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INTEGRATED REGULATORY REVIEW SERVICE (IRRS)

TO

SIERRA LEONE

Radiation Protection Board

Ministry of Energy and Power

Freetown, Sierra Leone

28 April -02 May 2008

DEPARTMENT OF NUCLEAR SAFETY AND SECURITY

FOREWORD

Under the terms of Article III of its statute, the International Atomic Energy Agency (IAEA) has the mandate to establish or adopt, in consultation and, where appropriate, in collaboration with competent organizations, standards of safety for protection of health and minimization of danger to life and property (including such standards for labour conditions), and to provide for the application of these standards to its own operations as well as to assisted operations and, at the request of the parties, to operations under bilateral or multilateral arrangements or, at the request of a State, to any of that State's activities concerning peaceful nuclear and radiation activities. This includes the publication of a set of Safety Standards, whose effective implementation is essential for ensuring a high level of safety. As part of its providing for the application of safety standards, the IAEA provides Safety Review and Appraisal Services, at the request of Member States, which are directly based on its Safety Standards.

In the regulatory framework and activities of the regulatory bodies, the IAEA has been offering, for many years, several peer review and appraisal services. These include: (a) the International Regulatory Review Team (IRRT) programme that provides advice and assistance to Member States to strengthen and enhance the effectiveness of their legal and governmental infrastructure for nuclear safety; (b) the Radiation Safety and Security Infrastructure Appraisal (RaSSIA) that assesses the effectiveness of the national regulatory infrastructure for radiation safety including the safety and security of radioactive sources; (c) the Transport Safety Appraisal Service (TranSAS) that appraises the implementation of the IAEA's Transport Regulations; and (d) the Emergency Preparedness Review (EPREV) that is conducted to review both preparedness in the case of nuclear accidents and radiological emergencies and the appropriate legislation.

The IAEA recognized that these services and appraisals had many areas in common, particularly concerning the requirements on a State to establish a comprehensive regulatory framework within its legal and governmental infrastructure and on a State's regulatory activities. Consequently, the IAEA's Department of Nuclear Safety and Security has developed an integrated approach to the conduct of missions on legal and governmental infrastructure to improve their efficiency, effectiveness and consistency and to provide greater flexibility in defining the scope of the review, taking into account the regulatory technical and policy issues.

The new IAEA peer review and appraisal service is called the Integrated Regulatory Review Service (IRRS). The IRRS is intended to strengthen and enhance the effectiveness of the State's regulatory infrastructure in nuclear, radiation, radioactive waste and transport safety, whilst recognizing the ultimate responsibility of each State to ensure the safety of nuclear facilities, the protection against ionizing radiation, the safety and security of radioactive sources, the safe management of radioactive waste, and the safe transport of radioactive material. The IRRS is carried out by comparisons against IAEA regulatory safety standards with consideration of regulatory technical and policy issues.

The new regulatory service is structured in modules that cover general requirements for the establishment an effective regulatory framework, regulatory activities and management systems for the regulation and control in nuclear safety, radiation safety, waste safety, transport safety, emergency preparedness and response and security. The aim is to make the IAEA services more consistent, to enable flexibility in defining the scope of the missions, to promote self-assessment and continuous self-improvement, and to improve the feedback on the use and application of the IAEA Safety Standards. The modular structure also enables tailoring the service to meet the needs and priorities of the Member State. The IRRS is neither an inspection nor an audit but is a mutual learning mechanism that accepts different approaches to the organization and practices of a national

regulatory body, considering the regulatory technical and policy issues, and that contributes to ensuring a strong nuclear safety regime. In this context, considering the international regulatory issues, trends and challenges, and to support effective regulation, the IRRS missions provide:

- a balance between technical and policy discussions among senior regulators;
- sharing of regulatory experiences;
- harmonization of the regulatory approaches among Member States; and
- mutual learning opportunities among regulators.

Regulatory technical and policy discussions that are conducted during IRRS missions take into account the newly identified issues coming from the self-assessment made by the host organization, visits to installations to observe inspections and interviews with the counterparts.

Other legally non-binding instruments can also be included upon request of the Member States, such as the Code of Conduct (CoC) on the Safety and Security of Radioactive Sources, which was adopted by the IAEA Board of Governors in 2004 and for which more than 85 Member States have written to the Director General of the IAEA committing themselves to implementing its guidance, and the Code of Conduct on the Safety of Research Reactors, which was adopted by the IAEA Board of Governors in 2005.

The IRRS concept was developed at the IAEA Department of Nuclear Safety and Security and then discussed at the 3rd review meeting of the Contracting Parties of the Convention on Nuclear Safety in 2005. The meeting acknowledged the importance of the IAEA regulatory peer reviews now recognized as a good opportunity to exchange professional experience and to share lessons learned and good practices. The self-assessment performed prior to the IAEA peer review mission is an opportunity for Member States to assess their regulatory practices against the IAEA safety standards. These IAEA peer review benefits were further discussed at the International Conference on 'Effective Nuclear Regulatory Systems' in Moscow in 2006, at which note was taken of the value of IRRS support for the development of the global nuclear safety regime, by providing for the sharing of good regulatory practices and policies for the development and harmonization of safety standards, and by supporting the application of the continuous improvement process. All findings coming from the Convention on Nuclear Safety review meetings and from the Moscow conference are inputs for the IRRS to consider when reviewing the regulatory technical and policy issues.

In addition, the results of the IRRS missions will also be used as effective feedback for the improvement of existing safety standards and guidance and the development of new ones, and to establish a knowledge base in the context of an integrated safety approach. Through the IRRS, the IAEA assists its Member States in strengthening an effective and sustainable national regulatory infrastructure thus contributing towards achieving a strong and effective global nuclear safety and security regime.

The Global Nuclear Safety Regime has emerged over the last ten years, with international legal instruments such as safety Conventions and Codes of Conduct and significant work towards a suite of harmonized and internationally accepted IAEA safety standards. The IAEA will continue to support the promotion of the safety Conventions and Codes of Conduct, as well as the application of the IAEA safety standards in order to prevent serious accidents and continuously improve global levels of safety.

With regard to the IRRS, the Director General of the IAEA, Dr Mohamed El Baradei, has stated that; 'The General Conference Resolution of September 2006 related to measures to strengthen international cooperation in nuclear, radiation and transport safety and waste management: "recognizes the importance of an effective regulatory body as an essential element of national

nuclear infrastructure, urges Member States to continue their efforts to increase regulatory effectiveness in the field of nuclear, radiation and transport safety and waste management, and consider availing themselves of the Secretariat's new Integrated Regulatory Review Service (IRRS) and notes with satisfaction the increased interest of the Member States in the IRRS."

At his opening speech of the fiftieth regular session of the General Conference in 2006, the Director General stated that; "The Agency's safety review services use the IAEA Safety Standards as a reference point, and play an important part in evaluating their effectiveness. This year we began offering, for the first time, an Integrated Regulatory Review Service (IRRS). This new service combines a number of previous services, on topics ranging from nuclear safety and radiation safety to emergency preparedness and nuclear security. The IRRS approach considers international regulatory issues and trends, and provides a balance between technical and policy discussions among senior regulators, to harmonize regulatory approaches and create mutual learning opportunities among regulators."

In his introductory statement to the IAEA Board of Governors on 5th March 2007, the Director General said; "The newly established Integrated Regulatory Review Service (IRRS) is intended to help Member States enhance their legislative and regulatory infrastructures, and to harmonize regulatory approaches in all areas of safety. It will also be one of the most effective feedback tools on the application of Agency standards.

