Commission for the Protection
From Ionising and Non-Ionising Radiation

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Annual report of the Commission for the Protection from Ionising and Non-Ionising Radiation for 2024

Pursuant to Article 11(6) of the Nuclear Safety and Radiation Protection Act, Cap 585 the Commission for the Protection from Ionising and Non-ionising Radiation is presenting this report for the attention of the Minister.

This is the seventh report produced by the Commission and covers the period from 1st January 2024 to 31st December 2024.

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1 Executive Summary

In its sixth full year of operation, the Commission for the Protection from Ionising and Non-Ionising Radiation (Commission) demonstrated its continuing commitment to fulfil Malta's European and international regulatory obligations.

In January 2024 the Commission was transferred from the Ministry for Inclusion, Voluntary Organisations, and Consumer Rights to the Office of the Prime Minister – European Funds, Equality, Reforms, and Social Dialogue.

During the year, the Commission expanded its activities, supported by the recruitment of additional technical staff. It ensured Malta's compliance with European Commission (EC) requirements, including the Basic Safety Standards Directive, Nuclear Safety Directive, Radioactive Waste Management Directive and the EURATOM Nuclear Safeguards Regulations. The Commission ensured the timely submission of all necessary reports to the EC and the International Atomic Energy Agency (IAEA), fulfilling all reporting obligations.

The Commission worked to strengthen its testing capabilities, with 2024 marking the initiation of partial environmental radioactivity monitoring being done in Malta. Previously, Malta depended solely on international organisations to conduct such analysis, which could pose significant challenges in the event of a radiological emergency. Establishing national testing capabilities represents a major step forward in enhancing Malta's preparedness and response capacity.

The Commission continued to provide a service to society through education, training, and outreach. A series of workshops and stakeholder engagements were held to strengthen understanding of radiation protection legislation and regulatory responsibilities. These initiatives support professionals in maintaining high standards of safety and compliance. The Commission also participated in international training activities to strengthen institutional expertise.

The Commission also provided a service to the international community by sharing its expertise through participation in international peer review processes in other countries. This contribution highlights the high level of knowledge and regulatory competence within the institution and underscores the importance of retaining and further developing this expertise within the entity to ensure continuity and long-term sustainability.

The Commission acknowledges that currently the Secretariat remains under-resourced to fully comply with its legal obligations under the Nuclear Safety and Radiation Protection Act, CAP 585 (Act) and in response, the Commission did all in its powers to increase the staffing, ensure knowledge transfer and build capacity of the Secretariat.

