



Radiation Protection Authority

Annual 2023 Report



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DISTRICT ADMINISTRATION OFFICE BLOCK

AKAPELWA STREET

LIVINGSTONE.

ABBREVIATIONS AND ACRONYMS

RPA:	Radiation Protection Authority
IAEA:	International Atomic Energy Agency
EU:	European Union
ED:	Executive Director
8NDP:	Eighth National Development Plan
IA:	Institutional Assessment
OD:	Organisational Development
MoTS:	Ministry of Technology and Science
ZEMA:	Zambia Environmental Management Agency
SP:	Strategic Plan
EU:	European Union
SWOT:	Strengths,Weakness,Opportunities, Threats
UNDP :	United Party for National Development
ICT :	Information and Communications Technology
NISIR :	National Institute for Scientific and Industrial Research
MoU :	Memorandum of Understanding
TLD :	Thermoluminescent Dosimeter
ERB:	Energy Regulation Board
ZRA:	Zambia Revenue Authority
ERM:	Enterprise Risk Management
M&E:	Monitoring and Evaluation

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Our Functions

Advise the Government on policies, measures and matters relating to ionising radiation;

Implement the policies of the Government related to the protection of the public, workers and the environment from the harmful effects of ionising radiation;

Establish facilities for the collection and dissemination of scientific and technical information on ionising radiation;

Collect and disseminate information on the work of the Authority through publications, seminars, workshops and print or electronic media;

Liaise with the Zambia Environmental Management Agency (ZEMA) or any other regional or international organisation and institution on matters relating to the promotion of the safe use of ionising radiation in Zambia;

Initiate policy formulation and implement the provisions of this Act and, when so required by the Minister or if the Board otherwise thinks it necessary, draw up and submit to the Minister proposals for amending it or regulations to be made under it;(Ionising Radiation Protection Act No. 16 of 2005)

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Ensure the protection and safety of the public in the event of an accidental release of harmful ionising radiation or other emergencies;

Respond to, and coordinate responses to radiological incidences and emergencies;

Make recommendations to the Minister on all matters concerning radiation;

Issue Licenses and authorisations

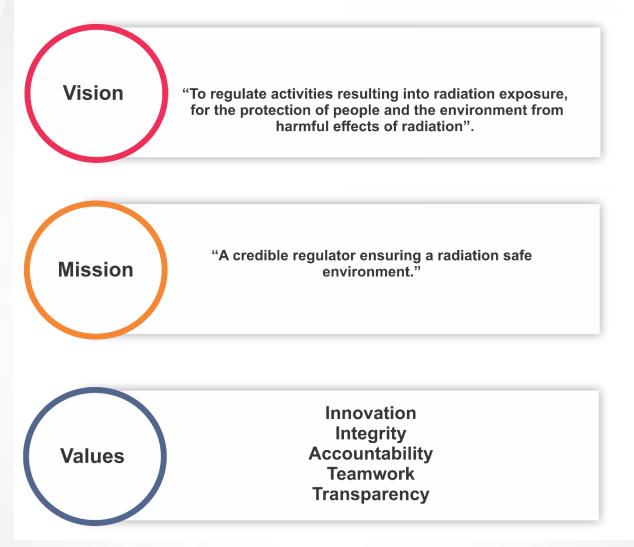
Carry out such activities as are necessary or conducive to the better performance of its functions under the Act.



RADIATION PROTECTION AUTHORITY



Vision, Mission and Values



CONTENTS BOARD CHAIRPERSON'S FOREWORD	
EXECUTIVE DIRECTOR'S STATEMENT	
EAECUTIVE DIRECTOR S STATEMENT	9
RADIATION PROTECTION AUTHORITY BOARD 2023	10
EXECUTIVE SUMMARY	12
1.0 INTRODUCTION	13
2.0 NUCLEAR AND RADIATION SAFETY	15
2.1.1 INSPECTORATE AND ENFORCEMENT	15
2.2 ENFORCEMENT	17
2.2.1 Authorisation and Standards	18
2.2.2 STAKEHOLDER ENGAGEMENTS:	18
2.2.4 RPA HOST THE FIFTH ANNUAL CONFERENCE FOR RADIATION PROTECTION OFFICERS	19
2.2.5 RPA HOSTED THE REGIONAL TRAINING COURSE ON AUTHORISATION AND INSPECTION	20
2.3 NUCLEAR SAFETY, SECURITY AND SAFEGUARDS	21
2.3.1 PHYSICAL PROTECTION INSPECTIONS	21
2.3.2 IAEA TRAINING PROGRAMMES	22
2.3.3 RADIATION MONITORING IN BORDERS	24
3.0 TECHNICAL SERVICES	24
3.1 ROLES AND MANDATE	24
3.1.1 RESEARCH	25
3.1.2 DOSIMETRY	25
3.1.3 MAINTENANCE AND REPAIR OF MEDICAL X-RAY EQUIPMENT IN PUBLIC HOSP	ITAL26
3.2 NON-IONIZING	26
3.3 TRAINING	28
3.4 ENVIRONMENT RADIOACTIVITY MONITORING	30
3.4.2 LEAK TESTS, PRODUCTS, WATER AND FOOD SAMPLES	32
	33
3.5 DOSIMETRY AND INSTRUMENTATION.	34
3.6 INTERNATIONAL ENGAGEMENT	41
Table 1 Summary activities of Technical Services Department	41

4.0. HUMAN RESOURCE AND ADMINISTRATION UNIT	42
4.1 HUMAN RESOURCE AND ADMINISTRATION	42
4.2 STAFF ESTABLISHMENT	42
4.3 MEDICAL SERVICES	43
5.0 PUBLIC RELATIONS UNIT	44
5.1. ROLES AND MANDATE	44
5.2 AWARENESS CAMPAIGNS	44
5.3 SHOWS AND EXHIBITIONS	45
5.4 MEDIA COVERAGE AND PUBLICATIONS	48
5.5 RADIATION PROTECTION AUTHORITY LAUNCHES THE 2023-2026 STRATEG	IC PLAN50
6.1 ROLES AND MANDATE	52
6.3 CHALLENGES	53
6.4. PROPOSED SOLUTIONS	53
7 .0 LEGAL UNIT	53
7.1 LEGISLATIVE ASSISTANCE FOR TREATY RATIFICATION	53
7.2 BOARD MATTERS	
7.2.1 THE RADIATION PROTECTION AUTHORITY BOARD AND MANAGEMENT O TOUR OF CHIRUNDU BORDER CANCER DISEASE HOSPITAL (CDH), NATIONAL FOR SCIENTIIFIC AND INDUSTRIAL RESEARCH (NSIR) AND MISENGE ENVIROM AND TECHNICAL SERVICES. (METS)	INSTISTITUE MENTAL
7.3 CORPORATE GOVERNANCE	56
7.4 LAW AND REGULATIONS	56
8.0 FINANCE UNIT	57
ROLES AND MANDATE	57
9.0. INTERNAL AUDIT	61
ROLES AND MANDATE	61
9.1 ACTIVITIES UNDERTAKEN IN THE YEAR 2023.	61
10.1 ACHIEVEMENTS	63
10.2 CHALLENGES	63
10.3. PROPOSED SOLUTIONS	64
11.0 THE WAY FORWARD	
	64
12.0 OUTLOOK	

BOARD CHAIRPERSON'S FOREWORD



It is my pleasure to present the Radiation Protection Authority (RPA) Annual Report and Financial Statements for the year ended 31st December 2023. During the period under review the Board continued to give policy guidance in the management and governance of the Authority as it executed its mandate within the key objectives of the Strategic Plan 2019 – 2021

The process of formulating the 2023 Annual Report provided the RPA with an opportunity to reflect on past successes and failures, determine our efforts in light of the challenges ahead, and put forward strategies for improved performance.

The report outlines the vision and the areas of focus to help the Authority fulfil its mandate of ensuring that people and the environment are protected from the harmful effects of ionising radiation.

During the financial year 2023, the Board approved licenses and approved RPA policies such as the wellness Policy and Recruitment Policy among others to enhance the operations of the Authority for better service delivery

Finally, I would like to thank the RPA Board, Management, and Staff for their continued commitment to protecting people and the environment from the harmful effects of radiation.

Brig. Gen. (Dr.) Adrian Maleya Board Chairperson

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EXECUTIVE DIRECTOR'S STATEMENT



I am pleased to submit the RPA 2023 Annual Report to you. This report highlights key activities undertaken by the Radiation Protection Authority during the period 1st January to 31st December 2023.

The Radiation Protection Authority, during the year 2023, continued the implementation of the Strategic Plan for the Year 2019–2021. The Authority endeavoured to provide effective and efficient services in line with the Service Delivery Charter of 2020.

It is my pleasure to submit that the Authority launched a new strategic plan under the theme "Safe and secure people and the environment from the harmful effects of radiation," which reflects the core values that drive the efforts in the Ministry of Science and Technology.

The launch of the strategic plan underscores the unwavering commitment of the Authority of realising our strategic results of Radiation Regulatory Excellence resulting into Safe and secure people and the environment, Communication and Collaboration resulting into Effective execution Operational Excellence resulting into Effective and efficient service delivery.

Finally, I want to thank the Government of the Republic of Zambia, cooperating partners, and other stakeholders, as well as the RPA Board, Management, and staff, for their continued commitment to achieving the results of safe and secure people and the environment from the harmful effects of radiation.

Dr. Boster Dearson Siwila, PhD Executive Director and Board Secretary

RADIATION PROTECTION AUTHORITY BOARD 2023



Brigadier General (Dr.) Adrian Maleya (Board Chairperson)



Mrs. Christabel N. Reinke (Vice Board Chairperson)



Mrs. Olipa J. Sakala (Board Member)



Mr. Fred Banda (Board Member)



Mrs.Thandiwe Phiri-Chabi (Board Member)



Mr. Felisian Ngosa (Board Member)



Mrs Jane M. Chinkusu (Board Member)



Mr Joesph Kamvuma (Board Member)



Mr Muleka Kamanisha (Board Member)

EXECUTIVE SUMMARY

The Radiation Protection Authority, during the year 2023, continued the implementation of the Strategic Plan for the Year 2019–2021. The Authority endeavoured to provide effective and efficient services in line with the Service Delivery Charter of 2020. However, in December 2023, the Authority launched its 2023-2026 strategic plan which shall guide the operations of the Authority for the next 3 years.

The RPA ensured that the following key areas were addressed during the year 2023: • Policies and legislation; • Nuclear Security and Safeguards • Radiation Protection and Nuclear Safety • Performance Management Under Radiation Protection and Nuclear Safety. Out of 350 registered facilities, a total number of 267 representing 76% facilities were licensed of which 245 were renewals and 22 were new applications. 80 of the licensed facilities were non-medical and 187 were medical facilities

Further, out of 350 facilities, a total number of 287 representing 82% facilities were inspected of which 220 were medicals, pre-authorisation 22, enforcement 90 and 67 non-medical.

The RPA further screened 115,627 vehicles for the purposes of nuclear security and radiation safety, compared to 95,130 vehicles that were screened in 2022. Furthermore, the Authority conducted 287 radiation safety inspections of facilities that were in possession of or using radiation sources. Under the Technical Services Department, the Authority conducted research on dosimetry results for five consecutive years for occupationally exposed workers in 15 major provincial hospitals.

The Authority examined the status of maintenance and repair programs for medical X-ray equipment in 10 provinces of Zambia. The results show that hospitals did not have written routine maintenance programs, and only remedial works were present in all 128 hospitals in the period 2018-2022.

RPA in collaboration with NISIR conducted collected samples in Siavonga for radioactivity monitoring. The team collected a total of 17 water samples in Siavonga. Furthermore, in order to provide for the protection of the public, workers and environment from the harmful effects arising from the use of materials or devices capable of producing ionising radiation, RPA analysed a total of 133 fertilizer samples, 1 soya meal porridge and 1 manganese ore.

1.0 INTRODUCTION

This annual report covers the period from January 1st to 31st December 2023 and highlights the major activities undertaken by the authority during this period. The mandate of RPA is to protect the public, workers, and the environment from hazards arising from the use of devices or materials capable of producing ionizing radiation.

The mandate is in line with the fundamental safety objective of protecting people and the environment from the harmful effects of ionizing radiation. The functions of the Authority as prescribed in the Ionising Radiation Protection Act No. 16 of 2005, as amended by the Ionising Radiation Protection Act No. 19 of 2011, Part II Section 7 and Part III Section 18, are anchored on the three thematic areas of: radiation regulatory excellence, resulting in safe and secure people and the environment from the harmful effects of radiation; service excellence, resulting in satisfied clients; and operational excellence, resulting in effective and efficient service delivery.

The Authority's modus operandi is informed by a strategic plan as a building block for "A credible regulatory body in protecting people and the environment from harmful effects of radiation." The Authority developed the 2019–2021 Strategic Plan as a blueprint on which all activities are based. As of December 31st, 2023, the Authority's 2023-2026 Strategic plan was launched to guide the activities of the Authority in the next 3years.