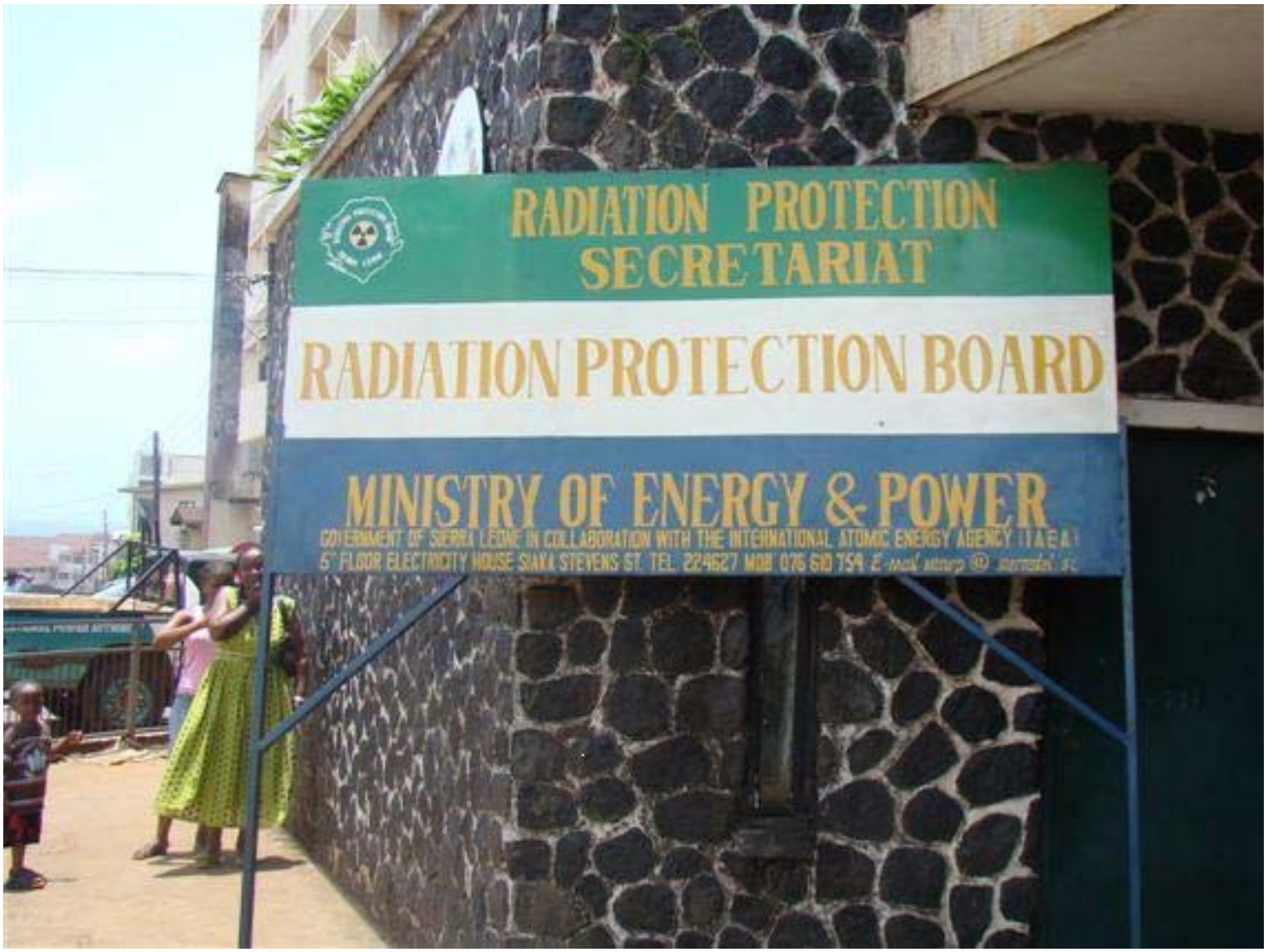
INTEGRATED REGULATORY REVIEW SERVICE (IRRS)

REPORT TO

THE GOVERNMENT OF SIERRA LEONE

Radiation Protection Board and its Secretariat, Ministry of Energy and Power

Freetown, Sierra Leone
28 April – 02 May 2008



REPORT

INTEGRATED REGULATORY REVIEW SERVICE (IRRS)

Mission date: 28 to 02 May 2008

Official Counterpart Organisation: Radiation Protection Board and its Secretariat Ministry of Energy and Power

Location: Freetown, Sierra Leone

Regulated facilities and activities: medical, industrial, mining and research application

Organized by: IAEA

IAEA Review Team: Ms. Ivanka ZACHARIŠOVA, Team Leader, Czech Republic

Mr. Teodros GEBREMICHAEL, Reviewer, Ethiopia

Mr. Nasiru-Deen BELLO, Reviewer, Nigeria

Mr. Karol SKORNIK, Team Coordinator, IAEA/NSRW

IAEA-2008
Issue date: December 2008

The number of recommendations, suggestions and good practices set out in this report is in no way a measure of the status of the regulatory framework. Comparisons of such numbers between IRRS reports from various countries should not be attempted.

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EXECUTIVE SUMMARY

At the request of the Government of Sierra Leone, an international team of experts in radiation safety and security visited the Radiation Protection Board and its Secretariat (RPB) from 28 April to 02 May 2008 to conduct an Integrated Regulatory Review Service (IRRS) mission to review the country's regulatory framework and its effectiveness. The RPB, with its Secretariat, is the regulatory body responsible for radiation protection and safety in relation to activities involving radiation sources and radiation facilities in Sierra Leone.

The purpose of this IRRS mission was to conduct a peer review of the country's regulatory framework for all regulated activities involving sources, facilities and activities, to review the regulatory effectiveness of the RPB and to exchange information and experience in the areas considered by IRRS. It is expected that the IRRS mission will facilitate regulatory improvements in Sierra Leone from the knowledge gained and experiences shared by the RPB and the IRRS reviewers through the evaluation of the effectiveness of the regulatory framework.

The scope of the mission included sources, facilities and activities regulated by the RPB: medical activities, industrial and research activities, as well as safety and security of radioactive sources.

The IRRS review team consisted of four senior regulatory experts from three Member States and the IAEA Coordinator. The IRRS team carried out the peer review of RPB in all relevant areas: legislative and governmental responsibilities; responsibilities and functions of the regulatory body; organization of the regulatory body; activities of the regulatory body, including the authorization process, review and assessment, inspection and enforcement and the development of regulations and guides; safety and security of radioactive sources; the quality management system and information management.

The conduct of the mission was based on intensive interviews and discussions, as well as working sessions with key personnel of the RPB under the Ministry of Energy and Power. Working sessions included review of documentation provided before and during the mission. Moreover, two members of the team participated as observers in regulatory inspections at two licensee facilities (medical and industrial). Discussions also included policy issues related to regulatory control for the safety and security of all sources of ionizing radiation.

On the basis of mission's findings, the team was able to arrive at conclusions and make recommendations with reference to the international safety standards, related IAEA requirements and guidance. The recommendations indicate where improvements are necessary or desirable to further enhance the legal and governmental infrastructure for radiation safety and security, and improve effectiveness of regulatory controls.

Major conclusions and recommendations of the mission are as follows:

- The Protection from Radiation Act, No. 14 (2001) is sufficiently comprehensive in relation to

  - activities involving radiation sources,
  - protection of the public and environment, and
  - safe management of radioactive waste, and

  should be implemented in its entirety. To this end, the RPB, after a break caused by changes in the Government, should resume its regular activities, and the Secretariat to the Board,

with its Chief Radiation Protection Officer and technical staff, should intensify discharging day-to-day regulatory functions with no further delay.

- In accordance with the Act No. 14, the Government should ensure that the RPB, as national regulatory body, be effectively independent from any national agencies having promotional role in application of radiation sources and radiation-based technology. This should also include effective independence with respect to the budget of the RPB.
- Action should be taken to develop subsidiary legislative instruments. This includes, as a matter of the highest priority, the implementation of the Protection from Radiation Regulations 2006. Furthermore, other outstanding regulations, as well as regulatory guidance (Codes of Practice) and procedures in compliance with international standards, should be developed.
- In order to enhance the effective implementation of the Act No.14, decision-makers, stakeholders and operators of radiation sources should be made aware of the establishment and functions of the RPB and its Secretariat, as well as of their respective responsibilities.
- The Government is encouraged to declare its support to the *Code of Conduct on the Safety and Security of Radioactive Sources* (2004) and *Guidance* on *the Import and Export of Radioactive Sources* (2005).
- Enabling safety legislation for peaceful uses of atomic energy should be reviewed and revised with due consideration of all regulatory aspects including those relating to the safety and security of radioactive sources.
- Sufficient support should be provided to the RPB and its Secretariat in terms of expanding technical and support staff, provision of necessary technical and logistical support (e. g. premises, vehicles, IT and radiation monitoring equipment) and necessary funding to ensure that all radiation practices in the country are properly regulated in line with IAEA safety standards.
- The approved organizational structure and related staffing levels should be implemented as soon as possible to enable the RPB Secretariat to discharge all regulatory functions.
- A national training programme for current and newly recruited technical staff of the RPB Secretariat should be developed. The programme should be formalised and structured using human resources already trained, particularly for induction training. IAEA assistance in the provision of education and specialised training opportunities can be included in the programme.

A summary of the recommendations is provided in Appendix V of the full Report. The IRRS team and RPB agreed upon an Action Plan 2008-2010 focusing on activities to be carried out with IAEA input. The Action Plan is provided in Appendix VIII of the full Report.

There was a consensus that the IRRS mission was a timely undertaking of the IAEA assistance to strengthen the regulatory infrastructure of Sierra Leone, in line with IAEA standards for the safety of radioactive sources.

The Government of Sierra Leone is to be commended on its effort to develop effective regulatory framework for radiation safety and security of radioactive source, particularly on action taken to implement part of the above recommendations, concerning support to the RPB and its Secretariat, immediately after IRRS mission was held.

I. INTRODUCTION

At the request of the Government of Sierra Leone, an IAEA team, encompassing three experts from Member States and the IAEA mission coordinator, visited the RPB and its Secretariat; the Regulatory Body of Sierra Leone, from 28 April to 02 May, 2008 to conduct an Integrated Regulatory Review Service (IRRS). The RPB Secretariat was the official counterpart to the mission.

The purpose of the mission was to conduct a peer review of the country's regulatory framework and the regulatory activities, to review the regulatory effectiveness of RPB and to exchange information and experience in the areas considered by IRRS. The areas reviewed were: legislative and governmental responsibilities; authority, responsibilities and functions of the regulatory body; organization of the regulatory body; the authorization process; review and assessment; inspection and enforcement; the development of regulations and guides; safety of radioactive sources; the management system; and information management.

