NATIONAL RADIOACTIVE WASTE DISPOSAL INSTITUTE (NRWDI)

ANNUAL PERFORMANCE PLAN FOR 2023/2024

Document No.: ***NRWDI-PLN-0061 REV. 0***

Date: ***11th January 2023***

Private Bag X1
Pretoria
0001
Gauteng Province
South Africa.

CHAIRPERSON'S STATEMENT

The National Radioactive Waste Disposal Institute (NRWDI) is an independent State-Owned Entity established in terms of section 3 of the National Radioactive Waste Disposal Institute Act (Act 53 of 2008). The overarching mandate of NRWDI is to provide sustainable and technically feasible solutions for the long-term management and disposal of all radioactive waste classes on a national basis. The key objective of this mandate is to protect people and the environment as well as to avoid undue burden being placed on future generations due to our past, present and future involvement in nuclear science and technology applications.

The role of NRWDI will become increasingly crucial as the country embraces the importance of clean energy sources and continues to include nuclear power in the energy mix of South Africa. It is imperative that NRWDI plans effectively so that it meets the requirements of its mandate as informed and aligned to the current and future needs of the country's radioactive waste generators.This would include expanding the Vaalputs national radioactive waste disposal facility site to accommodate the storage and disposal of long-lived and high-level radioactive wastes in addition to the short-lived low-level operational wastes currently being disposed of at the facility.

For the past six years, NRWDI has been operating on a limited budget allocation which poses a risk to its long-term sustainability. A bill for establishing a Radioactive Waste Management Fund by statute has been formulated and is currently underway to being promulgated. The Fund will finance the activities of NRWDI and thereby create a reliable income stream for NRWDI in terms of the "polluter pays principle", where the waste generators pay levies for the disposal of their radioactive waste.

Priorities and critical focus areas for NRWDI in the 2023/24 financial year will include the following:

- Ensuring a smooth transition of Vaalputs operations from Necsa to NRWDI and implementation of successful change management programmes;
- Providing support to the Department of Mineral Resources and Energy and the Minister, as the Shareholder, in facilitating the promulgation of the Radioactive Waste Management Fund Bill;
- Entrenching a culture of accountability in NRWDI and demonstrating commitment to good governance, prudent financial management, operational excellence and leadership based on ethical and moral standards.

- Ensuring strategic engagements and communications with all NRWDI stakeholders to eliminate doubt and build trust;
- Ensuring that public perceptions, concerns and expectations are adequately addressed and that public education, participation and communication activities in respect of radioactive waste management and disposal issues are placed at the centre stage.
- Ensuring that there is presence and visibility of NRWDI in the nuclear space;
- Positioning NRWDI as a high-performing respected waste disposal organisation through continued efforts to forge networks and partnerships with the government, private sector, local and international research agencies, and other stakeholders.
- Ensuring a conducive working environment that is underpinned by our organisational values, namely, Nurturing, Respect, Work-life Balance, Dedication and Integrity.

If NRWDI places emphasis on the above-mentioned priorities in its operations in 2023/24, if adequate funding or alternative funding streams materialise and if the Nuclear Installation Licence (NIL-43) is received, then the Board is confident that NRWDI will be fulfilling its constitutional and legislative mandate.

We live in times where the NRWDI cannot exist in isolation but is dependent on its engagement with its stakeholders. I wish to pay tribute to all NRWDI's stakeholders for their continued support. We couldn't make progress without our stakeholders, who continue to challenge, scrutinise and support our vitally important work. We will always engage our stakeholders in an inclusive manner, that is responsive, and supports trust, constructive dialogue, and meaningful partnerships.

The NRWDI Board of Directors hereby endorse the Annual Performance Plan for 2023/24 and pledges its commitment and support to the NRWDI management team and employees in their implementation and execution of the 2023/2024 Annual Performance Plan and thereby fulfilling NRWDI's mandate and making an impactful contribution to Government's social and economic imperatives.

MS T ZUNGU

Chairperson: NRWDI Board of Directors

CHIEF EXECUTIVE OFFICER'S STATEMENT

It gives me immense pleasure to present the 2023/2024 Annual Performance Plan (APP) for the National Radioactive Waste Disposal Institute. This Annual Performance Plan is aligned with the Department of Mineral Resources and Energy's (DMRE) strategic outcomes and contributes towards the delivery of the objectives of the National Development Plan as well as the Medium-Term Strategic Framework. The plan emphasises the key priorities for NRWDI for the forthcoming year to ensure that it fulfils the mandate as prescribed in terms of Section 5 of our founding legislation, the National Radioactive Waste Disposal institute Act, (Act 53 of 2008).

NRWDI's key overarching mandate is to dispose all classes of radioactive waste on a national basis in a manner that is safe, secure, technically sound, socially acceptable, environmentally responsible and economically feasible and therefore ensuring that there is no undue burden placed on the future generations.

A key priority for NRWDI is to acquire the licence to operate the national low-level radioactive waste repository at Vaalputs. NRWDI is working closely with Necsa, the current licence holder, to ensure that this functional shift is as seamless as possible. With the Nuclear Installation Licence (NIL-43) for Vaalputs on the horizon, the major activity will focus on building capacity and the capability to ensure that we have the necessary skills and expertise to take-over the management and operations of the Vaalputs radioactive waste repository. The task ahead seems daunting; however, we have proactively compiled a Transitional Plan that will allow a seamless transition to ensure uninterrupted disposal of low-level radioactive waste from Necsa and the Koeberg Nuclear Plant.

Nuclear energy is included in the energy mix for the country, and as such there will be greater reliance and dependence on NRWDI to research and develop radioactive waste management and disposal technologies suitable for the needs of South Africa. For this to unfold, it would be necessary to, not only leverage existing partnerships, but also establish new partnerships and collaborations with various organisations nationally, regionally and internationally. The importance of relationships, partnerships and collaboration efforts should not be underestimated because together we can achieve so much more when current economic times have become so challenging.

Instilling trust and confidence with NRWDI's diverse stakeholder groupings is a key strategic imperative. It is therefore important for NRWDI to proactively engage will all our stakeholders in a manner that will enhance the transparency, openness, trust and willingness by the stakeholders to accept that NRWDI can safely and securely dispose radioactive waste without compromising the health and safety of the public and environment. In this way, the people of South Africa will enjoy the benefits of economic prosperity associated with the applications related to nuclear science and technology.

Information sharing is another key focus area for NRWDI. It is important for us to provide information on all aspects of radioactive waste management to the public living in and around the radioactive waste disposal facility and the public in general. We live in times where digitisation could be used to our advantage. NRWDI will be sharing information on social media platforms to educate and empower our stakeholders and the public on the role of NRWDI in the safe and secure management and disposal of radioactive waste in protecting the environment.

It goes without saying that the nuclear industry is a highly regulated one and the safe management and disposal of radioactive waste must be executed in compliance with quality, health, safety, environmental and nuclear licencing regulatory requirements, relevant international standards and best practices. Once the NIL-43 is received by NRWDI, it will have to ensure that NIL- 43 is maintained, therefore compliance with the nuclear installation licences is key to the successful operation of disposal facilities.

The long-term sustainability of NRWDI remains a challenge. The enactment of the Radioactive Waste Management Fund Bill needs to be fast tracked as this will provide for NRWDI to become self-sufficient.

NRWDI will continue to forge networks and partnerships with the government, private sector, local and international research performing agencies, including other stakeholders. These networks and partnerships will be grounded on the principle of strategic partnerships as an essential element of delivery on the mandate of NRWDI. I would like to express our gratitude to all our local and international strategic partners and we are looking forward to more years of fruitful collaboration and cooperation.

The 2023/2024 Annual Performance Plan is an ambitious plan and in order to execute the plan it is imperative that there is a collective understanding of our responsibilities and obligations as public servants to the people of South Africa.

I would like to take this opportunity to thank the Department of Mineral Resources and Energy and the NRWDI Board for their ongoing support and strategic direction as well as guidance. Last but not least, a special thanks to the entire NRWDI team for their passion, hard work and their continued commitment to the success of the organisation. I am certain that individually and collectively, Team NRWDI is ready and inspired to make meaningful and impactful contributions towards realising the outcomes and outputs contained herein.

The NRWDI Board fully endorses this Annual Performance Plan and commits to supporting its implementation.

DR M MKHOSI
Chief Executive Officer: NRWDI
Date: 31st January 2023

OFFICIAL SIGN-OFF

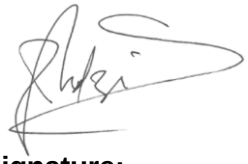
It is hereby certified that this Annual Performance Plan:

- Was developed by the management of the National Radioactive Waste Disposal Institute (NRWDI) under the guidance of the Accounting Authority;
- Takes into account all the relevant policies, legislation and other mandates for which NRWDI is responsible, and
- Accurately reflects the Outcomes and Outputs which NRWDI will endeavour to achieve over the period 2023/24.

Signature:

Mr Justin Daniel

Programme 1: Administration – Finance & SCM



Signature:

Mr Zweli Ndziba

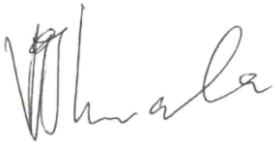
Programme 1: Administration – Corporate Services Division

Signature:

Mr Alan Carolissen

Programme 2: Radioactive Waste Disposal Operations

Signature:



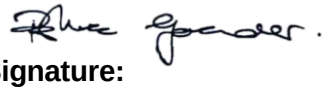
Dr Vusi Twala

Programme 3: Science, Engineering and Technology

Signature:

Mr Alan Carolissen

Programme 4: Radioactive Waste Compliance Management



Signature:

Ms Deshnee Govender

Manager: Strategy, Planning, Performance Monitoring, Evaluation and Reporting

Signature:

Dr Margaret Mkhosi

CEO of NRWDI

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LIST OF ABBREVIATIONS

Acronym/Term	Description/Definition
AFRA	African Regional Cooperative Agreement for Research, Development and Training related to Nuclear Science and Technology
CA	Competent Authority
CEO	Chief Executive Officer
CISF	Central Interim Storage Facility
DFFE	Department of Forestry, Fisheries and the Environment
DMRE	Department of Mineral Resources and Energy
DOH	Department of Health
EAP	Environmental Assessment Practitioner
EIA	Environmental Impact Assessment
GHG	Greenhouse Gas Emissions
HLW	High Level Waste
IAEA	International Atomic Energy Agency
ILW	Intermediate Level Waste
IRP	Integrated Resource Plan
ISO	International Standards Organ
IUDF	Integrated Urban Development Framework
KNPS	Koeberg Nuclear Power Station
LLW	Low Level Waste
MTEF	Medium Term Expenditure Fund
MTSF	Medium Term Strategic Framework
NDP	National Development Plan
NIL	Nuclear Installation License
NNR	National Nuclear Regulator
NRWDIA	National Radioactive Waste Disposal Institute Act
NRWDI	National Radioactive Waste Disposal Institute
Necsa	South African Nuclear Energy Corporation
PESTLE	Political, Economic, Social, Technological, Legal, Environmental
PFMA	Public Finance Management Act
PSIF	Public Safety Information Forum
RAWIS	Radioactive Waste Information System

Acronym/Term	Description/Definition
SADC	South African Development Community
SHEQ	Safety, Health, Environment and Quality
SWOT	Strengths, Weaknesses, Opportunities and Threats
WAC	Waste Acceptance Criteria

PART A: OUR MANDATE

1. UPDATES TO THE RELEVANT LEGISLATIVE AND POLICY MANDATES

The National Radioactive Waste Disposal Institute (NRWDI) carries out its work having due regard to the fundamental rights contained in the Constitution of the Republic of South Africa, 1996 (Act No. 108 of 1996) and other related legislation. The following sections are extracts from the Constitution which have a direct bearing on the NRWDI in terms of delivering on their constitutional mandate.

The NRWDI mandate is underpinned by Section 24(b) of the Constitution of the Republic of South Africa, Act 108 of 1996 which states that:

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.

In turn, the above constitutional provisions inform further pieces of legislation that impact the functioning of NRWDI. The governance and regulation of radioactive waste management is also subject to the provisions of the following acts. These are discussed below.

National Radioactive Waste Disposal Institute Act (NRWDIA), 2008 (Act 53 of 2008)

The National Radioactive Waste Disposal Institute Act (NRWDIA) (Act no. 53 of 2008) was proclaimed by the President of the Republic of South Africa in Government Gazette no. 32764 and NRWDIA became effective on the 1st December 2009. The NRWDIA endorsed the establishment of the National Radioactive Waste Disposal Institute (NRWDI). The functions of NRWDI as per Section 5 of the NRWDI Act (Act 53 of 2008) are summarised as follows:

- Manage radioactive waste disposal on a national basis;

- Operate the national low-level waste repository at Vaalputs;
- Design and implement disposal solutions for all categories of radioactive waste;
- Develop criteria for accepting and disposing radioactive waste in compliance with applicable regulatory safety requirements and any other technical and operational requirements;
- Assess and inspect the acceptability of radioactive waste for disposal and issue radioactive waste disposal certificates;
- Manage, operate and monitor operational radioactive waste disposal facilities including related predisposal management of radioactive waste on disposal sites;
- 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;
- 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;
- Manage ownerless radioactive waste on behalf of the Government, including the development of radioactive waste management plans for such waste;
- Assist generators of small quantities of radioactive waste in all technical aspects related to the management of such waste;
- Implement institutional control over closed repositories, including radiological monitoring and maintenance as appropriate;
- Implement any assignments or directives from the Minister regarding radioactive waste management;
- Provide information on all aspects of radioactive waste management to the public living around radioactive waste disposal facilities and to the public in general;
- Advise nationally on radioactive waste management;
- Co-operate with any person or institution in matters falling within these functions; and
- Any other function necessary to achieve the objectives of the Institute.