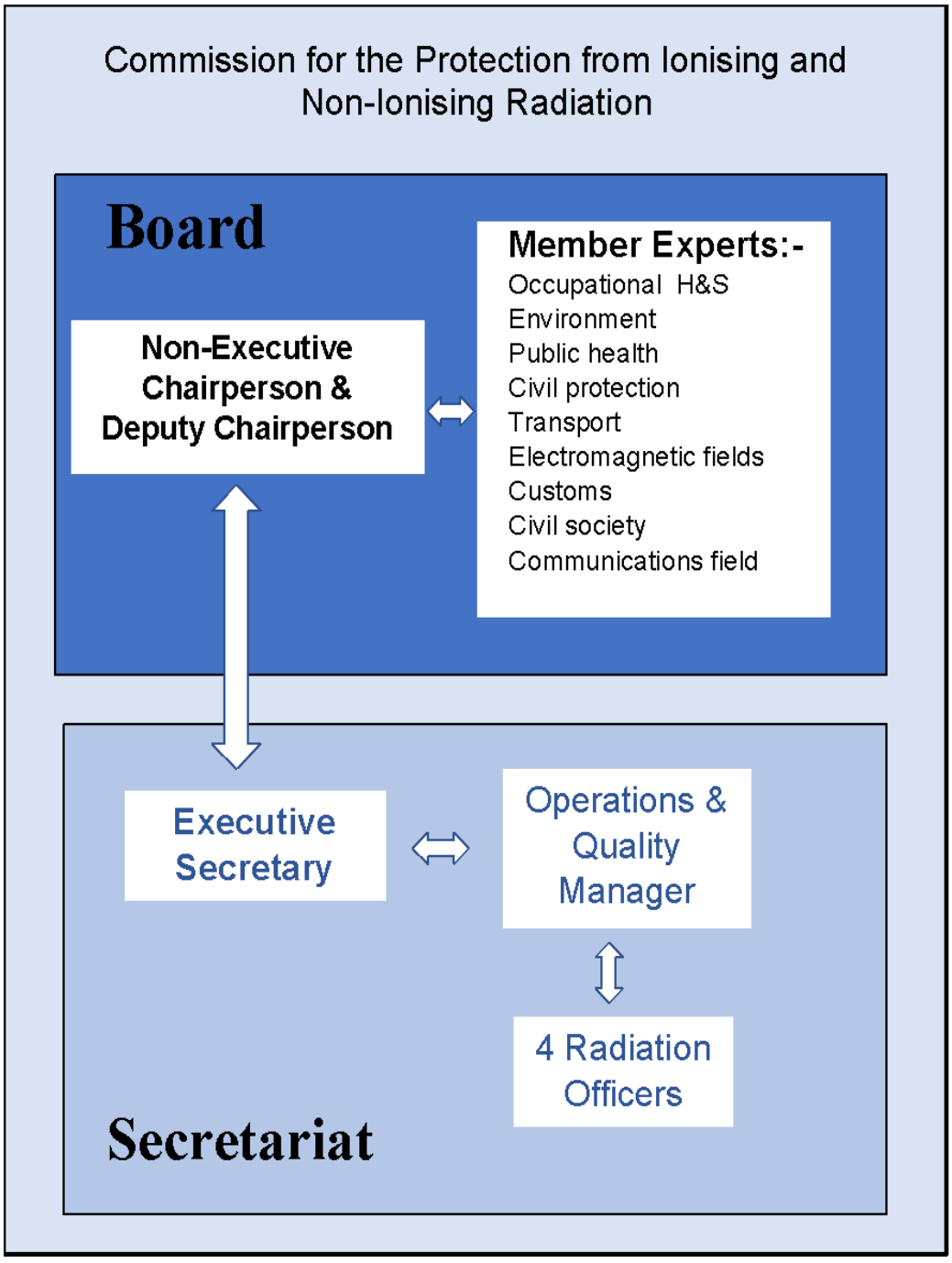
The Commission remains committed to its mission of: *To allow and regulate the beneficial and justified uses of ionising and non-ionising radiation for the well-being of the population and the environment* by regulating the beneficial and justified uses of ionising and non-ionising radiation, ensuring the protection of both the population and the environment. It continues to uphold its responsibilities to the highest standard, adhering to its legal obligations and strategic objectives.

2 The Operations of the Commission

This section outlines the Commission's governance structure, internal functioning, staffing, financial arrangements, and preparations for upcoming international peer review missions.

2.1 The Structure of the Commission

The Commission consists of a Chairperson, a Deputy Chairperson, nine independent expert members and a Secretariat responsible for the execution of its functions, as outlined in the below figure. This structure ensures that both strategic direction and operational implementation are effectively maintained.



2.2 Functioning of the Commission

The Commission has four sub-groups, each comprising expert members from the Commission Board, Secretariat and invited external experts selected according to the specific policy areas they address. These sub-groups focus radon monitoring, training, environmental monitoring, and non-ionising radiation.

In 2024, the sub-groups met as often as required to draft policies, strategies, and documentation in their respective areas. The Commission convened ten meetings during the year, during which sub-group updates were presented and discussed to inform decision-making.

2.3 Internal Procedures of the Commission

The Commission continued to strengthen and formalise its internal management system to ensure alignment with regulatory best practices and improve operational efficiency.

2.4 Staffing within the Secretariat

The staff complement of the Secretariat by the end of the year was composed of five persons, consisting of an Executive Secretary, a Manager, two Radiation Officers and one Junior Radiation Officer.

This year, the Secretariat experienced staff turnover, prompting the issuance of several public calls to fill positions within the Secretariat; however, recruitment proved challenging due to the limited pool of local expertise and the highly competitive salaries offered in this sector. These factors continued to impact the Commission's ability to build and retain specialised technical capacity.

2.5 Commission Budget

The Commission's budget for 2024 was €345,000.

Part XV of the CAP 585 does not apply as the Ministry is responsible for managing the Commission's budget.