In addition, the regulatory technical and policy issues considered in this review provide a greater understanding of the regulatory issues that may have international implications and assist in addressing specific technical issues relevant to the regulation of radiation safety and security.

During the mission, RPB made available a collection of reference material for the team to review. This material consisted of legislative and regulatory documents. The team performed a systematic review of all topics using this reference material, interviews with members, technical Staff of the RPB and its Secretariat, and major stakeholders, as well as direct observation of their working practices.

IRRS activities took place mainly at the RPB premises, Ministry of Energy and Power headquarters, Freetown. Announced regulatory inspections at two licensee institutions were observed by part of the team. The observation of inspections took place at the INTERTEK Foreign Trade Standard, Queen Elisabeth II Port, Freetown and Emergency Surgical Centre, Goderich-Freetown Radiology Dept. (see Appendix III).

II. OBJECTIVES AND SCOPE

The purpose of the mission was to conduct an IRRS review of the Sierra Leonean legal and governmental infrastructure for radiation safety and security, and the effectiveness of the country's regulatory body (RPB and its Secretariat), as well as to exchange information and experience between the RPB and the IRRS team with a view to contributing to harmonizing regulatory approaches and creating mutual learning opportunities among regulators.

The key objective of this mission was to strengthen and enhance, where necessary, the country's regulatory infrastructure for radiation safety and the security of radioactive sources. This was accomplished by:

- providing Sierra Leone (RPB and other competent authorities) with a review of its regulatory technical and policy issues for radiation safety and the security of radioactive sources;
- providing an evaluation of country's regulatory infrastructure for radiation safety and the security of radioactive sources with respect to international safety standards;
- providing the Government of Sierra Leone with recommendations for improvement;
- providing competent authorities of Sierra Leone with an opportunity for self-assessment of regulatory activities with regard to the *International Basic Safety Standards for Protection against Ionizing Radiation and for the Safety of Radiation Sources* (BSS), IAEA requirements on *Legal and Governmental Infrastructure for Nuclear, Radiation, Radioactive Waste and Transport Safety* (GS-R-1), *Code of Conduct on the Safety and Security of radioactive Source* and *Guidance on Import and Export of Radioactive Sources.*
- based on results of the review, preparing an agreed mid-term Action Plan 2008-2010 incorporating national activities and IAEA input for strengthening regulatory infrastructure for radiation safety in compliance with IAEA safety standards.

The scope of this mission was:

- an overall appraisal of regulatory issues including policy issues, for ensuring radiation safety and the security of radioactive sources in all areas of application in Sierra Leone, and
- quality and information management systems including public information.

III. BASIS FOR THE REVIEW

A) PREPARATORY WORK AND IAEA REVIEW TEAM

The preparatory work for the mission was carried out by the IAEA Team Coordinator, Mr Karol Skornik, NSRW/IAEA. The IRRS Team Leader was Ms Ivanka Zachariaŝova, senior officer of the regulatory authority in the Czech Republic. The team also included Messrs Teodros Gebremichael and Nasiru-Deen Bello, respectively from the Ethiopian and Nigerian regulatory authorities. The full composition of the team, with the affiliation of its members is presented in Appendix I.
A team briefing was conducted on 27 April 2008 to discuss the programme and specifics of the mission, to clarify the basis for the review, background, context and objectives of the IRRS and to adopt the methodology for review and evaluation.
Significant amount of work was carried out by the team in order to review the *Pre-appraisal Questionnaire* on the status of regulatory infrastructure in Sierra Leone, submitted by the counterpart, to prepare for interviews and direct observations at the sites, and to identify additional reference material, necessary during the mission.

B) REFERENCES FOR THE REVIEW

The main reference documents provided by RPB for the review mission are listed in Appendix VI. The most relevant IAEA safety standards and other reference documents, used for the review, are listed in Appendix VII.

C) CONDUCT OF THE REVIEW

During the mission, a systematic review was conducted of all the review areas. The objectives were to provide the RPB with recommendations and suggestions, as well as to identify good practices. The review was conducted through meetings, interviews and discussions with RPB, assessment of the reference material, and direct observations regarding the national practices and activities, particularly in the context of inspections.

The team performed its activities based on the mission programme agreed with the Counterpart (Appendix II.).

The entrance meeting was held on 28 April 2008, with the participation of the Hon. Martin A. B. Kamara, Deputy Minister, Ministry of Energy and Power (MEP), Mr. Ernest S.A. Surrur, Permanent Secretary, MEP, RPB Chairman and members, senior representatives of stakeholders' institutions and senior management of national agencies concerned. Opening remarks were made by the Dr Ernest T. Ndomahina, Chairman, RPB, and the IAEA Team Coordinator.

The team met with Hon. Haja Afsatu O.E. Kabba, Minister of Energy and Power and the Permanent Secretary, MEP in separate meetings on 28 April and 1 May 2008 to discuss the key findings of the review.

The exit meeting was held on 2 May 2008 with the Deputy Minister and the Permanent Secretary, MEP, RPB members and the RPB Secretariat. The main conclusions and recommendations were presented by the Team Leader. An Executive Summary of the draft report was handed to the Management, MEP and the RPB Secretariat.

1. LEGISLATIVE AND GOVERNMENTAL RESPONSIBILITIES

Policy Issues

A plenary discussion on the regulatory policy issues was held with the Chair and members of the Radiation Protection Board and technical staff of the RPB Secretariat. The discussions focused, among other things, on:

- independence of the RPB;
- openness and transparency in regulatory activities including the involvement of stakeholders and public information;
- enhancing regulatory competence and effectiveness; and
- human resources and knowledge management.

There was a good perception of the importance of establishing a clear national policy to ensure safety and security of radioactive sources in the country. The participants agreed that the RPB and its Secretariat would be the main but not the only beneficiaries of such policy. Summary of the discussions is presented below.

Independence of the regulatory body

Background:

Although more Member States have effective independent regulators, the issue of independence is still a challenge.

Key elements of the discussion:

- Legislation establishes effectively independent regulatory body;
- The need to resume activities of the Radiation Protection Board, after a break caused by changes in the Government;
- Access to independent resources and technical advice;
- Funding independence;
- Clear division between the responsibilities of Operators and Regulators.

Openness, transparency and stakeholders' involvement (including public communications)

Background:

Openness and transparency in regulation is essential to encourage continuous improvement of performance and building public confidence. The international community promotes openness through several services. However, finding a proper balance between public availability of information and protection of confidential data remains a challenge.

Key elements of the discussion:

- Strategies for engagement of stakeholders;
- Stakeholder involvement in regulatory decision making;
- The basis for regulatory decisions made available to stakeholders;
- Use of electronic means of communication, including the internet, for communication with stakeholders;
- Low threshold for informing stakeholders of nuclear and radiation safety related information.

Leadership and management of safety

Background:

Leadership in radiation safety matters has to be demonstrated on the highest levels in an organization. The importance of human and organizational aspects of safety and safety culture is widely accepted. An effective management system is considered essential to support leadership in order to maintain and continuously enhance a good safety culture. Assessment tools for safety culture are being developed. Advanced decision-making techniques are increasingly needed to apply resources where they will do the most good. Recent events have led to concern over complacency in some operating organizations and lack of regulatory effectiveness in identifying and proactively responding to early symptoms of emerging problems.

Key elements of the discussion:

- Safety policy defined;
- Safety management system;
- Integration of the elements of the safety management system (safety culture, environment, quality, financial etc)
- Internal assessment of safety culture;
- Open dialogue between regulatory body and senior industry executives;
- Internal decision making and appeal process;
- Value and ethics programmes;
- Self assessment;
- Regulatory experience included in appointing senior executives.

Legislative and statutory framework

GS-R-1 § 2.2 (1)

The legislative basis to regulate the safety of facilities and activities in Sierra Leone is provided by the *Protection from Radiation Act, No. 14 of 2001* (the Act). The Act established the Radiation Protection Board (RPB), under the Ministry of Energy and Power, as the regulatory body. A Radiation Protection Secretariat to carry out the day-to-day regulatory activities of the RPB has been established, and a Chief Radiation Protection Officer has been appointed. The Act is complemented by the *Protection from Radiation Regulations of 2006*. However, the current legislation does not provide for the security of radioactive sources.

A draft revised Radiation Protection Act 2008 and draft Statutory Instrument: Radiation Protection Regulations 2008 have been prepared and will be submitted for the IAEA review and comments.

Establishment of an effectively independent regulatory body

GS-R-1 § 2.2 (2)

The Act No. 14 established the RPB and its Secretariat as one, effectively independent regulatory body. (Part II, Sections 2&3). The RPB and the Secretariat remain under the organizational structure of the Ministry of Energy and Power (MEP). The IRRS team was informed that the RPB and the Secretariat were financially independent of the MEP. The budget for the RPB is allocated by the Ministry of Finance. These financial resources are claimed by the RPB to be insufficient. The MEP provides office space and some logistic support to the Secretariat. However, the support is not adequate to cover development needs of the Secretariat. The IRRS team was also informed that due to restructuring and changes at the decision-making level at the MEP, regular activities of the RPB had been disrupted for over two years. The team met the Chair and some members of the Board.