The majority of the above functions are currently performed within the scope of Low-Level Waste (LLW) inventories. In future, the scope would need to be extended to address the national inventory of radioactive waste consisting of Intermediate Level

Waste (ILW), High Level Waste (HLW), long-lived waste, spent nuclear fuel and disused sealed radioactive sources. This implies that alternative disposal concepts would have to be researched, designed and implemented. It is also possible that alternative disposal sites would need to be obtained, characterised, constructed and operated.

Nuclear Energy Act, 1999 (Act 46 of 1999)

NRWDI is an independent entity established by statute under the provision of section 55(2) of the Nuclear Energy Act (No. 46 of 1999) to fulfil the institutional obligation of the Minister of Mineral Resources and Energy. In accordance with the provisions of the Nuclear Energy Act, 1999 (Act No. 46 of 1999), the discarding of radioactive waste and storage of irradiated nuclear fuel require the written permission of the Minister of Mineral Resources and Energy and are subject to such conditions that the Minister, in concurrence with the Minister of Environment, Forestry and Fisheries and the Minister of Water and Sanitation, deems fit to impose. The conditions so imposed will be additional to any conditions contained in a nuclear authorisation as defined in the NNRA.

National Nuclear Regulatory Act, 1999 (Act 47 of 1999)

The Act provides for the establishment of a National Nuclear Regulator in order to regulate nuclear activities, for its objects and functions, for the manner in which it is to be managed and for its staff matters; to provide for safety standards and regulatory practices for protection of persons, property and the environment against nuclear damage; and to provide for matters connected therewith.

Hazardous Substances Act, 1973 (Act 15 of 1973)

Sealed radioactive sources, including disused sealed sources, are controlled as Group IV Hazardous Substances, in terms of the Hazardous Substances Act, 1973 (Act No. 15 of 1973) and are regulated by the Directorate Radiation Control in the Department of Health.

Currently all disused sealed radioactive sources are temporarily stored at Necsa because the end point (i.e., final disposal) has not yet been defined in radioactive

waste management plans. The disposal of all radioactive material falls within the ambit of the National Nuclear Regulator and therefore the regulatory framework to manage the total life cycle of sealed radioactive sources needs to be harmonised.

The safety, security and control of disused radioactive sources is a high priority and in line with international commitment in order to prevent radiation accidents that may be caused by the potential abuse and misuse of such sources for, e.g., malicious purposes. NRWDI will liaise with all role players and stakeholders to mitigate these risks by implementing sustainable disposal options (end points) for various categories of disused sealed radioactive sources.

Mineral and Petroleum Resources Development Amendment Act, 2008 (Act 49 of 2008)

The objectives of this Act are to recognise the internationally accepted right of the State to exercise sovereignty over all the mineral and petroleum resources within the Republic, give effect to the principle of the State's custodianship of the nation's mineral and petroleum resources, give effect to section 24 of the Constitution by ensuring that the nation's mineral and petroleum resources are developed in an orderly and ecologically sustainable manner while promoting justifiable social and economic development; and promote equitable access to the nation's mineral and petroleum resources to all the people of South Africa.

National Water Act, 1998 (Act 36 of 1998)

The purpose of this Act is to ensure that the nation's water resources are protected, used, developed, conserved, managed and controlled in ways which take into account amongst other factors: promoting equitable access to water; redressing the results of past racial and gender discrimination; promoting the efficient, sustainable and beneficial use of water in the public interest; facilitating social and economic development; protecting aquatic and associated ecosystems and their biological diversity; meeting international obligations.

Public Finance Management Act, 1999 (Act 01 of 1999 as amended by Act 29 of 1999)

Enables public sector managers to manage and improve accountability in terms of eliminating waste and corruption in the use of public funds. NRWDI is listed as a Schedule 3A public entity.

Promotion of Administrative Justice Act, 2000 (Act 03 of 2000)

Gives effect to the constitutional right to just administrative action for any member of the public whose rights have been adversely affected and to ensure efficient, effective and legitimate administration within all spheres of government.

Preferential Procurement Policy Framework Act, 2000 (Act 05 of 2000)

Gives effect to Section 217 (3) and provides a framework for the implementation of the procurement policy contemplated in Section 217 (2) of the Constitution.

Promotion of Access to Information Act, 2000 (Act 02 of 2000)

Gives effect to the constitutional right of access to any information held by the State and any information held by a private person that is required for the exercise or protection of any other right.

Intergovernmental Relations Framework Act, 2005 (Act 13 of 2005)

Establishes a framework for national, provincial and local government to promote and facilitate intergovernmental relations and to provide a mechanism and procedure to facilitate the settlement of intergovernmental disputes.

Skills Development Act, 1998 (Act 97 of 1998)

Provides an institutional framework to devise and implement national, sector and workplace strategies to develop and improve the skills of the South African workforce.

Employment Equity Act, 1998 (Act 55 of 1998)

Serves as a mechanism to redress the effects of unfair discrimination and to assist in the transformation of workplaces, so as to reflect a diverse and broadly representative workforce.

Disaster Management Act, 2002 (Act 57 of 2002)

Provides for an integrated and co-ordinated disaster management policy that focuses on preventing or reducing the risk of disasters, mitigating the severity of disasters, emergency preparedness, and rapid and effective responses to disaster and post-disaster recovery.

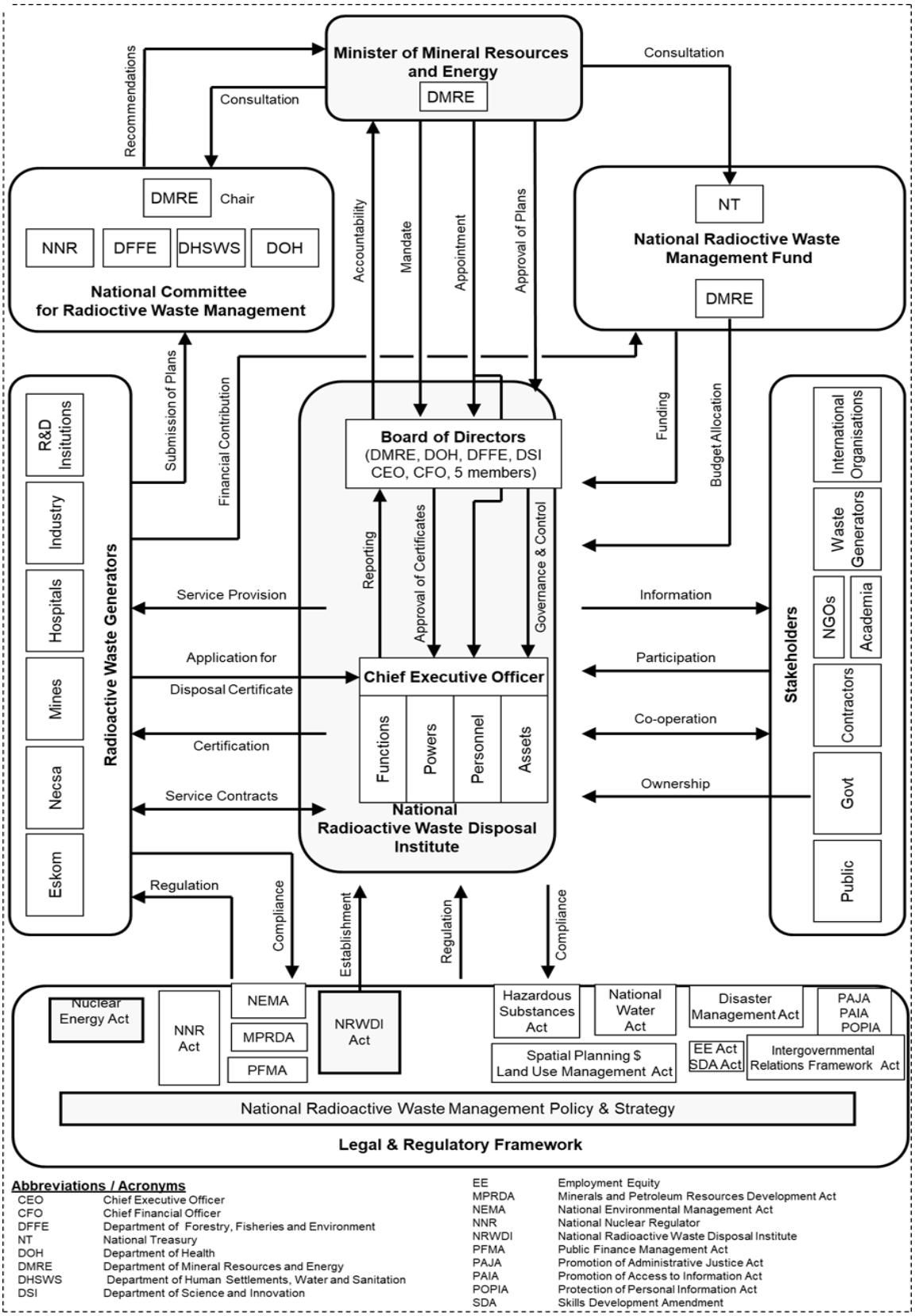
Spatial Planning and Land Use Management Act, 2013 (Act 16 of 2013)

Makes provision for inclusive developmental, equitable and efficient spatial planning at different spheres of government.

Protection of Personal Information Act, 2021 (Act 4 of 2013)

The Protection of Personal Information Act aims to promote the protection of personal information processed by public and private bodies to regulate the flow of personal information across the borders of the Republic. It is South Africa's data protection law.

Figure 1 : The legislative and regulatory environment within which NRWDI operates.



Abbreviations / Acronyms

CEO	Chief Executive Officer
CFO	Chief Financial Officer
DFFE	Department of Forestry, Fisheries and Environment
NT	National Treasury
DOH	Department of Health
DMRE	Department of Mineral Resources and Energy
DHSWS	Department of Human Settlements, Water and Sanitation
DSI	Department of Science and Innovation
EE	Employment Equity
MPRDA	Minerals and Petroleum Resources Development Act
NEMA	National Environmental Management Act
NNR	National Nuclear Regulator
NRWDI	National Radioactive Waste Disposal Institute
PFMA	Public Finance Management Act
PAJA	Promotion of Administrative Justice Act
PAIA	Promotion of Access to Information Act
POPIA	Protection of Personal Information Act
SDA	Skills Development Amendment

2. UPDATES TO INSTITUTIONAL POLICIES AND STRATEGIES

There are a number of key policy mandates that comprehensively capture our vision and thus describe what we do and why we do them. In short, these are programs and plans that seek to address public interest. The policy mandates also provide for a relevant international framework that has a bearing on NRWDI and South Africa's policies.

National Development Plan, Vision 2030

The National Development Plan sets out the vision for South Africa by the year 2030:

- 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.

Radioactive Waste Management Policy and Strategy for South Africa (2005)

The cornerstone of South Africa's approach to addressing radioactive waste management issues is the Radioactive Waste Management Policy and Strategy for the Republic of South Africa (Policy and Strategy) was published in November 2005. The Policy and Strategy serves as a national commitment to address radioactive waste management in a coordinated and cooperative manner and represents a comprehensive radioactive waste management governance framework by formulating, in addition to nuclear and other applicable legislation, a policy and implementation strategy developed in consultation with all stakeholders

Integrated Urban Development Framework (IUDF)

IUDF is a central urban policy that seeks to address urban spatial patterns through the creation of compact, co-ordinated cities. In the main, it is geared towards transforming urban spaces, focusing on infrastructure development and unleashing the potential of cities.

National Energy Efficiency Strategy

A guiding document developed by government to support implementation of energy efficient measures in South Africa

International Conventions

Apart from South African policies and strategies, the assurance of nuclear safety is reinforced by a number of international instruments. These include certain Conventions such as the Convention on Nuclear Safety and Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management ("Joint Convention") that are established by the International Atomic Energy Agency (IAEA) and that are legally binding on the participating IAEA Member States. South Africa, as a contracting party to these conventions is obliged to adhere to the articles of these conventions and to provide regular reports on compliance to these conventions.

The Joint Convention establishes an international peer review process among Contracting Parties and provides incentives for the IAEA Member States to improve nuclear safety in line with international best practises. One of the objects of the Institute is to fulfil national obligations in respect of international nuclear instruments relating to management of spent nuclear fuel and radioactive waste management, including disposal, to ensure that the Republic of South Africa is in compliance with the articles of the Joint Convention through existing national legal and regulatory infrastructure.

The South African Joint Convention report provides information on spent fuel and waste management facilities, radioactive waste inventories, ongoing decommissioning projects, spent fuel and radioactive waste management safety, as well as information on imports/exports of radioactive waste (trans-boundary movements) and disused sealed radioactive sources.

