



NUCLEAR REGULATORY AUTHORITY

ANNUAL REPORT

2020



PROFESSOR ABA BENTIL ANDAM
BOARD CHAIRMAN, 2020

CHAIRMAN'S OVERVIEW

Like other establishments, the Nuclear Regulatory Authority (NRA) of Ghana went through a trying period in year 2020 as a result of the impact of the COVID19 pandemic.

The NRA Board put in place the modalities for all the necessary precautions, and Management and staff took very seriously the protocols given; everyone did their best to go by the protocols in order to ensure a safe working environment.

In the midst of the noted challenges, considerable work was done by the staff, for which Management and staff deserve well-earned congratulations for braving the odds. Furthermore, this goes to bring home the special role which the Nuclear Regulatory Authority of Ghana is poised to play in achieving the national development agenda.



DR NII KWASHIE ALLOTEY
DIRECTOR-GENERAL

FOREWORD BY DIRECTOR-GENERAL

The Nuclear Regulatory Authority (NRA) is an independent regulatory body established by the NRA Act, 2015 (Act 895). The NRA has a statutory responsibility for regulating civilian use of nuclear and other radioactive materials in medicine, industry, agriculture, education and research in Ghana. This is to ensure the protection of people and the environment from the harmful effects of radiation.

The Authority is composed of three directorates, which are: the Nuclear Installations Directorate (NID), the Radiological and Non-Ionising Installations Directorate (RNID), and the Finance and Administration Directorate (F&A). For the 2020 year, the NID continued its work in preparation for the country's nuclear power programme by developing regulations and guidance documents and also continued to develop the competency of staff. In particular, the directorate led the Authority in the on-going implementation of the European Union funded "Support for the Regulatory Authority of Ghana" project.

The RNID focused on carrying out planned regulatory work required for the licensing of medical and industrial radiological facilities and activities. The COVID-19 pandemic however had an adverse impact, and the projected number of authorisations and inspections to be completed could not be met. The F&A directorate also played its role and provided the needed supporting infrastructure to lessen the impact of the COVID-19 pandemic on the work activities of the Authority, and for the effective delivery of the Authority's core mandate. Particularly, the directorate led the Authority to complete the development of the 2021-2025 Corporate Strategic Plan that is expected to guide all future work of the Authority in the medium-term.

In summary, it can be noted that the year 2020 under review saw the Authority continue its work of protecting humans and the environment from radiation hazards. In regards to the COVID-19 pandemic, the Authority has now gained sufficient knowledge and experience on how to deal with the various challenges faced, and it is therefore expected that the year 2021 will see the Authority meet or possibly even exceed its targets for the year.

NRA MANDATE AND CORE ACTIVITIES

“ The Nuclear Regulatory Authority (NRA) is an independent regulatory authority established by the Nuclear Regulatory Authority Act, 2015 (Act 895). ”

The NRA Act, 2015 (Act 895) empowers the Authority to regulate activities and practices for the peaceful use of nuclear energy and radiation under the jurisdiction of Ghana. The Authority therefore controls the possession, use, import, export, transport, transfer, storage and the disposal of radioactive materials, radioactive waste and nuclear material as well as decommissioning or other related activities or practices identified.

The Scope of the NRA’s regulatory responsibility therefore includes among others:

- The authorisation and regulation of the civilian use of nuclear and other radioactive materials in Ghana;
- Regulating the Ghana Research Reactor 1 and the Gamma Irradiation Facility at the Ghana Atomic Energy Commission, radiation facilities in medicine, industry, research, education and in the near future commercial nuclear power plants; and,
- Regulating the possession, use, transport, storage and the disposal of radioactive materials and radioactive waste and also licences the import and export of radioactive materials.

The ultimate goal of the NRA is to ensure the protection of the general public, patients, people who work with radiation, property and the environment from the harmful effects of radiation.

NRA’s Vision

To ensure humans and the environment are protected from the harmful effects of radiation.

NRA’s Mission

To regulate radiation to meet national and international standards and obligation in a professional, objective and transparent manner.