Regulatory body - assigned responsibilities, authority, and resources

GS-R-1 § 2.2 (3)

The RPB is vested by the Act 14 (Part II, Sections 1, 2 & 3) with the responsibilities for authorization, regulatory review and assessment, as well as for inspection and for establishing safety principles, criteria, regulations and guides.
Specifically, these responsibilities are assigned as follows:

Authorization

The RPB is the sole authority in the country, responsible for granting authorizations [ref. Articles 10, 11 and 12].

Regulatory review and assessment

This role is assigned to the RPB, under Article 11.

Inspection

The RPB Secretariat, the executive arm of the RPB, is responsible for carrying out regulatory inspections [Article 19.a].

Enforcement

The legislation does not give the RPB the authority to enforce regulatory requirements.

Establishing regulations, safety principles, criteria and guides

This is assigned to the Secretariat under the Act 14, for the approval of the RPB and subsequent signature by the Minister.

GS-R-1 § 2.2 (4)

The RPB and its Secretariat are provided under the Act 14 with adequate authority and power, with the exception of enforcement. The Government is also committed to ensure adequate staffing and financial resources for the RPB and the Secretariat to discharge their responsibilities. However, this commitment is still not sufficient in terms of human and material resources for the RPB and the Secretariat to carry out their activities.

CONCLUSIONS	
C1	**Conclusion:** The current legislation (Act No. 14) and Regulations 2006 do not provide for the security of radioactive sources. There is a need to revise the legislation in line with the provisions of the Code of Conduct on the Safety and Security of Radioactive Sources and its Guidance on the Import and Export of Radioactive Sources.
C2	**Conclusion:** The current legislation does not provide for sufficient empowerment of the RPB and its Secretariat to discharge its functions. Specifically, the Act 14 does not provide for enforcement actions to be taken by the regulatory body.

RECOMMENDATIONS, SUGGESTIONS AND GOOD PRACTICES	
(1)	**BASIS: GS-R1** §2 Legislative and Governmental Responsibilities
R1	**Recommendation:** The Government may wish to consider declaring its support to the *Code of Conduct on the Safety and Security of Radioactive Sources* and its *Guidance on the Import and Export of Radioactive Sources.*
R2	**Recommendation:** The Act No. 14 of 2001 should be reviewed and revised. Due consideration should be given to all aspects related to the safety and security of radioactive sources including the categorization of sources.

2. RESPONSIBILITIES AND FUNCTIONS OF THE REGULATORY BODY

Regulatory body - fulfilling statutory obligations

GS-R-1 § 3.1

The Act No. 14 makes provisions for the RPB to define policies, safety principles and criteria. However, these statutory obligations are not being fulfilled. The IRRS Team was informed that meetings of the RPB had not been held for a few years. Day-to day regulatory functions have been discharged to a limited extent by the Secretariat. Restructuring and changes at the decision-making level in the Ministry of Energy and power, as well as shortage of regulatory staff of the Secretariat, were cited as a reasons for this limitation.

GS-R-1 § 3.2 (1)

Radiation Protection Regulations 2006, prepared with IAEA assistance, have been enacted. Other subsidiary instruments including codes of practice and safety guides have yet to be prepared.

GS-R-1 § 3.2 (2)

The Act No. 14 gives responsibility to the RPB Secretariat to review and assess applications for authorizations. These activities have been initiated. However, no guidance for end users has been issued on the format and content of such applications.

GS-R-1 § 3.2 (3) (i)-(x)

The legislation makes provisions for the RPB to issue, amend, suspend or revoke authorizations. This empowerment has not been implemented.

GS-R-1 § 3.2 (4)-(6)

Under the provisions of the Act No.14, the RPB Secretariat is empowered to carry out regulatory inspections and recommend corrective actions to be taken by licensees. However, the empowerment does not include the regulatory inspectors' right of entry to facilities at any time; neither does it provide for necessary enforcement actions.

Regulatory body – discharging its main responsibilities

GS-R-1 § 3.3 (1)-(5).

(1) The process for dealing with applications for regulatory action (e.g. for authorizations) is in place, however, its scope has not been fully implemented, and no guidance has been issued by the RPB to familiarize applicants with related regulatory requirements;
(2) so far, a process for changing conditions of authorization has not been implemented;
(3) guidance to the operator for developing and presenting safety documentation for regulatory assessment has not been issued.
(4) under the Act No.14, the RPB Secretariat may require any operator to provide proprietary information. The Act explicitly places a requirement on the regulatory body to protect the confidentiality of such submissions. However, this requirement has not been met.
(5) the legislation allows the RPB Secretariat to reject an application for authorization. The requirement to provide an explanation of the reasons for rejecting a submission has not yet arisen.

GS-R-1 § 3.3 (6)
The requirement regarding communication with the public is partly fulfilled by the RPB Secretariat. There is limited exchange of information with governmental and other relevant bodies.

CONCLUSIONS	
C3	**Conclusion:** The Act No. 14 provides for sufficient effective independence of the RPB, as well as for adequate power to define policies, safety principles and criteria, with the exception of security related issues. However, for a few years, activities of the RPB have been at a standstill. Apart from the general Regulations 2006, no subsidiary instruments (regulations) or guidance documents have been issued. Similarly, no internal RPB procedures for the implementation of the RPB empowerments are in place. There is an urgent need for the RPB to resume its activities.
C4	**Conclusion:** There is an urgent need to increase technical and support staff of the Secretariat so that regulatory functions can be carried out in accordance with the Act No. 14 and Regulations 2006.

RECOMMENDATIONS, SUGGESTIONS AND GOOD PRACTICES	
R3	**Recommendation:** Activities of the Radiation Protection Board (RPB) should be resumed as soon as possible in accordance with the Act No.14.
R4	**Recommendation:** The RPB should issue a set of regulations and practice-specific safety guidance, commensurate with present and future radiation practices in the country.
R5	**Recommendation:** The RPB should include security of radioactive sources in national draft regulations and guidance documents in due consideration of identified priorities. Furthermore, internal safety and security-related procedures should be prepared, following the issuance of subsidiary instruments by the RPB.
R6	**Recommendation:** The Government should provide sufficient support to the RPB and its Secretariat in terms of recruiting more technical and support staff, provision of necessary technical and logistical support (e.g. premises, vehicles, IT and radiation monitoring equipment) and necessary funding to ensure that all activities and practices involving the use of ionizing radiation and radioactive sources are properly regulated, in accordance with the Act No. 14 and Regulations 2006, and in line with IAEA safety standards and related requirements.

3. ORGANIZATION OF THE REGULATORY BODY

Organizational structure, size and activities

GS-R-1 § 4.1

The requirement regarding the organizational structure of the RPB Secretariat for it to be able to discharge its responsibilities is not met. The RPB Secretariat does not have a well defined organizational structure. Such a structure has been approved, but not implemented. The size of the Secretariat does not seem to be commensurate with the extent of present activities and practices. Budgetary needs of the RPB and its Secretariat are not adequately met. The current situation adversely affects the efficiency and effectiveness of regulatory work and slows down any development in reaching compliance with international standards. Specifically,
- office space of the RPB and its Secretariat is not sufficient;
- there is a need of acquiring more IT equipment and to arrange for radiation monitoring laboratory;
- it is necessary to ensure calibration of radiation monitoring instruments,
- there is an urgent need to acquire at least one more vehicle for inspection purposes.

Use of consultants and contractors

GS-R-1 § 4.3
The RPB and its Secretariat have not been using services of external consultants and contractors so far, although it is provided for by the Act No. 14.

Staffing and Training of the Regulatory Body

GS-R-1 §4.6-4.8
The Chief Radiation Protection Officer who is also a Secretary to the RPB has been appointed. The Staff of the Secretariat includes two technical officers, a technician and one clerk. The current staffing level is inadequate. The IRRS review team was informed that a new organizational structure of the Secretariat has been approved. Accordingly, the staffing level will gradually increase to eight technical officers (regulators) and four technicians.

Training programme for the current staff has been entirely based on and delivered through the IAEA assistance. A national training course for regulators was held in 2006. One technical staff of the Secretariat completed a regional Post-graduate Educational Course on Radiation Protection and on the Safety of Radiation Sources (PGEC) in South Africa, 2007. All technical staff attended IAEA regional training events or were awarded on-the-job fellowships.

The RPB does not have radiation measurement laboratory, neither does it have an access to or means for calibration services of radiation monitoring equipment.

Relations with the operators

GS-R-1 §4.10
This requirement seems to be partly met, especially through inspections carried out by the RPB Secretariat (ref. Annex III). However, with a limited system of authorization and no enforcement system in place, there is no sufficient basis for the assessment of relationship between the regulatory authority and the operator.

International Cooperation

GS-R-1 §4.11

International cooperation in matters relating to regulatory infrastructure for the control of radiation sources is based on the country's membership of the IAEA and the participation in the IAEA Technical Cooperation Programme.