Sustainable Development Goals

A global agenda with a vision of ending poverty, protecting the planet and ensuring that humanity enjoys peace and prosperity. It appreciates that eradicating poverty in all its forms and dimensions, including extreme poverty, is the greatest global challenge and an indispensable requirement for sustainable development.

African Union 2063 Agenda

The Africa 2063 Agenda envisages an integrated, prosperous and peaceful Africa through inclusive growth and sustainable development.

Addis Ababa Agreement

The Addis Ababa Action, primarily provides and informs the implementation of the New Urban Agenda. Its main focus is on infrastructure, technology, micro small and medium enterprises.

Paris Agreement

The Paris agreement guides international efforts towards reducing and limiting greenhouse gas emissions and the associated approach towards low carbon development. Article 4.19 of the Agreement encourages its signatories to formulate and communicate long term – low GHG emission development to UNFCC by 2020.

Sendai Framework for Disaster Risk Reduction 2015-2030

The Sendai Framework is a non-binding voluntary framework; whose main focus is on the reduction of disaster risk.

3. UPDATES ON RELEVANT COURT RULINGS

There are no current court rulings that may have an influence on the on NRWDI's operations and/or service delivery obligations.

PART B: OUR STRATEGIC FOCUS

1. UPDATED SITUATIONAL ANALYSIS

The situational analysis is a narration of prevailing facts and their implications for NRWDI and the execution of its mandate. It is a logical step that follows any form of planning.

There are a number of countries that use nuclear technology to generate electricity and radioactive material for many other purposes, resulting in significant progress being made in the safe and effective management of radioactive waste and spent nuclear fuel, including the development of deep geological repositories.

Most nuclear power plants have a design operating lifetime of 25-40 years but engineering assessments have confirmed that they can operate for a longer period. There seems to a growing acceptance from society regarding the nuclear power generation and the safe management and storage of nuclear waste internationally. For societal acceptance, trust and confidence, it is imperative for regular communication with stakeholders to take place.

In terms of the Spent Fuel Management Outcomes and regardless of the chosen Spent Nuclear Fuel Strategy, the following technical outcomes are inescapable namely the Centralised Interim Storage Facility (CISF) and the Deep Geological Repository (DGR).

Some of the global lessons learnt are the following:

- Spent fuel pools are for cooling purposes and not storage.
- Limit the spent fuel inventory “at reactor”.
- Site selection for a Deep Geological Repository (DGR) is problematic.
- In the absence of a DGR, drive towards the storage of spent fuel, in particular off-site dry storage.
- Majority of countries have now opted for the direct disposal of spent fuel instead of reprocessing followed by disposal.

In South Africa, there are two nuclear reactors generating about 5% of its electricity. Government’s commitment to the future of nuclear energy as part of the energy mix in South Africa is strong and there is always be a need for an

entity like NRWDI. Currently, there are facilities for the safe management and disposal of LLW which is carried at the Vaalputs site in the Northern Cape.

The South African public still needs to gain confidence and trust in the use of nuclear power as well as the safe management and disposal of nuclear waste. The mindsets of citizens can only be transformed through various communication initiatives which needs to be put in place.

The NRWDI has performed a PESTLE analysis, a SWOT analysis, and Stakeholder Analysis.

1.1 External environment analysis

NRWDI's macro-environment and micro- environment was assessed, taking into consideration the **Political**, **Economic, Social, Technological, Legal & Environmental (PESTLE) aspects** as well as the **Strengths, Weaknesses, Opportunities and Threats (SWOT).** These trends have informed the development of impact statement, outcomes, and outcome indicators to steer the organisation on its path to deliver on its mandate.

PESTLE ANALYSIS

Table 1: Political & Technological aspects

Political	Economic
• In terms of the Integrated Resource Plan (IRP), nuclear energy has been incorporated as a part of the energy mix for the country. With the extension of the Koeberg Nuclear Power Plant operating lifetime and the replacement of the SAFARI-1 Research Reactor by a new multi-purpose reactor, the need for radioactive disposal solutions increases. Nuclear energy use is increasing around the world seeing that the greenhouse gas emissions emitted from nuclear power plants are far less than coal and other hydrocarbon fired power stations. • The political and socio- economic factors as outlined in the MTSF of Government and the DMRE Strategic Plan are aligned to NRWDI's plans.	• South Africa has competing social, education, infrastructure and health budget priorities.

Table 2: Social & Technological aspects

Social	Technological
• The perceived risk associated with nuclear energy and radioactive waste has led to nuclear having a negative perception as an energy source in the energy mix. Comprehensive programmes and other interventions must be put in place to communicate the safe and secure storage and disposal of radioactive waste to the public. • Increased corporate social responsibility needs to take place. NRWDI can explore the possibilities of partnering with other organisations to improve the social, economic and environmental well- being of the Vaalputs community and other communities. • Once the NRWDI obtains NIL43 it will take over the conducting of PSIF meetings in Vaalputs, and this will be done "in accordance with the NNR Act, as the holder of a nuclear installation licence must establish a Public Safety Information Forum to inform the persons living in the relevant municipal area in respect of which an emergency plan has been established in terms of section 38(1) of the Act on nuclear safety and radiation safety matters related to the relevant nuclear installation. The Public Safety Information Forum must conduct all meetings open to any member of the public at a minimum frequency of one meeting per quarter."	• Technology for radioactive waste management exists. • Great advancement with regards to technologies to store and dispose of all classes of radioactive waste. • Deep Geological Repository (DGR) is required.

Social	Technologic
• There is an increased awareness of social media and digital connectedness. Social media like (Facebook, Twitter, LinkedIn) can be used as an effective tool for communication with stakeholders to demystify and debunk the perceived risk associated with radioactive waste.	.

Table 3: Legal & Environmental aspects

Legal	Environmental
▪ Impact of legislation e.g.: Fund Bill and any other related Acts. ▪ Impact of litigation and court judgements. ▪ Impact of Regulation.	▪ Nuclear energy use is increasing around the world seeing that the greenhouse gas emissions emitted from nuclear plants are far less than the coal fired power stations. The need for the safe storage of radioactive material is likely to increase as a result of the abovementioned both in South Africa and around the world. ▪ Climate change and global warming has led to the environment becoming a global agenda item. The public is becoming more and more aware of the environment as they would like to preserve the environment for future generations. NRWDI plays a key role in protecting the environment for the current and future generations through its safe management and disposal of radioactive waste. ▪ Need to minimise its Carbon Footprint of NRWDI by reduced consumption in printing, water and electricity. Need to encourage environmentally friendly practices in NRWDI.

SWOT ANALYSIS

A SWOT analysis is a powerful tool for sizing up an organisation's resource capabilities and deficiencies. NRWDI's internal strengths and weaknesses, together with the external opportunities and threats were evaluated to provide a basis for re-aligning, re-prioritising and refining NRWDI's impact statement, outcomes and outcome indicators. The purpose is for NRWDI to optimise identified strengths, harness opportunities, offset identified weaknesses and mitigate threats.

Strengths are factors that give NRWDI a distinctive advantage or competitive edge within the environment within which it operates. The Institute can use such factors to accomplish its strategic objectives.

The weaknesses refer to a limitation, fault, or defect within the Institute that prevent it from achieving its objectives; it is what an Institute does poorly or where it has inferior capabilities or limited resources as compared to other organisations.

Opportunities include any favourable current or prospective situation which could be facilitated to allow the organisation to enhance its competitive edge. Threats may be a barrier, constraint, or anything which may inflict challenges, damages, harm or injury to the organisation.

Table 4: Strengths and Weaknesses

Strengths	Weaknesses
• NRWDI mandate is legislated and unambiguous. • Suitably qualified and experienced staff to manage the operations. • Technical expertise in radioactive waste management and disposal. • Established low-level waste disposal facility (Vaalputs), which is in operation for more than 30 years. • Stability in management. • International and local partnerships and connectedness. • Clean audits as part of good reputation. • ISO 9001 compliant. • Staff contingent that is dedicated, innovative and open to embrace change. • Established governance structures with a fully complemented Board. • Management systems, policies and strategies in place.	• Lack of integrated management system. • Lack of knowledge management. • Sustainability of funding – this negatively influences acting on the mandate. • Lack of succession planning. • Lack of brand identity and image. • Change management processes for the Vaalputs functional shift needs to be strengthened. • Insufficient staff compliment to execute the mandate. • Lack of programme and project management capacity. • Under-resourced technical divisions.

Table 5: Opportunities and Threats

Opportunities	Threats
• 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 radioactive waste. • Build strong co-operative partnerships with IAEA, global and local waste management organisations to enhance and complement NRWDI's research and development competencies. • Innovation for the disposal of other radioactive waste classes. • Gazette tariffs for waste disposal. • Organisations moving towards a hybrid model. • Fund Bill promulgation will enable critical projects. • Established and mature regulatory environment. • With urban migration taking place at a rapid pace, land will become available for siting of new waste disposal infrastructure. • There are high levels of unemployment in the country and the implementation of the new waste management and disposal technologies will make a positive impact on socio- economic empowerment by alleviating poverty through job creation.	• Loss of skills due to the nuclear industry being small. • Negative public perception and anti - nuclear sentiment regarding nuclear energy and radioactive waste. • Delays in finalisation of the Radioactive 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. • Change in regulatory requirements. • Risk and liabilities related to the Vaalputs functional shift e.g., inadequate funding for long-term aftercare.

Stakeholder Analysis

Achieving societal and political acceptance is one of the largest challenges with regard to the management and disposal of radioactive waste. This relates in particular to dealing with the myriad of perceptions and fears associated with nuclear disasters in the world e.g., nuclear bomb explosions and weapons programmes, nuclear reactor accidents, health effects associated with cancer and genetic birth effects. Therefore, demonstrating technical competence and regulatory compliance alone are not enough to instil stakeholder confidence and trust. Thus, it is imperative to ensure public participation and stakeholder engagement in a meaningful way. NRWDI's stakeholder management strategy ensures that the advancement of enhanced stakeholder participation and corporate transparency go hand in glove. Stakeholder confidence building strategies and policies are regional specific and take into account cultural diversities.

Figure 2 below reflects the NRWDI's stakeholder map whilst Table 8: Stakeholder Analysis Matrix depicts the variety of stakeholders who assume substantial influence over the operation of the organisation. These stakeholders have respective expectations that must be fulfilled as tabulated below.

Figure 2: NRWDI Stakeholder Map

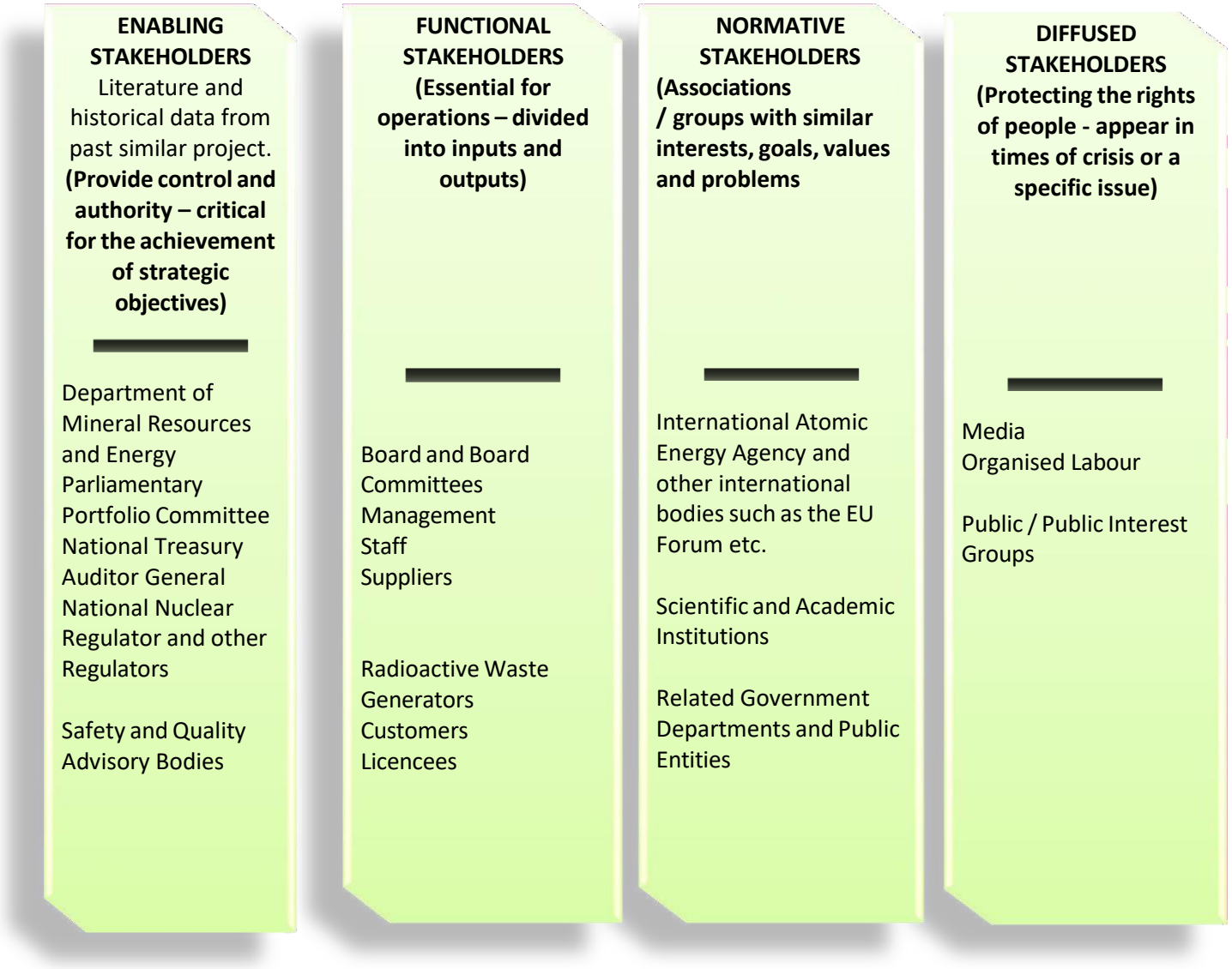


Table 6: Stakeholder Analysis Matrix

Stakeholder	Influence	Expectation
The Board and Governance Committees e.g., Technical Operations Committee, Social and Ethics Committee, Audit and Risk Committee	• Strategic direction	• Transparency • Accountability • Governance, Integrity, Ethics • Stability • Visibility • Delivery
Department of Mineral Resources and Energy	• Policy Setting • Administrative and governance oversight	• Conformance • Governance Continuity and Reporting • Synergy and effective collaboration • Fulfilment of legislative mandate
Parliamentary Portfolio Committees	• Sanction • Legislation • Oversight budget and reporting	• Accountability and reporting • Governance, Integrity, Ethics • Contribution to National Priorities • Provision of direction
Waste generators	• Public Perception • Risk Profile • Waste disposal infrastructure	• Provision of information to establish waste disposal solutions • Clarity on waste management processes • Waste management plans • Fair in operation • Consistent feedback