Core Values

NRA is committed to sound and transparent governance that will enhance the Authority's relationship with all stakeholders. This is achieved through adherence to the following core values by management and staff:



Professionalism:

Adhere to standard operating procedures in performance of duties using competent staff



Integrity:

Honesty in dealing with clients and stakeholders



Transparency:

In communication and decision making with licensees, relevant stakeholders and the public in an appropriate and accurate manner



Objectivity:

To be fair to all clients and other stakeholders

Summary of NRA Functions

The main regulatory functions of the NRA can be summarized as follows:

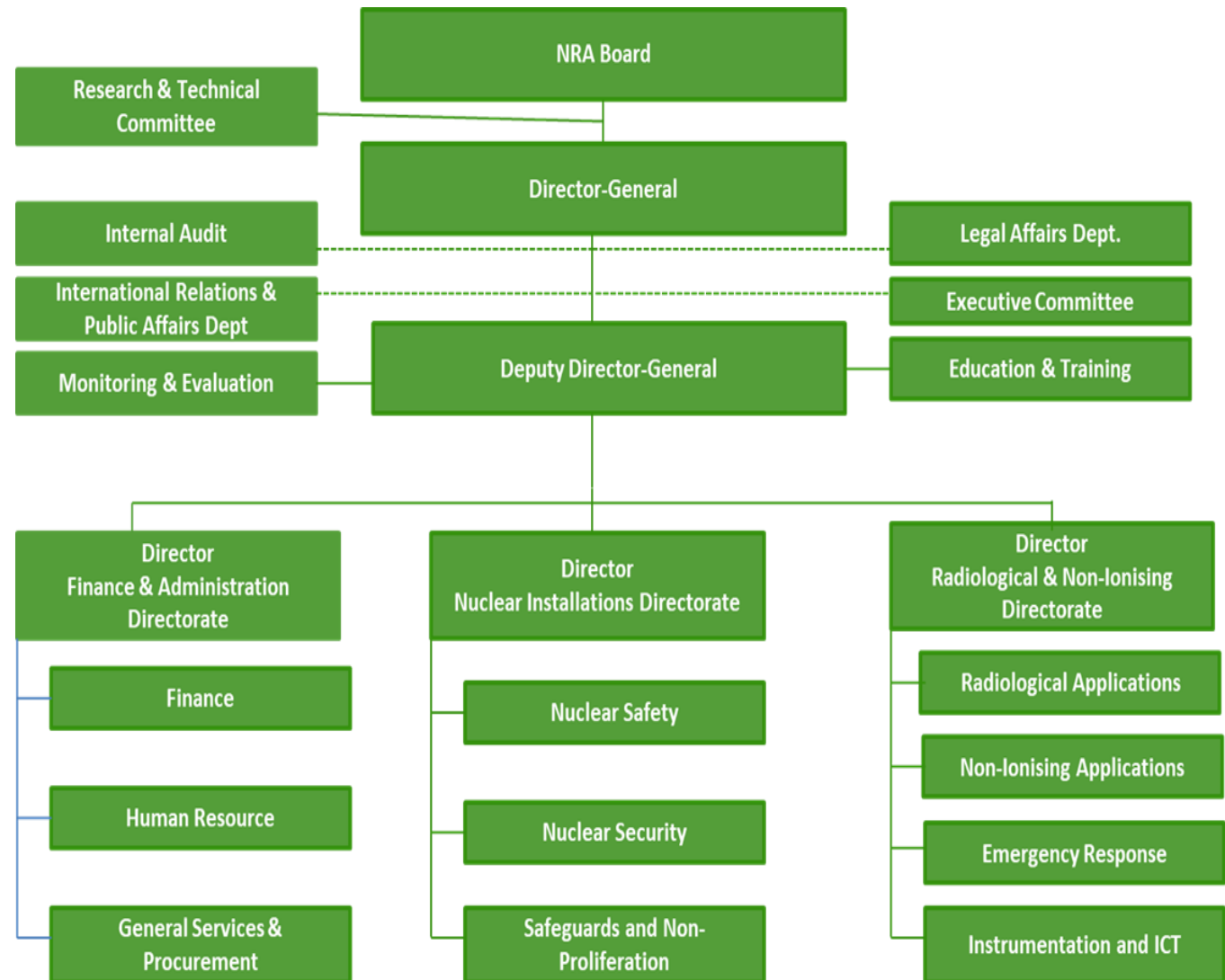
- Develop regulations and guides
- Regulatory review and assessment
- Regulatory inspection to ensure compliance with regulatory standards
- Issuance of authorisations and permits
- Enforcement
- Conduct research to support regulatory decisions
- Cooperate with other local and international regulatory bodies and agencies to enable effective implementation of mandate
- Implement appropriate international legal instruments to which Ghana is a signatory

ADMINISTRATIVE STRUCTURE

The Authority is governed by a seven-member Board. The Board, among other things, formulates policies and regulations for managing staff of the Authority as well as to oversee the safety and security of facilities and activities.