2.6 Preparations for the Commission to manage its finances in 2025

To enable the Commission to manage its own finances from 2025 onwards, a dedicated bank account was opened in 2024, and contracts were signed for external payroll and accountancy services. These steps represent a key milestone toward greater administrative independence.

2.7 Planning of international peer review of Commission

In line with Malta's obligations under EU legislation, the Commission formally requested an Integrated Regulatory Review Service (IRRS) mission from the International Atomic Energy Agency (IAEA) to peer review Malta's regulatory framework for radiation safety. The IRRS mission is scheduled for the second quarter of 2026, and preparatory work consisting of a thorough self-assessment of the regulatory framework commenced in 2024 to ensure full readiness.

3 Inventory of users of radiation in Malta

This section provides an overview of the undertakings in Malta that make use of ionising radiation. Keeping the inventory of users allows the Commission to maintain effective regulatory oversight and ensure compliance with national and European legislation.

In 2024, there were 242 undertakings that use ionising radiation, an increase of eight compared to 2023. The distribution by application in shown in Table 1.

Table 1. Inventory of undertakings using ionising radiation (2024).

Application	**Number of sites 2023**	**Number of sites 2024**
Radiotherapy	1	1
Nuclear Medicine	3	3
X-ray diagnostic	26	27(+1)
Dental	120	124(+4)
Veterinary	31	28 (-3)
Industrial NDT	8	6(-2)
Industrial other quality control	19	24(+5)
Security Screening	15	12(-3)
Central storage facility	1	1
Suppliers (in 2023)	10	16(+6)
Total	**234**	**242(+8)**

4 Licences Issued

The Commission is responsible for licensing undertakings that use ionising radiation.

In 2024, a total of 48 licences were issued: 32 were new licences issued for the first time whilst 16 licences were renewed, as presented in Table 2.

This represents a substantial rise compared to 2023, when only 8 licences were issued (1 new, 7 renewals). The increase is primarily attributed to dedicated regulatory campaigns aimed at ensuring that the use of ionising radiation is properly licensed and regulated. This year a dedicated campaign was undertaken amongst all veterinary clinics (28 veterinary clinics inspected).

The Commission remains committed to sustaining this momentum by extending similar regulatory efforts to other sectors in the coming years.

Table 2. Licenses issued in 2024 per application.

Application	**Licences issued in 2024**
Medical	14
Veterinary clinics	26
Industrial (non-destructive testing)	1
Industrial (low risk)	6
Waste facility	1
Total	**48**

5 International obligations

The Commission fulfils a range of international obligations of Malta, including environmental monitoring, nuclear safeguards reporting, participation in international conventions, and the exchange of incident notifications through the IAEA.

5.1 Environmental monitoring

The Commission remains committed to coordinate Malta's environmental monitoring programme. This programme monitors radioactivity in the environment from the sampling of air particulates, seawater, and soil by the Environmental and Resources Authority (ERA), and the drinking water, milk, and food by the Environmental Health within the Department for Health Regulation (EHD).

The workings of this programme are outlined in the previous National Environmental Monitoring Plan, agreed in 2013. During 2024, the Commission worked extensively to revise and update this plan. The updated framework now also includes Veterinary Services, incorporating the monitoring of animal feed and taking into account the testing capabilities developed within the Commission's laboratory.

Results from the monitoring programme are transmitted annually to the European Union Joint Research Centre's Radioactivity Monitoring Database. In addition, ERA's gamma dose monitoring stations have their data transmitted directly to the EU and are included in the European dose rate map https://remap.jrc.ec.europa.eu/Simple.aspx.

5.2 Reporting under EURATOM Nuclear Safeguards

The Secretariat submitted all the necessary reports on the nuclear material accountancy to the European Commission under the trilateral EU/IAEA nuclear safeguards agreements, ensuring continued compliance with EURATOM obligations.

5.3 Eighth review cycle of the Convention on the management of radioactive waste

Malta is a contracting party to the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management and thus is required to attend review meetings and report on Malta's compliance with the obligations set out in the Convention.

The Maltese report for the Eighth Review Meeting was prepared and sent to the IAEA in August 2024. In response to the report, a total of 33 questions and comments were received from another six contracting parties by the end of the year.