Stakeholder	Influence	Expectation
		• Waste management inventory database • Good turnaround times • Honesty • Accountability • Integrity • Comply with their own license agreements • Transparency • Responsiveness • Guidance • Interaction • Accessibility, Fairness, Consistency, Feedback
Staff	• Productivity • Morale • Public Perception • Performance Effectiveness	• Fairness • Respect of Worker Rights • Equity • Involvement • Best Practice HRM policies/practices • Conducive work environment • Adequate resourcing • Transparency • Ethical Behaviour • Remuneration and incentives
Media	• Public perception and opinion • Public knowledge and exposure • Public behaviour	• Regular Communication • Transparency • Access to Information

Stakeholder	Influence	Expectation
Organised Labour	• Policies • Productivity	• Framework for engagement • Willingness to work • Transparency • Communication • Fairness • Enabling environment for association
The Public/Public interest groups/Lobby groups/Licensees	• Operations • Strategy • Culture • Advocacy	• Transparency • Fairness • Consistent delivery • Integrity • Values orientation • Information sharing • CSI
Suppliers	• Risk • Effectiveness • Turnaround	• Transparency • Fairness • Consistency • Ethical Behaviour
National Treasury (NT)	• Regulatory environment • Financial Prudency • Budgeting	• Reporting • Governance • Compliance
Auditor General (AG)	• Regulatory environment • Compliance	• Reporting • Governance • Audit outcomes • Performance
International Atomic Energy Agency and other international bodies such as EU Forum etc.	• Policy • Guidance • Safety standards • Direction	• Compliance • Implement international best practice • Capacity building • Research and Development

Stakeholder	Influence	Expectation
		• Collaboration
NNR / regulators	• Source of regulation	• Regulatory compliance • Efficiency • Fairness • Regulate • Transparency • Due process • Cooperation
Scientific and Academic Institutions	• Research agenda • Strategy	• Partnerships • Collaboration • Compliment the Research and development mandate
Vaalputs community	• Safety	• Community initiatives Job opportunities/socio-economic opportunities
Local and provincial authorities	• Emergency response	• Social initiatives • Environmental initiatives

1.2 Internal environment analysis

1.2.1 Vision

To be a world-class radioactive waste disposal organisation.

1.2.1 Mission

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

1.2.3 Values

NRWDI's values are grounded in strong ethical considerations. As a result, NRWDI staff members are required to maintain the highest standards of proper conduct and integrity at all times and to ensure that there is no doubt as to what is required. To this end, NRWDI has developed a set of core values. NRWDI's value statements are reflected in the table below:

Table 7: NRWDI Values

Nurturing	We will make the well-being of people and the environment, a priority.
Respect	We will respect all and obey the laws and legislation that govern our country and regulates our industry
Work-life-balance	We are committed to the creation of a culture that supports the achievement of both life and work.
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.
Integrity	We will conduct ourselves with openness, honesty and respect for all stakeholders

NRWDI will strive to be a learning organisation, continuously evolving and developing to improve and to find the safest efficient radioactive waste disposal solutions. All NRWDI employees are consistently encouraged to live the NRWDI's values in all that they do. NRWDI will continue to encourage staff to do so until such time as the values form an integral part of the work life of all staff at NRWDI. Regular communication sessions will continue to be held detailing NRWDI's purpose, mandate, role, functions and ways of working. This will ensure that the NRWDI's strategy and values remain relevant and become firmly institutionalised.

1.2.4 Organisational structure

NRWDI is a Schedule 3A public entity that reports to the Executive Authority i.e., the Minister of Mineral Resources and Energy. NRWDI's activities are funded by the provision of a budget from funds voted annually to the DMRE. The governance of NRWDI is entrusted to a Board appointed in accordance with the NRWDI Act, Section 7(1), by the Minister of Mineral Resources and Energy.

Good governance is crucial to business sustainability and growth of the organisation. The NRWDI has committees that advise the Accounting Authority on matters pertaining to governance. These are the Audit and Risk Committee, the Human Resources, Social and Ethics Committee which also has oversight of the Human Resources and Remuneration aspects, and the Technical Operations Committee. These committees' function by way of formal Charters.

The Chief Executive Officer, assisted by a senior management team which comprises of the Chief Financial Officer and Divisional Managers, is responsible for the day-to-day running of the NRWDI. The operational component of NRWDI has to be delivered through the Vaalputs National Radioactive Waste Disposal Facility, whose functional shift from Necsa to NRWDI is a key imperative for full operationalisation of NRWDI.

The current organisational structure of NRWDI was approved by the Board. The structure has to be adjusted over time to ensure that it remains relevant and appropriate to organisational requirements. It must also ensure that NRWDI continues to have the right people, with the right skills and competencies available at the right time, at the appropriate level to deliver on its mandate.

The organogram that follows represents the organisational structure for 2023/24 of NRWDI. It sets out the operational structures, based on NRWDI's Strategy 2020-2025 and Annual Performance Plan 2023/24, which will best enable it to deliver on its mandate.

The organisational structure of NRWDI has therefore been designed according to the design principles of consistency, continuity, accountability, flexibility and efficiency.

In order to ensure consistency and continuity, NRWDI will embark upon a full Workforce Planning exercise or scenario forecasting (quantitative and qualitative) exercise that will determine its specific resourcing requirements (as contained within a Workforce and Strategic Sourcing Plan) for coming years.

To ensure accountability, NRWDI, wherever possible, ensures that whole work processes with discrete work products are owned 'end to end' by functional teams.

NRWDI will also use Project Management principles in managing their projects. In order to ensure efficiency, the NRWDI will be structured with a combination of permanent and contingent employees.

The Programmes within NRWDI are: - Administration; Radioactive Waste Disposal Operations; Science, Engineering and Technology; and Radioactive Waste Compliance Management. The Administration Programme has the following sub-programmes: - 1. Office of the CEO, which comprises of Strategic Planning, Monitoring & Evaluation and Reporting; Internal Audit, Risk Management, Board Secretariat and Communications and Stakeholder Relations; 2. Corporate Services, which comprises of Human Resources management, Information & Communications Technology, and Legal Services;
3. Finance, which comprises of financial management and Supply Chain management.

To ensure consistent communication of business objectives and changes, as well as staff engagement at all levels, the Communications and Stakeholder Relations unit manages internal & external communications.

The role of the Administration Programme in NRWDI also includes ensuring employment-related regulatory compliance as well as the appropriate design and utilisation of all aspects of its physical space in order to create an optimal, safe and cost-effective environment for NRWDI employees. This is accomplished by managing the core facilities management and activities which include Occupational Health and Safety (OHS), maintenance, and cleaning.

NRWDI has a reasonably stable management core enjoying a degree of continuity. This core is tasked with managing employees whose numbers vary according to organisational requirements. The evolving profile of the NRWDI workforce indicates a transition to a predominantly younger workforce over time. Managing this young, largely contingent workforce will require leadership within NRWDI to develop the necessary skills to manage millennial employees.

Given the changes in the South African nuclear industry landscape and following a review of the potential contributions from radioactive waste generators, the following waste streams should therefore be included in the national inventory of radioactive waste to be disposed of at Vaalputs:

- The KNPS radioactive waste inventory for past, current and future operational and project-related waste generated for the lifetime of the NPP, including waste generated following the 20-year life extension project and end of its service life decommissioning of the KNPS;
- KNPS “historical waste” (i.e., “old” waste packages currently in storage at the KNPS that previously could not be shipped to Vaalputs for disposal due to non-compliance with the Vaalputs Waste Acceptance Criteria).

The Necsa radioactive waste inventory for past (e.g., waste from the uranium conversion, enrichment and fuel fabrication programmes), current and future generated operational, project and decommissioning LILW-SL to be disposed of at Vaalputs, including waste generated by SAFARI-1 and II.

Figure 3: NRWDI organisational structure

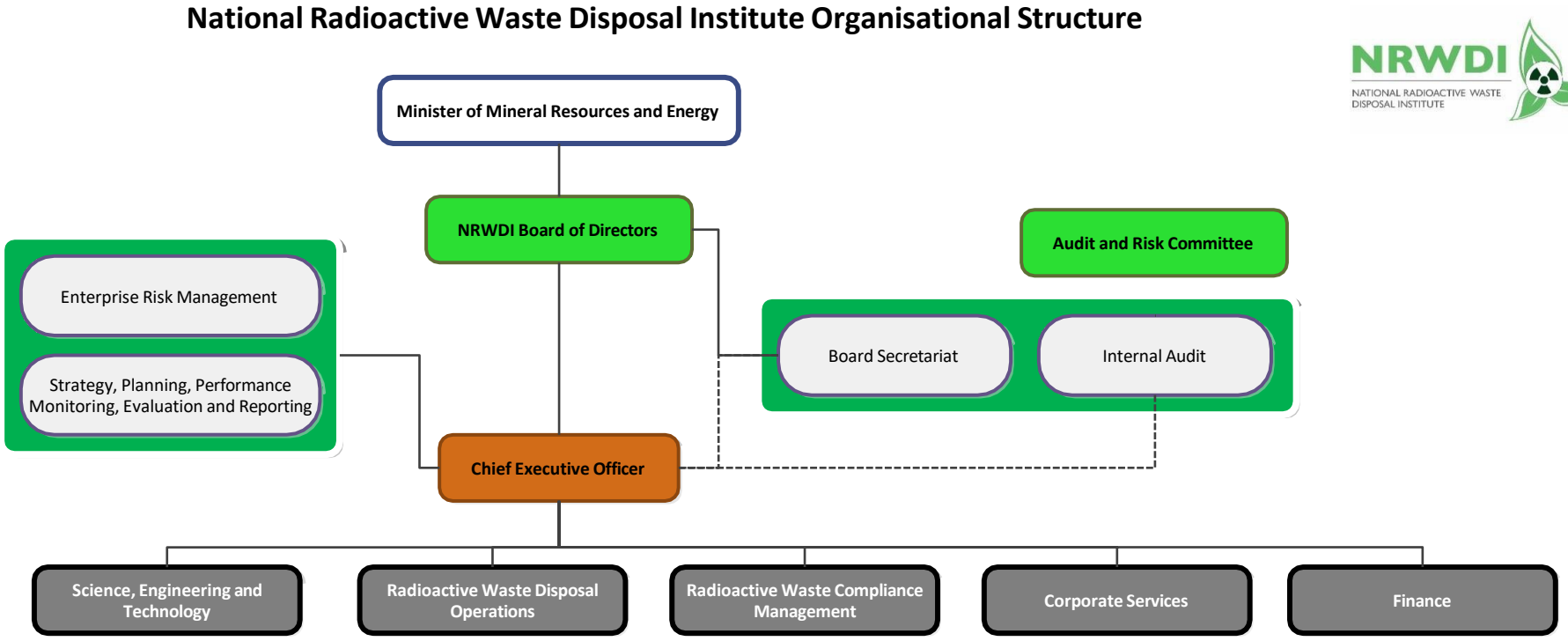


Table 8: Income and Expenditure

	Audited outcome	Audited outcome	Audited outcome	Budget estimate	Approved budget	Medium Term Estimates		
	2019/20	2020/21	2021/22	2022/23		2023/24	2024/25	2025/26
REVENUE								
Non-tax revenue	2 521	1 184	1 299	1 625	1 625	1 600	1 500	1 400
Commssion received	1	1	1	-		-	-	
Interest, dividends and rent on land	2 520	1 183	1 177	1 625	1 625	1 600	1 500	
Other income			122					
Transfers received	47 499	49 397	49 166	50 304	50 304	50 486	52 753	55 116
Total revenue	**50 020**	**50 581**	**50 465**	**51 929**	**51 929**	**52 086**	**54 253**	**56 516**