The day-to-day administrative activities of the NRA are managed by a Director General with the assistance of a Deputy Director General.

There are three Directorates and fifteen (15) departments to carry out technical and administrative activities to enable the Authority to achieve its mandate





RADIOLOGICAL AND NON-IONISING INSTALLATIONS DIRECTORATE

Regulatory Documents

The Directorate completed the drafting of the following documents

- Basic Ionising Radiation Regulations
- Radioactive Waste Management Regulations
- Emergency Preparedness and Response Regulations
- Fillable Authorisation Application Forms

Authorisation

During the year under review 368 authorisations were issued to authorised persons, which include irradiating devices, radioactive sources, transport operators and TSOs as indicated in Figure 1.

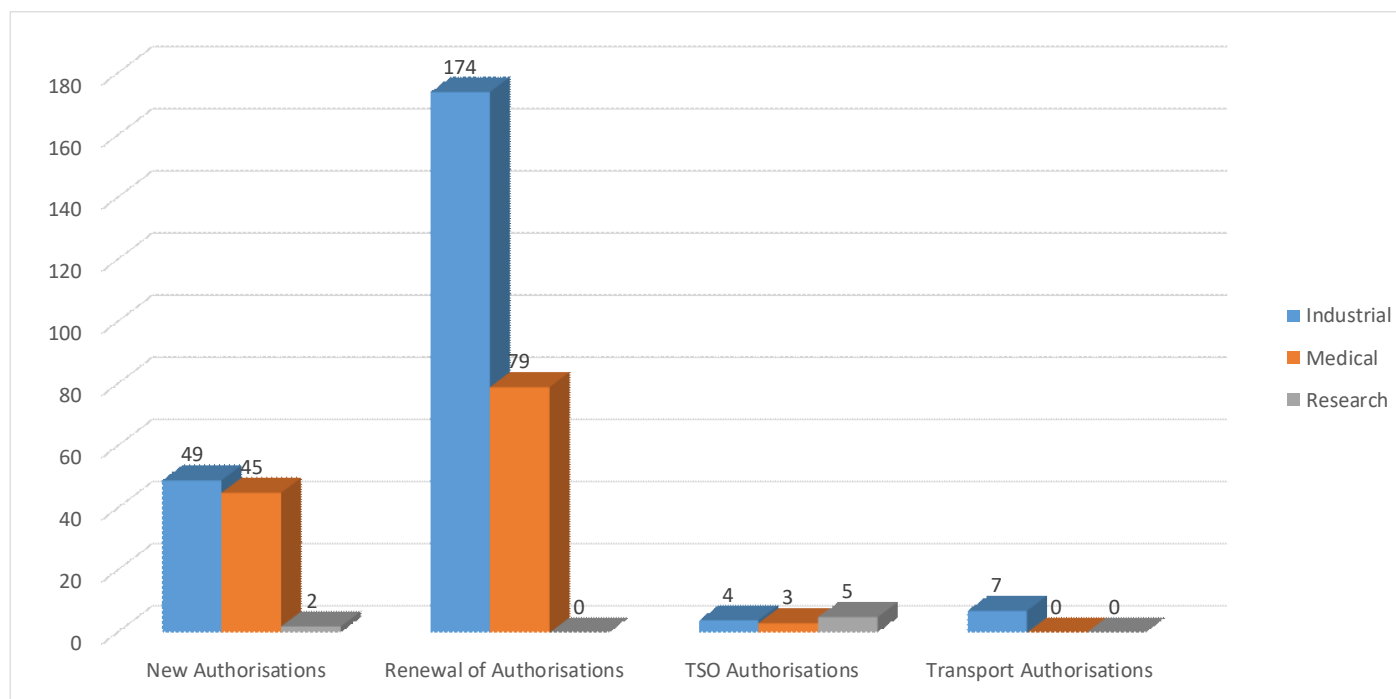


Figure 1: Authorisations issued in 2020



Permits

Import, export, transport, transfer, transit, construction, design approval and decommissioning/dismantling permits were also issued to 260 authorised persons as shown in Figure 2.