The written replies to the questions and attending the review meeting was to take place in 2025.

5.4 Incident and Trafficking Database

The Commission acts as the national focal point for the IAEA's Incident and Trafficking Database (ITDB) to the relevant Maltese stakeholders. This database is the IAEA's information system on incidents of illicit trafficking and other unauthorized activities and events involving nuclear and other radioactive material outside of regulatory control. In 2024, a total of 148 notifications were received and distributed to relevant national stakeholders.

6 Activities of the Secretariat

The Secretariat carries out a range of regulatory functions including inspections, recognition of experts, and laboratory analysis.

6.1 Regulatory Inspections

In 2024, the Secretariat performed 79 inspections of undertakings that use ionising radiation as presented in Table 3. A graded approach based on the level of radiological risk is applied, with the higher risk applications being inspected more frequently to ensure optimal use of resources within the Secretariat.

This year a focused inspection campaign targeted veterinary clinics to ensure full regulatory compliance.

Table 3. Number of inspections in the relevant applications.

Application	**Inspections in 2023**	**Inspections in 2024**
Radiotherapy	10	2
Nuclear medicine	2	4
Diagnostic radiology	13	15
Veterinary	2	29
Dental	71	12
Cyclotron	1	0
Security Screening	2	10
Container Shipment	1	1
Public Enquiry	1	0
School	1	1
Quality Control Equipment	0	2
Lightning Conductors	0	3
Total	**104**	**79**

The primary cause for the reduction in the number of inspections performed in 2024 versus 2023 is that in 2023 an inspection campaign was undertaken of dental clinics to perform inventory checks of dental x-ray equipment.

6.2 Recognition of experts

In accordance with regulations, the Commission recognises Radiation Protection Experts (RPE) and Medical Physics Experts (MPE).

By the end of 2024, 18 RPEs and 16 MPEs were recognised. Four RPE recognitions were renewed during the year, while no new or renewed MPE recognitions were issued. The list of recognised experts is available at: https://rpc.gov.mt/approved-service-providers/.

6.3 Radioanalysis Laboratory

The laboratory's primary purpose is to conduct analysis for the National Radioactivity Monitoring Programme and to provide support during radiological emergencies impacting Malta. In 2024, the

laboratory completed its second full year of gamma spectrometry analyses on food, water, feed, and environmental samples. The number of analyses conducted in Table 4.

Table 4. Number of gamma spectrometry analysis performed in 2024.

Media	Number of gamma spectrometry analysis performed in 2023	Number of gamma spectrometry analysis performed in 2024
Air Filter	28	26
Soil	12	6
Tap water	5	None
Milk	2	1
Foodstuffs	7	2
Seawater	16	12
Feed	1	2
Total	**77**	**49**

In 2024 the laboratory took part in the IAEA Intercomparison Worldwide Proficiency Test Exercise IAEA-TERC-2024-01 which are designed to monitor and demonstrate performance and analytical capabilities of different radioanalytical laboratories. The exercise consisted of different sample media including water, bauxite, sediment and simulated contaminated surface samples.

The laboratory performed the analysis of gamma emitting man-made and natural radionuclides using gamma spectrometry. 69% of the results produced by the Commission laboratory were consistent with the actual results. The Commission is actively exploring methodologies to enhance and strengthen its testing capabilities. This includes expanding the range of analytical equipment to cover a wider variety of sample types and implementing measures to ensure the reliability and accuracy of analytical results.

7 Emergency Exercises

The Commission participated in several EU and IAEA desk-top emergency exercises in collaboration with the Civil Protection Department. These exercises provided opportunities to assess and enhance Malta's preparedness in case of radiological emergencies.

8 Commission Sub-groups

8.1 Environmental Steering Committee

The Environment Steering Committee worked closely with the Environment and Resources Authority, the Environmental Health Directorate, and the Animal Health and Welfare Department to develop the Maltese National Radioactivity Monitoring Programme, ensuring alignment with EU recommendations and strengthening analytical capacity for both routine and emergency monitoring.

8.2 Non-ionising Radiation Sub-Committee

The Non-Ionising Radiation Sub-Committee focused on clarifying legal issues relating to non-ionising radiation and currently both the Occupational Health and Safety Authority (OHSA) and the Commission share responsibilities for safety, with the Commission having the general oversight whilst the subsidiary legislations are within OHSA.