	Audited outcome	Audited outcome	Audited outcome	Budget estimate	Approved budget	Medium Term Estimates		
	2019/20	2020/21	2021/22	2022/23		2023/24	2024/25	2025/26
EXPENSES								
Current payments	**44 490**	**46 033**	**47 205**	**51 929**	**51 929**	**52 086**	**54 253**	**56 516**
Compensation of employees	33 574	36 690	37 451	42 545	42 846	42 847	43 012	44 938
Salaries and wages	33 574	36 690	37 451	42 545	42 846	42 847	43 012	44 938
Goods and services: Of which	10 916	9 343	9 754	9 384	9 083	9 239	11 241	11 578
Administrative fees	42	22	23	63	63	63	66	69
Advertising	154	330	71	300		250	250	261
Minor assets	-	3	5	72	16	72	100	104
Audit costs: External	785	1 099	1 142	1 534	1 150	1 273	1 720	1 478
Catering: Internal activities	32	1	3	12	5	12	13	13
Communication (G&S)	278	275	240	529	362	518	535	559
Computer services	639	952	1 291	750	861	750	750	784
Consultants: Business and advisory services	144	512	870	550	550	550	550	575
Legal services (G&S)	73	-	341	250	250	250	250	261
Contractors: Maintenance and repairs of other fixed structures	-	-	-	-		-	-	
Contractors: Maintenance and repairs of other machinery and equipment	-	18	22	-	20	-	-	
Contractors: Other	1 818	2 692	970	844	950	745	1 870	909
Agency and support/outsourced services	27	742	1 446	36	654	36	38	39
Entertainment	-	-	-	10	12	10	10	10
Consumable supplies	51	48	9	66	15	65	66	69
Consumables: Stationery, printing and office supplies	29	224	171	76	77	76	77	81
Operating leases	817	850	888	1 600	1 600	1 750	1 900	1 985
Travel and subsistence	643	63	472	300	359	300	302	316
Training and development	253	342	315	750	100	800	1 000	1 045
Operating payments	4 304	104	320	292	689	319	294	1 505
Venues and facilities	124	62	-	150	150	150	150	157
Depreciation	703	1 004	1 128	1 200	1 200	1 250	1 300	1 358
Losses from sale of fixed assets	-	-	27	-	-	-	-	-
Total Expenditure	**44 490**	**46 033**	**47 205**	**51 929**	**51 929**	**52 086**	**54 253**	**56 516**
Surplus / Deficit)	**5 530**	**4 548**	**3 260**	**-**	**-**	**-**	**-**	**-**

Additional notes to budget amounts for MTEF

1. Advertising	Costs incurred for advertising vacant posts in newspapers
2. Agency and support (Outsourced services)	Internal Audit Function uses a combination of projects completed by own internal resources and those allocated to audit firms where NRWDI does not have the capacity to execute the project.
3. Assets less than R 5000	Capital projects less than R 5000.
4. Audit costs	Fees for the Auditor General of South Africa.
5. Board costs	Remuneration of non-executive Board Members.
6. Catering (Internal Activities)	In terms of NT Instruction on cost containment measures, no catering is allowed for internal meetings unless there are external stakeholders attending the meeting or deviations for internal meetings are approved per delegation of authority.
7. Communication	Payment to Necsa for telephones, network and email facilities.
8. Computer services	Computer hardware such as keyboards, hard drives and servers.
9. Contractors	Payments to service providers providing technical and specialist services where these services are unnecessary to maintain these skills in-house
10. Entertainment	Expenditure incurred by Senior Managers in performance of their duties. Such expenditure includes, but is not limited to, luncheon meetings held with, foreign delegations and/or other individuals in and outside the public sector.
11. Lease payments	Rental of NRWDI office space from Necsa.
12. Legal fees	Provision for unforeseen legal costs that maybe incurred.
13. Non – life insurance	Short term insurance for assets.
14. Printing and publication	Printing of corporate statutory documents like the strategic plan, annual performance plans and

	annual reports.
15. Repairs and Maintenance	Building/equipment.
16. Training and Development	Statutory training and staff development.
17. Travel and Subsistence	Travel to Vaalputs, Parliament, technical meetings, domestic and international travel as well as travel for Board members.
18. Venues and facilities	Hiring of venues and facilities for external stakeholder engagements.
19. Annual Licence Fees	Software licences.
20. Safety Support Case	Relicensing of Vaalputs.
21. PSI Forums	Costs associated to hold quarterly Vaalputs Public Safety Information Forum meetings sessions at Vaalputs.
22. Stationery	Internal stationery.
23. Postal costs	Postage and delivery costs.
24. Consumables	Cleaning materials.
25. Branding material	Banners, pamphlets, brochures, signage.
26. Membership fees	Corporate membership fees and individual professional membership fees.

Table 9: STATEMENT OF FINANCIAL POSITION – NRWDI CONSOLIDATED

Financial position	Budget	Audited outcome	Budget	Audited outcome	Budget	Audited outcome	Budget estimate	Approved budget	Outcome/ Budget Average %	Average growth rate (%)	Net change/ total: Average (%)	Medium-term estimate			Average growth rate (%)	Net change/ total: Average (%)
	2019/20		2020/21		2021/22		2022/23		2019/20 - 2022/23			2023/24	2024/25	2025/26	2022/23 - 2025/26	
Carrying value of assets	1 439	2 944	1 008	3 492	2 175	3 230	1 538	1 538	181,9%	-19,5%	11,2%	835	872	912	-16,0%	9,8%
of which:																
Acquisition of assets	-	(309)	-	(1 326)	(458)	(894)	(490)	(490)	318,5%	16,6%	-3,1%	(512)	(526)	(550)	3,9%	-4,9%
Receivables and prepayments	142	371	142	251	142	374	142	142	200,4%	-27,4%	1,1%	142	148	155	3,0%	1,4%
Cash and cash equivalents	6 552	25 961	7 580	28 789	8 035	31 762	8 672	8 672	308,6%	-30,6%	87,7%	9 375	9 796	10 235	5,7%	88,9%
Total assets	**8 133**	**29 276**	**8 730**	**32 532**	**10 352**	**35 366**	**10 352**	**10 352**	**286,2%**	**-29,3%**	**100,0%**	**10 352**	**10 817**	**11 301**	**3,0%**	**100,0%**
Accumulated surplus/(deficit)	-	18 924	-	23 471	-	26 731	-	-		-100,0%	53,1%	-	-	-		
Trade and other payables	5 245	5 305	5 245	757	5 305	1 194	5 305	5 305	59,5%		18,8%	5 305	5 543	5 792	3,0%	51,2%
Provisions	2 888	5 047	3 485	8 304	5 047	7 441	5 047	5 047	156,9%		28,1%	5 047	5 274	5 510	3,0%	48,8%
Total equity and liabilities	**8 133**	**29 276**	**8 730**	**32 532**	**10 352**	**35 366**	**10 352**	**10 352**	**286,2%**	**-29,3%**	**100,0%**	**10 352**	**10 817**	**11 301**	**3,0%**	**100,0%**
Contingent liabilities	-	-	-	-	-	-	-	-				-	-	-		

PART C: MEASURING OUR PERFORMANCE

1. INSTITUTIONAL PROGRAMME PERFORMANCE INFORMATION

1.1 PROGRAMME 1: ADMINISTRATION

1.1.1 Purpose

To ensure that NRWDI is operationally efficient, cost-effective, properly managed and complies with good corporate governance principles.

Programme1 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; and
- Mainstreaming of gender, empowerment of youth and persons with disability

1.1.2 Functions

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

(i). **Strategic planning, monitoring and evaluation and reporting** coordinates the translation of policy priorities agreed upon by the Board into actionable strategic plans with clear outcomes, outputs, indicators and resource commitments. It also carries out monitoring and evaluation of the strategy as articulated in the annual performance plan and institutional operational plan to ensure that NRWDI delivers on its impact statement and improves and sustains its performance and reporting thereof.

(ii). **Risk Management** is responsible for coordinating and supporting the overall institutional risk management process ensuring that risks are identified and managed so that it does not impact negatively on the institutional performance.

(iii). **Internal Audit** plays a pivotal role in the combined assurance framework by providing independent assurance over risk management and systems of internal control.

(iv). **Board Secretariat** plays an important role in supporting the effectiveness of the board by monitoring that board policy and procedures are followed. The

Secretariat also coordinates the timely completion and dispatch of board agenda and all other documents that are tabled before the Board.

(v). **Communications and Stakeholder Relations** aims to remove existing constraints by achieving alignment through effective stakeholder engagement and value-adding partnerships that are mutually beneficial which will result in the organisation meeting and exceeding its goals.

(vi). **Finance and Supply Chain Management** ensures compliance with all relevant financial statutes and regulations, the most important of which is the Public Finance Management Act (PFMA). It ensures that goods and services are procured taking into consideration the procurement legislation and the principles of good corporate governance.

(vii). **Corporate Services (Human Capital Management; Information and Communications Technology Management; Legal Services Management; and General Administration and Facilities Management) -**The Corporate Services sub-programme primarily provides integrated strategic and operational business enabling services. Legal Services is responsible for providing a comprehensive legal advisory service to enable the entity to execute its mandate effectively within the rule of law. Human Resources (HR) Management provides transformational HR support enabling the entity to attract, develop and retain skilled people across the organisation. Information and Communication Technology (ICT) provides long term planning and day to day support in respect of ICT needs, services and systems. Facilities Management ensures physical and information security. It also oversees accommodation and the maintenance thereof.

1.1.3 Programme 1: Outcomes, outputs, output Indicators and targets

Table 10: Programme 1: Outcomes, outputs, output Indicators and targets

Outcome	Outputs	Output indicators	Annual targets						
			Audited actual performance			Estimated performance	MTEF period		
			2019/2020	2020/2021	2021/2022	2022/2023	2023/2024	2024/2025	2025/2026
Effective, Efficient and Responsive NRWDI	Financial sustainability plan	Financial sustainability plan	N/A	N/A	N/A	Financial sustainability assessment completed	Funding model developed	Financial sustainability plan developed	Implementation of the financial sustainability plan
	Valid invoices paid within 30 days after relevant documents are received	Percentage of valid invoices paid within 30 days after relevant documents are received	100%	100%	100%	100% of valid invoices paid within 30 days after relevant documents are received	100% of valid invoices paid within 30 days after relevant documents are received	100% of valid invoices paid within 30 days after relevant documents are received	100% of valid invoices paid within 30 days after relevant documents are received

Outcome	Outputs	Output indicators	Annual targets						
			Audited actual performance			Estimated performance	MTEF period		
			2019/2020	2020/2021	2021/2022	2022/2023	2023/2024	2024/2025	2025/2026
	Organisational Development and Empowerment of Designated Groups (Employment Equity implementation)	Number of females at Executive/Senior Management Levels	N/A	N/A	N/A	N/A	No Target	2 females at Executive/Senior Management Levels	2 females at Executive/Senior Management Levels
	Develop and Maintain a National Radioactive Waste Database (RAWIS)	Functional and populated Radioactive Waste Inventory System (RAWIS)	N/A	N/A	N/A	Incorporate additional User Requirements on RAWIS system and migrate all existing data from old Necsa Radwaste Inventory System	Interface RAWIS system with waste generators inventory system	Migrate information from waste generators data base	Functional and populated Radioactive Waste Inventory System (RAWIS) with full reporting capabilities

Outcome	Outputs	Output indicators	Annual targets						
			Audited actual performance			Estimated performance	MTEF period		
			2019/2020	2020/2021	2021/2022	2022/2023	2023/2024	2024/2025	2025/2026
	Strategic Partnerships and collaborations Framework	Partnership and collaboration framework developed and implemented	N/A	N/A	N/A	Approved partnership and collaboration framework	Approved partnership and collaboration framework	Partnership and collaboration tools (processes MoUs, MoAs) developed	Implementation of the approved Partnership and Collaboration Framework
	Public Awareness on NRWDI Mandate	Number of Public Awareness initiatives	4	4	2	4 public awareness initiatives	4 public awareness initiatives	4 public awareness initiatives	4 public awareness initiatives
	Communications and stakeholder engagement plan	Implementation of Communications and Stakeholder Engagement Plan	N/A	N/A	N/A	80% implementation of communications and stakeholder engagement plan	80% Implementation of communications and stakeholder engagement plan	80% Implementation of communications and stakeholder engagement plan	90%Implementation of communications and stakeholder engagement plan

Outcome	Outputs	Output indicators	Annual targets						
			Audited actual performance			Estimated performance	MTEF period		
			2019/2020	2020/2021	2021/2022	2022/2023	2023/2024	2024/2025	2025/2026
	Unqualified Audit Opinion	Unqualified Audit Report	N/A	N/A	Unqualified Audit Report	Unqualified Audit Report	Unqualified Audit Report	Unqualified Audit Report	Unqualified Audit Report

