and related nuclear facilities such as the Vaalputs National Disposal Facility, to ensure the safe disposal of all classes of radioactive waste in order to protect humans and the environment.

The following activities are inherently part of the Radioactive Waste Operations Division:

- Operate the national low level waste repository at Vaalputs;
- Manage, operate and monitor operational radioactive waste disposal facilities including related predisposal management of radioactive waste on disposal sites;
- Manage ownerless radioactive waste on behalf of the Government, including the development of radioactive waste management plans for such waste;
- Provide information on all aspects of radioactive waste management to the public living around radioactive waste disposal facilities and to the public in general.
- Maintain the Vaalputs Waste Disposal Inventory Database and submit annually a report to the NNR relating to waste inventory disposed of at Vaalputs.

Programme 2 makes a contribution to two of the MTSF priorities namely priority 1 which is “*Economic Transformation and Job Creation*” and Priority 6 “*A capable , ethical and developmental state*”. NRWDI is currently establishing new waste disposal and related infrastructure that will create and sustain more decent jobs.

PERFORMANCE INFORMATION: PROGRAMME 2

Programme 2: Outcomes, Outputs, Performance Indicators and Targets

Outcome	Outputs	Output indicators	Annual targets						
			Audited actual performance			Estimated performance	MTEF period		
			2016/17	2017/18	2018/19	2019/2020	2020/21	2021/22	2022/23
Safe disposal of all classes of radioactive waste	All radioactive waste classes disposed	Percentage compliance rate for annual SHEQ audit for disposal facilities on Vaalputs site	N/A	84%	88%	80%	80%	80%	80%
		Number of Public Safety Information Forum (PSIF) meetings held with communities surrounding Vaalputs	N/A	4	4	4	2	2	2
		Percentage acceptance rate for the disposal of waste packages received from waste generators for disposal	N/A	N/A	N/A	N/A	95%	95%	95%

PROGRAMME 3: SCIENCE, ENGINEERING & TECHNOLOGY

The purpose of the programme is to develop and implement technologies for the for all classes of radioactive waste that currently do not have disposal and related infrastructure such as the infrastructure for the safe storage and disposal of spent nuclear fuel or high level radioactive waste and long lived intermediate level waste on a national basis.

The following activities are inherently part of the Science, Engineering and Technology Division:

- Investigate the need for any new radioactive waste disposal facilities and to site, design and construct new facilities as required;
- Define and conduct research and development aimed at finding solutions for long-term radioactive waste management; and
- Maintain a national radioactive waste database and publish a report on the inventory and location of all radioactive waste in the Republic at a frequency determined by the BOD.

Programme 3 makes a contribution to two of the MTSF priorities namely priority 1 which is “Economic Transformation and Job Creation” and Priority 6 “ A capable , ethical and developmental state” NRWDI is currently establishing new waste disposal and related infrastructure that will create and sustain more decent jobs.

PERFORMANCE INFORMATION: PROGRAMME 3

Programme 3: Outcomes, Outputs, Performance Indicators and Targets

Outcome	Outputs	Output Indicators	Annual Targets						
			Audited/Actual Performance			Estimated Performance	MTEF Period		
			2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23
Centralised storage of spent nuclear fuel	CISF established	Percentage of CISF project plan implemented	N/A	N/A	N/A	N/A	20%	40%	60%

PROGRAMME 4: RADIOACTIVE WASTE COMPLIANCE MANAGEMENT

The purpose of the programme is to ensure that NRWDI's core mandate is executed in compliance with quality, health, safety, environmental and nuclear licensing regulatory requirements, relevant international standards and best practices. The programme also seeks to provide management systems and resources to discharge the obligations associated with holding a nuclear authorisation.

The following activities are inherently part of the Radioactive Waste Compliance Management Division:

- Implementation of institutional control over closed repositories, including radiological monitoring and maintenance as appropriate;
- Assessing and inspecting the acceptability of radioactive waste for disposal and issuing of radioactive waste disposal certificates; and
- Developing criteria for accepting and disposing radioactive waste in compliance with applicable regulatory safety requirements and any other technical and operational requirements.

Programme 4 makes a contribution to one priority of the MTSF namely Priority 6 which is “Capable, Ethical and Developmental State.”