8.3 Radon Working Party

The Radon Working Party worked on developing the Maltese actions regarding the protection from radon through the development of the Maltese Radon Action Plan. In 2024 a new study using radon monitoring equipment commenced, the purpose of the study being to investigate how building materials, ventilation, and room elevation affect radon concentrations in dwellings. The Radon Action Plan was updated accordingly.

8.4 Training Steering Committee

The Training Steering Committee continued its work on developing a comprehensive training framework that establishes the Commission's training requirements for all persons working with ionising radiation.

In line with the Basic Safety Standards regulations, the Commission is responsible for developing training syllabi and approving organisations that provide such training. The sub-group is currently preparing a framework that addresses the specific training needs of the various professional groups involved in the use of ionising radiation, ensuring that regulatory and practical requirements are clearly defined.

To achieve this goal, a series of meetings were held during 2024 with key stakeholders, including the Council for Professions Complementary to Medicine and Radiography Studies at the University of Malta, to align the proposed framework with existing professional education structures and sectoral needs.

9 Management of radioactive disused sources

Long term management solution of radioactive material in storage

Most of the disused long-lived radioactive sources are stored in a Central Storage Facility which is managed by a private company and holds a licence obtained from the Commission.

To support the development of a sustainable long-term management solution, the Commission sought advice from an IAEA contracted expert. The expert was tasked with assessing available options for the safe and secure management of disused sources. A detailed report, finalised in November 2023, examined a number of possible disposal and export strategies, including:

- The construction of a narrow-diameter borehole with waste emplacement at a depth of between 50 m and 200 m.
- The conversion of an existing underground man-made structure to accommodate long-term storage.
- The export of the sources to an appropriate international facility.

Based on this the Commission drafted a comprehensive submission for Government outlining the findings and strategic considerations. Subsequently, the Ministry directed the Commission to pursue the export option as the preferred long-term solution.

10 Outreach

As part of its outreach programme, the Commission organised nine workshops at its Mosta premises, attended by 103 participants, covering topics relating to Maltese radiation regulations.

In addition, a senior member of the Secretariat was selected by the IAEA to participate as an IRRS reviewer during the 2024 mission to Ghana, sharing Malta's regulatory experience to international peer review.

11 IAEA support to the Commission

Malta receives assistance from the IAEA through various technical cooperation projects (TCPs). Proposals for TCPs are written by member states of the IAEA and then submitted for evaluation and review to the IAEA. When awarded, national TCPs are run on a two-year project cycle and may be nearly fully funded by the IAEA or co-funded with the member state.

11.1 National TC project for 2024-2025 for the Commission.

In 2023 the IAEA approved project MAT9011, proposed by the Commission, with a budget of €194,000. This project was designed to train the newly employed staff and expand the radio-analysis laboratory monitoring capabilities in our laboratory.

Additionally, in 2024 Malta received two expert missions to discuss equipment needs for the expansion of laboratory capabilities most notably to be able to provide liquid scintillation analysis for beta emitting radionuclides

12 Future priorities for the Commission

Looking ahead, the Commission will continue to strengthen its regulatory framework and operational capacity. Key priorities include:

i. Ensuring the Secretariat is adequately staffed and trained.
ii. Ensuring that adequate budgetary allocations are made available to support the Commission's operations and the implementation of its strategic objectives.
iii. Providing the Government with technical and strategic advice on the future management of radioactive waste.
iv. Prepare for the IRRS mission scheduled for mid-2026.
v. Review and development of the Commission's management system documentation.
vi. Action the remaining findings of the previous IRRS and ARTEMIS missions.
vii. Finalising the training framework for undertakings.
viii. Expanding the testing capabilities of the radioanalytical laboratory.
ix. Further developing radon policies in line with the Radon Action Plan.
x. Considering accession to the Convention on the Early Notification of a Nuclear Accident and Convention on Assistance in a Nuclear Accident or Radiological Emergency.
xi. Regulation of non-ionising radiation as deemed relevant.

Prof Lourdes Farrugia
Chairperson
24 November 2025

Mr Paul Brejza
Executive Secretary
24 November 2025