1.1.4 Programme 1: Output indicators: annual and quarterly targets

Table 11: Programme 1: Output indicators: annual and quarterly targets

Output indicators	Annual target 2023/2024	Q1	Q2	Q3	Q4
Financial sustainability plan	Funding model developed	Conduct analysis on the current approach to funding	Compare and adopt learnings from funding models of similar / peer	Evaluate the revenue potential and costs of selected funding	Select optimal funding model(s) to be implemented
Percentage of valid invoices paid within 30 days	100% of valid invoices paid within 30 days after relevant documents are received	100% of valid invoices paid within 30 days after relevant documents are received	100% of valid invoices paid within 30 days after relevant documents are received	100% of valid invoices paid within 30 days after relevant documents are received	100% of valid invoices paid within 30 days after relevant documents are received

Output indicators	Annual target 2023/2024	Q1	Q2	Q3	Q4
Functional and populated Radioactive Waste Inventory System (RAWIS)	Incorporate additional User Requirements on RAWIS system and migrate all existing data from old Necsa Radwaste Inventory System	Present RAWIS System Beta Version and acquired additional user requirements input from all stakeholders	Modify RAWIS system functionality as per additional user requirements Conduct user testing	Collect and gather historical and current Radwaste Data from Vaalputs Conduct data normalisation	Migrate Vaalputs historic and current data into RAWIS system, conduct user Quality Assurance sign off (hand over) on the system
Partnership and Collaboration Framework developed and implemented	Approved Partnership and Collaboration Framework	Conduct desktop study and research on local and international Partnership and Collaboration Frameworks frameworks and policies	Produce first draft Partnership and Collaboration Framework	Conduct staff workshop and incorporate inputs into final draft Partnership and Collaboration Framework	Approved Partnership and Collaboration Framework
Number of Public Awareness Initiatives	4 public awareness initiative	1 public awareness initiative	1 public awareness initiative	1 public awareness initiative	1 public awareness initiative

Output indicators	Annual target 2023/2024	Q1	Q2	Q3	Q4
Percentage implementation of the communications and stakeholder engagement plan	80% implementation of communications and stakeholder engagement plan	20% implementation of communications and stakeholder engagement plan	40% implementation of communications and stakeholder engagement plan	60% implementation of communications and stakeholder engagement plan	80% implementation of communications and stakeholder engagement plan
Unqualified Audit Opinion	Unqualified Audit Report	No Target	No Target	No Target	Unqualified Audit Opinion

1.1.5 Programme 1: Explanation of planned performance over the medium - term period

In order to have an effective, efficient and responsive NRWDI there must be a focus on the human resources and financial resources in the organisation. There is also a need for the various policies, processes and strategies to be in place. In this case the outputs include implementation of the finance strategy, human capital strategy and an unqualified audit report all of which contribute towards achieving the outcome and impact statement.

Strategic support at NRWDI comprises of a multitude of activities which are conducted by specific units within the organisation. All of these activities need to be timeously co-ordinated and meticulously implemented in order to ensure that the organisation is able to execute its mandate. Financial viability and sustainability (compliance to the PFMA and Treasury Regulations) must be tracked and monitored to ensure sustainable operations, support effective asset management, and deliver appropriate levels of service to stakeholders.

NRWDI seeks to ensure that governance protocols are adhered to by employing robust internal control systems. Key contributions to such will be made by the Risk and Internal Audit departments and the Board Secretariat. Performance Planning, Reporting, Monitoring and Evaluation will determine the effectiveness of NRWDI in terms of meeting its mandate and the requirements of the Shareholder. The monitoring and evaluation processes are a strategic imperative, executed via the Office of the CEO, Strategy and Planning department and reported on, at defined intervals. The Human Capital strategy seeks to understand and anticipate the organisations talent needs. The strategy will focus on attracting, maintaining and retaining appropriate human capital and providing opportunities for employee growth and advancement.

The outputs i.e., a developed and implemented finance strategy; human capital strategy and an unqualified audit report will contribute jointly towards the achievement of the outcome i.e., Effective, Efficient and Responsive NRWDI.

The Administrative division will utilise their resources plan appropriately to ensure that outputs are achieved on time and within the allocated budget.

1.1.6 Programme 1: Programme Resource Considerations

Table 12: Budget Allocation for programme 1 and sub programmes as per the ENE and/or the EPRE

Expenses	Audited outcome	Audited outcome	Audited outcome	Budget estimate	Approved budget	Medium Term Estimates		
Rand thousand	2019/20	2020/21	2021/22	2022/23		2023/24	2024/25	2025/26
Objective/Activity								
Administration								
Compensation of employees	**17 865**	**21 585**	**22 014**	**24 122**	**27 298**	**27 299**	**28 025**	**28 951**
Salaries and wages	17 865	21 585	22 014	24 122	27 298	27 299	28 025	28 951
Goods and services	**6 535**	**6 367**	**8 461**	**8 834**	**8 798**	**8 690**	**9 684**	**10 995**
Administrative fees	33	22	23	63	63	63	66	69
Advertising	154	230	55	300		250	250	261
Minor assets	-	3	5	72	16	72	100	104
Audit costs: External	785	1 099	1 142	1 534	1 150	1 273	1 415	1 478
Catering: Internal activities	32	1	3	12	5	12	13	13
Communication (G&S)	174	185	147	363	316	352	368	384
Computer services	639	900	1 291	750	861	750	750	784
Consultants: Business and advisory services	144	512	870	550	550	550	550	575
Legal services (G&S)	73		341	250	250	250	250	261
Contractors: Maintenance and repairs of other fixed structures	-	-	22	-	20	-		
Contractors: Maintenance and repairs of other machinery and equipment	-	18		-		-		
Contractors: Other	1 818			844	950	745	870	909
Agency and support/outsourced services	27	729	1 432	36	654	36	38	39
Entertainment	-			10	12	10	10	11
Consumable supplies	51	48	6	50	15	50	50	52
Consumables: Stationery, printing and office supplies	28	224	171	50	76	50	50	52
Operating leases	817	850	888	1 600	1 600	1 750	1 900	1 985
Travel and subsistence	413	55	320	100	238	100	100	104
Training and development	242	342	315	750	100	800	1 000	1 045
Operating payments	278	83	275	150	572	177	455	1 354
Venues and facilities	124	62		150	150	150	150	157
Depreciation	703	1 004	1 128	1 200	1 200	1 250	1 300	1 358
Losses from Sale of fixed assets	-	-	27	-	-	-		
Total Expenditure	**24 400**	**27 952**	**30 475**	**32 956**	**36 096**	**35 989**	**37 709**	**39 946**

1.2 PROGRAMME 2: RADIOACTIVE WASTE DISPOSAL OPERATIONS

1.2.1 Purpose

The purpose of the program is to provide radioactive waste disposal and related services on a national basis that is, safe, technically sound, socially acceptable, environmentally responsible

and economically feasible ensuring that no undue burden is placed on future generations due to past, present and future involvement in nuclear programs.

The future of the environment is a global agenda item and management and disposal of radioactive waste material must be carried out in such a manner that human health and the environment are protected.

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

(i) Operate the national low-level waste repository at Vaalputs;
(ii) Manage, operate and monitor operational radioactive waste disposal facilities including related predisposal management of radioactive waste on disposal sites;
(iii) Manage ownerless radioactive waste on behalf of the Government, including the development of radioactive waste management plans for such waste;
(iv) Provide information on all aspects of radioactive waste management to the public living around radioactive waste disposal facilities and to the public in general.
(v) 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.

1.2.2 Programme 2: Outcomes, Outputs, Performance Indicators and Targets

Table 13: Programme 2: Outcomes, Outputs, Performance Indicators and Targets

Outcome	Outputs	Output indicators	Annual targets						
			Audited actual performance			Estimated performance	MTEF period		
			2019/2020	2020/2021	2021/2022	2022/2023	2023/2024	2024/2025	2025/2026
Safe and secure disposal of all classes of radioactive waste	Radioactive Waste safely and securely disposed at Vaalputs	Waste Acceptance Criteria (WAC) met for LLW	N/A	N/A	N/A	100% disposed waste packages meet WAC	100% of waste packages disposed are WAC compliant	100% of waste packages disposed are WAC compliant	100% of waste packages disposed are WAC compliant
	Preparation for physical security upgrades for Vaalputs to store or dispose other radioactive waste classes	Physical security upgrade implementation plan completed	N/A	N/A	N/A	Establish requirements for security upgrades	Assessment of the facility against the stakeholder requirements	Security upgrade implementation plan	Security upgrade implementation plan
National Waste Inventory Report	Preparation for the publication of a national waste inventory report.	Draft National Waste Inventory Report completed	N/A	N/A	N/A	Develop a Framework for the National Waste Inventory Report	Implementation of Framework for the National Waste Inventory Report	Draft National Waste Inventory Report	Draft National Waste Inventory Report

1.2.3 Programme 2: Indicators, Annual and Quarterly Targets

Table 14: Programme 2: Indicators, Annual and Quarterly Targets

Output indicators	Annual target 2023/2024	Q1	Q2	Q3	Q4
Waste Acceptance Criteria (WAC) met	100% of waste packages disposed are WAC compliant	100% of waste packages disposed are WAC compliant	100% of waste packages disposed are WAC compliant	100% of waste packages disposed are WAC compliant	100% of waste packages disposed are WAC compliant
Physical security upgrade implementation plan completed	Assessment of the facility against the stakeholder requirements	Undertake gap analysis of current physical security measures	Complete Design Basis threat of Vaalputs in conjunction with SSA and SAPS	Draft physical security upgrade stakeholder engagement report issued	Assessment of the facility against the stakeholder requirements
Preparation for the publication of a national waste inventory report.	Implementation of Framework for the National Waste Inventory Report	Obtain inputs from Eskom for for the National Waste Inventory Report	Obtain inputs from Necsa for the National Waste Inventory Report	Review inputs from waste generators	Implementation Framework for the National Waste Inventory Report

1.2.4 Programme 2: Explanation of Planned Performance over the Medium -Term Period

In order to ensure safe disposal of all radioactive waste classes, the Vaalputs National Waste Disposal must be operated within Vaalputs Nuclear Installation License conditions. Key activities will focus on the operation and management of Vaalputs by:

- verifying that waste packages presented for disposal meet all the requirements of the Vaalputs Waste Acceptance Criteria;
- ensuring adherence to Vaalputs Integrated SHEQ Management System;
- sharing information with Vaalputs communities via the Vaalputs Public Safety information Forum.

1.2.5 Programme Resource Considerations

Table 15: Budget Allocation for programme 2 and sub programmes as per the ENE and/or the EPRE

Expenses	Audited outcome	Audited outcome	Audited outcome	Budget estimate	Approved budget	Medium Term Estimates		
Rand thousand	2019/20	2020/21	2021/22	2022/23		2023/24	2024/25	2025/26
Objective/Activity								
Radioactive Waste Disposal Operations								
Compensation of employees	**3 671**	**2 399**	**2 516**	**3 552**	**2 009**	**2 009**	**2 009**	**2 009**
Salaries and wages	3 671	2 399	2 516	3 552	2 009	2 009	2 009	2 009
Goods and services	**36**	**23**	**32**	**157**	**1**	**157**	**160**	**166**
Communication (G&S)	35	23	23	50		50	50	52
Consumable supplies	-			3		3	3	3
Consumables: Stationery, printing and office supplies	-			4		4	4	4
Travel and subsistence	1		8	50	1	50	52	55
Operating payments	-		1	50		50	50	52
Total Expenditure	**3 707**	**2 422**	**2 548**	**3 709**	**2 010**	**2 166**	**2 169**	**2 175**

The Radioactive Waste Disposal Operations division will utilize their resources plan appropriately to ensure that outputs are achieved on time and within the allocated budget.

1.3 PROGRAMME 3: SCIENCE, ENGINEERING AND TECHNOLOGY

1.3.1 Purpose

The purpose of this programme is to develop and implement radioactive waste management solutions for safe storage and disposal of all classes of radioactive waste through scientific, engineering and technological means.

This purpose is aligned with the legal mandate of NRWDI (NRWDI Act No.53 of 2008), which sanctions NRWDI to manage the disposal of radioactive waste on a national basis. As such the following functions of the programme flow from this mandate:

- To conduct research and develop plans for the long-term management of radioactive waste storage and disposal;
- To design and implement disposal solutions for all classes of radioactive waste;
- To investigate the need for any new radioactive waste disposal facilities;
- To site, design and construct such new facilities as may be required;
- To assist generators of small quantities of radioactive waste in all technical aspects related to the disposal of such waste;
- To develop and manage an intellectual property (IP) system for the protection of technology designs, innovations and related IP rights; and
- To co-operate with any person or institution on matters relating to the above functions of the programme

The goal of the programme is to promote science to expand knowledge in the field of radioactive waste management and disposal and use engineering to convert this scientific knowledge, through combining it with resources and techniques, to create (design, build and maintain) new technologies for application to radioactive waste management and disposal.

The programme makes a contribution to two of the MTSF priorities, namely, Priority 1 “Economic Transformation and Job Creation” and Priority 6 “A Capable, Ethical and Developmental State.” This contribution arises from the planned project such as the Establishment of a Centralised Interim Storage Facility for Spent Nuclear Fuel and the Disposal of Disused Sealed Radioactive Sources in a Borehole Disposal Facility.