Enforcement

Enforcement notices were issued to 11 facilities for serious noncompliance issues observed when regulatory inspections were carried out in these facilities. Each facility was given a specific period to correct these issues. Authorisations to these facilities were not granted.

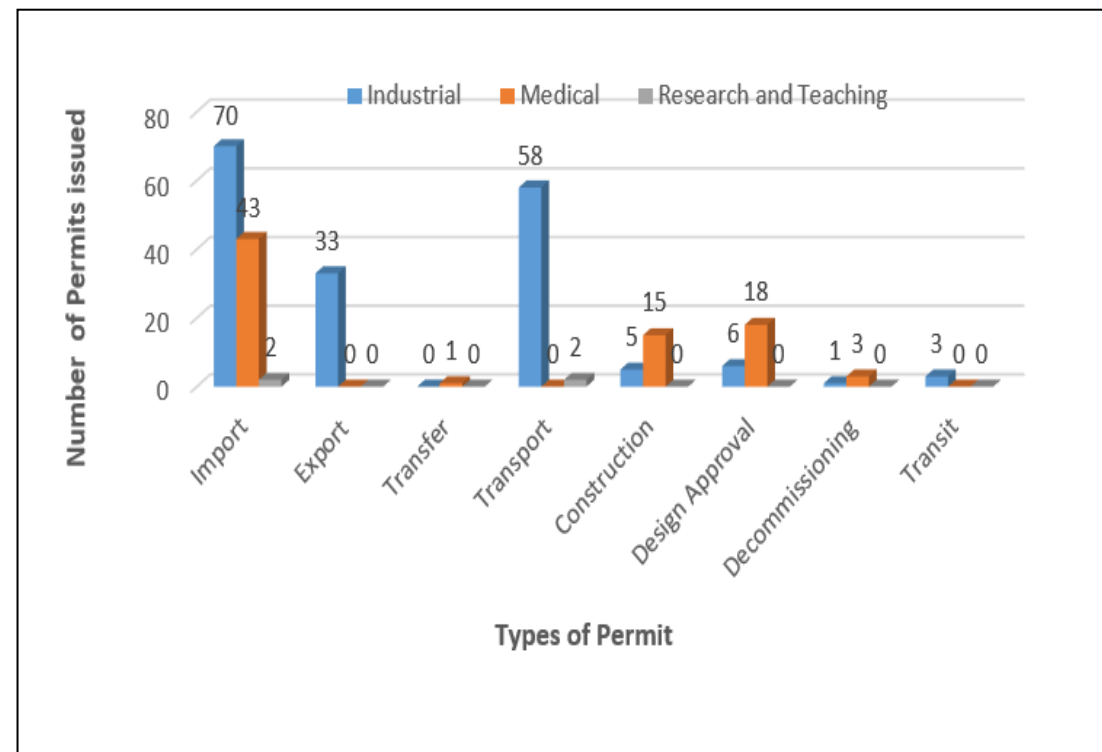


Figure 2: Types of Permits issued in 2020

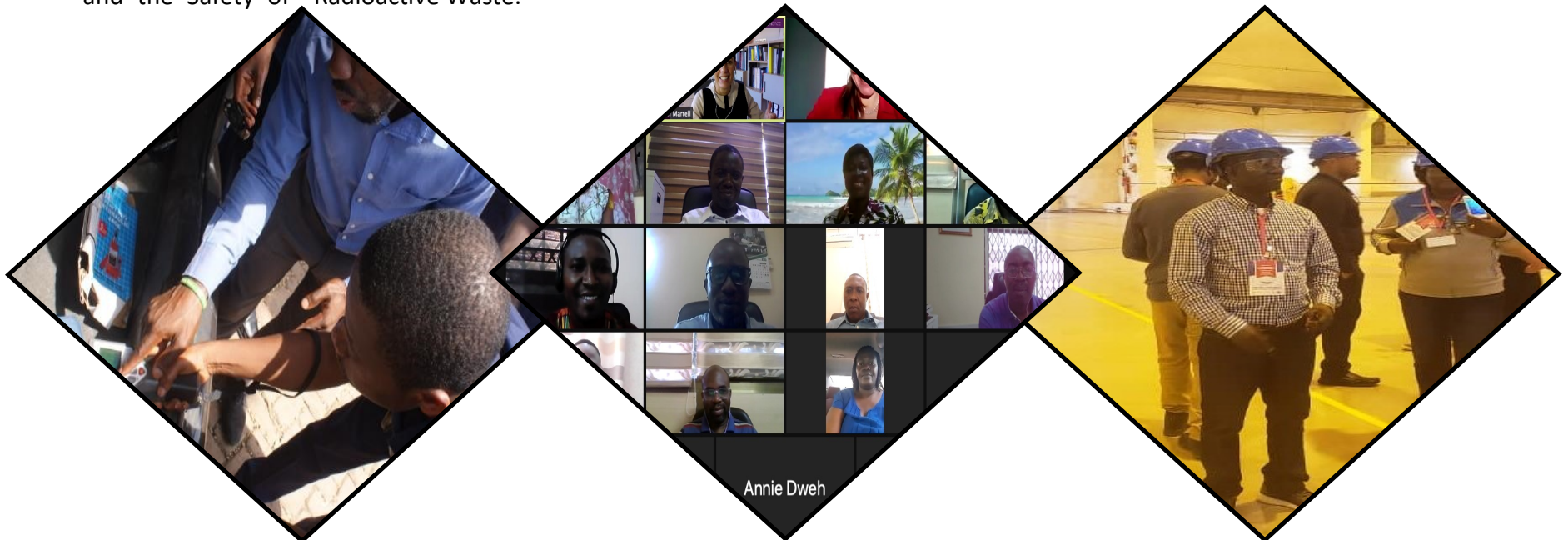
NUCLEAR INSTALLATIONS DIRECTORATE

In 2020, the NID conducted the following activities:

- ◆ Gap analysis of Safety Infrastructure based on GSR Part 1 using a questionnaire developed by ENCO, with various staff of the NRA forming the bases for Regulatory Strategy and Action Plan under Task 1 of INSC Project;
- ◆ Gap Analysis of the Management System based on IAEA GSR Part 2, GS-G 3.1 and GSG 12, using a questionnaire developed by ENCO, with the Task 2 Workgroup;
- ◆ Coordinated the drafting of processes and procedures for:
 - Management Processes: *Policy Making, Process Management, Governance, Performance Management, Change Management, and Project Management*
 - Core Processes: *Development of Regulations and Guides, Notification and Authorisation, Review and Assessment, Inspection, Enforcement, Emergency Preparedness and Planning, and Safeguards Reporting.*
 - Support Processes: *Procurement, Transport Management, Human Resource Management, Finance/Accounting, Information and Communication Technology, Instrumentation, Document and Records Control;*