No formal bilateral arrangements or agreements on radiation safety with other countries are in place. Informal cooperation has been established with regulatory bodies of Ghana and Nigeria.

CONCLUSIONS	
C5	**Conclusion:** There is an urgent need to implement the approved organizational structure and increase the staffing level of the RPB Secretariat to enable discharging its regulatory functions, in accordance with the Act No.14 and Regulations 2006.
C6	**Conclusion:** Government support, with the provision of necessary resources, is needed to facilitate the implementation of the approved organizational structure and gradual increase of the staffing level of the RPB Secretariat.
C7	**Conclusion:** Induction training is needed on a priority basis as soon as new technical officers (regulators) have been recruited. This can be done using human resources already trained. The follow up capacity building programme needs to be developed.
C8	**Conclusion:** There is a need of sufficient office space for the RPB and its Secretariat to discharge their regulatory functions. Furthermore the RPB Secretariat needs a radiation measurement laboratory, as well as a possibility to calibrate radiation monitoring equipment.
C9	**Conclusion:** There is an urgent need for the RPB Secretariat to acquire at least one more vehicle for inspection purposes.
C10	**Conclusion:** The present level of cooperation with IAEA appears to be adequate to the country's needs. Also, informal bilateral cooperation exists with some regulatory authorities in the region is in place. However, there is a need to formalize arrangements for such a cooperation.

RECOMMENDATIONS, SUGGESTIONS AND GOOD PRACTICES	
	BASIS: GS-R-1 §4.
R7	**Recommendation:** The approved organizational structure and related staffing levels should be implemented as soon as possible to enable the RPB Secretariat to discharge its full scope regulatory functions.
R8	**Recommendation:** Adequate annual budget should be provided by the Government, so that discharging regulatory functions by the RPB and its Secretariat is not compromised. Budgetary allocations should take into account related development needs.
R9	**Recommendation:** Induction training at national level, using already trained human resources, should be organized on a priority basis as soon as new technical officers (regulators) have been recruited. The follow up capacity building programme should be developed.
R10	**Recommendation:** Arrangements should be made to ensure access to a radiation measurement laboratory and the provision of calibration services of radiation monitoring equipment.
R11	**Recommendation:** The Government should provide at least one more vehicle to the RPB Secretariat for inspection purposes.
R12	**Recommendation:** The process of preparing and concluding Memoranda of Understanding (MoUs) with national institutions, bodies and law enforcement agencies concerned should be finalized as soon as possible.

R13	**Recommendation:** The RPB and its Secretariat should formalize bilateral arrangements on cooperation, particularly with well-established regulatory bodies in neighbouring States of the West Africa sub-region.
R14	**Recommendation:** Current efforts should continue to maintain and strengthen cooperation with the IAEA in all radiation safety and source security areas pertaining to the regulatory infrastructure.

4. ACTIVITIES OF THE REGULATORY BODY

Notification

GS-R-1 §5.2, BSS §2.10, GS-G-1.5 §3.25

The system of notification is at its early stage. Currently, input to the registry of radiation sources is provided solely through an effort by the RPB Secretariat. There is practically no feedback provided by operators. The national registry using RAIS has been initiated. A conventional back-up system, in the form of a log book, is in place. It is estimated that the present inventory accounts for about 40% of used and disused radiation sources in the country.
Implementation of the system requires retrospective action, i.e. a notification by operators who have been in possession of sources prior to the promulgation of Regulations 2006. The RPB Secretariat is presently unable to complete the task due to insufficient resources, budgetary constraints and no empowerment to enforce legislation.

Authorization

GS-R-1 §5.3

The system has been initiated. However, authorization procedure does not include a distinction between 'authorization by registration' and 'authorization by licensing'. Security related issues are not part of the authorization process.

GS-R-1 §5.4

No guidance has been issued on the format and content of applications for authorization.
At present, there are no complex facilities that would require a staged approach to the authorization process. However, practices requiring such approach cannot be ruled out in the future.

Review and assessment

GS-R-1 §5.7 - 5.11

Although the RPB Secretariat attempts to undertake a review and assessment process of an operator's technical submission for authorization, the process does not include the potential magnitude and nature of the hazard associated with a facility under review. No procedure is in place, requiring that applications be reviewed and assessed within a specified time frame. The process does not include the provisions of the *Code of Conduct* and its *Guidance on Import and Export of radioactive Sources.*

Inspection

GS-R-1 §5.14-5.17

A programme for inspections is in place. However, due to the shortage of qualified staff and resources, the frequency and scope of inspections do not depend on the potential magnitude and nature of the hazard or past performance of the facility or activity. Inspections are carried out once a year in accordance with the approved programme. Only announced inspections are held; there are no unannounced inspections or those held on a short notice The RPB Secretariat has established written inspection procedures which are routinely applied by inspection staff. However, the inspection programme and the conduct of inspections do not include security of sources.

An informal practice is in place to notify an operator of the inspection within one month following an abnormal event. The operator's radiation source inventory is routinely verified during each inspection.

Enforcement

GS-R-1 §5.18 - 5.23

Enforcement policy is still to be developed, established and implemented in line with provisions of the draft revised Act. At present, under the Act No. 14 of 2001, the RPB Secretariat is not empowered to take enforcement actions. This lack of empowerment applies to all cases, including those of serious non-compliance.

Regulations and Guides

GS-R-1 §5.25- §5.28

The Act No.14 only implicitly gives the Radiation Protection Board the right to issue regulations and guides. This authority has been exercised by issuing Regulations 2006. No other subsidiary instruments are in place.

CONCLUSIONS	
C11	**Conclusion:** The current system of notification is at its early stage and largely incomplete. Specifically, the provisions of the Act No. 14 regarding operators' responsibilities for notification are not adhered to. There is a need for the RPB Secretariat to develop the system including the inventory of radiation sources, and to render it fully operational.
C12	**Conclusion:** There is an urgent need for the process of retrospective notification to be initiated and completed within a specified time frame using the RAIS system, provided by the IAEA, as main instrument for maintaining and updating the inventory of radiation sources
C13	**Conclusion:** The process of review and assessment does not include the potential magnitude and nature of the hazard associated with a facility under review. No procedure is in place, requiring that applications be reviewed and assessed within a specified time frame. Furthermore, the process does not include the provisions of the *Code of Conduct* and its *Guidance on Import and Export*…
C14	**Conclusion:** There is a need to introduce amendments to the authorization process to include: - the categorization of sources, - distinction between authorization by registration and authorization by licensing, - guidance on the format and content of applications for authorization, as well as a defined time-frame for granting or rejecting authorizations, - staged approach to the process providing types of authorizations for different stages of complex facilities (siting, design, construction, commissioning, operation and decommissioning), - provisions of the *Code of Conduct* and its *Guidance on the Import and Export*.
C15	**Conclusion:** The frequency (once/year) and type of inspections are adversely affected by the shortage of qualified staff. Even though a programme for planned (announced) inspections is in place, the programme does not include security related issues.

CONCLUSIONS	
C16	**Conclusion:** There is a need to develop a procedure relating to regulatory inspections following any abnormal events including security-related events.
C17	**Conclusion:** Procedure requiring the RPB to notify the registrant/licensee of the results of an inspection within a specified time frame is still to be formalised.
C18	**Conclusion:** The system of enforcement needs to be introduced in the revised legislation as a matter of high priority.
C19	**Conclusion:** There is a need for RPB to develop enforcement policy in line with international BSS and GS-R-1. Specifically, the following issues are to be addressed: - requirements for formal arrangements with law enforcement agencies, - empowerment of the RPB Secretariat to cease activities and to take prompt actions to restore an adequate level of safety and security including cases of continual or serious non-compliance, - powers of the inspectors to take 'on-the-spot' enforcement actions.

RECOMMENDATIONS, SUGGESTIONS AND GOOD PRACTICES	
	BASIS: GS-R-1 §5
R15	**Recommendation:** The national registry of radiation sources, with present coverage estimated at approx. 40 %, should be completed as soon as possible, using RAIS software as the main tool for maintaining and updating the relevant data.
R16	**Recommendation:** The system of notification should be rendered fully operational, and the process of retrospective notification on radiation sources and practices – completed as soon as possible.
R17	**Recommendation:** Procedures related to the review and assessment of applications for authorization should be revised to incorporate: - the potential magnitude and nature of the hazard associated with a facility under review, - requirements for the RPB Secretariat to review and assess the application within a specified time frame, - provisions of the *Code of Conduct on the Safety and Security of Radioactive Sources* and its *Guidance on the Import and Export of Radioactive Sources.*
R18	**Recommendation:** The authorization process and related procedures should be reviewed and amended to include: - the categorization of sources, - distinction between the authorization by registration and authorization by licensing, - guidance on the format and content of applications for authorization, as well as defined time frame for granting or rejecting an authorization. - staged approach to the process providing for types of authorization for different stages of complex facilities (siting, design, construction, commissioning, operation and decommissioning); - provisions of the *Code of Conduct on the Safety and Security of Radioactive Sources* and its *Guidance on Import and Export of Radioactive Sources; and* - specified time frame for granting or rejecting an authorization.
R19	**Recommendation:** Procedure for regulatory inspections following any abnormal events including security-related events should be developed and incorporated in the existing inspection procedures.