In order to ensure effective implementation of the 2019–2021 Strategic Plan, the Authority formulated a consolidated institutional work plan for 2023 that comprised activities under each department and unit with clear targets aimed at attaining strategic objectives. A quarterly review process was undertaken to ensure effective implementation and adherence to the plan. A mid-term review of the strategic plan was undertaken, and areas of improvement in terms of implementation were noted and planned for action for the remaining part of the period of the strategic plan. The Authority's balanced scorecard is presented below:

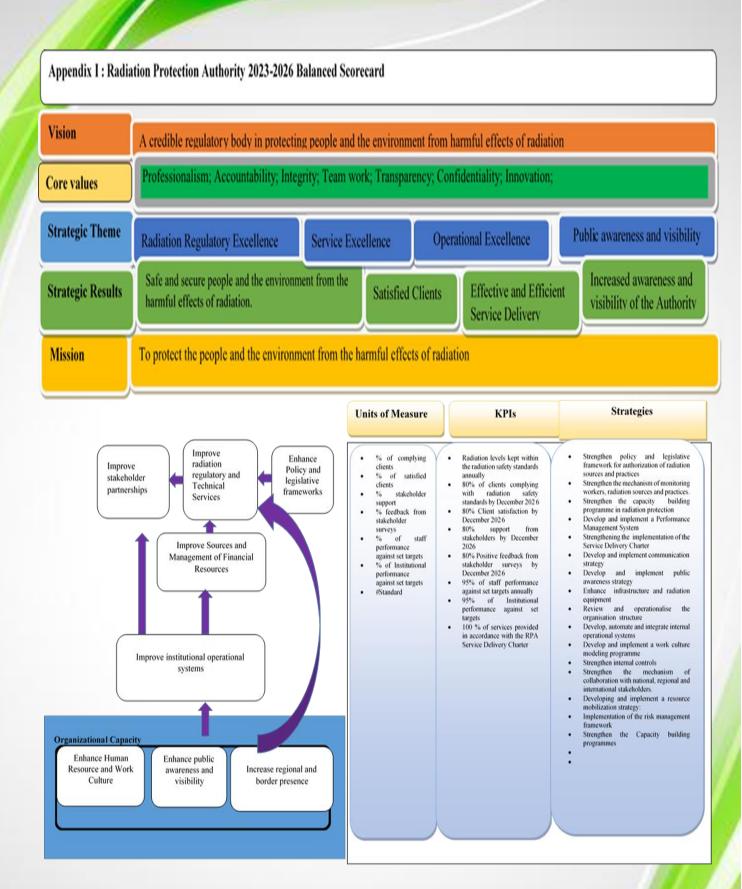


Figure 1 : RPA Balanced Scorecard

2.0 NUCLEAR AND RADIATION SAFETY 2.1 ROLES AND MANDATE

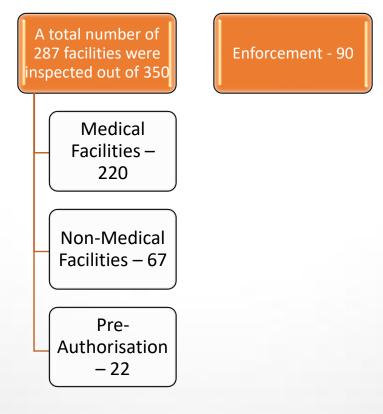
The Nuclear and Radiation Safety Department is responsible for authorization and developing standard, conducting inspections at facilities and Implementing programmes under Nuclear Safety Security and Safeguards.

The report outlines all the activities undertaken in the year 2023, under the following sections:

- 1. Inspectorate and Enforcement
- 2. Authorisation and Standards
- 3. Nuclear Safety, Security and Safeguards

2.1.1 INSPECTORATE AND ENFORCEMENT

Under the inspectorate section, out of 350 facilities, a total number of 287 representing 82% facilities were inspected of which 220 were medicals, pre-authorisation 22, enforcement 90 and 67 non-medical. The chart below shows the number of facilities inspected against



uninspected.

Figure 2: number of inspected facilities



Fig 3: Inspectors carrying out an inspection

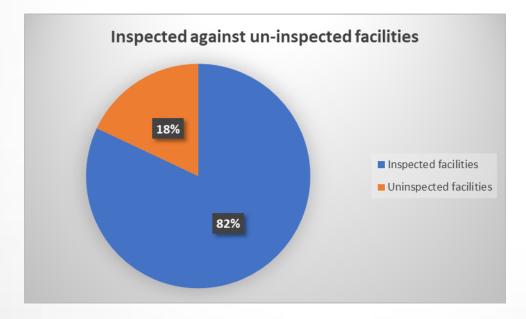
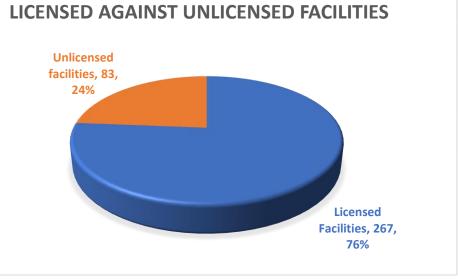


Fig 4: Inspected Facilities against uninspected

2.1.2 LICENCES ISSUED

Out of 350 registered facilities, a total number of 267 representing 76% facilities were licensed of which 245 were renewals and 22 were new applications. 80 of the licensed facilities were non-medical and 187 were medical facilities. The pie chart below shows the number of licensed facilities against unlicensed facilities.

Figure 5: Licensed against unlicensed facilities



2.1.3 NEW APPLICATIONS

- a) Medical facilities 20
- b) Non-medical facilities 2

Total – 22 Facilities

2.2 ENFORCEMENT

Enforcement was carried out on a total of 90 facilities.



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Fig 6: Inspector carrying out enforcement

2.2.1 Authorisation and Standards

Under Standards Section, the following Safety Guides were developed:

- Safety Guide on Diagnostic Radiology and Image Guided Interventional Procedures
- 2. Safety Guide in Nuclear Medicine
- 3. Safety Guide on Physical Protection of Radioactive Materials

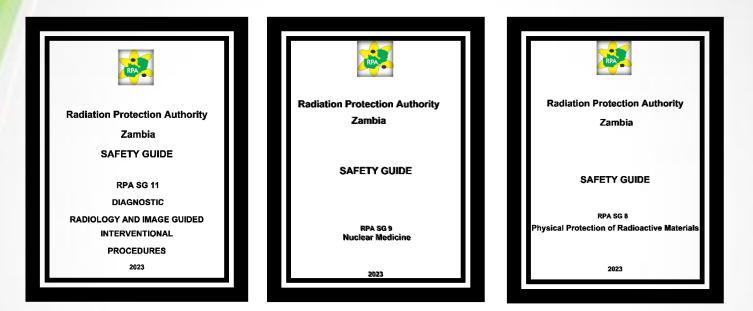


Figure 7: safety guides developed in the year 2023

2.2.2 STAKEHOLDER ENGAGEMENTS:

A virtual round table discussion was held with the RPOs on development of the Radiation Protection and Safety Program.

2.2.3 RPA HOSTS REGIONAL TRAINING COURSE

The Radiation Protection Authority hosted Regional Training Course on Authorization and Inspection of Radiation Safety and Nuclear Security for Medical Practices in Lusaka, Zambia from June 19th to 30th, 2023 under the IAEA Regulatory Infrastructure Development Project (RIDP Africa II).

The training, attended by 40 participants from various African countries, focused on equipping regulators with the knowledge to implement key processes (authorization,

inspection, and enforcement) for medical radiation practices in line with IAEA guidelines (TRS No. 1002).



Fig 8: Participants during the inspection at Cancer Diseases Hospital

Through lectures, group exercises, and presentations, participants gained a comprehensive understanding of IAEA safety and security standards, including effective regulatory control systems, application and authorization procedures, security considerations, inspection processes, and enforcement measures. This training will enhance Zambia's ability to ensure the safe and secure use of radioactive materials in medical practices.

2.2.4 RPA HOST THE FIFTH ANNUAL CONFERENCE FOR RADIATION PROTECTION OFFICERS

The Radiation Protection Authority, in collaboration with the United States Nuclear Regulatory Commission, successfully hosted the 5th Annual Radiation Protection Officers (RPO) under the theme "Advancing Radiation Safety, Nuclear Safety, and Security by Empowering Excellence in Facility Operations from the 11th to the 13th of October 2023. The conference brought together radiation protection experts, industry leaders, and professionals from around the world to discuss the latest developments and innovations in the field. Attendees engaged in thought-provoking discussions, knowledge sharing, and networking opportunities, contributing to the advancement of radiation safety and protection.

The District Commissioner for Livingstone, the Chairperson of the Radiation Protection Authority Board, and the Executive Director for the Authority were present at the conference's official opening ceremony.

A number of people from more than one hundred facilities and hospitals across the nation attended annual conference.



Figure 9: participants during the 5th Annual RPO conference pose for a photo

2.2.5 RPA HOSTED THE REGIONAL TRAINING COURSE ON AUTHORISATION AND INSPECTION

The Radiation Protection Authority, in Collaboration with the International Atomic Energy Agency, hosted a Regional training course on the Authorisation and inspection of Radiation Safety and Nuclear Security for Medical Practices. The training took place for two weeks from 19th, to 30th June 2023 in Lusaka.



Figure 10: participants pose for a photo during the training

2.3 NUCLEAR SAFETY, SECURITY AND SAFEGUARDS

2.3.1 PHYSICAL PROTECTION INSPECTIONS

In 2023, the Radiation Protection Authority prioritized the physical protection of radioactive materials through a collaborative approach. With the valuable support of the United States Office of Radiological Security, inspections were conducted at three key facilities: The Cancer Diseases Hospital, the ZCCM-IH Radiation Waste Management Facility, and the National Institute for Scientific and Industrial Research. Furthermore, leveraging the expertise of the International Atomic Energy Agency (IAEA) during their IPPAS Mission, RPA conducted an additional inspection at the Alfred H. Knight facility. These comprehensive assessments ensured robust security measures are in place to safeguard radioactive materials throughout our nation.

2.3.2 IAEA TRAINING PROGRAMMES

IAEA Completes 100th IPPAS Mission in Zambia

The International Atomic Energy Agency (IAEA) successfully concluded its 100th International Physical Protection Advisory Service (IPPAS) mission in Zambia today. Launched in 1995, IPPAS is the IAEA's premier program dedicated to strengthening national nuclear security regimes by reviewing physical protection measures.



Fig 11: IPPAS Mission team during the Official opening and assessment of the National Infrastructure

This historic mission, conducted at the request of the Zambian government from August 28th to September 8th, marked the first IPPAS deployment in the country. Over the course of twelve days, a team of international experts collaborated closely with Zambia's Radiation Protection Authority (RPA) to comprehensively assess the nation's nuclear security regime. The review encompassed the security of radioactive material, associated facilities and activities, including transport security measures.



Fig 13: IPPAS Mission team during site visit at Alfred H. Knight in Kitwe

This successful mission signifies a significant step forward for Zambia's commitment to the global nuclear security regime. The IPPAS Mission peer review approach undoubtedly contributed to further strengthening the Zambia's ability to safely and securely manage radioactive materials.

2.3.3 RADIATION MONITORING IN BORDERS

The Authority assessed 115,627 vehicles and trucks for safety and security for the year 2023.





Figures 14 & 15: showing RPA staff assessing trucks for safety and security.

3.0 TECHNICAL SERVICES

3.1 ROLES AND MANDATE

The Technical Services Department of the Radiation Protection Authority provides radiation laboratory services and radiation protection technical support in order to facilitate the www.rpa.gov.zm

implementation of radiation protection and nuclear safety programmes. In addition, the department guides licensees on how to comply with the national and international safety standards which allow for the protection of the public, workers and the environment from hazards arising from the use of devices or materials capable of producing ionising radiation. The provision of these services and technical support is in line with the functions of the Authority under section seven (7) and section eighteen (18) of the Principle Act.

The Department of Technical Service conducted various activities under the following sections according to the 2023 Work Plan.

3.1.1 RESEARCH

The research section is responsible for conducting research in nuclear safety, radiation safety, radiation protection, nuclear security, and safeguards to enhance regulatory control of nuclear and other radioactive materials and improve efficiency in the regulatory processes for the Authority to make informed decisions. The section also develops and implements radiation protection training programs to ensure radiation users comply with safety requirements. The purpose of the training program is to sensitize and educate members of the public and licensees on radiation protection and safety matters to enhance safety and improve compliance with the safety requirements.

3.1.2 DOSIMETRY

In 2023, the Authority, conducted research on dosimetry results for occupationally exposed workers in 15 major provincial hospitals (Figure 1). This analysis examined workers' personal dose equivalent Hp(d) results in 15 medical facilities from 2017 to 2021. The analysis results showed that annual doses for the workers were below the recommended dose limit of 50 mSv per year. The study further revealed inconsistencies in individual monitoring periods amongst the facilities, missing monitoring periods, and insufficient monitoring records.

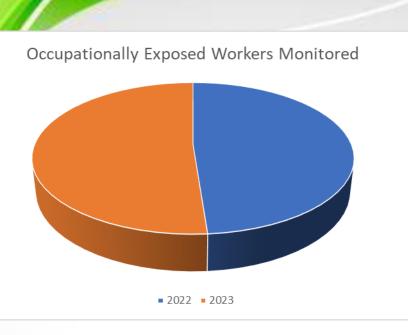


figure 16: pie chart showing number of occupationally exposed workers monitored in the year 2022 against 2023

3.1.3 MAINTENANCE AND REPAIR OF MEDICAL X-RAY EQUIPMENT IN PUBLIC HOSPITALS

The Authority examined the status of maintenance and repair programs for medical X-ray equipment in 10 provinces of Zambia the results show that hospitals did not have written routine maintenance programs, and only remedial works were present in all 128 hospitals in the period 2018-2022.