- ◆ Virtual Workshop on Strategic Regulatory Approaches as part of EC INSC Project, 28th July – 27th August, 2020
- ◆ Virtual Workshop on Site Licensing activities as part of EC INSC Project, 14th – 21st September, 2020
- ◆ EU/INSC Task 6 virtual workshop on Stakeholder Involvement, Transparency and Public Information from December 14-18, 2020.
- ◆ Hosted GNPPO Meeting on Environmental Framework for nuclear power programme during which working groups were formed to address interfaces with Environmental Protection Agency, Energy Commission, and Factories Inspectorate on 26th February 2020.
- ◆ Held meeting with Ghana Atomic Energy Commission on GHARR-1 enforcement action on 1 July 2020 addressing the reasons for which the facility was not in operation.
- ◆ Held Test Run with ENCO on implementation of virtual workshops and support in line with the European Commission Instrument for Nuclear Safety Cooperation (INSC) Project with the NRA on 23 July 2020.
- ◆ Held virtual bilateral meetings with International Safeguards Engagement Program (INSEP) of United States Department of Energy (US-DOE) on 30 July 2020 and 28 August 2020.

- ◆ Held Video Conference with ENCO on European Commission's Centre of Excellence for East and Central Africa Project 60 Extension on 26 August 2020.
- ◆ Held discussions on completion of National Action Plan for CBRN on 1 September 2020.
- ◆ Participated in the preparation of National Report for the Joint Convention on the Safety of Spent Fuel Management and the Safety of Radioactive Waste.