RECOMMENDATIONS, SUGGESTIONS AND GOOD PRACTICES	
R20	**Recommendation:** An administrative requirement for the RPB Secretariat to notify the operator (registrant or licensee) of the results of an inspection within a specified time frame should be developed and introduced as a matter of high priority.
R21	**Recommendation:** The RPB should develop an adequate system of enforcement and related policy.
R22	**Recommendation:** The following elements related to enforcement policy and actions should be included in the revised legislation: (i) requirements for formal arrangements with law enforcement agencies, (ii) empowerment to cease operator's activities and to take prompt action in order to restore adequate level of safety and security including cases of continual or serious non-compliance, (iii) powers for the inspector to take 'on-the-spot' enforcement action.

5. SAFETY AND SECURITY OF RADIOACTIVE SOURCES

The RPB, with its Secretariat have still to develop a policy and requirements regarding safety and security of radioactive sources. This relates in particular to handling and storage of disused and/or recovered sources, as well as to operations involving import and export of sources. The IRRS review team were informed that a provisional temporary storage container for disused sources was located at Sierra Rutile Mines, 300 km east of Freetown. However, the place is owned by an operator in a remote, hardly accessible area. According to information provided by the RPB Secretariat, the container is in safe and secure condition. However, the IRRS team was unable to verify whether safety requirements and physical protection measures are in place. There is a need to establish a radioactive waste repository, suitable for handling, conditioning and storage of radioactive sources. Furthermore, no measures are in place to handle or store radioactive sources at the ports of entry (Freetown Port Authority and Lungi International Airport. The IRRS review team were informed that scrap metal sites are occasionally scanned by the RPB staff prior to container loading, but there is no monitoring programme at such sites.
It was noted that no procedures including emergency plans have been established to address actions to be taken in cases of sources that have been lost from authorized control (e.g. stolen or accidentally disposed). Also, no measures are in place to ensure safety and security in cases of ceased operations.

CONCLUSIONS	
C20	**Conclusion:** There is a need for the RPB and its Secretariat to develop regulatory requirements for the safety and security of radioactive sources during their movement or transport, as well as in field operations
C21	**Conclusion:** RPB regulatory action is necessary to ensure safe and secure storage of radioactive sources during import/export operations at Freetown Port and Lungi International Airport.
C22	**Conclusion:** There is a need for the RPB to establish a facility for safe and secure storage of radioactive waste and disused and/or recovered sources.
C23	**Conclusion:**. RPB action is necessary to establish a monitoring programme at scrap metal sites for possible identification of radioactive material.

RECOMMENDATIONS, SUGGESTIONS AND GOOD PRACTICES	
	BASIS: BSS §2.34, 2.35, RS-G-1.9
R23	**Recommendation:** The RPB should establish requirements and a programme for ensuring safety and security of radioactive sources in their movement or transport, as well as in field operations.
R24	**Recommendation:** RPB action should be taken with appropriate authorities to ensure safe and secure storage of radioactive sources during import/export operations at the Freetown Port and Lungi International Airport, as well as at other ports of entry (maritime and air).
R25	**Recommendation:** The RPB should establish a centralized facility for safe and secure storage of radioactive waste and disused and/or recovered sources.
R26	**Recommendation:** RPB should establish and implement a monitoring procedures and programme at scrap metal sites for possible identification of radioactive material. The programme should involve scrap metal dealers.

6. QUALITY MANAGEMENT

A quality management system has yet to be established. This includes the administrative manual of the RPB Secretariat.

CONCLUSIONS	
C24	**Conclusion:** The quality management system of the regulatory body is still to be established.

RECOMMENDATIONS	
R27	**Recommendation:** The quality management system should be gradually introduced. Necessary provisions related to the system should be included in the revised legislation. It is further recommended that the self-assessment tools, developed by the IAEA, be used in the process.

7. INFORMATION MANAGEMENT

The RPB and its Secretariat still do not have procedures for the collection of national and international information with important bearing on safety and security of authorized practices. Also, no procedures are in place for disseminating such information.

The premises of the RPB Secretariat are located at the Ministry of Energy and Power. The regulatory authority's files and electronic records are protected against unauthorized access as part of the Ministry's relevant procedures. However, bulk of the information management system including security and confidentiality of regulatory information is still to be established.

CONCLUSIONS	
C25	**Conclusion:** The information management system is practically to be established. The existing few elements, related to the protection of written and electronic records need to be strengthened.

RECOMMENDATIONS, SUGGESTIONS AND GOOD PRACTICES	
(1)	**BASIS:** GS-R-3 §5.12, 5.21
R28	**Recommendation:** The RPB and its Secretariat should establish, implement and develop the system of information management. Related provisions should be made in the revised legislation.

The IRRS Team wishes to acknowledge good arrangements made and logistic support provided by the RPB Secretariat during the mission.

APPENDIX I – LIST OF PARTICIPANTS

INTERNATIONAL EXPERTS		
Ms Ivanka ZACHARIAŠOVA	State Office for Nuclear Safety (SONS), Czech Republic	Team Leader
Mr Teodros GEBREMICHAEL	Ethiopian Radiation Protection Authority (ERPA), Ethiopia	Reviewer on Safety of Radiation Sources
Mr Nasiru-Deen BELLO	Nigerian Nuclear Regulatory Authority, Nigeria	Reviewer on Security of Radioactive Sources
IAEA STAFF MEMBERS		
Mr Karol SKORNIK	Division of Radiation, Transport and Waste Safety	Team Coordinator
OFFICIAL LIAISON OFFICER		
Mr Josephus Jibao KONGO	Ministry of Energy and Power	Chief Radiation Protection Officer and Executive Secretary, Radiation Protection Board; NLO.
SIERRA LEONEAN COUNTERPARTS		
Mr Martin BASH-KAMARA	Ministry of Energy and Power	Deputy Minister
Mr Ernest SURRUR	Ministry of Energy and Power	Permanent Secretary
Mr Ernest NDOMAHINA	Radiation Protection Board	Chairman
Mr Clarence ADUSEI	Ministry of Justice, Law Officers Dept.	Law Officer; Member of the RPB
Ms Mary MYE-KAMARA	Office of National Security, Disaster Management Dept.	Director; Member of the RPB
Mr Richard MOIGBEH	Sierra Leone Police	Assistant Inspector General
Mr John JABATI	RPB Secretariat	Inspector
Mr Charles VANDY	RPB Secretariat	Technical Staff

APPENDIX II – MISSION PROGRAMME

IRRS Mission to SIERRA LEONE, 28 April– 02 May 2008

DISCUSSIONS ON POLICY ISSUES INCLUDED IN ALL WORK SESSIONS

Date/time	Programme	Participants
Day 1		
09:00–10.00	Entrance meeting with senior officials of the bodies having a regulatory role in Sierra Leone	Full IRRS Team Members of the RPB & Secretariat, as well as representatives of ministries and other national agencies concerned
10.00–11.00	Review of IRRS programme and terms of reference	Full IRRS Team and country representatives having a regulatory role
11.00 – 13.00	Discussions on the status of the national regulatory infrastructure component 1 – '**Legislative and Statutory Framework'** • Legislation. • Regulations and guidance. • Regulatory body establishment and independence. • Regulatory body staffing and training. • Regulatory body funding. • Co-ordination and co-operation at the national level. • International co-operation.	Full IRRS Team and relevant country representatives having a regulatory role
13:00 – 14:00	Lunch	
14:00 – 17:00	Continued discussions on the status of the national regulatory infrastructure component 1 – 'Legislative and Statutory Framework'	Full IRRS Team and relevant country representatives having a regulatory role
18.00–23.00	Preparation of findings and drafting of IRRS report	IRRS Team