PERFORMANCE INFORMATION: PROGRAMME 4

Programme 4: Outcomes, Outputs, Performance Indicators and Targets

Outcome	Outputs	Output indicators	Annual targets						
			Audited actual performance			Estimated performance	MTEF period		
			2016/17	2017/18	2018/19	2019/2020	2020/21	2021/22	2022/23
Compliance with the applicable statutory requirements.	Management System requirements implemented	Percentage implementation of the Radiation Protection Program for Vaalputs	N/A	N/A	N/A	N/A	80% of annual project plan for implementation of the Radiation Protection Program executed	80% of annual project plan for implementation of the Radiation Protection Program executed	80% of annual project plan for implementation of the Radiation Protection Program executed
	Management System requirements implemented	Percentage implementation of a Quality Management System for NRWDI that is ISO 9001 compliant	N/A	N/A	N/A	N/A	80% of annual project plan for implementation of ISO 9001 compliant Quality Management System executed	80% of annual project plan for implementation of ISO 9001 compliant Quality Management System executed	80% of annual project plan for implementation of ISO 9001 compliant Quality Management System executed
		Percentage implementation of an ISO compliant SHE Management System for NRWDI	N/A	N/A	N/A	N/A	80% of annual project plan for implementation of ISO compliant SHE Management System executed	80% of annual project plan for implementation of ISO compliant SHE Management System executed	80% of annual project plan for implementation of ISO compliant SHE Management System executed

BUDGET ALLOCATIONS



BUDGET ALLOCATIONS FOR 2020/21-2022/23 MTEF

Revenue	Audited Outcome	Audited Outcome	Audited Outcome	Approved budget	Revised estimate	Medium-term estimate		
Rand Thousand	2016/17	2017/18	2018/19	2019/20		2020/21	2021/22	2022/23
Non-Tax revenue	5,525	1,211	1,908	1,526	2,282	2,094	2,364	2,666
Commission received	1	1	1	0	1	0	0	0
Waste disposal fees	5111	0	0	0	0	0	0	0
Interest	413	1210	1907	1526	2281	2094	2364	2666
Transfers received	10,000	30,000	45,532	47,499	47,499	49,397	51,564	54,039
Total revenue	15,525	31,211	47,440	49,025	49,781	51,491	53,928	56,705

BUDGET EXPENDITURE PER PROGRAMME 2020/21-2022/23 MTEF

Statement of Financial Performance - NRWDI Consolidated

Expenditure	Audited Outcome	Audited Outcome	Audited Outcome	Approved budget	Revised estimate	Medium-term estimate		
	Rand Thousand	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23
Administration	15,525	20,611	29,853	30,887	31,644	33,712	35,437	37,310
Radioactive Waste Disposal Operations	0	2,965	4,309	4,630	4,630	4,060	4,173	4,345
Science, Engineering and Technology	0	4,010	4,566	4,937	4,937	5,127	5,324	5,591
Radioactive Waste Compliance Management	0	3,625	8,712	8,570	8,570	8,592	8,994	9,459
Total revenue	15,525	31,211	47,440	49,025	49,781	51,491	53,928	56,705

CONCLUDING REMARKS



CONCLUDING REMARKS

- **NRWDI maintained clean audit status for two consecutive years which will bear testimony to the fact that an institutionalized culture of accountability and responsibility prevails in NRWDI, thus demonstrating a resilient commitment towards good governance, prudent financial management, excellence, transformational and ethical leadership.**
- **NRWDI is deeply committed to deliver safe, sustainable and publicly acceptable solutions for the long term management and disposal of all radioactive waste classes to ensure that no undue burden is placed on future generations due to our past, present and future involvement in nuclear science and technology applications.**
- **NRWDI will never compromise on safety and security, taking full accountability for our social and environmental responsibilities, always seeking value for money and actively engaging with stakeholders in an open, transparent and respectful manner.**
- **NRWDI remains totally committed to fulfilling the vast expectations of South Africans that radioactive waste can be safely managed in a manner that meets or exceeds all applicable regulatory standards and requirements for protecting the health, safety and security of our people and the environment, both now and in the future.**

NRWDI

NATIONAL RADIOACTIVE WASTE
DISPOSAL INSTITUTE



THANK YOU !

Physical Address:

Building X
Elias Motsoaledi Street Extension
(Church Street West)
R104 Pelindaba
Brits Magisterial District
North West, 0240

Postal Address:

Private Bag X1
Pretoria
0001
Gauteng
Telephone:
012 305 3222

Email:

info@nrwdi.org.za

Website:

www.nrwdi.org.za

Social media:

twitter: [@nrwdi_org](https://twitter.com/nrwdi_org)

facebook: www.facebook.com/nrwdi