3.2 NON-IONIZING

The Authority has a keen interest in non-ionising radiation in view of recent developments such as the reclassification by WHO of non-ionising radiation from "not carcinogenic" to "possibly carcinogenic" in the international technology and science community. In 2023, the Authority, procured new equipment for measuring non-ionizing radiation. To ensure full utilization of the equipment, the staff of the Authority were trained in the safe use and monitoring of non-ionising radiation by a Chief Research Scientist from the Radiation Protection Institute from the Ghana Atomic Energy Commission (GAEC). The Authority also conducted a stakeholder awareness meeting on non-ionizing radiation. In addition, the Authority held a joint Zimbabwe-Zambia technical workshop on Non-Ionising Radiation (NIR) safety from 6-8th June 2023 in Kariba, Zimbabwe. The workshop aimed to share experiences on technical aspects of regulating non-ionizing radiation and lessons learned from best practices. The sharing of experiences gave impetus on the rudiments of an effective

regulatory infrastructure for non-ionizing radiation. Additionally, emphasis on a uniform approach to regulation in the sub-region would enhance stakeholder confidence and foster capacity building through experience sharing.



Figure 17: Joint ZAMBIA RPA-ZIMBABWE workshop team on NIR



Figure 18: Joint ZAMBIA RPA-ZIMBABWE workshop proceedings on NIR



Figure 19: Officers measuring EMFs from power lines

3.3 TRAINING

The Authority conducts training in radiation protection and the safe use of radiation sources. This training is necessary for persons associated with radiation work to understand their responsibilities and perform their duties safely. The Authority, conducted 23 trainings in radiation protection to ensure compliance with radiation safety requirements, representing a 16% increase compared to 14 trainings in 2022 (Figure 2 Figure 3 Figure 4). To improve the training, the Authority developed a Technical Services Training Material in Radiation Protection and Safe Use of Radiation Sources.



Figure 20: Radiation Protection Training at Sino hydro Zambia limited



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Figure 20: Radiation Protection Training at Zambia Airports Corporation ltd



Figure 21: Presentations by the trainer at MIMBULA MINERALS LIMITED



Figure 22: Training at Redachem

3.4 ENVIRONMENT RADIOACTIVITY MONITORING

3.4.1 ZAMBIAN MINING AND ENVIRONMENTAL REMEDIATION PROJECT (ZMERIP)

The Radiation Protection Authority (RPA) in collaboration with the National Institute for Scientific and Industrial Research (NISIR) conducted a number of activities under the www.rpa.gov.zm

Zambian Mining and Environmental Remediation and Improvement Project (ZMERIP). The team conducted sampling campaigns in three (3) different towns in the Copperbelt Province namely; Luanshya, Mufulira and Kitwe (Slag dump No. 48 and the surrounding communities). A total of 98 samples were collected in the three towns. The sample matrices were soil, water, sediment and vegetation. During the first sampling campaign of the slag dump No. 48 and the surrounding communities it was discovered that the communities surrounding slag dump No. 48 also known as "black mountain" were getting the slag dump materials to fill their backyards. The materials consisted of naturally radioactive material (NORM that emits harmful radiation, and the main exposure is caused by ingestion and inhalation of radioactive particles from the materials. This prompted the team comprising of RPA, NISIR and the Zambia National Information Services (ZANIS) to conduct a sensitization campaign first with the councillors and black mountain surrounding communities namely in Wusakile, Chamboli, Ndeke, Nkadabwe and Nkana West communities of Kitwe. The purpose of the sensitization campaign was to come up with the strategies for removing these materials from the communities and encourage community members to relocate them to a central site. In fiscal year of 2023, ZMERIP procured a number of equipment and accessories under the project. These include equipment such as gamma spectroscopy lead shield, lead shield stand, hand-held gamma spectrometer, laboratory consumables, mixed radionuclide standards.



figure 23: RPA, NSIR and Mine Safety department conducts ZMERIP site inspection at the Black Mountain

3.4.2 LEAK TESTS, PRODUCTS, WATER AND FOOD SAMPLES

RPA in collaboration with NISIR conducted collected samples in Siavonga for radioactivity monitoring. The team collected a total of 17 water samples in Siavonga. Furthermore, in order to provide for the protection of the public, workers and environment from the harmful effects arising from the use of materials or devices capable of producing ionising radiation, RPA analysed a total of 133 fertilizer samples, 1 soya meal porridge and 1 manganese ore. In order to check the integrity of the radiation source shielding and radiation leakage on the radiation sources to ensure the safety of the workers and the environment, RPA conducted leak test analysis for Kalumbila FQM Trident Limited in Kalumbila, Kansanshi Mine in Solwezi, Mopani Copper Mine PLC in Kitwe and Sinohydro Zambia Limited in Lusaka. A total of 316 nuclear gauges were leak tested in the year 2023.



figure 24: shows number of leak tests conducted in the year 2022 against the year 2023.

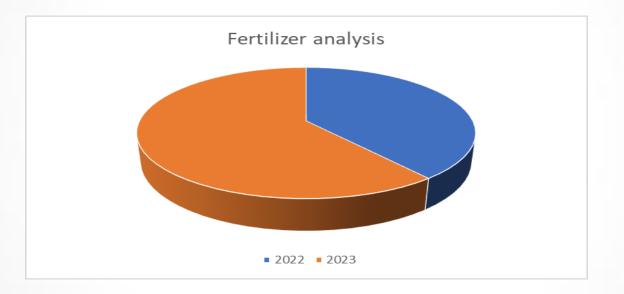


figure 25: shows number of fertilizers analysed in the year 2022 against the year 2023.

3.5 DOSIMETRY AND INSTRUMENTATION.

The primary responsibility of the Authority's Dosimetry Service is to ensure that occupationally exposed workers and radiation students are monitored for radiation exposure and kept safe from radiation doses that exceed the prescribed dose limits. The primary aim of instrumentation is to ensure that the Authority's equipment is well maintained and in proper working condition. In 2023, the Authority issued 1,971 TLD and 300 TLD dosimetry reports for occupationally exposed workers from 257 licensed facilities. Furthermore, to ensure that all occupationally exposed workers within the Authority's jurisdiction are being monitored, 700 TLD badges were procured.

The Authority received the below listed equipment to further enhance detection capabilities and calibrated four radiometer survey meters and one Radiology Quality Control Unit.

EQUIPMENT RECEIVED IN 2023

Name of Equipment	Date Received	Use of Equipment	Purchased By	RPA Asset Tag
X2 PRESTIGE RAYSAFE	01/02/2023	Quality Control Tests for	IAEA	RPA/LABD/009
		Medical X-Ray		
		Machines		

TAA 408.9 2891 2.30 1.4155 4 2.31 102.0 12.0				
RAYSAFE 452 SURVEY METER	10/02/2023	Radiation Dose Survey & Monitoring	IAEA	RPA/LABD/010
MAMMOGRAPHIC ACREDITATION PHANTOM	10/02/2023	Quality Control Tests for Mammography Machines	IAEA	RPA/LABD/011

<section-header></section-header>	10/02/2023	Quality Control Tests For CT Machines	IAEA	RPA/LABD/012
PORTABLE HAND HELD MULTI CHANNEL GAMMA RAY SPECTROMETER	18/01/2023	Gamma Radiation Spectrum Acquisition	ZMERIP	RPA/LABD/013

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IDENTIFINDER R400-T2	18/01/2023	Identification of	IAEA	RPA/LABD/014
		Radionuclides, Search and Location of Radiation Sources and Dose Monitoring		
IDENTIFINDER R425	02/02/2023	Identification of	IAEA	RPA/LABD/015
		Radionuclides,		

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<image/>		Search and Location of Radiation Sources and Dose Monitoring		
SPIR-Ace RADIONUCLIDE IDENTIFIER	01/12/2023	Identification of Radionuclides, Search and Location of Radiation Sources and Dose Monitoring	ZMERIP	Yet To Be Tagged

POLIMASTER PRD	01/10/2023	Search and Location of Radiation Sources and Dose Monitoring	IAEA	Yet To Be Tagged
DIGITAL LAB ANALYTICAL BALANCE	09/05/2023	Accurate Measurement of Weight of Sample being analysed for Radioactivity	ZMERIP	RPA/LAB/016

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Figure 26: shows equipment's the Authority received in the year 2023

The acquisition and calibration of equipment helped the Authority enhance and maintain equipment integrity.

3.6 INTERNATIONAL ENGAGEMENT

The Authority facilitated the International Response train-the-trainer workshop in Lusaka. The Office of Radiological Security (ORS) of the United States of America organized the workshop to help Zambia develop training materials on radioactive source security for various local audiences.

	2022	2023
Fertilizer analysis	87	135
Leak Test	271	316
Dosimetry results	223	234

Table 1 Summary activities of Technical Services Department



4.0. HUMAN RESOURCE AND ADMINISTRATION UNIT

4.1 HUMAN RESOURCE AND ADMINISTRATION

During the year under review, the Authority implemented the rationalised and harmonised salaries and conditions of service as determined by the Emolument Commission effective 1st November, 2023. These were contained in the rationalisation and harmonisation report of salaries and conditions of service for ten (10) regulatory institutions with a similar mandate. The report highlighted implementation cost implication scenarios, recommendations and it ensured that Conditions of Service were in line with Public Service Pay Policy.

4.2 STAFF ESTABLISHMENT

The total Staff Establishment in the year 2023 was 83. The Authority staff level for the filled positions as of December 31st December 2024 was 58. The Authority recruited a total number of four (4) staff to complement the existing staff establishment. The recruited staff were in the positions of Corporate Services Manager (1); Manager Internal Auditor (1); Two other positions of Director Nuclear and Radiation Safety as well as Technical Services Manager were filled up. Note, however, that these two positions did not affect the total number of staffs in the establishment as both positions were filled up by internal staff.

The table below shows the positions filled and the variance in the RPA structure as at December 31st 2023.

S/N	Department	Approved Establishment	Actual as at December 31st, 2023	Separation with The Authority	Variance
1	Executive Director's Office	2	2	0	0
2	Technical Services	21	8	0	13
3	Nuclear&Radiation Safety	23	19	0	4
4	Corporate Services	18	15	0	3

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5	Finance	12	7	1	5
6	Legal	2	2	0	0
7	Procurement & Supplies Unit	3	3	0	0
8	Internal Audit	2	2	0	0
	TOTAL	83	58	1	30

Table 2 Position filled and variance in the structure

Table 3: below shows the number of personnel under internship, attachments and short-term contract during the year under review.

Table 4: Personnel Engagement

S/N	Type of Engagement	No. of Staff
1.	Internship	10
2.	Attachment	2
3.	Short- term contract (temporary employment)	-
	Total	12

4.3 MEDICAL SERVICES

The Authority maintained a medical scheme with the University Teaching Hospital and Levy Mwanawasa General Hospital. Further, in addition to the inhouse Medical Scheme, the Authority also subscribed to the National Health Insurance Management Authority (NHIMA) for staff to access medical services at the NHIMA-accredited facilities in the country.

The RPA has also continued to maintain a Group Life Assurance cover to cover employees for the period of employment. Further, the Authority additionally maintained a Funeral Policy Cover under M'life with Madison Insurance for members of staff.

5.0 PUBLIC RELATIONS UNIT

5.1. ROLES AND MANDATE

The Public Relations Section is the interface between the Authority and its various stakeholders. This Section creates and implements measures to improve the Authority's public image. During the period under review, Public Relations activities were guided by the second Perspective of the Strategic Plan, which was to improve partnerships, and the seventh Objective, which was to increase regional and border presence by bolstering and communicating a healthy and positive brand outlook in order to gain public support and confidence.

5.2 AWARENESS CAMPAIGNS

During the period under review, the Authority embarked on a robust awareness raising campaign to raise awareness of the Authority's mandate and presence. This was achieved by mounting new billboards at the three border posts the Authority is operating from and the new regional office In Livingstone.





Figure 27: shows billboards mounted at Nakonde, Kasumbalesa, Chirundu border posts and the Livingstone regional office

5.3 SHOWS AND EXHIBITIONS

5.3.1 INTERNATIONAL TRADE FAIR

The Authority exhibited at the 2023 Zambia International Trade Fair under the theme "Stimulating Economic Development through Partnerships, Trade, and Investment."

The Authority interacted with over 85 members of the public who visited the stand and were given flyers and brochures as the theme was interpreted as Radiation Protection Authority plays a crucial role in enabling economic development within industries that utilize radiation, such as healthcare, manufacturing, and energy production. By establishing clear guidelines, regulations, and safety standards, the Authority fosters an environment where businesses can confidently invest in radiation-related technologies and services without compromising public health.



Figure 28: members of staff pose for a photo during the International trade fair

5.3.2 AGRICULTURE AND COMMERCIAL SHOW

The Authority exhibited at the 2023 Zambia Agricultural and Commercial Show under the theme "Inclusive Economic Transformation. "

The Authority stand was visited by over 66 members of staff whom the members of staff interacted with by emphasizing the mandate of the Authority and interpreting theme as upholding rigorous safety standards and regulations, the Authority establishes a foundation of trust and confidence within radiation-related industries. This not only protects public health but also fosters an environment conducive to sustainable economic growth. Businesses and investors are more likely to thrive in a marketplace where safety is prioritized, leading to broader economic benefits for society.



Figure 29: members of staff pose for a photo during the Agriculture and commercial show exhibition.

5.3.3 AFRICA PUBLIC SERVICE DAY

The Authority exhibited at the 2023 Africa Public Service Day under the theme of "Acceleration of the African Continental Free Trade Area Implementation," The members of staff interacted with over 23 members of the public and interpreted the theme as The Radiation Protection Authority can contribute to the AfCFTA implementation by collaborating with other regulatory bodies across African countries to harmonize radiation safety standards and regulations. Standardization of safety protocols ensures consistency in practices across borders, facilitating trade in radiation-related goods and services while upholding public health.



Figure 30: members of staff pose for a photo during the Africa Public Service day exhibition.

5.4 MEDIA COVERAGE AND PUBLICATIONS

During the period under review the Authority appeared in the media (both print and electronic) 22 times, through articles in newspapers, interviews on radio and television with no adverse media coverage this is against 13, reported in 2022.