Day 2		
09.00–13.00	Continued discussions on the status of the national regulatory infrastructure component 1 – 'Legislative and Statutory Framework' and component 2 – 'Activities of the Regulatory Body'	Full IRRS Team and relevant country representatives having a regulatory role.
13.00–14.00	Lunch	
14.00–17.00	Continued discussions on the status of the national regulatory infrastructure component 1 – 'Legislative and Statutory Framework' and component 2 – '**Activities of the Regulatory Body'** • Notification and national register of radiation sources. • Authorization • Safety and security of radioactive sources • Inspection • Enforcement. • Information management. • Quality management	Full IRRS Team and relevant country representatives having a regulatory role.
17.00–23.00	Preparation of findings and drafting of IRRS report	IRRS Team
Day 3		
09.00–13.00	IRRS Team observation of simultaneous regulatory inspections of medical facilities (diagnostic imaging, radiation therapy and nuclear medicine) and industrial facilities (e.g. well-logging, NDT etc).	IRRS Team members working in smaller groups or as individuals, country representatives having a regulatory role and competent staff of medical and industrial facilities.
13.00–14.00	Lunch	
14.00-17.00	IRRS Team observation of simultaneous regulatory inspections of medical facilities (diagnostic imaging, radiation therapy and nuclear medicine) and industrial facilities (e.g. well-logging, NDT etc).	IRRS Team members working in smaller groups or as individuals, country representatives having a regulatory role and competent staff of medical and industrial facilities.
09.00–13.00	If required, one member of IRRS Team working at HQ with relevant	IRRS Team member and relevant country

	regulatory staff to clarify issues arising from discussions and to begin preparation of preliminary draft report.	representatives having a regulatory role
14.00-17.00	Some IRRS Team members to finalise discussions on the status of the national regulatory infrastructure component 2 – 'Activities of the Regulatory Body'	Members of the IRRS Team and relevant country representatives having a regulatory role
17.00-23.00	Preparation of preliminary draft report	IRRS Team
Day 4		
9.00–13.00	Preparation of findings and drafting of IRRS preliminary draft report at the regulator's HQ	Full IRRS Team, and if required, members of the RPB & the Secretariat.
13.00–14.00	Lunch	
14.30–17.00	Final drafting of IRRS preliminary draft report (at HQ) – Preliminary draft made available to the regulator for overnight review.	Full IRRS Team
17.00–23.00	Preparation of preliminary draft report	Full IRRS Team
Day 5		
09.00–13.00	Exit meeting Summary of findings and recommendations, action plan	Full IRRS Team Members of the RPB & the Secretariat, and, if appropriate, representatives of ministries and other national agencies concerned..

APPENDIX III – SITE VISITS

OBSERVATION OF REGULATORY INSPECTIONS

1. Intertek Foreign Trade Standards, Queen Elisabeth II Port, Freetown

Two members of the IRRS team visited Queen Elizabeth II Quray to observe an announced regulatory inspection of the Cargo Linear Accelerator (LINAC) which is owned by a private company known as Intertek Foreign Trade Standards. The LINAC is THSCAN MB1215HS with a maximum energy of 6MeV. It started operations in 2005 and currently scans 110 containers (trucks) per day on average.

The cargo scanning facility is inspected once in a year by the RPB inspectors. Only announced inspections are carried out. The facility has been authorized and given a license valid for a year which expires 11 December 2008. The team observed that the conditions of authorization and the legal person were mentioned on the license

The team further observed that inspection commenced without a proper entrance briefing. A representative of the operator, receiving the inspectors, explained it was due to the unavailability of the responsible person for the facility at the time. A practice-specific checklist was used by the RPB inspectors. The team also observed that no safety documents were provided for the inspectors, and no radiation survey meter was in place, although the RPB inspectors were informed that area survey is done and a survey meter was put in another room. No local rules and emergency contact points were also posted. The RPB inspectors were informed that although no incidents or accidents had been reported since the commencement of the facility operation, there are *de facto* procedures of reporting any incidents or accidents to the relevant government organizations such as the RPB, although these procedures are not formalized. The team also observed that, prior to scanning; the truck was searched to make sure that no person was inside during the operation.

Two operating personnel of the facility had been provided a one week training in radiation protection and safety which was organized by the RPB with the IAEA assistance.

A protocol of the inspection was prepared during an exit meeting, and signed by the representative of the operator. The protocol constitutes a basis for an inspection report.

2. Emergency Surgical Centre, Goderich-Freetown Radiology Dept.

The IRRS team also observed an announced inspection at the Diagnostic X-ray Department, Emergency Surgical Centre in Goderich-Freetown; an NGO hospital.

An entrance briefing was held with the Hospital Medical Coordinator and the Radiation Protection Officer who were briefed on the objectives of the inspection. The RPB inspectors were given a tour of the Diagnostic X-ray Department and were shown one fixed X-ray radiography unit and one mobile X-ray unit, placed in one exposure room of the department. The inspectors were also informed that the hospital had one C-arm fluoroscopy machine in the Operating Theatre but that was not accessible at the time of the visit because of an operation taking place.
The inspection was conducted using a practice-specific “pre-authorization and regular inspection checklist for diagnostic X-ray installations”. The checklist, based on the IAEA guidance, includes provisions for comprehensive checking of design, safety controls, safety operations, emergency

preparedness etc. The results of quality control tests, involving kVp and timer accuracy, beam alignment, beam perpendicularity, Half Value Layer, radiation output consistency, tube leakage, etc, could not be provided by the operator, due to unavailability of relevant equipment. The RPB is also not in a possession of QC kits.
The IRSS Team observed that there was no radiologist and no hospital physicist in the hospital.

The inspection began with measuring the dimensions of the exposure room, the control room and the main door to the X-ray department. This was followed by checking technical specifications of the X-ray unit including shielding, safety controls and accessories, warning signals, local safety rules, verification of worker and public protection, emergency preparedness, justification of medical exposure, responsibilities of the operator. The inspection checklist was followed and included verification of safety procedures and records.

The team observed a typical X-ray room with proper shielding. The IRRS team also observed that the inspectors conducted the inspection in a professional manner, and their interaction with the operator was firm but fair. However the team noted the following:

(i) the visual inspection included only the main door; other places such as the darkroom, control room (which had a cracked lead glass), etc were not checked for safety;
(ii) the red warning light above the main door to the exposure room was permanently on;
(iii) two radiographers accompanying the RPB inspectors did not wear personnel monitoring badges; the inspectors were informed that such service was still unavailable in the country, and services by a foreign provider were too expensive and unreliable;
(iv) only one of the operating personnel had received training in radiation protection;
(v) there was no film printer in the X-ray department which could at times create a problem with patient identification;
(vi) patient records were kept at the X-ray department; however, no other general records (maintenance reports, training of personnel, etc) could be presented to the inspectors. The license was also not posted in the premises of the radiology department but the team was informed that it had been granted and was available from the Head of the Department.

At the end of inspection, a brief exit meeting was held with the Medical Coordinator and the RPO. Discussion focused on findings and recommendations. The team observed during the discussion that although a pre-authorization inspection (for renewal of the license) was carried out in January 2008, the renewed license had not been issued due to unresolved dispute on outstanding fees required for inspection and issuance of the license. It was also mentioned during the discussion between the RPB inspectors and the licensee that the hospital could not provide its personnel with personal monitoring services until such service became available in the country.
In this connection, the inspectors noted that the personnel monitoring of staff was the sole responsibility of the operator, and was a breach of the conditions for authorization.

APPENDIX IV – MISSION COUNTERPARTS

Item	Subject Area	IRRS Experts	Counterparts
	Legislative and governmental responsibilities	For all aspects of the Mission: Ivanka ZACHARIASOVA Karol SKORNIK	Mr. Josephus Jibao KONGO, Chief, RP Officer Dr Ernest T. NDOMAHINA, Chairman, Radiation Protection Board.
	Responsibilities and Functions of the Regulatory Body		
	Organization of the regulatory body		
	Activities of the Regulatory Body		
	Management System for the Regulatory Body		
	Policy Issues		
	Public Information		
	Safety of Radioactive Sources	Teodros GEBREMICHAEL	Mr John JABATI, RPB Secretariat
	Security of Radioactive Sources	Nasiru-Deen BELLO	Mr Charles VANDI, RPB Secretariat

REVIEWERS AND CONTRIBUTORS

APPENDIX V – RECOMMENDATIONS

	Areas	Recommandation No.	*Recommendations*
1.	**Legislative and Governmental Responsibilities**	*R1*	The Government may wish to consider declaring its support to the *Code of Conduct on the Safety and Security of Radioactive Sources* and its *Guidance on the Import and Export of Radioactive Sources.*
		R2	The Act No. 14 of 2001 should be reviewed and revised. Due consideration should be given to all aspects related to the safety and security of radioactive sources including the categorization of sources.
2.	**Responsibilities and Functions of the Regulatory Body**	*R3*	Activities of the Radiation Protection Board (RPB) should be resumed as soon as possible in accordance with the Act No.14.
		R4	The RPB should issue a set of practice-specific regulations and/or codes of practice, commensurate with present and future radiation practices in the country.
		R5	The RPB should include security of radioactive sources in national draft regulations and guidance documents in due consideration of identified priorities. Furthermore, internal safety and security-related procedures should be prepared, following the issuance of subsidiary instruments by the RPB.
		R6	The Government should provide sufficient support to the RPB and its Secretariat in terms of expanding technical and support staff, provision of necessary technical and logistical support (e. g. premises, vehicles, IT and radiation monitoring equipment) and necessary funding to ensure that all radiation practices in the country are properly regulated in line with international standards and related requirements for the safety and security of radioactive sources.