PROGRAMME 3: SCIENCE, ENGINEERING AND TECHNOLOGY

1.3.2 Programme 3: Outcomes, Outputs, Performance Indicators and Targets

Table 16: Programme 3: Outcomes, Outputs, Performance Indicators and Targets

Outcome	Outputs	Output indicators	Annual targets						
			Audited actual performance			Estimated performance	MTEF period		
			2019/2020	2020/2021	2021/2022	2022/2023	2023/2024	2024/2025	2025/2026
Capability for new radioactive waste disposal facilities established	CISF Project development	CISF project progress reports	N/A	N/A	N/A	Preliminary design developed	Detailed design developed	Safety case developed	License application lodged
						EIA phase 1 performed (i.e., Application to CA lodged)	EIA phase 2 performed (i.e., Final EIA report submitted to CA)	EIA phase 3 performed (i.e. Environmental Authorisation secured)	Site selection investigation initiated
Established solutions forradioactive waste management and disposal	R&D programme launched	R&D scientific & technical reports	N/A	N/A	N/A	R&D strategy developed	Initiate 2 research focus areas	Initiate 2 additional research focus areas	Initiate 2 additional research focus areas

1.3.3 Programme 3: Indicators, Annual and Quarterly Targets

Table 17: Programme 3: Indicators, Annual and Quarterly Targets

Output Indicators	Annual Targets 2023/24	Q1	Q2	Q3	Q4
CISF project progress reports	Preliminary design developed	Preliminary design Practitioner appointed	Interim Preliminary Design report completed	Interim Preliminary Design report reviewed	Final Preliminary Design report completed
	EIA phase 1 performed (i.e., Application to Competent Authority [CA] lodged)	Environmental Assessment Practitioner (EAP) appointed	Draft EIA Scoping Report compiled	Draft EIA Scoping Report completed	Application to Competent Authority lodged
R&D scientific and technical reports	2 research position papers completed	First research position paper drafted	First research position paper completed	Second research position paper drafted	Second research position paper completed

1.3.4 Programme 3: Explanation of Planned Performance Over the Medium-Term Period

There is currently no national "away from reactor site" storage and disposal infrastructure available for spent nuclear fuel except for the "on-reactor site" infrastructure. This programme will focus on the establishment of a national centralised interim spent fuel storage facility by 2030 for the safe storage of Koeberg and SAFARI-1 spent fuel and other high-level wastes from the country's nuclear reactors. A project plan will be required to provide a roadmap, milestones and schedules as well as indicate resources required for achieving this outcome by 2030. Key activities and milestones will include, inter alia, feasibility studies, technology selection, design development, environmental impact assessment, licensing, construction, cold and hot commissioning as well as the nuclear license to operate this facility.

In parallel, a R&D strategy will be developed, which will address R&D needs/requirements, intellectual property and information dissemination and the establishment of partnerships.

1.3.5 Programme Resource Considerations

Table 18: Budget Allocation for programme 3 and sub programmes as per the ENE and/or the EPRE

Expenses	Audited outcome	Audited outcome	Audited outcome	Budget estimate	Approved budget	Medium Term Estimates		
Rand thousand	2019/20	2020/21	2021/22	2022/23		2023/24	2024/25	2025/26
Objective/Activity								
Science, Engineering and Radwaste, Technology								
Compensation of employees	**4 403**	**4 710**	**4 807**	**5 123**	**4 527**	**4 527**	**4 636**	**4 636**
Salaries and wages	4 403	4 710	4 807	5 123	4 527	4 527	4 636	4 636
Goods and services	**177**	**26**	**53**	**137**	**133**	**137**	**141**	**147**
Administrative fees	1	-		-		-		
Communication (G&S)	20	18	23	24	23	24	25	26
Contractors: Other	-	-		-		-		
Consumable supplies	-			6		6	6	7
Consumables: Stationery, printing and office supplies	1			15		15	16	16
Travel and subsistence	154	8	30	50	110	50	50	52
Operating payments	-			42		42	44	46
Total Expenditure	**4 580**	**4 736**	**4 860**	**5 260**	**4 660**	**4 664**	**4 777**	**4 783**

The Science, Engineering and Technology division will utilise their resources plan appropriately to ensure that outputs are achieved on time and within the allocated budget.

1.4 PROGRAMME 4: RADIOACTIVE WASTE COMPLIANCE MANAGEMENT

1.4.1 Purpose

The aim of the programme is to ensure that NRWDI's core mandate (disposal of radioactive waste on a national basis) is executed in compliance with quality, health, safety, environmental and nuclear licensing and other statutory 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 Radioactive Waste Compliance Management division provides a support function to the Institute in terms of developing and ensuring compliance with the nuclear installation licence including the required safety, health, environment and quality management systems.

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

The compliance with quality, health, safety, environmental and nuclear licensing regulatory requirements, relevant international standards and best practices helps to ensure that NRWDI is in a position to deliver waste disposal services on a national basis.

PROGRAMME 4: RADIOACTIVE WASTE COMPLIANCE MANAGEMENT

1.4.2 Programme 4: Outcomes, Outputs, Performance Indicators and Targets

Table 19: Programme 4: Outcomes, Outputs, Performance Indicators and Targets

Outcome	Outputs	Output indicators	Annual targets						
			Audited actual performance			Estimated performance	MTEF period		
			2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26
Compliance with applicable statutory requirements	Compliance assurance audit performed	No of compliance assurance audit reports	N/A	N/A	N/A	N/A	2 x compliance assurance audit reports completed	2 x compliance assurance audit reports completed	2 x compliance assurance audit reports completed
	Compliance assurance inspections performed	No of inspections reports	N/A	N/A	N/A	N/A	2 x compliance Inspections completed	2 x compliance Inspections completed	2 x compliance Inspections completed
	ISO certification	External audit close out report	N/A	N/A	N/A	N/A	Obtain ISO 9001 certification	ISO 9001 maintained	ISO 14001 readiness for certification

1.4.3 Programme 4: Indicators, Annual and Quarterly Targets

Table 20: Programme 4: Indicators, Annual and Quarterly Targets

Output indicators	Annual target 2023/2024	Q1	Q2	Q3	Q4
Number of compliance assurance Audit Reports	2 x Audit Reports	N/A	1 x Audit Report : Risk based approach of specific IMS elements	N/A	1 x Audit Report : Nuclear Installation Licence
Number of Inspection Reports	2 x Inspection Reports	1 x Inspection report : Conditions of NIL	N/A	1 x Inspection report : Conditions of NIL	N/A
External Audit close out reports	Obtain ISO 9001 certification	Address SABS findings	Close out all findings	Submit final close out report to SABS	ISO 9001 certification obtained

1.4.4 Programme 4: Explanation of Planned Performance over the Medium-term period

The output indicators contribute directly towards achieving the NRWDI mandate, namely to manage radioactive waste disposal on a national basis. It therefore also supports all the activities for Programs 2 and 3. Compliance with the requirements and conditions of a nuclear authorisation is a prerequisite for any nuclear related projects and operations. In this regard the Nuclear Installation Licence requires that a Management System be established and implemented in accordance with the safety standards and regulatory practices for nuclear-related projects and operations. In order for NRWDI to manage the radioactive waste disposal operations and any other nuclear-related activities on a national basis, the assumption is that the National Nuclear Regulator has approved and issued the Nuclear Installation Licence to NRWDI.

The implementation of the Compliance Assurance Plan will assist in ensuring that NRWDI as a holder of a nuclear authorisation complies with the requirements of the Nuclear Installation Licence (NIL). The compliance assurance activities take into consideration the training sessions, awareness sessions, audits and inspections.

1.4.5 Programme Resource Considerations

Table 21: Budget Allocation for Programme 4 and sub-programmes as per the ENE and/or the EPRE

Expenses	Audited outcome	Audited outcome	Audited outcome	Budget estimate	Approved budget	Medium Term Estimates		
Rand thousand	2019/20	2020/21	2021/22	2022/23		2023/24	2024/25	2025/26
Objective/Activity								
Radioactive Waste Compliance Management								
Compensation of employees	**7 635**	**7 996**	**8 114**	**9 748**	**9 012**	**9 012**	**9 342**	**9 342**
Salaries and wages	7 635	7 996	8 114	9 748	9 012	9 012	9 342	9 342
Goods and services	**4 168**	**2 927**	**1 208**	**255**	**151**	**255**	**256**	**267**
Administrative fees	7	-		-		-		
Advertising	-	100	16	-		-		
Communication (G&S)	49	49	47	92	23	92	92	96
Computer services	-	52		-		-		
Contractors: Other	-	2 692	970	-		-		
Agency and support/outsourced services	-	13	14	-		-		
Consumable supplies	-		3	6		6	7	7
Consumables: Stationery, printing and office supplies	-			7	1	7	7	8
Travel and subsistence	74		114	100	10	100	100	104
Training and development	11	-		-		-		
Operating payments	4 027	21	44	50	117	50	50	52
Total Expenditure	**11 803**	**10 923**	**9 322**	**10 003**	**9 163**	**9 267**	**9 598**	**9 609**

The Radioactive Waste Compliance Management division will utilize their resources plan appropriately to ensure that outputs are achieved on time and within the allocated budget.

2. UPDATED KEY RISK AND MITIGATION FROM SP

Table 22: Key risks and mitigation

OUTCOME	KEY RISKS	RISK MITIGATION
1. An effective, efficient and responsive NRWDI	a) Failure to develop the funding model	• Collaboration with sister entities and other stakeholders • Appoint independent contractor • Strengthen internal capacity to deliver on the mandate. • Ensure development and implementation of robust processes and systems.
	b) Non-compliance to NRWDIA (RAWIS not approved by NNR)	• Strengthen end-user engagements and provide understanding on the benefits of the new system. • Engage internal stakeholders and put a project to register RAWIS as National Radioactive Waste Inventory system at NNR.
	c) Failure to develop partnerships and collaborations tools	• Exposure of technical team to partnership and collaboration framework workshops • Approval of the collaboration and partnership framework
	d) Lack of public understanding of NRWDI brand and operations	• Review and implement robust communications and stakeholder engagement strategy • Implement outreach events for core programmes • Develop a stakeholder engagement framework, procedures and M&E tools for improvement
	e) Not being able to achieve 80% implementation of the communications and stakeholder engagement plan	• Communications and stakeholder engagement plan. • Communications protocols. • Re-instatement of BOCO allows for information flow and collaboration
	f) Qualified/disclaimer/adverse opinions received	• To be included in the compact for all execs
2. Safe and secure disposal of all classes of	a) Failure to ensure that physical security systems are in place	• Liaison with SSA/SAPS in preparation for security assessments

OUTCOME	KEY RISKS	RISK MITIGATION
radioactive waste		• Development of the safety and security framework (national security) • Develop and implement an effective communication plan with security cluster
3. Capability for new radioactive waste disposal facilities establishment	a) Failure to develop preliminary design	• Outsource specialised skill. • Fully implement the CISF Project Framework Agreement
	b) Failure to perform EIA phase 1	• Outsource specialised skill. • Fully implement the CISF Project Framework Agreement
4. Enabling R&D programme for long-term radioactive waste management solutions	a) Inability to meaningfully contribute to field the radioactive waste management	• Develop a collaboration framework.
5. Compliance with applicable statutory requirements	a) Failure to conduct in-person audits b) Non-compliance to regulatory requirements.	• Adherence to audit schedules • Conducting online audits.
6.	a) Failure to conduct in-person inspections. b) Non-compliance to regulatory requirements.	• Adherence to inspections schedules • Conducting online inspections
7.	a) Inability to meet ISO 9001 standard requirements	• Adherence to audit schedules. • Conducting online audits. • Awareness sessions are scheduled quarterly & presentations sent out. • Continuous follow-ups to ensure effective corrective action. • Documented information governing control of documents/ record is available.

3. PUBLIC ENTITIES

N/A

4. INFRASTRUCTURE PROJECTS

The CISF is an infrastructure project.

Table 22: Infrastructure Projects

No.	Project Name	Programme	Description	Outputs	Start date	Completion date	Total estimated cost	Current year expenditure
1.	CISF	3	Establishment of a centralised interim storage facility (CISF) for long-term storage of spent fuel from the country's reactors	CISF established and operational by 2030	2021	2030	R1.95 b	R11.5 m

5. PUBLIC PRIVATE PARTNERSHIPS

NRWDI does not have any public-private partnerships.