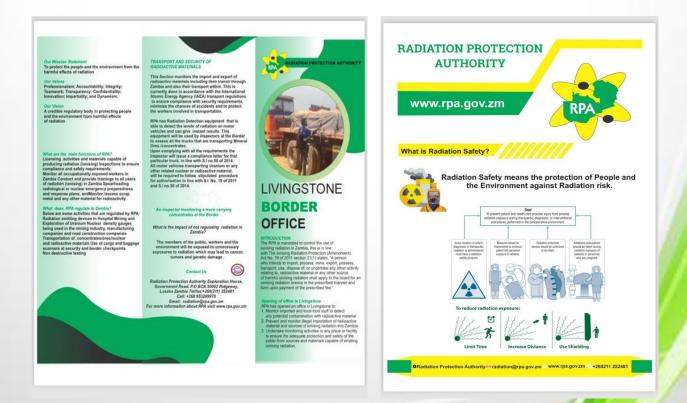
Publications which included the news letters, Annual Report, Calendars and Diaries, brochures and flyers were produced and distributed to various stakeholders during exhibitions, border visitations, conferences, trainings and walk in clients.











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Figures: 31,32,33,33,34,35,36,37 and 38 shows media coverage and publications undertaken in the year 2023.

5.5 RADIATION PROTECTION AUTHORITY LAUNCHES THE 2023-2026 STRATEGIC PLAN

The Radiation Protection Authority launched its 2023–2026 Strategic Plan at an event held at the Taj Pamodzi Hotel in on December 28, 2023.

The theme of the strategic plan was "Safe and secure people and the environment from the harmful effects of radiation," which reflects the core values that drive the efforts in the Ministry of Science and Technology. environment.



Figure 39: RPA Board and management during the strategic plan launch



Figure 40: RPA Board and management and staff during the strategic plan launch

6.0 PROCUREMENT UNIT

6.1 ROLES AND MANDATE

The Procurement unit performs its functions in accordance with the Public Procurement No.8 of 2022. The unit is responsible for the supervision and undertaking of the procurement of goods and services in order to facilitate the smooth operations of the Authority. The department is headed by the Senior Procurement Officer whose assisted by the Assistant Procurement Officer. Other positions in the department include one Store Officer.

The Unit performs the following specific functions:

- Undertakes timely, preparation of procurement plans in order to guide the procurement process and facilitate decision making.
- Undertakes efficiently, secretarial services to the Procurement Committee in order to facilitate smooth conduct of meetings.
- Undertakes timely and accurately, the preparation bidding documents in order to ensure transparency in tendering procedures and to facilitate compliance with laid down procedures.
- Undertakes timely the procurement of goods and services in order to meet end user requirements
- Supervises effectively the storage and supply of goods and services in order to facilitate operations of user departments.
- Undertakes effectively the maintenance of an up to date supplier register in order to facilitate identification of appropriate suppliers.
- Manages timely development of work plans and implementation of performance appraisal system (APAS) in order to monitor, evaluate and enhance performance.
- Supervises effectively utilization of human and material resources in order to achieve sectional objectives.

ACHIEVEMENTS AND CHALLENGES IN THE YEAR 2023 6.2 ACHIEVEMENTS

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- Improvement in the adoption and use of the e-GP system when carrying out procurements.
- Procured all major goods and services on the approved procurement plan for the year 2023
- Attended the Zambia Institute of Purchasing and Supply Annual General Conference were major issues in procurement were discussed

6.3 CHALLENGES

- Inadequate manpower, there is need for the position of procurement officer to be filled.
- Major suppliers of affordable goods and services not participating on tenders posted on the e-GP system.
- Delay in payment process, due to the need for all invoices to be sent to ZRA for clearing before payment has been made.

6.4. PROPOSED SOLUTIONS

• The authority should Recruit a Procurement Officer.

7.0 LEGAL UNIT

7.1 LEGISLATIVE ASSISTANCE FOR TREATY RATIFICATION

During the period under review the legal unit facilitated for the approval of the following conventions. The Attorney General approved the ratification of the following Conventions;

i. Additional Protocol pursuant to INFCIRC/540 (Corr.);

ii. Convention on Early Notification of a Nuclear Accident (INFCIRC/335);

iii. Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency (INFCIRC/336);

iv. Convention on Nuclear Safety (INFCIRC/449);

v. Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management (the 'Joint Convention'), reproduced in document INFCIRC/546; and

vi. Convention on the Physical Protection of Nuclear Material (INFCIR/274) and Amendment.

vii. The Vienna Convention on Civil Liability for Nuclear Damage.

A stakeholder consultation meeting with stakeholders was held in October, 2024 for purposes of drafting Cabinet Memoranda for the aforementioned Conventions. The Cabinet Memoranda of the aforementioned conventions were re submitted to the Ministry of Technology and Science for the ratification process in line with the Ratification of International Agreements Act, No. 34 of 2016.

7.2 BOARD MATTERS

In line with the Radiation Protection Authority Calendar, the Radiation Protection Authority Board (RPAB) had meetings in every quarter of 2023. The meetings comprised of both Ordinary and Extra Ordinary Meetings. Further the Board was dissolved in December, 2023. However, before the dissolution, there was a familiarization tour to all RPA Boarder offices and other facilities with Radioactive Sources i.e National Institute of Scientific Research (NISIR), MISENGE.

RADIATION 7.2.1 THE PROTECTION **AUTHORITY** BOARD AND MANAGEMENT CONDUCTS TOUR OF CHIRUNDU BORDER CANCER DISEASE **INSTISTITUE** HOSPITAL (CDH). NATIONAL FOR **SCIENTIIFIC** AND INDUSTRIAL RESEARCH (NSIR) AND MISENGE ENVIROMENTAL AND **TECHNICAL SERVICES. (METS)**

In a bid to enhance their understanding of the authority's undertakings and promote collaboration, the RPA board and management conducted a comprehensive tour of the CDH, NSIR, METS and the Chirundu border facilities. The visit was aimed at familiarizing the board with the facilities the authority is working with.



Figure 41: RPA Board and Management pays courtesy call on National Institute for Scientific and Industrial Research



Figure 42 and 43 RPA Board and Management visits Misenge Environmental and Technical Services and Cancer Disease Hospital



The Board issued licenses and approved certain RPA policies such as the wellness Policy and Recruitment Policy among others.

7.3 CORPORATE GOVERNANCE

The Legal Department in the year 2023, did attend the Corporate Governance Training together with the Board Members and other Radiation Protection Authority Management as a refresher course.

The Department also advised the institutions on various matters that bordered on Corporate Governance.

7.4 LAW AND REGULATIONS

In relation to Laws and Regulations, the Legal Department did facilitate for the drafting of Cabinet Memoranda of some Conventions that Zambia is intending to ratify, engaged in the process of drafting of Radiation Protection (Nuclear Medicine) Statutory Instrument No. 8 of 2024 and the Ionising Radiation Protection (Radiotherapy) Statutory Instrument No.7 of 2024. Further, the Legal Department also hosted the IAEA experts who met the RPA staff members and the stakeholders to discuss the Nuclear Safety and Radiation Protection Authority Bill. The Experts also gave comments and recommendations on how to proceed with the Bill.

8.0 FINANCE UNIT

ROLES AND MANDATE

The Finance unit performs its functions in accordance with the Public Finance Management Act No.1 of 2018. The unit is responsible for all financial and management accounting functions of the Authority in order to facilitate implementation of programmes. The department is headed by the Finance Manager whose assisted by a Senior Accountant. Other positions in the department include two Assistant Accountants based at Head Office and Accounts Assistants based at the Border offices.

The Unit performs the following specific functions:

- Prepares and submits financial management reports in order to comply with financial regulations and facilitate informed decision making;
- Implements internal controls in order to enhance transparency and accountability in the utilisation of financial and material resources
- Maintenance of expenditure and commitment ledgers in order to ensure that public funds are appropriately utilised;
- Collects and accounts for Revenues in order to safeguard resources and support the budget;
- Accounting for assets in order to safeguard property;
- Prepares and submits annual audited accounts in order to facilitate decision making;
- Manages financial risks in order to mitigate losses;
- Facilitates the processing of personnel emoluments including salaries;
- Cash Management; and
- Undertakes budgetary Control in order to prevent budget over-runs and misapplication of funds.

8.1 OVERVIEW OF THE FINANCIAL PERFORMANCE

During the Financial year ended 31st December 2023, the Authority generated revenue (internally generated funds, government and donor grants) in amounts totalling K28,512,075.00 (2022: K24,568,431.00). The total operating expenses for the year 2023 were K27,407,408.00 (2022: K19,285,548.00). ¹The figure below shows revenue and expenditure for the years 2022 and 2023 respectively.

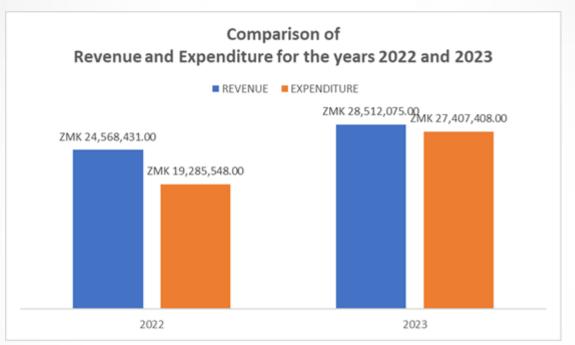


Figure 44: Revenue and expenditure bar chart for the years 2022 and 2023

- ii) The total comprehensive surplus for the year reduced by 80% from a surplus of K5,442,466 in 2022 to a surplus of K1,104,667 in 2023. The reduction in the surplus between the year under review and the prior year was as a result of an increase in the implementation of activities (inspections, Board meetings increased as the previous Board tenure came to an end in 2022, employee costs, trainings, etc) as opposed to the prior year. Further the provision of bad debts reduced also reduced the surplus.
- iii) The Surplus margin ratio for the year 2023 was positive 4% (2022: positive 22%) The positive 4% surplus margin in 2023 shows that the Authority spent 4% less than what

¹ Reference can be made to the Statement of Comprehensive Income on page 11 and to the detailed Statement of Comprehensive Income on page 25 to 26 and page 31 of the Audited Financial Statements.

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i)

the Authority collected in 2023 and the positive 22% in 2022 shows that the Authority spent 22% less than what the Authority collected in 2022.

iv) Revenue increased by 16% during the year 2023. The increase in revenue was mainly attributed to more enforcements carried out as well as the increase in, donations, consultancy fees and revenue obtained from the monitoring of imported vehicles.

8.2 **OVERVIEW OF THE FINANCIAL POSITION²**

- i) The total net book value of the Authority's assets was K 6,497,589 as at 31st December 2023 (2022: K 3,949,443). ³Assets of the Authority comprise of Laboratory equipment, Land and Building, Motor Vehicles, Computer Equipment and Office Furniture and Fittings. The increase in the netbook value of assets is as a result of the acquisition of assets and donations of assets during the period under review.
- ii) The current ratio (Current Assets divided by current liabilities) of the Authority for the financial year 2023 was 1.0:0.87 (2022 was 1.0:0.99). The current ratio of 1 and above shows that the Authority is able to settle its current liabilities as and when they fall due. The major current liabilities (trade and other payables) of the Authority include; provision for leave pay, provision for gratuity, provision for litigation, statutory contributions and accrued operational expenses. As at 31st December 2023 the current liabilities. The increase was as a result of accrued staff salaries and statutory contributions for the months of November and December 2023 that was paid in January 2024. (This was as a result of the Emoluments Commission approval of the harmonised report on conditions of service. Further the increase was also as result of having more

 ² The Authority's Total assets (noncurrent and current assets) and Total Equity and Liabilities amounted to a total sum of K18,320,342 each. Reference can be made to the Statement of Financial Position which shows the breakdown of the Assets and Equity and Liabilities on page 10 of the Audited Financial Statements.
 ³ Reference can be made to Authority's asset register on page 22 of the Audited financial statements which shows the additions of assets and donations received as well as the depreciation charge during the period under review.

contractual employees in the period under review compared in the prior year (hence the increase on gratuity provision).

iii) The Authority recorded a 8% decrease in net trade and other receivables from K2,162,646 in the year 2022 to K1,996,430.00 in 2023. The decrease in trade receivables is as a result of the provision of doubtful debts.⁴

8.3 **OVERVIEW OF THE BUDGETARY PERFORMANCE FOR THE YEAR** 2023

i) This section gives an overview of the performance of the budget for the year 2023. The following table compares the actual results with the budget.

	2023 ACTUAL (A) K	2023 BUDGET (B) K	Variance (B-A) K	% Output K
INCOME:				
Revenue-Internally generated funds	18,203,797.00	24,354,337.50	(6,150,540.50)	(25.25%) ⁵
Cost of Sales	(570,342.00)			
Operating Surplus	17,633,455.00			
Other Income:				
Operational Government	7 000 006 06	8 000 000 00	(2.04)	0.00%6
Grant	7,999,996.96	8,000,000.00	(3.94)	0.00%*
Donor grant	2,878,620.00	3,000,000.00	(121,380.00)	(4.05%) ⁷
Total Other Income	10,878,620.00	11,000,000.00		
TOTAL INCOME	28,512,075.00	35,354,337.50	(6,842,262.50)	19.35%
EXPENSES:				

Table 1: Comparison of Actual Results to the 2023 Budget.

received.

