

RADIATION PROTECTION INSTITUTE

GHANA ATOMIC ENERGY COMMISSION.

2023 ANNUAL REPORT

EXECUTIVE SUMMARY

The Radiation Protection Institute (RPI) of the Ghana Atomic Energy Commission was established to provide scientific and technical services, and to conduct research in Health Physics, Radiation Protection and Safety, and Nuclear Security as well as Radioactive Waste Management.

In the **year under review (2023)**, the Institute undertook and/or achieved the following:

- Calibration of One hundred and five (105) devices.
- Nine Hundred and seven (907) Occupationally Exposed Workers were monitored successfully.
- One thousand and forty (1,061) RF Base station sites were monitored across the Country.
- Fifty (50) antenna pre-installation (conditional compliance) assessments were done.
- Radiological quality assessment of three (3) water samples was carried-out.
- Five hundred (541) food products were analyzed for radioactivity contamination.
- Sixteen (16) radiation protection and safety training courses were offered to three hundred and fifty-seven (355) personnel from varied sectors of the economy.
- Radiological Safety Assesements/Consultancy were undertaken for six (6) Instutions culimnating in sixteen (16) facilities being assessed.
- The Institute provided effective technical and commercial services to various clients which has contributed to the internal revenue mobilization of the Institute. In this regard, four (4) disused moisture density gauges, and one (1) Cs-137 disused density gauge were received from Knight Piesold Ghana Ltd and Newmont Ghana Limited- Ahafo Mines, respectively for permanent management whilst one (1) Iridium Gamma Camera was received for a temporary storage at the Radioactive Waste Management Facility.
- The Institute finalised the Security Plan document which is vital to obtaining the requisite operating licence for the Radioactive Waste Management Facility has been accomplished for consideration by the Nuclear Regulatory Authority.
- The Institute in collaboration with the Ghana Telecommunication Chamber undertook radiofrequency (RF) public education at Elmina, Kwabenya and Tema during the year under review.

- The Institute received a grant of GHS 2,286,003.35 from the Ghana Skills Development Fund (GSDF) to develop skills for upgrade and expansion of the Secondary Standards Dosimetry Laboratory.

Scientific Communications (Journal Articles, Technical Reports, Conference Papers, Invited Presentations, etc.)

- A total of **eleven (11) technical reports** have been compiled for the year 2023.
- A total of ten **(10) conference papers** have been compiled from members of the Institute for the year 2023.
- A total of thirty **(30) peer reviewed papers** have been compiled from members of the Institute for the year 2023.
- A total of **two (2) News portal reports** were published.
- **One (1) book chapter** publication.
- Two (2) manuscripts are in Press /Under review.
- **Twelve (12) RPI Internal Seminar Presentations** was held.
- **Fourteen (14) Other External Seminars and Invited Presentations** were given by Staff.

Notwithstanding these achievements, the Institute encountered several challenges which include:

- Lack of staff in some critical areas such as physical sciences, electronics repairs and maintenance have still not received the needed attention. Moreover, the current study leave policy of the Commission is having a significant inadvertent impact on the availability of most especially scientific and technical staff at the various Centres of the Institute.
- High electricity bills and increase in fuel prices which put pressure on the Institute's finances and thereby affecting its activities.
- Aging and obsolete equipment had a toll on the output of the Institute in 2023.
- High cost in vehicle maintenance and the lack of robust vehicles suitable for difficult terrains in the Country had enormous effect on the performance of the Institute in 2023

Irrespective of the challenges encountered during the year 2023, the Institute was able to fund most of its activities through internally generated funds of three million, two hundred and twenty-two thousand, four hundred and seven Ghana cedis (**GHC 3,222,407**) during the fiscal year. It is

anticipated that the Institute will receive the needed co-operation and support from GAEC Management to enable it to undertake its activities in 2024 effectively and efficiently.