PART D: TECHNICAL INDICATOR DESCRIPTION

PROGRAMME 1: ADMINISTRATION

Indicator title	**Financial sustainability plan**
Definition	Conduct a financial sustainability assessment that will lead to developing a funding model for the entity which will culminate in the development of a financial sustainability plan that will inform the entity of the various alternative funding sources and funding opportunities to enable the entity to be a going concern and to deliver on its mandate.
Source of data	Desktop research data and data from industry and benchmarked entities
Method of calculation/assessment	Assessment report Funding model
Means of verification	Assessment report
Assumptions	Adequate resources are available
Disaggregation of beneficiaries (where applicable)	• Target for women: N/A • Target for youth: N/A • Target for disabled persons: N/A
Spatial transformation (where applicable)	• Contribution to spatial transformation priorities: N/A • Spatial impact area: N/A
Calculation type	Cumulative (year-to-date)
Reporting cycle	Quarterly
Desired performance	Developed financial sustainability assessment report
Indicator responsibility	Chief Financial Officer

Indicator title	**Percentage of creditors paid within 30 days**
Definition	100% of creditors must be paid within 30 days after relevant documents are received
Source of data	Payments requests, invoices, proof of payments payment reports, creditors age analysis
Method of calculation/assessment	Number of payments within 30 days / total number of payments made date invoice paid less date documents received.
Means of verification	Audit reports, quarterly reports and annual reports detailed individual creditors payment report
Assumptions	Adequate resources in the finance division

Disaggregation of beneficiaries (where applicable)	• Target for women: N/A • Target for youth: N/A • Target for disabled persons: N/A
Spatial transformation (where applicable)	• Contribution to spatial transformation priorities: N/A • Spatial impact area: N/A
Calculation type	Cumulative (year-to-date)
Reporting cycle	Quarterly
Desired performance	100% of creditors paid within 30 days after relevant documents are received
Indicator responsibility	Chief Financial Officer

Indicator title	**Functional and populated Radioactive Waste Inventory System (RAWIS)**
Definition	The NRWDI Radioactive Waste Inventory System (RAWIS) will be implemented at NRWDI Head Office with a mirror instance at Vaalputs for performance and backup purposes. The system will be used to capture and maintain a National Inventory of radioactive waste across South Africa whether disposed-off at NRWDI disposal sites or stored on waste producer sites. The RAWIS will be implemented through a capital project on an annual basis over the three-year period, and its implementation will be achieved and tracked through a project plan.
Source of data	NRWDI Radioactive Waste Inventory System (RAWIS) project plan
Method of calculation / assessment	Actual number of deliverables achieved in the RAWIS project plan / the number of deliverables contained in the project plan x 100
Means of verification	Project reports, audit reports, quarterly reports and annual reports
Assumptions	Availability of SET Division staff members for joint application functionality development workshops
Disaggregation of beneficiaries (where applicable)	Target for women: N/A Target for youth: N/A

	Target for disabled persons: N/A
Spatial transformation (where applicable)	Contribution to spatial transformation priorities: N/A Spatial impact area: N/A
Calculation type	Cumulative (year-to-date)
Reporting cycle	Quarterly
Desired performance	100% of the project plan deliverables achieved
Indicator responsibility	Executive Manager: Corporate Services

Indicator title	**Partnership and Collaboration Framework developed and implemented**
Definition	The indicator entails the development of a documented partnership and collaboration framework and tools.
Source of data	IAEA Partnership agreement, Universities and SOE websites
Method of calculation / assessment	Developed and approved Partnerships and collaboration framework Implemented Partnerships and collaboration framework
Means of verification	Minutes of meeting where the framework for partnership and collaboration is approved and implemented
Assumptions	Programmes require a framework for partnerships and collaboration in order to implement relevant projects
Disaggregation of beneficiaries (where applicable)	• Target for women: N/A • Target for youth: N/A • Target for disabled persons: N/A
Spatial transformation (where applicable)	• Contribution to spatial transformation priorities: N/A • Spatial impact area: N/A Target for disabled persons: N/A
Calculation type	Non - cumulative
Reporting cycle	Quarterly

Desired performance	Approved and implemented partnership and collaboration framework
Indicator responsibility	Executive Manager: Corporate Services

Indicator title	**Number of Public Awareness initiatives**
Definition	Number of public awareness initiatives held with stakeholders
Source of data	Public awareness initiatives held with stakeholders
Method of calculation / assessment	Meeting attendance register and minutes of meeting
Means of verification	Minutes and attendance registers
Assumptions	Availability of stakeholders at scheduled meetings (If no in-person meeting(s) can be held, alternative digital communication platforms can also be held)
Disaggregation of beneficiaries (where applicable)	• Target for women: no limits for attendance and participation • Target for youth: no limits for attendance and participation • Target for disabled persons: no limits for attendance and participation
Spatial transformation (where applicable)	• Contribution to spatial transformation priorities: N/A • Spatial impact area: N/A
Calculation type	Cumulative (Year to Date)

Indicator title	**Percentage implementation of the Communications and Stakeholder Engagement Plan**
Definition	Effective communication with stakeholders aims to ensure that stakeholders are aware of the objectives of a project as well as organisation. It also serves to help NRWDI understand those who will be affected by a project or the functions of the

	entity. It provides an opportunity for the share information and educate the stakeholders accordingly, thus leading to greater stakeholder satisfaction and improving the chances of successful initiatives/projects.
Source of data	Stakeholder engagements and feedback Survey analyses
Method of calculation/assessment	Stakeholder engagements and feedback Survey Reports
Means of verification	Bi–Annual Reports
Assumptions	Capacitated communications and stakeholder relations department
Disaggregation of beneficiaries (where applicable)	• Target for women: N/A • Target for youth: N/A • Target for disabled persons: N/A
Spatial transformation (where applicable)	• Contribution to spatial transformation priorities: N/A • Spatial impact area: N/A
Calculation type	Cumulative (year-to-date)
Reporting cycle	Quarterly
Desired performance	80% implementation of the communications and stakeholder engagement plan
Indicator responsibility	Manager: Communications and Stakeholder Engagement

Indicator title	**Unqualified audit report**
Definition	The entity to obtain an audit report without material findings and without material financial misstatements
Source of data	Audit report
Method of calculation / assessment	Audit report without adverse findings
Means of verification	Audit reports, and annual reports
Assumptions	Adequate resources in NRWDI

Disaggregation of beneficiaries (where applicable)	• Target for women: N/A • Target for youth: N/A • Target for disabled persons: N/A
Spatial transformation (where applicable)	• Contribution to spatial transformation priorities: N/A • Spatial impact area: N/A
Calculation type	Cumulative (year-to-date)
Reporting cycle	Annually
Desired performance	Unqualified audit report
Indicator responsibility	Acting CEO

PROGRAMME 2: RADIOACTIVE WASTE OPERATIONS

Indicator title	**Waste Acceptance Criteria (WAC) met**
Definition	Waste packages received from waste generators can only be accepted for disposal at Vaalputs if these waste packages meet the requirements of the Vaalputs Waste Acceptance Criteria.
Source of data	WAC Compliance Checklist
Method of calculation / assessment	Actual number of waste packages disposed meeting the WAC
Means of verification	Waste shipment records/ Waste Disposal Records
Assumptions	• WAC checklist fully completed for every waste consignment • WAC checklists filed in records system • Provision made for waivers • WAC non-compliance addressed by means of non-conformance reports (NCR's)
Disaggregation of beneficiaries (where applicable)	• Target for women: N/A • Target for youth: N/A • Target for disabled persons: N/A
Spatial transformation (where applicable)	Contribution to spatial transformation priorities: N/A Spatial impact area: N/A
Calculation type	Cumulative (Year End)
Reporting cycle	Quarterly
Desired performance	100% of the waste packages disposed meet WAC
Indicator responsibility	Chief Operations Officer

Indicator title	**Physical Security upgrade Implementation plan completed**
Definition	Upgrade Vaalputs security to meet National Key Point requirements in order to receive all classes of radioactive waste
Source of data	National Key Points Act and Nuclear Energy Act
Method of calculation / assessment	Physical Security upgrade Implementation Plan
Means of verification	Progress reports
Assumptions	Resources are available Stakeholders will provide adequate support and information Vaalputs remains operational
Disaggregation of beneficiaries (where applicable)	• Target for women: N/A • Target for youth: N/A • Target for disabled persons: N/A
Spatial transformation (where applicable)	Contribution to spatial transformation priorities: N/A Spatial impact area: N/A
Calculation type	Cumulative (Year End)
Reporting cycle	Quarterly
Desired performance	Physical Security upgrade Implementation Plan finalised
Indicator responsibility	Chief Operations Officer

Indicator title	**Draft National Waste Inventory Report completed**
Definition	NRWDI must publish a report on the inventory and location of all radioactive waste in the Republic at a frequency determined by the Board
Source of data	National Key Points Act and Nuclear Energy Act
Method of calculation / assessment	Draft National Waste Inventory Report
Means of verification	Benchmarking/Progress reports
Assumptions	RAWIS is functional Waste Generators will provide waste inventories
Disaggregation of beneficiaries (where applicable)	• Target for women: N/A • Target for youth: N/A • Target for disabled persons: N/A
Spatial transformation (where applicable)	Contribution to spatial transformation priorities: N/A Spatial impact area: N/A
Calculation type	Cumulative (year-end)
Reporting cycle	Quarterly
Desired performance	Draft National Waste Inventory Report completed
Indicator responsibility	Chief Operations Officer

PROGRAMME 3: SCIENCE, ENGINEERING AND TECHNOLOGY

Indicator title	**CISF project progress reports**
Definition	CISF project progress report are documents that explain in detail how far the project has advanced towards its completion, outline the activities carried out, the tasks completed, and the milestones reached vis-à-vis the project plan, and provide the status of the project at the point when the report is required.
Source of data	Literature. Consultants. Data from past/similar projects.
Method of calculation / assessment	Evaluative assessment performed to evaluate the content and quality of the quarterly targets (i.e., the reports to be delivered in each quarter).
Means of verification	Reviews by the Project Task Team. Reviews by the Technical Advisory Committee. Reviews by the Board Technical and Operations Committee. Reviews by the CISF Project Steering Committee. Reviews by the Gateway Review Team.
Assumptions	Availability of financial and human resources. Continuity of support by the CISF Project Framework Agreement parties (i.e., Necsa, Eskom and DMRE).
Disaggregation of beneficiaries (where applicable)	• Target for women: N/A • Target for youth: N/A • Target for people with disabilities: N/A
Spatial transformation (where applicable)	N/A
Calculation type	Cumulative
Reporting cycle	Annually (tracking and monitoring is done on the quarterly basis)
Desired performance	Achieve the targeted output.
Indicator responsibility	Chief Technology Officer.

Indicator title	**R&D scientific and technical reports**
Definition	Scientific and technical reports are documents that describes the process, progress, or results of technical or scientific research or the state of a technical or scientific research problem. It might also include recommendations and conclusions of the research. A focus of this indicator is on scientific and technical report arising from the R&D on radioactive waste management and disposal.
Source of data	Literature. Experiments. Consultants. Data from projects.
Method of calculation / assessment	Evaluative assessment performed to evaluate the content and quality of the quarterly targets.
Means of verification	Reviews by Technical Advisory Committee. Reviews by Board Technical and Operations Committee. Reviews by external stakeholders.
Assumptions	Availability of financial and human resources.
Disaggregation of beneficiaries (where applicable)	Students at higher learning institutions Various R&D stakeholders
Spatial transformation (where applicable)	N/A
Calculation type	Cumulative
Reporting cycle	Annually (tracking and monitoring is done on the quarterly basis)
Desired performance	Achieve the targeted output.
Indicator responsibility	Chief Technology Officer.

PROGRAMME 4: RADIOACTIVE WASTE COMPLIANCE MANAGEMENT

Indicator title	**Number of compliance assurance audit reports**
Definition	Assurance audits undertaken to ensure that compliance with QMS, RP, SHE and NIL conditions
Source of data	• Compliance assurance audit reports • Compliance assurance audit management letter
Method of calculation / assessment	Number of compliance assurance audits reports
Means of verification	Audit reports
Assumptions	IMS in place
Disaggregation of beneficiaries (where applicable)	• Target for women: N/A. • Target for youth: N/A. • Target for disabled persons: N/A.
Spatial transformation (where applicable)	Contribution to spatial transformation priorities: N/A. Spatial impact area: N/A.
Calculation type	Cumulative (Year End).
Reporting cycle	Bi-Annually
Desired performance	2 Audit reports
Indicator responsibility	Interim Compliance Management Executive

Indicator title	**Number of inspection reports**
Definition	Inspection reports undertaken to ensure that compliance elements with QMS, RP, SHE and NIL conditions
Source of data	Inspection reports and Inspection Management letters
Method of calculation / assessment	Number of inspection reports
Means of verification	Inspection reports
Assumptions	IMS in place,
Disaggregation of beneficiaries (where applicable)	• Target for women: N/A. • Target for youth: N/A. • Target for disabled persons: N/A.
Spatial transformation (where applicable)	Contribution to spatial transformation priorities: N/A. Spatial impact area: N/A.
Calculation type	Cumulative (Year End).
Reporting cycle	Bi-Annually.

Desired performance	2 Inspection reports
Indicator responsibility	Interim Compliance Management Executive

Indicator title	**External Audit Close out Reports**
Definition	ISO certification of NRWDI QMS to instill confidence and trust with our stakeholders
Source of data	SABS reports, minutes of engagements with NRWDI
Method of calculation / assessment	ISO Certification issued by SABSA
Means of verification	SABS reports, minutes of engagements with NRWDI
Assumptions	
Disaggregation of beneficiaries (where applicable)	• Target for women: N/A. • Target for youth: N/A. • Target for disabled persons: N/A.
Spatial transformation (where applicable)	Contribution to spatial transformation priorities: N/A. Spatial impact area: N/A.
Calculation type	Cumulative (Year End).
Reporting cycle	Quarterly.
Desired performance	External audit report with no findings from SABS
Indicator responsibility	Interim Compliance Management Executive