⁴ The explanatory notes to the financial statements from page 22 to 24 of the Audited Financial statements shows the movement of assets and liabilities in the

The explanatory notes to the maincial statements from page 12 to 14 of the nutrities maintee statement of Financial Position. Statement of Financial Position. ⁵ The Authority received internally generated funds amounting to K18,203,797 out of the budgeted internally generated funds amount of K24,354,337.50 leaving a variance of K6,150,540.50 (25.25%) not received. ⁶ The Authority received all the monthly operational government grants during the 12 months of the year under review leaving a zero-percentage variance. ⁷ The Authority received donor funds amounting to K2,878,620.00 out of the budgeted donor funds amount of K3,000,000.00 leaving a variance of K121,380 (4.05%) not received.

Expenditure	27,407,408.00	35,354,337.50	7,496,929.50	77.52% ⁸
Surplus/Deficit				
for the year	1,104,667.00			

9.0. INTERNAL AUDIT

ROLES AND MANDATE

The Internal Audit department derives its mandate from the Board approved Audit Charter. The Charter is a formal written document that defines the purpose, authority and responsibility of the department. Further, Section 17 of the Public Finance Management Act No. 1 of 2018 states the objectives of Internal Auditors as including ascertaining that risk management and internal control systems are in place and continually being improved and optimized. Therefore, the department exists to enhance and protect RPA's value by providing objective risk-based assurance, advice and insight. The work of the department involves highlighting weaknesses and recommending ways of improving the effectiveness of risk management, internal controls and governance processes.

Internal Audit is also responsible for ascertaining the adequacy of RPA's policies and strategies in the prevention and detection of fraud and corruption in order to safeguard public funds and prevent damage to its reputation and image.

9.1 ACTIVITIES UNDERTAKEN IN THE YEAR 2023.

In 2023, the department continued to provide reasonable assurance to the Board by evaluating management's assertions in relation to the achievement of objectives, effectiveness and efficiency of operations, reliability of financial information, and compliance with laws and regulations. This was supported by recommendations and follow up on corrective action taken where weaknesses were evident in order to improve the effectiveness of RPA's risk management, internal controls and governance processes. Internal audit implemented its annual risk-based audit plan following its approval by the Board. All the scheduled audits were completed and Internal Audit Reports were issued and approved by the Board. In addition, a quarterly Action Taken Report (Control Log) of External and Internal Audit

⁸ The % variance of the expenditure during the year under review indicates that the Authority's implementation of activities was at 77.52% (K27,407,408.00) of the total annual budgeted expenditure of K35,354,337.50 leaving a variance of K7,496,929.50 (22.48%) WWW.rpa.gov.zm observations and recommendations were prepared and updated to ensure that all management commitments and resolutions of audit findings were constantly tracked.

9.2 THE AUDIT COMMITTEE

The Audit and Risk Management Committee is established as a statutory committee in terms of section 19 (1) of the Public Finance Management Act No. 1 of 2018. The Committee assisted the Board in the discharge of its duties relating to financial reporting to all stakeholders, compliance, risk management and the effectiveness of accounting and management information systems. The committee consists of independent members who collectively have sufficient qualifications and experience in financial and non-financial matters to fulfil their duties. The internal and external auditors have unrestricted access to the Audit and Risk Management Committee. The committee met four (4) times during the year.

9.3 PRE-AUDITING

The department continued undertaking pre-audits of Payments and Procurement Low Value Papers.

9.4 CHALLENGES

The main challenge the department faced was the limited number of staffs. However, during the year 2023, the position of Manager Internal Audit was filled.

9.6 LOOKING AHEAD

- Continue to review/audit progress on the implementation of the new strategic plan 2023 - 2026. The overall responsibility for the Internal Audit department will be to give assurance to the Board as to whether the strategic objectives are being achieved as planned.
- Undertake Finance and Procurement audits on a quarterly basis to ensure that the Authority focus on procurement of goods and services at the right price, right quality and timely delivery is realized.

- Undertake the Quality Assurance and Improvement Program (QAIP) in accordance with International Standard for the Professional Practice of Internal Auditing (Standard) 1300.
- Place more emphasis on the core mandate of the Authority as it is regarded as high risk.
- Deliver high quality audit services and continuously improve audit and management processes through implementation and use of an audit software and an updated risk management framework.
- Review the adequacy of the risk management processes and mitigations in place.

10.0 ACHIEVEMENTS AND CHALLENGES IN THE YEAR 2023

10.1 ACHIEVEMENTS

- Launched the strategic plan for the year 2023-2026.
- Opened a new regional office In Livingstone.
- Recruited a Corporate service manager and Internal Audit Manager.
- Approved Institutional Conditions of Services for the members of staff of RPA by emoluments commission.
- Procured all major goods and services on the approved procurement plan for the year 2023.
- Developed and approved the wellness Policy and Recruitment Policy.

10.2 CHALLENGES

- Lack of adequate office space and purposely built Laboratory to support Environmental Monitoring Activities.
- Border monitoring activities for the Authority was still being carried out at only three borders; Kasumbalesa, Nakonde and Chirundu. For effective monitoring, there is need for the Authority to be present at all the major points of entry/exit.

- During the year under review, 24% of the registered facilities were not licensed due to non-payment of the prescribed fees.
- Inadequate legal framework.
- Inadequate staff.

10.3. PROPOSED SOLUTIONS

- Construction of offices and laboratories at the acquired one-acre plot at NISIR's waterfalls land to enhance the regulatory and environmental protection functions of RPA still remains a priority.
- Establishment of offices at all the remaining major points of entry (borders) still remains a priority so as to ensure public radiation safety.
- Enactment of a legal framework that adequate to cover all aspects of regulating nuclear Science and Technology.

11.0 THE WAY FORWARD

The Authority shall continue providing effective and efficient regulatory and protection services to all its clientele in line with the provisions of the Strategic Plan 2023-2026 and the Service Delivery Charter.

12.0 OUTLOOK

During the year 2024, the Authority will continue to operate within its mandate of protecting people and the public from harmful effects of ionising radiation while implementing the 2023-2026 Strategic Plan from which an Institutional work plan will be developed. The workplan Plan comprises key activities to be undertaken during the year under each Strategic Objectives with specific drivers and targets to help in measuring and managing performance at all levels. Management will ensure the following in the year 2024:

 System Improvements: In line with the strategic plan the Authority intends to focus on improving the current systems platform through integration, full automation and creation of a robust infrastructure and architecture to ensure efficiency, enhanced controls and increased revenues.

- **RPA** Draft Bill: The Authority intends to further engage the line Ministry and stakeholders to ensure that the Draft RPA Bill is enacted by year end 2024.
- Partnerships: In order to ensure growth, it is imperative that the Authority pursue stronger partnerships with other relevant agencies both public and private sector.
- Effective Stakeholder Management and Engagement: The Authority shall continue to constructively and effectively engage and manage the various key stakeholders.

Radiation Protection Authority Financial Statements for the year ended December 31, 2023

FOR THE YEAR ENDED 31 DECEMBER 2023

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RADIATION PROTECTION AUTHORITY

FINANCIAL STATEMENTS

Contents				
The reports and statements set out below comprise the financial statements presented to the Board:	out below comprise the finance	cial statements presented to th	ne Board:	
				Page
	. ;			
General Information				2
Directors' Report				3 - 5
Directors' Responsibilities and Approval	Approval			9
Independent Auditor's Report				7-9
Statement of Financial Position				10
Statement of Profit or Loss and Other Comprehensive Income	Other Comprehensive Incom	le		11
Statement of Changes in Funds				12
Statement of Cash Flows				13
Accounting Policies			1	14 - 19
Notes to the Financial Statements	SI		2	20 - 30
The following supplementary information does not form part of the financial statements:	formation does not form part	t of the financial statements:		
Detailed Income Statement				31

Amazon Associates Chartered Accountants -

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Radiation Protection Authority Financial Statements for the year ended December 31, 2023		
Directors' Report	Radiation Protection Authority Financial Statements for the near context December 21 2000	
In Pursuant to Part V of the Ionising Radiation Protection Act, No. 16 of 2005 the Directors submit their report together with the audited financial statements for the year ended 31st December 2023.	General Information	
1. Establishment	Country of incorporation and domicile	Zambia
The Authority was established by the Ionising Radiation Protection Act No. 16 of 2005.	Nature of business and principal activities	Protection of the public, workers, the environment from hazards
2. Nature of business		arising from the use of devices or materials capable of producing ionising radiation and to monitor and regulate ionising radiation in Zambia.
The Addition Autoority was incorporated in Zambia with the mandate to protect public, workers and the environment from hazards arising from the use of devices or materials capable of producing ionising radiation.	Directors	Ms. Christabel N. Reinke
3. Review of financial results and activities		Mr. Msafiri Sinkala Ms. Olina I Sakala
The financial statements have been prepared in accordance with International Financial Reporting Standards and the requirements of the Ionising Radiation Protection Act No.16 of 2005. The accounting policies have been applied consistently commared to the microward.		Ms. Thandiwe P. Chabi Mr. Muleka Kamanisha
Full details of the financial position, results of operations and cash flows of the Authority are set out in these financial statements.		Mrs. Jane Mubanga Chinkusu Dr. Joseph Kabunda Mrs. Patricia S. Chilaisha
4. Risk management		Mrs. Brenda Chibulu Mwamba Brio Gen Dr Tevy Michemura
The broad of dimensions has associated as a set of the		Mr. Nkumbu Siame
Intervolution of uncerous rate vortain responsibility for the establishment and oversight of the Authority's risk management framework. The Authority's risk management policies are established to identify and analyse the risks faced by the entity, to set appropriate risk limits and controls and the monterviers and adherence to limits. Risk management policies and systems are reviewed regularly to reflect changes in market conditions and the Authority's activities.		Mr. Mumba Diangamo Nakama Dr. Charles Mwishi Dr. Steven Mudenda
The Authority's board of directors oversees how management monitors compliance with the risk management noticies and		Mr. Gerald Mwila
procedures, and reviews adequacy of the risk management framework in relation to the risks faced by the entity. The board undertakes both regular and ad hoc reviews of risk management controls and procedures.	Business address	Exploration House Government Road
5. Corporate governance		Ridgeway Lusaka. Zambia
The board of directors hereby confirms that the Authority has complied with all the internal control aspects of the principles of good governance. The financial statements have been prepared in accordance with the International Financial Reporting Standards and its interpretations adopted by the International Accounting Standards Board and the requirements of the Ionising Radiation Protection Act, No. 16 of 2005.	Registered office	Exploration House Government Road Ridgeway Lusaka Zamhia
	Postal address	P.O. Box 50002 Ridgeway Lusaka, Zambia
	Bankers	Zambia National Commercial Bank (ZANACO) Plc Access Bank Zambia Limited (Formerly Atlas Mara)
	Auditors	Amazon Associates Chartered Accountants Registered Auditors
	TPIN	1002530531
	Legal advisors	Bunting & Associates Advocates and Notaries

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Financial Statements for the year ended December 31, 2023 **Radiation Protection Authority**

Directors' Report

10. Litigation statement

The Authority becomes involved from time to time in various claims and lawsuits incidental to the ordinary course of business

Two court cases in respect of claims by former employees to the amount of K4 million have been instituted against the Authority: The cases are still pending at the Courts and the final outcome will only be confirmed when judgement is delivered. The Authority's legal advisors are of the opinion that the cases can go either way. There is no possibility of claiming this amount from a third party resulting in reimbursement. Save as recorded above, the directors are not aware of any legal or arbitration proceedings, including proceedings that are pending or threatened that may have a material effect on the financial position of the Authority.

11. Events after the reporting period

The directors are not aware of any material event which occurred after the reporting date and up to the date of this report.

12. Statement of disclosure to the Authority's auditors

With respect to each person who is a director on the day that this report is approved: •

- there is, so far as the person is aware, no relevant audit information of which the Authority's auditors are unaware, and
 - the person has taken all the steps that he/she ought to have taken as a director to be aware of any relevant audit information and to establish that the Authority's auditors are aware of that information.

13. Terms of appointment of the auditors

The auditors, Messrs Amazon Associates Chartered Accountants will continue in office following their three year term of appointment by the Office of the Auditor General.

By Order of the Board

Secretary to the Board Lusaka 12/0子/2024 Executive Director

Financial Statements for the year ended December 31, 2023 **Radiation Protection Authority**

Directors' Report

6. Directors

The directors in office during the year and at the date of this report are as follows:

Directors	Office	Designation	Nationality	Changes
Ms. Christabel N. Reinke	Board Chairperson	Non-executive	Zambian	Appointed 9 Nov2023
Mr. Msafiri Sinkala	Vice Chairperson	Non-executive	Zambian	Appointed 9 Nov 2023
Ms. Olipa J. Sakala	Board member	Non-executive	Zambian	Appointed 9 Nov 2023
Ms. Thandiwe P. Chabi	Board member	Non-executive	Zambian	Appointed 9 Nov 2023
Mr. Muleka Kamanisha	Board member	Non-executive	Zambian	Appointed 9 Nov 2023
Mrs. Jane Mubanga Chinkusu	Board member	Non-executive	Zambian	Appointed 9 Nov 2023
Dr. Joseph Kabunda	Board member	Non-executive	Zambian	Appointed 9 Nov 2023
Mrs. Patricia S. Chilaisha	Board member	Non-executive	Zambian	Appointed 9 Nov 2023
Mrs. Brenda Chibulu Mwamba	Board member	Non-executive	Zambian	Appointed 9 Nov 2023
Brig. Gen. Dr. Levy Muchemwa	Board member	Non-executive	Zambian	Appointed 9 Nov 2023
Mr. Nkumbu Siame	Board member	Non-executive	Zambian	Appointed 9 Nov 2023
Mr. Mumba Diangamo Nakama	Board member	Non-executive	Zambian	Appointed 9 Nov 2023
Dr. Charles Mwishi	Board member	Non-executive	Zambian	Appointed 9 Nov 2023
Dr. Steven Mudenda	Board member	Non-executive	Zambian	Appointed 9 Nov 2023
Mr. Gerald Mwila	Board member	Non-executive	Zambian	Appointed 9 Nov 2023
Brig. Gen. Dr. Adrian Maleya	Board member	Non-executive	Zambian	Term ended 9 Nov 2023
Mr. Fred Banda	Board member	Non-executive	Zambian	Term ended 9 Nov 2023
Mr. Felisian Ngosa	Board member	Non-executive	Zambian	Term ended 9 Nov 2023
Mr. J Kamvuma	Board memeber	Non-executive	Zambian	Term ended 9 Nov 2023

7. Property, plant and equipment

There was no change in the nature of the property, plant and equipment of the Authority or in the policy regarding their use.