- ◆ Participated in the following Session of the Virtual 64th General Conference of IAEA: The Operator's Forum on 22 September 2020; FORO Side Event on 23 September 2020; FNRBA Virtual Side Event on 24 September 2020; RCF Plenary on 25 September 2020.
- ◆ Held virtual Project 60 Meeting with ENCO on their review of Laws and Regulations on security of radioactive sources on 11th December 2020.



FINANCE AND ADMINISTRATION

In the course of the year 2020, the F&A directorate worked feverishly with the Integrated Management System (IMS) document development team to record processes and procedures for the directorate's functions. The directorate also drafted a number of policies that govern its activities for inclusion in the IMS document.

Some key department-related functions performed by the directorate are presented below:

- In view of the Covid-19 pandemic, the Directorate facilitated staff meetings where staff were advised by management to strictly observe the safety protocols directed by the World Health Organisation as well as the Government. Reminder emails on the need to adhere to the protocols were also circulated to all staff periodically.
- The Directorate also facilitated the preparation and implementation of work schedules for staff to ensure decongestion of offices to reduce the chances of transmission of the SARS-CoV-2 among staff.
- National Service Persons (NSP) were tasked to convert regulatory information from hard copies into electronic format by keying in the information. This was to enable regulatory inspectors to easily access and monitor authorisations issued since 2016. At the end of their service in August 2021, the NSP were contracted for one month to continue with the exercise.
- In September 2020, auditors from the Ghana Audit Service were hosted for the conduct of the first Statutory Audit of the Authority's Financial Statements since its establishment in 2016. The Financial Statements for the period 2016 to 2019 were successfully audited and this was marked as a milestone for the Authority.
- The Directorate liaised with some technical staff to develop various fees and charges for regulating radiological facilities and activities as well as Technical Support Organisations. These fees and charges were submitted to the Ministry of Finance to seek approval for implementation.

Staff Strength

The total number of staff as at December 2020 remain 73, consisting of 48 technical and 25 support staff. Fifteen staff out of the 73 had been engaged on contract basis.

Position	Current Number	Status	
		Established	Contract
Research Scientists/ Technologist	48	41	7
Support Staff	25	17	8
TOTAL NUMBER OF STAFF	73	58	15

STATEMENT OF REVENUE AND EXPENDITURE FOR THE YEAR ENDED 31ST DECEMBER 2020

REVENUE	2020	2019
	GH¢	GH¢
GoG Subvention	6,149,600.43	5,011,553.05
Internally Generated Fund	1,893,800.37	2,006,363.17
Donor	201,643.84	60,132.80
Other Revenue	9,941.32	14,404.63
TOTAL REVENUE	8,254,985.96	7,192,453.65
EXPENDITURE		
Compensation of Employees	5,892,072.19	4,742,760.40
Goods and Services	475,100.64	505,232.51
Internally Generated Expenditure	1,179,955.21	1,889,431.56
TOTAL EXPENDITURE	7,547,128.04	7,097,952.62
SURPLUS/(DEFICIT)	707,857.92	94,501.03

Containerised Office Building

During the year, the Authority continued the construction of the Containerised Office Building capable of seating over 60 people. When completed the building would serve as additional office space for the Authority.

This is being constructed within the premises of the Authority, and in particular, between the House 1 & 2 buildings of the Authority. The state of the building is as shown in Figure 3 below.



Figure 3: Containerised Office Building for the NRA

MAJOR TARGET ACTIVITIES FOR 2020

The following are the Authority's major target activities for 2021:

- Initiate the development of key guidance documents
- Develop action points for the implementation of the CSP of NRA
- Inspect 350 medical and industrial facilities (i.e., about 800 sources, devices, transport operators and TSOs) Develop inspection procedure for inspectors
- Further improvement of the custom Regulatory Authority Information System (RAIS) web application developed
- Coordination of the development of an Integrated Management System for the Radiological Applications Department (processes from start to end) Deployment of network storage system (NAS)
- Complete National Detection Strategy
- Organise Sub-Regional Meeting on Nuclear Security with support from IAEA
- Hold Validation Meeting for DBT and Alternate Threat Statement
- Train Safeguards Officers of Authorised Persons
- Stakeholder Engagement and Additional Protocol Outreach
- Commence implementation of the Corporate Strategic Plan
- Finalise the development of fees and charges and submit for approval



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