At December 31, 2023 the Authority's investment in property, plant and equipment amounted to ZMW6,497,589 (2022: ZMW 3,949,443), of which ZMW3,994,008 (2022: ZMW 1,940,637) was added in the current year through additions.

8. Employees

The average number of employees during the year was 61 (2022: 52) and their total emoluments amounted to ZMW 15,981,202 (2022: ZMW 12,707,895).

9. Going concern

The financial statements have been prepared on the basis of accounting policies applicable to a going concern. This basis presumes that finds will be available to finance future operations and that the realisation of assets and settlement of liabilities, contingent obligations and commitments will occur in the ordinary course of business. The directors believe that the Authority has adequate financial resources to continue in operation for the foreseeable future and accordingly the financial statements have been prepared on a going concern basis. The directors have satisfied themselves that the Authority is in a sound financial position and that it has sufficient cash to meet its foreseeable obligations. The directors are not aware of any new material changes that may adversely impact the Authority. The directors are also not aware of any material non-compliance with statutory or regulatory requirements or of any pending changes to legislation which may affect the Authority.



9" Floor ELZ Building, Stand No. 2374, Kerkin Siwale Roud, Lusaka. Phone Not: - 2009 557 165 10 - 200 957 156 10 - 260 953 595 20 - 250 973 481 - 240 953 20 16 19 - 260 973 94 968 - 250 973 481 - 420 953 237 70 1 - 260 973 94 968 Email: movika Juma@amazonascociates co zm

info@mazonassociates.co.zm Partners: Monika Kumar Naison Chikati

Independent Auditor's Report

fo the Board of Radiation Protection Authority

Report on the Audit of the Financial Statements

Opinion

We have audited the financial statements of Radiation Protection Authority (the Authority) set out on pages 10 to 30, which comprise the statement of financial position as at December 31, 2023, statement of profit or loss and other comprehensive income, statement of changes in funds and statement of cash flows for the year then ended, and notes to the financial statements, including material accounting policy information.

In our opinion, the financial statements present fairly, in all material respects, the financial position of Radiation Protection Authority as at December 31, 2023, and its financial performance and cash flows for the year then ended in accordance with International Financial Reporting Standards and the requirements of the Ionising Radiation Protection Act No.16 of 2005.

Basis for Opinion

We conducted our audit in accordance with International Standards on Auditing. Our responsibilities under those standards are further described in the Auditor's Responsibilities for the Audit of the Financial Statements section of our report. We are independent of the Authority in accordance with the International Ethics Standards Board for Accountants' International Code of Ethics for Professional Accountants (including International Independence Standards) (Parts 1, 3 and 4A) (IESBA Code) and other independence requirements applicable to performing audits of financial statements in Zambia. We have fulfilled our other ethical responsibilities in accordance with the IESBA Code and in accordance with other reductance with the the splicable to performing audits of financial statements in Zambia. We have fulfilled our other ethical responsibilities in Zambia. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our option.

Key Audit Matters

Key audit matters are those matters that, in our professional judgement, were of most significance in our audit of the financial statements of the current period. These matters were addressed in the context of our audit of the financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters.

We have determined that there are no key audit matters to communicate in our report.

Radiation Protection Authority Financial Statements for the year ended December 31, 2023

Directors' Responsibilities and Approval

The directors are required in terms of the Ionising Radiation Protection Act No. 16 of 2005 to maintain adequate accounting records and are responsible for the content and integrity of the financial statements and related financial information included in this report. It is their responsibility to ensure that the financial statements fairly present the state of affairs of the Authority as at the end of the financial year and the results of its operations and eash flows for the period then ended, in conformity with the financial Reporting Standards. The external auditors are engaged to express an independent opinion on the financial statements. The financial statements are prepared in accordance with International Financial Reporting Standards and are based upon appropriate accounting policies consistently applied and supported by reasonable and prudent judgements and estimates. The directors acknowledge that they are ultimately responsible for the system of internal financial control established by the Authority and place considerable importance on maintaining a strong control environment. To enable the directors to meet these responsibilities, the directors set standards for internal control aimed at reducing the nisk of error or loss in a cost-effective manner. The standards include the proper delegation of responsibilities within a clearly defined framework, effective accounting procedures and adequate segregation of duties to ensure an acceptable level of risk. These controls are monitored throughout the Authority and all employees are required to maintain the highest ethical standards in ensuring the Authority's business is conducted in a manner that in all reasonable circumstances is above reproach. The focus of risk management in the Authority is on identifying, assessing, managing and monitoring all known forms of risk arons the Authority. While operating risk cannot be fully eliminated, the Authority endeavours io minimise it by ensuring that appropriate infrastructure, controls, systems and ethical behaviour are applied and managed within predetermined procedures and constraints.

The directors are of the opinion, based on the information and explanations given by management, that the system of internal control provides reasonable assurance that the financial records may be relied on for the preparation of the financial statements. However, any system of internal financial control can provide only reasonable, and not absolute, assurance against material misstatement or loss. The directors have reviewed the Authority's cash flow forecast for the year to December 31, 2024 and, in light of this review and the current financial position, they are satisfied that the Authority has access to adequate resources to continue in operational existence for the foresceable future. The external auditors are responsible for independently auditing and reporting on the Authority's financial statements. The financial statements have been examined by the Authority's external auditors and their report is presented on pages 7 to 9.

The financial statements set out on pages 10 to 31, which have been prepared on the going concern basis, were approved by the board of directors on $\frac{12}{10}$, $\frac{127}{202}$, 2024 and were signed on their behalf by:

Approval of financial statements

• Board Chairper

Audit and Risk Committee Chairperson

9

Independent Auditor's Report

We communicate with the directors regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify thring onr andit

Report on Other Legal and Regulatory Requirements

In our opinion the Radiation Protection Authority has prepared the financial statements as at 31 December 2023 in accordance with the louising Radiation Protection Act Nu.16 of 2003 and other records and registers have also been kept in accordance with the Act

Monika Kumar

Engagement Partner Engagement Partner Practising Certificate No.AUD/F000447 Amazon Associates Chartered Accountants Registered Auditors

24/04 202 4. Lusaka

Independent Auditor's Report

Other Information

The directors are responsible for the other information. The other information comprises the General Information on page 2, Directors' Report on pages 3 to 5, Directors' Responsibilities and Approval statement on page 6 and the Supplementary Information on page 31. The other information does not include the financial statements and our auditor's report thereon.

Our opinion on the financial statements does not cover the other information and we do not express an audit opinion or any form of assurance conclusion thereon.

In connection with our audit of the financial statements, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the financial statements or our knowledge obtained in the audit, or otherwise appears to be materially misstated. If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

Responsibilities of the Directors for the Financial Statements

The directors are responsible for the preparation and fair presentation of the financial statements in accordance with International Financial Reporting Standards and the requirements of the Ionising Radiation Protection Act No.16 of 2005, and for such internal control as the directors determine is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error. In preparing the financial statements, the directors are responsible for assessing the Authority's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the directors either intend to liquidate the Authority or to cease operations, or have no realistic alternative but to do so.

Auditor's Responsibilities for the Audit of the Financial Statements

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

As part of an audit in accordance with International Standards on Auditing, we exercise professional judgement and maintain professional scepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omisions, misrepresentations, or the override of internal control.
 - Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Authority's internal control.
 - Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the directors.
- Conclude on the appropriateness of the directors' use of the going concern basis of accounting and based on the
 audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast
 significant doubt on the Authority's ability to continue as a going concern. If we conclude that a material
 uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the
 financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on
 the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may case
 the Authority to cease to continue as a going concern.

Evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

Radiation Protection Authority Financial Statements for the year ended December 31, 2023

Statement of Profit or Loss and Other Comprehensive Income

www.rpa.gov.zm

Figures in Zambian Kwacha	Note(s)	2023	2022
Revenue	10	18.203.797	14.962.990
Cost of sales	11	(570,342)	(222,967)
Operating surplus		17,633,455	14,740,023
Other operating income	12	10,878,620	9,828,408
Other operating gains (losses)	13		159,583
Depreciation	14	(1,400,862)	(844,663)
Employee cost	14	(15,981,202)	(12,707,896)
Other operating expenses		(10,025,344)	(5,732,989)
Total comprehensive surplus for the year		1,104,667	5,442,466

The accounting policies on pages 14 to 19 and the notes on pages 20 to 30 form an integral part of the financial statements.

Radiation Protection Authority Financial Statements for the year ended December 31, 2023

Statement of Financial Position as at December 31. 2023

Figures in Zambian Kwacha Assets Assets Non-Current Assets Property, plant and equipment Property, plant and equipment Current Assets Trade and other receivables Cash and cash equivalents Cash and cash equivalents Total Assets	Note(s) 0 4 5 3	2023 6,497,589 149,188	3,949,443
Assets Non-Current Assets Property, plant and equipment Current Assets Inventories Trade and other receivables Cash and cash equivalents Total Assets	m vn.4∞	6,497,589	3,949,443
Non-Current Assets Property, plant and equipment Current Assets Inventories Trade and other receivables Cash and cash equivalents Total Assets	w v40	6,497,589	3,949,443
Non-Current Assets Property, plant and equipment Current Assets Inventories Trade and other receivables Cash and cash equivalents Total Assets	w v40	6,497,589 149,188	3,949,443
Property, plant and equipment Current Assets Inventories Trade and other receivables Cash and eash equivalents Total Assets	w v4.o	6,497,589	3,949,443
Current Assets Inventories Trade and other receivables Cash and cash equivalents Total Assets	0 4 O	149,188	
Inventories Trade and other receivables Cash and cash equivalents Total Assets	o 4 o	149,188	
Trade and other receivables Cash and cash equivalents Total Assets	4 0		142.551
Cash and cash equivalents Total Assets	9	1.996.430	2.162.646
Total Assets		9,677,134	8,741,014
Total Assets		11,822,752	11,046,211
		18,320,341	14,995,654
Fund and Liabilities			
Funds			
Accumulated funds	2	9,518,207	8,413,541
Liabilities			
Non-Current Liabilities			
Capital grant	∞	2,000,000	1,000,000
Current Liabilities			
Trade and other payables	6	3,528,986	2,349,856
Deferred income	7	3,273,148	3,232,257
		6,802,134	5,582,113
Total Liabilities		8,802,134	6,582,113
Total Funds and Liabilities		18,320,341	14,995,654

The financial statements and the notes on page 3, were approved by the board of directors on $\frac{12}{12}$ / $\frac{0.7}{12024}$ and were signed on its behalf by:

Audit and Risk Committee Chairperson Ś. 3 Board Chairperson •.

The accounting policies on pages 14 to 19 and the notes on pages 20 to 30 form an integral part of the financial statements.

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Radiation Protection Authority Financial Statements for the year ended December 31, 2023

Financial Statements for the year ended December 31, 2023			
Statement of Cash Flows			
Figures in Zambian Kwacha	Note(s)	2023	2022
Cash flows from operating activities			
Surplus for the year		1,104,667	5,442,469
Adjustments for non-cash items: Depreciation		1,445,863	844,663
Prior year adjustment			(5,984)
Changes in working capital: (Increase) decrease in inventories		(6,637)	(142,552)
(Increase) decrease in trade and other receivables		519,127	(260,768)
(Increase) decrease in prepayments Increase (decrease) in trade and other payables		(352,912) 1,179,130	- (511,156)
Increase (decrease) in deferred income		40,891	140,777
Cash generated from operations		3,930,129	5,507,449
Net cash from operating activities		3,930,129	5,507,449
Cash flows from investing activities			
Purchase of property, plant and equipment Proceeds from sale of pronerty, nlant and equipment	<i>ლ</i> თ	(4,039,009) 45 000	(1,940,636) 143 146
Proceeds from disposal of TLD badges			365,417
Net cash from investing activities		(3,994,009)	(1,432,073)
Cash flows from financing activities			
Movement in capital grant Amortisation of grant		1,000,000	1,000,000 (506,623)
Net cash from financing activities		1,000,000	493,377
Total cash movement for the year		936,120	4,568,753
Cash and cash equivalents at the beginning of the year	J	8,741,014	4,172,261
Cash and cash equivalents at the end of the year	9	9,677,134	8,741,014

Radiation Protection Authority Financial Statements for the year ended December 31, 2023

Statement of Changes in Funds

Figures in Zambian Kwacha	Capital grant	Accumulated funds	Total funds
Balance at January 1, 2022	506,623	2,988,562	3,495,185
Total comprehensive surplus for the year	'	5,442,466	5,442,466
Prior period adjustments	1	(5,984)	(5,984)
Decrease in provision for bad debts		(11, 503)	(11,503)
Capital grant received during the year	1,000,000		1,000,000
Amortization of capital grant	(506,623)	ı	(506,623)
Total changes in funds	493,377	(17,487)	475,890
Opening balance as previously reported Adiustments	1,000,000	8,402,037	9,402,037
Prior period adjustments (Note 16)	(1,000,000)	11,503	(988,497)
Balance at January 1, 2023 as restated	'	8,413,540	8,413,540
Total comprehensive surplus for the year	•	1,104,667	1,104,667
Balance at December 31, 2023	1	9,518,207	9,518,207

Accounting Policies

1.3 Property, plant and equipment

Property, plant and equipment is initially measured at cost.

Expenditure incurred subsequently for major services, additions to or replacements of parts of property, plant and equipment are capitalised if it is probable that future economic benefits associated with the expenditure will flow to the Authority and the cost can be measured reliably. Day to day servicing costs are included in profit or loss in the year in which they are incurred.

Property, plant and equipment is subsequently stated at cost less accumulated depreciation and impairment losses.

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

Item	Depreciation method	Average depreciation rate
Buildings	Straight line	2%
Furniture and fixtures	Straight line	25%
Motor vehicles	Straight line	25%
Office equipment	Straight line	33%
Computer equipment	Straight line	33%
Laboratory equipment	Straight line	20%

The residual value, useful life and depreciation method of each asset are reviewed at the end of each reporting period. No material changes were made.

There were no indicators of impairment for property, plant and equipment and no impairment tests were performed.

1.4 Financial instruments

Financial instruments are recognised when the Authority becomes a party to the contractual provisions. They are measured, at initial recognition, at fair value plus transaction costs, if any.

The material accounting policies for each type of financial instrument held by the Authority are presented below:

Trade and other receivables

Trade and other receivables, excluding, when applicable, prepayments, are classified as financial assets. At initial recognition, the Authority measures trade and other receivables at their transaction price (as defined in IFRS 15) as the trade receivables do not contain a significant financing component in accordance with IFRS 35 (or when the Authority applies the practical expedient in accordance with paragraph 63 of IFRS 15) (note 7).

The amortised cost is the amount recognised on the receivable initially, minus principal repayments, plus cumulative amortisation (interest) using the effective interest method of any difference between the initial amount and the maturity amount, adjusted for any loss allowance. Trade and other receivables are recognised when the Authority becomes a party to the contractual provisions of the receivables. They are measured, at initial recognition, at fair value plus transaction costs, if any. The Authority subsequently measures the trade receivables at the undiscound invoice price. As a practical expedient, the entity need not adjust the promised amount of consideration for the effects of a significant financing component if the entity expects, at contract inception, that the period between when the entity transfers a promised good or service to a customer and when the customer pays for that good or service will be one year or less. The accounting policy for impairment of trade and other receivables is set out in the loss allowances and write offs accounting policy.

Radiation Protection Authority Financial Statements for the year ended December 31, 2023

Accounting Policies

Corporate information

The Radiation Protection Authority is a statutory body incorporated and domiciled in Zambia. The principal activity of the Authority is to monitor and regulate the use of ionising radiation in Zambia in accordance with the Ionising Radiation Protection Act No. 16 of 2005 as amended.

1. Material accounting policies

Management has considered the principles of materiality in IFRS Practice Statement 2 Making Materiality Judgements, and only those accounting policies which are considered material have been presented in these financial statements.

1.1 Basis of preparation

The financial statements have been prepared on the going concern basis in accordance with, and in compliance with, International Financial Reporting Standards ("IFRS") and International Financial Reporting Standards Interpretations Committee ("IFRS IC") interpretations issued and effective at the time of preparing these financial statements and the Ionising Radiation Protection Act No.16 of 2005 as amended. The financial statements have been prepared on the historic cost convention, unless otherwise stated in the accounting policies which follow and incorporate the material accounting policies set out below. They are presented in Zambian Kwacha, which is the Authority's functional currency.

These accounting policies are consistent with the previous period.

1.2 Significant judgements and sources of estimation uncertainty

The preparation of financial statements in conformity with IFRS requires management, from time to time, to make judgements, estimates and assumptions that affect the application of policies and reported amounts of assets, liabilities, income and expenses. These estimates and assoriated assumptions are based on experience and various other factors that are believed to be reasonable under the circumstances. Actual results may differ from these estimates. The estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognised in the period in which the estimates are revised and in any future periods affected.

Critical judgements in applying accounting policies

Management did not make critical judgements in the application of accounting policies, apart from those involving estimations, which would significantly affect the financial statements.

Key sources of estimation uncertainty

The financial statements do not include assets or liabilities whose carrying amounts were determined based on estimations for which there is a significant risk of material adjustments in the following financial year as a result of the key estimation assumptions.

Financial Statements for the year ended December 31, 2023

Radiation Protection Authority

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

The Authority received a government grant, the condition was which that the grant will be used for operational purposes and a part allocated for capital expenditure

Grants are recognised when there is reasonable assurance that the:

Authority will comply with the conditions attaching to them; and Grants will be received Grants are recognised as income over the periods necessary to match them with the related costs that they are intended to compensate A grant that becomes receivable as compensation for expenses or losses already incurred or for the purpose of giving immediate financial support to the entity with no future related costs is recognised as income of the period in which it becomes receivable.

Grants related to assets, including non-monetary grants at fair value, are presented in the financial position by setting up the grant as deferred income or by deducting the grant in arriving at the carrying amount of the asset. Repayment of a grant related to income is applied first against any un-amortised deferred credit set up in respect of the grant. To the extent that the repayment exceeds any such deferred credit, or where no deferred credit exists, the repayment is recognised immediately as an expense. Repayment of grant related to an asset is recorded by increasing the carrying amount of the asset or reducing the deffered income balance by the amount repayable. The cumulative additional depreciation that would have been recognised to date as an expense in the absence of the grant is recognised immediately as an expense.

1.12 Revenue from contracts with customers

The Authority recognises revenue from the following major sources:

- Licence fees These are licenses issued to mines and hospitals to ensure that the radiations from mines and x-ray machines in hospitals are within the range/capacity that a human body should be exposed to •
 - Imports and exports/ Transporation fees A minimal fee is charged for every truck/ car carrying minerals and Inspection fees - These are charges on inspections and assessment of machines in various sectors mostly Hospitals. Mines and constructions companies.
 - ores entering through the borders.
 - Sale of Thermoluminescence Dosimeter Machines (TLDs) These are imported from Dubai and sold to hospitals and other individuals that are exposed to radiation. TLDs are worn by individuals that are exposed to radiation and these badges indicate and help reduce the radiation exposure.
- Servicing of Thermoluminescence Dosimeter Machines (TLDs) -These are TLD badges donated to the Authority which are hired out to students who are interns and are charged for servicing those badges every 3 months.

Revenue is measured based on the consideration specified in a contract with a customer and excludes amounts collected on behalf of third parties. The Authority recognises revenue when it transfers control of a product or service to a customer

Interest income

Interest income is included in 'other operating income' in the statement of profit or loss and other comprehensive income

Financial Statements for the year ended December 31, 2023 **Radiation Protection Authority**

Accounting Policies

1.4 Financial instruments (continued)

[mpairment - Expected credit losses and write offs

A provision matrix is used as a practical expedient when determining expected credit losses. The provision matrix is based on historic credit loss experience, adjusted for factors that are specific to the debtors, general economic conditions and an assessment of both the current and forecast conditions.

ECL). The amount of expected credit losses is updated at each reporting date to reflect changes in credit risk since initial recognition of the respective instruments. This means that at each reporting date, the ECL for a specific instrument will either be based on lifetime ECL or 12 month ECL depending on the credit risk at reporting date compared to the credit risk at initial a significant increase in credit risk (risk of default) since initial recognition. If the credit risk has not increased significantly since initial recognition, then the loss allowance for that instrument is measured at 12 month expected credit losses (12 month All other loss allowances are measured at an amount equal to lifetime expected credit losses (lifetime ECL) when there has been recognition.

Irrespective of the outcome of the above assessment, the credit risk on an instrument is always presumed to have increased significantly since initial recognition if the contractual payments are more than 30 days past due, unless the Authority has reasonable and supportable information that demonstrates otherwise. By contrast, if an instrument is assessed to have a low credit risk at the reporting date, then it is assumed that the credit risk of the receivable has not increased significantly since initial recognition. The measurement of expected credit losses incorporates the probability of default, loss given default and the exposure at default, taking the time value of money, historical data and forward-looking information into consideration The movement in credit loss allowance is recognised in profit or loss with a corresponding adjustment to the carrying amount of the instrument through a loss allowance account.

and there is no realistic prospect of recovery, e.g. when the counterparty has been placed under liquidation or has entered into bankruptcy proceedings. Instruments written off may still be subject to enforcement activities under the Authority's recovery The Authority writes off an instrument when there is information indicating that the counterparty is in severe financial difficulty procedures. Any recoveries made are recognised in profit or loss.

Trade and other payables

Trade and other payables (note 15), excluding amounts received in advance, are classified as financial liabilities.

They are recognised when the Authority becomes a party to the contractual provisions, and are measured, at initial recognition, at fair value plus transaction costs, if any. They are subsequently measured at the undiscounted amount of the cash expected to be paid, unless the arrangement effectively constitutes a financing transaction. If trade and other payables contain a significant financing component, and the effective interest method results in the recognition of interest expense, then it is included in profit or loss in finance costs.

Trade and other payables expose the Authority to liquidity risk

Cash and cash equivalents

Cash and cash equivalents are stated at carrying amount which is deemed to be fair value.

Notes to the Financial Statements

2. New Standards and Interpretations

2.1 Standards and interpretations effective and adopted in the current year

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

Initial application of IFRS 17 and IFRS 9 - Comparative information

A narrow-scope amendment to the transition requirements of IFRS 17 for entities that first apply IFRS 17 and IFRS 9 at the same time. The amendment regards financial assets for which comparative information is presented on initial application of IFRS 17 and IFRS 9, but where this information has not been restated for IFRS 9. Under the amendment, an entity is permitted to present comparative information about a financial asset as if the classification and measurement requirements of IFRS 9 had been applied to that financial asset before. The option is available on an instrument-by-instrument basis. In applying the classification overlay to a financial asset, an entity is not required to apply the impairment requirements of IFRS 9.

The effective date of the amendment is for years beginning on or after January 1, 2023.

The Authority has adopted the amendment for the first time in the 2023 financial statements.

The impact of the amendment is not material.

Deferred tax related to assets and liabilities arising from a single transaction - Amendments to IAS 12

The amendment adds an additional requirement for transactions which will not give rise to the recognition of a deferred tax asset or liability on initial recognition. Previously, deferred tax would not be recognised on the initial recognition of an asset or liability in a transaction which is not a business combination and at the time of the transaction affects neither accounting profit or loss. The additional requirement provides that the transaction, at the time of the transaction must not give rise to equal taxable and deductible temporary differences.

The effective date of the amendment is for years beginning on or after January 1, 2023.

The Authority has adopted the amendment for the first time in the 2023 financial statements.

The impact of the amendment is not material

Disclosure of accounting policies: Amendments to IAS 1 and IFRS Practice Statement 2

IAS 1 was amended to require that only material accounting policy information shall be disclosed in the financial statements. The amendment will not result in changes to measurement or recognition of financial statement items, but management will undergo a review of accounting policies to ensure that only material accounting policy information is disclosed.

The effective date of the amendment is for years beginning on or after January 1, 2023.

The Authority has adopted the amendment for the first time in the 2023 financial statements.

The impact of the amendment is not material.

Definition of accounting estimates: Amendments to IAS 8

The definition of accounting estimates was amended so that accounting estimates are now defined as "monetary amounts in financial statements that are subject to measurement uncertainty."

The effective date of the amendment is for years beginning on or after January 1, 2023.

The Authority has adopted the amendment for the first time in the 2023 financial statements.

The impact of the amendment is not material.

Radiation Protection Authority Financial Statements for the year ended December 31, 2023

Accounting Policies

1.13 Cost of sales

When inventories are sold, the carrying amount of those inventories is recognised as an expense in the period in which the related revenue is recognised. The amount of any write-down of inventories to net realisable value and all losses of inventories are recognised as an expense in the period the write-down or loss occurs. The amount of any write-down of inventories, arising from an increase in net realisable value, is recognised as a reduction in the amount of inventories recognised as an expense in the period the realisable value, is recognised as a reduction in the amount of inventories recognised as an expense in the period in which the reversal occurs.

1.14 Translation of foreign currencies

Foreign currency transactions

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

Foreign currency monetary items are translated at the end of the reporting period using the closing rate.

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

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Notes to the Financial Statements

3. Property, plant and equipment

		2023			2022	
	Cost	Accumulated depreciation	Accumulated Carrying value depreciation	Cost	Accumulated depreciation	Accumulated Carrying value depreciation
Buildings	1,796,701	(177.147)	1.619.554	1.796.701	(141.213)	1.655.488
Furniture and fixtures	613,561	(425,578)		506,582	(362,751)	
Motor vehicles	3,814,553	(1,823,232)	1,	2,082,553	(1,273,404)	~
Office equipment	(433,664)	589,796		(282,137)	572,449	
Computer equipment	1,120,589	(479,929)		540,819	(382,280)	
Other property, plant and	4,662,093	(3, 126, 135)	1,535,958	3,447,161	(2,623,038)	
equipment						
Capital - Work in progress	365,981	'	365,981	68,001	1	68,001
Total	11,939,814	(5,442,225)	6,497,589	8,159,680	(4,210,237)	3,949,443

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	Opening	Additions	Disposals	Depreciation	Total
	balance				
Buildings	1,655,488	'	1	(35,934)	1,619,554
Furniture and fixtures	143,831	106,979	ı	(62, 827)	187,983
Motor vehicles	809,149	1,732,000	ı	(549,828)	1,991,321
Office equipment	290,312	17,347		(151, 527)	156,132
Computer equipment	158,539	624,770	(45,000)	(97,649)	640,660
Laboratory equipment	824,123	1,214,932	1	(503,097)	1,535,958
Capital - Work in progress	68,001	297,980	1	1	365,981
	3,949,443	3,994,008	(45,000)	(1,400,862)	6,497,589

Reconciliation of property, plant and equipment - 2022

Total	1,655,488	143,831	809,149	290,312	158,539		68,001	3,949,443
Depreciation	(35,934)	(40, 293)	(200,273)	(127,333)	(62,192)	(378,638)	'	(844,663)
Disposals	1	T	(288, 746)	•	1	(219,819)	,	(508,565)
Additions through donations	,	49,375	1	35,449	69,316	604,273	1	758,413
Additions	J	66,758	620,000	225,363	116,400	85,702	68,001	1,182,224
Opening balance	1,691,422	67,991	678,168	156,833	35,015	732,605	,	3,362,034
	Buildings	Furniture and fixtures	Motor vehicles	Office equipment	Computer equipment	Laboratory equipments	Capital - Work in progress	

Details of properties

Included in Land and building is a one (1) acre plot which was allocated to Radiation Protection Authority (RPA) by the National Institute for Scrientific Research (NISIR) through the Government of the Republic of Zambia in 2015. Title to this plot is in the name of NISIR.

Financial Statements for the year ended December 31, 2023 **Radiation Protection Authority**

Notes to the Financial Statements

2. New Standards and Interpretations (continued)

The impact of the amendment is not material.

IFRS 17 Insurance Contracts

The IFRS establishes the principles for the recognition, measurement, presentation and disclosure of insurance contracts issued.

The effective date of the standard is for years beginning on or after January 1, 2023.

The Authority expects to adopt the standard for the first time in the 2023 financial statements.

The impact of the standard is not material.

2.2 Standards and interpretations not yet effective

The Authority has chosen not to early adopt the following standards and interpretations, which have been published and are mandatory for the Authority's accounting periods beginning on or after January 1, 2024 or later periods:

Standard/ Interpretation: • Lack of exchanges	/ Interpretation: Lack of exchangeability - amendments to IAS 21	Effective date: Years beginning on or after January 1, 2025	Expected impact: Unlikely there will be a
Supplier finar IFRS 7	Supplier finance arrangements - a mendments to IAS 7 and January 1, 2024 IFRS 7	January 1, 2024	material impact Unlikely there will be a
Non-current li	Non-current liabilities with covenants - amendments to IAS January 1, 2024	January 1, 2024	Unlikely there will be a
ı Lease liability ir	Lease liability in a sale and leaseback	January 1, 2024	material impact Unlikely there will be a

material impact

21

Radiation Protection Authority Financial Statements for the year ended December 31, 2023

Notes to the Financial Statements

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Figures in Zambian Kwacha	2023	2022
Deferred income		
The Authority has deferred income which consists of menent donce finds and licence face received in education	and licence fees received in advance	

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suce tees received in advance. 3,273,148 Aux community has verificed involute writion contains of unspent donor funds and lice The Authority starts to receive licence fees early October for the following year. Deferred income

3,232,257

Below is the reconciliation of the deferred income:

Total ZMW	3,232,257 3,188,830 (3,147,939)	3,273,148	Total	3,191,622 3,097,637 (3,057,002)	3,232,257
European UNSNRC- RPO ZMW	2,307 12,844 -	15,151	European UNSNRC- RPO ZMW	2,307	2,307
IAEC ZMW	134,619 - (52,608)	82,011	IAEA ZMW	134,619 - -	134,619
ZMERIP ZMW	258,875 379,326 (258,875)	379,326	ZMERIP ZMW	38,993 258,874 (38,992)	258,875
Licence fees ZMW	2,836,456 2,796,660 (2,836,456)	2,796,660	License fees ZMW	3,018,010 2,836,456 (3,018,010)	2,836,456
2023	Opening balance Receipts Amortisation	;	2022	Opening balance Receipts Amortisation	

8. Capital grant

This capital grant is allocated by the government to the Authority to help in the construction of a laboratory at the NISIR plot.

ZMWZ ZMWZ	1,000,000 506,623			2,000,000 1,000,000			114,131 2.080		193,877 172,547			713,359 311,426		3,528,986 2,349,856
			2		s									
	Opening balance	Received during the year	Amortization of the grant		9. Trade and other payables	Financial instruments:	Trade payables	Accrued operational expenses	Bank error account	Accrued leave pay	Accrued gratuity	Statutory obligations	Provision	

9.

Financial instruments:	Trade payables	Accrued operational expenses	Bank error account	Accrued leave pay	Accrued gratuity	Statutory obligations	Provision

Radiation Protection Authority Financial Statements for the year ended December 31, 2023

Notes to the Financial Statements

Figures in Zambian Kwacha	. 2023	2022
 Trade and other receivables 		
Financial instruments: Trade receivables Loss allowance	1,933,999 (474,096)	1,902,498
Trade receivables at amortised cost Interest on staff loans	1,459,903 2,130	1,902,498 7,669
Non-financial instruments: Employee costs in advance Prepayments	181,485 352,912	252,479
Total trade and other receivables	1,996,430	2,162,646
Split between non-current and current portions		
Current assets	1,996,430	2,162,646
Financial instrument and non-financial instrument components of trade and other receivables	d other receivables	
At amortised cost Non-financial instruments	1,462,033 534,397	1,910,167 252,479
	1,996,430	2,162,646

Exposure to credit risk

Trade receivables inherently expose the Authority to credit risk, being the risk that the Authority will incur financial loss if customers fail to make payments as they fall due.

Fair value of trade and other receivables

The fair value of trade and other receivables approximates their carrying amounts.

5. Inventories

8,741,014

9,677,134

Bank balances

Radiation Protection Authority Financial Statements for the year ended December 31, 2023

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Notes to the Financial Statements			
Figures in Zambian Kwacha	2023	2022	
12. Other operating income			
Decrease in bad debt provision Donor erants	- 200 845	11,503	
Donations in kind	1,193,536	758,412	
Interest income ZMERIP donor funds	694 779,549	9,825 307,643	
Government grants	7,999,996 10,878,620	8,506,621 9,828,408	
13. Other operating gains (losses)			
Gains (losses) on disposals Property, plant and equipment 3	,	159,583	
14. Operating profit (loss)			
Operating profit for the year is stated after charging (crediting) the following, amongst others:			
Auditor's remuneration - external Audit fees	102,651	92,484	
Remuneration, other than to employees Consulting and professional services	825,808	101,000	
Employee costs			
Salaries and wages	14,334,337	11,580,216	
outer contributions NAPSA contributions Graturity	108,724 536,534 1,001,607	25,520 413,958 688,202	
Total employee costs	15,981,202	12,707,896	
Depreciation of property, plant and equipment	1,445,863	844,663	

Radiation Protection Authority Financial Statements for the year ended December 31, 2		, 2023
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Notes to the Financial Statements Figures in Zambian Kwacha

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	C707	7707
10. Revenue		
Revenue from contracts with customers Rendering of services	8.076.090	6 835 890
Commissions received	1,986,750	1,099,800
Institutional licences Sale and service of TLD badges	5,764,157 2,376,800	5,253,190 1,774,110
	18,203,797	14,962,990
Disaggregation of revenue from contracts with customers		
The Authority disaggregates revenue from customers as follows:		
Rendering of services		
Luports and export licences Laboratory sample festing	337,650	307,650
Food monitoring	5,400	6,600
Inspection fees	1,521,840	1,338,540
Monitoring of imported vehicles RPO annual conference fees	4,311,450	3,341,900
Transportation of radioactive aces	1,374,300	43,500 1,392,100
	8,076,090	6,835,890
Commissions received		
Consultancy fess/expert advice	1,986,750	1,099,800
Institutional licences TLD Badges	2,376,800	5,253,190 $1,774,110$
	8,140,957	7,027,300
Total revenue from contracts with customers	18,203,797	14,962,990
Timing of revenue recognition		ç
At a point in time Sale of goods	12,439,640	9,709,800
Over time		
Sale of goods	5,764,157	5,253,190
Total revenue from contracts with customers	18,203,797	14,962,990
11. Cost of sales		
Sale of goods	570,342	222,967

25

Radiation Protection Authority

Notes to the Financial Statements

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15. Financial instruments and risk management (continued)

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Financial risk management

Overview

The Authority is exposed to the following risks from its use of financial instruments:

 Liquidity risk; and Credit risk; •

Credit risk

Credit risk is the risk of financial loss to the Authority if a customer or counterparty to a financial instrument fails to meet its contractual obligations.

The Authority is exposed to credit risk on trade and other receivables and cash and cash equivalents.

counterparty is analysed individually for creditworthiness before terms and conditions are offered. The analysis involves Credit risk for exposures other than those arising on cash and cash equivalents, are managed by making use of credit approvals limits and monitoring. The Authority only deals with reputable counterparties with consistent payment histories. Each making use of information submitted by the counterparties as well as external bureau data (where available). Counterparty credit limits are in place and are reviewed and approved by credit management committees. The exposure to credit risk and the creditworthiness of counterparties is continuously monitored. Credit risk exposure arising on cash and cash equivalents is managed by the group through dealing with well-established financial institutions with high credit ratings. Credit loss allowances for expected credit losses are recognised for all debt instruments. In order to calculate credit loss allowances, management determine whether the loss allowances should be calculated on a 12 month or on a lifetime expected credit loss basis. This determination depends on whether there has been a significant increase in the credit risk since initial recognition. If there has been a significant increase in credit risk, then the loss allowance is calculated based on lifetime expected credit losses. If not, then the loss allowance is based on 12 month expected credit losses. This determination is made at the end of each financial period. Thus the basis of the loss allowance for a specific financial asset could change year on year.

expected credit losses of the instruments. For all other trade receivables, IFRS 9 permits the determination of the credit loss For trade receivables which do not contain a significant financing component, the loss allowance is determined as the lifetime allowance by either determining whether there was a significant increase in credit risk since initial recognition or by always making use of lifetime expected credit losses. Management have chosen as an accounting policy, to make use of lifetime expected credit losses. Management does therefore not make the annual assessment of whether the credit risk has increased significantly since initial recognition for trade receivables.

The maximum exposure to credit risk is presented in the table below:

			2023			2022	
		Gross	Credit loss	Amortised	Gross	Credit loss	Amortised
		carrying	allowance	cost / fair	carrying	allowance	cost / fair
		amount		value	amount		value
Trade and other receivables	4	2,470,526	(474,096)	1,996,430	2,162,646		2,162,646
Cash and cash equivalents	9	9,677,134		9,677,134	8,741,014		8,741,014
		12,147,660	(474,096)	(474,096) 11,673,564	10,903,660	'	10,903,660

Liquidity risk

Financial Statements for the year ended December 31, 2023 **Radiation Protection Authority**

Notes to the Financial Ctata-

Notes to the Financial Statements				
Figures in Zambian Kwacha			2023	2022
15. FINANCIALINSTRUMENTS AND FISK MANAGEMENT				
Categories of financial instruments	•			
Categories of financial assets				
2023				
Trade and other receivables Cash and cash equivalents	Note(s) 4 6	Note(s) Amortised cost 4 1,462,033 6 9,677,134	Total 1,462,033 9,677,134	Fair value 1,462,033 9,677,134
		11,139,167	11,139,167	11,139,167
2022				
	Note(s)	Note(s) Amortised cost	Total	Fair value
trade and other receivables Cash and cash equivalents	6 4	1,910,167 8,741,014	1,910,167 8,741,014	1,910,167 8,741,014
		10,651,181	10,651,181	10,651,181
Categories of financial liabilities				
2023				
	Note(s)	Note(s) Amortised cost	Total	Fair value
Trade and other payables	6	3,528,986	3,528,986	3,528,986
2022				
	Note(s)	Note(s) Amortised cost	Total	Fair value
Trade and other payables	6	2,349,856	2,349,856	2,349,856

28

27

Radiation Protection Authority

29

30

Radiation Protection Authority Financial Statements for the year ended December 31, 2023

Detailed Income Statement

Figures in Zambian Kwacha	Note(s)	2023	2022
Revenue	10	18,203,797	14,962,990
Cost of sales	11	(570,342)	(222,967)
Operational surplus	**		
	12	17,633,455	14,740,023
Other operating income	12	10,878,620	9,828,408
Other operating gains (losses)			
Gains on disposal of asset		-	159,583
Other operating expenses			Table 4 Martin Law
Advertising	14	179,717	87,727
Auditor's remuneration	14	102,651	92,484
Bad debts		548,849	11,503
Bank charges		27,842	19,884
Cleaning		48,885	41,864
Consulting and professional fees		674,433	-
Legal fees		151,375	101,000
Depreciation		1,445,863	844,663
Employee costs		15,981,202	12,707,896
Board committee meetings		1,135,611	274,639
Office refreshments		58,505	52,199
Regulatory fees		366,263	509,678
Workers compensation		66,670	50,000
International meetings		129,169	90,256
Tender procurement		15,750	3,600
Public sensitization		739,229	788,495
Inspections and review of sites Medical scheme		1,095,044	667,702
		39,762	77,065
Insurance		178,918	38,559
IT expenses	0	81,637	77,753
Motor vehicle expenses		532,842	371,041
Electricity		46,500	61,169
Postage Printing and stationery		26,825	19,700
Protective clothing		761,373	643,185
Repairs and maintenance		113,866	23,020
Security		91,753	89,901
Staff welfare		127,368	131,612
Telephone and fax		60,607	101,954
Training		66,723	60,202
Travel - local		1,174,788	433,074
114701 - 10041		1,337,388	813,723
Total comprehensive surplus for the year		27,407,408	19,285,548
Total comprehensive surplus for the year		1,104,667	5,442,466

31 The supplementary information presented does not form part of the financial statements



Radiation Protection Authority

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