	Areas	Recommandation No.	*Recommendations*
3.	**Organization of the Regulatory Body**	*R7*	The approved organizational structure and related increased staffing level should be implemented as soon as possible to enable the RPB Secretariat to discharge its full scope regulatory functions.
		R8	Adequate annual budget should be provided by the Government, so that discharging regulatory functions by the RPB and its Secretariat is not compromised. Budgetary allocations should take into account related development needs
		R9	Induction training at national level, using human resources already trained, should be organized on a priority basis as soon as new technical officers (regulators) have been recruited. The follow up capacity building programme may be delivered with IAEA assistance.
		R10	Arrangements should be made to ensure access to a radiation measurement laboratory and the provision of calibration services of radiation monitoring equipment.
		R11	The Government should provide at least one more vehicle to the RPB Secretariat for inspection purposes.
		R12	The process of preparing and concluding Memoranda of Understanding (MoUs) with national institutions, bodies and law enforcement agencies concerned should be finalised as soon as possible.
		R13	The RPB and its Secretariat should formalise bilateral arrangements on cooperation, particularly with well-established regulatory bodies in neighbouring States of the West Africa sub-region.
		R14	Current efforts should continue to maintain and strengthen cooperation with the IAEA in all radiation safety and nuclear security thematic areas pertaining to the regulatory infrastructure.

4.	**Activities of the Regulatory Body**	*R15*	The national registry of radiation sources, with present coverage estimated at approx. 40 %, should be completed as soon as possible, using RAIS software as the main tool for maintaining and updating the relevant database.
		R16	The system of notification should be rendered fully operational, and the process of retrospective notification on radiation sources and practices – completed as soon as possible.
		R17	Procedures related to the review and assessment of applications for authorization should be revised to incorporate: - the potential magnitude and nature of the hazard associated with a facility under review, - requirements for the RPB Secretariat to review and assess the application within a specified time frame, - provisions of the *Code of Conduct on the Safety and Security of Radioactive Sources* and its *Guidance on the Import and Export of Radioactive Sources*
		R18	The authorization process and related procedures should be reviewed and amended to include: - the categorisation of sources; - distinction between authorization by registration and authorization by licensing; - guidance on the format and content of application for authorization as well as a defined time-frame for issuing authorizations; - staged approach to the process providing for types of authorization for different stages of complex facilities (siting, design, construction, commissioning, operation and decommissioning); - provisions of the *Code of Conduct on the Safety and Security of Radioactive Sources* and its *Guidance on Import and Export of Radioactive Sources; and* - specified time frame for granting or rejecting an authorization.
		R19	Procedure for regulatory inspections following any abnormal events including security-related events should be developed and incorporated in the existing inspection procedures.

		R20	An administrative requirement for the RPB Secretariat to notify the operator (registrant or licensee) of the results of an inspection within a specified time frame should be developed and introduced as a matter of high priority.
		R21	The RPB should develop an adequate system of enforcement and related policy.
		R22	The following elements related to enforcement policy and actions should be included in the revised legislation: (i) requirements for formal arrangements with law enforcement agencies, (ii) empowerment to cease operator's activities and to take prompt action in order to restore adequate level of safety and security including cases of continual or serious non-compliance, (iii) powers for the inspector to take 'on-the-spot' enforcement action.
5.	**Safety and Security of Radioactive Sources**	*R23*	The RPB should establish requirements and programme for ensuring safety and security of radioactive sources in their movement, transport, as well as in field operations.
		R24	RPB action should be taken with appropriate authorities to ensure safe and secure storage of radioactive sources during import/export operations at the Freetown Port and Lungi International Airport, as well as at other ports of entry (maritime and air).
		R25	The RPB should establish a centralized facility for safe and secure storage of radioactive waste including disused and/or recovered sources.
		R26	RPB should establish and implement monitoring procedures and programme at scrap metal sites for possible identification of radioactive material. The programme should involve scrap metal dealers.
6.	**Quality Management**	*R27*	The quality management system should be gradually introduced. Necessary provisions related to the system should be included in the revised legislation. It is further recommended that the self-assessment tools, developed by the IAEA, be used in the process.
7.	**Information Management**	*R28*	The RPB and its Secretariat should establish, implement and develop the system of information management. Related provisions should be incorporated in the revised legislation.

APPPENDIX VI – REFERENCE MATERIAL PROVIDED BY RPB-SIERRA LEONE

1. Protection from Radiation Act 2001,
2. Radiation Protection Regulations 2006 (draft),
3. Draft Cabinet Memorandum on the revision of the Act 2001
4 Draft Revised Radiation Protection Bill 2008,
5. Draft revised Radiation Protection Regulations 2008,
6. Notification Form,
7. Specimen Authorization Form,
8. Draft Memorandum of Understanding with Customs Department,
9. Draft memorandum of Understanding with Ministry of Health and Sanitation,
10. Inspection Protocol for Diagnostic X-ray Equipment,
11. Inspection Protocol for Industrial Radiology Equipment,
12. IRRS Pre-appraisal Questionnaire.

APPENDIX VII – IAEA REFERENCE MATERIAL USED FOR THE REVIEW

[1] INTERNATIONAL ATOMIC ENERGY AGENCY International Basic Safety Standards for Protection against Ionizing Radiation and for the Safety of Radiation Sources. Safety Series 115, IAEA (1996)

[2] INTERNATIONAL ATOMIC ENERGY AGENCY Legal and Governmental Infrastructure for Nuclear, Radiation, Radioactive Waste and Transport Safety. Safety Standards Series No. GS-R-1, IAEA (2000)

[3] INTERNATIONAL ATOMIC ENERGY AGENCY Code of Conduct on the Safety and Security of Radioactive Sources. IAEA/CODEOC/2004

[4] INTERNATIONAL ATOMIC ENERGY AGENCY Independence In Regulatory Decision Making International Nuclear Safety Advisory Group (INSAG) Report 17, IAEA (2003)

[5] INTERNATIONAL ATOMIC ENERGY AGENCY Regulatory Control of Radiation Sources GS-G-1.5, 2004

[6] INTERNATIONAL ATOMIC ENERGY AGENCY Categorization of Radioactive Sources RS-G-1.9, 2005

[7] INTERNATIONAL ATOMIC ENERGY AGENCY Legislation and Establishment of A Regulatory Authority for the Control Of Radiation Sources (draft)

[8] INTERNATIONAL ATOMIC ENERGY AGENCY Application of the International Radiation Safety Standards in Nuclear Medicine, Safety Reports Series No. 40 (2005)

[9] INTERNATIONAL ATOMIC ENERGY AGENCY Application of the International Radiation Safety Standards in Radiotherapy , Safety Reports Series No. 38 (2006)

[10] NTERNATIONAL ATOMIC ENERGY AGENCY Application of the International Radiation Safety Standards in Diagnostic Radiology and Interventional Procedures using X-Rays, Safety Reports Series No. 39 (2006)

[11] INTERNATIONAL ATOMIC ENERGY AGENCY Application of the International Radiation Safety Standards in Industrial Radiography and Industrial Irradiators (draft)

[12] INTERNATIONAL ATOMIC ENERGY AGENCY Building Competence in Radiation Protection and the Safe Use of Radiation Sources, RS-G-1.4

[13] INTERNATIONAL ATOMIC ENERGY AGENCY. Safety Report No 20: Training in Radiation Protection and the Safe Use of Radiation Sources

[14] INTERNATIONAL ATOMIC ENERGY AGENCY TECDOC 1525 Notification and Authorization for the use of radiation sources

[15] INTERNATIONAL ATOMIC ENERGY AGENCYTECDOC 1526 Inspection of Radiation Sources and regulatory enforcement

[16] INTERNATIONAL ATOMIC ENERGY AGENCY Guidance on the Import and Export of Radioactive Sources. IAEA/GIERS/2005

[17] INTERNATIONAL ATOMIC ENERGY AGENCY Quality Assurance within Regulatory Bodies. IAEA-TECDOC-1090 (1999).

[18] NTERNATIONAL ORGANIZATION FOR STANDARDIZATION Quality Management Systems Fundamentals and Vocabulary. ISO 9000: 2000, Geneva (2000).

[19] INTERNATIONAL ATOMIC ENERGY AGENCY TECDOC-1355 Security of Radioactive Sources (2003)

[20] INTERNATIONAL ATOMIC ENERGY AGENCY TECDOC 1388, Strengthening Control over Radioactive Sources in Authorized Use and Regaining Control of Orphan Sources. IAEA, Vienna (2004).

[21] INTERNATIONAL ATOMIC ENERGY AGENCY, Preparedness and Response for a Nuclear or Radiological Emergency, Safety Series No. GS-R-2, IAEA Vienna (2002).

[22] INTERNATIONAL ATOMIC ENERGY AGENCY, Regulations for the Safe Transport of Radioactive Materials, Safety Series No. TS-R-1, IAEA, Vienna (2000)

[23] EUROPEAN FOUNDATION FOR QUALITY MANAGEMENT, The EFQM Excellence Model, Brussels (1999).

APPENDIX VIII – LIST OF ABBREVIATIONS

IRRS	Integrated Regulatory Review Service
BSS	International Basic Safety Standards for Protection against Ionizing Radiation and for the Safety of Radioactive Sources
CoC	Code of Conduct for the Safety and Security of Radioactive Sources
IAEA	International Atomic Energy Agency
RAIS	Regulatory Authority Information System

APPENDIX IX – ACTION PLAN 2008 -2010–SIERRA LEONE

ELEMENTS OF THE ACTION PLAN

These are two tables; the first deals with actions relating to the legislative and statutory framework and the second sets out actions specifically relating to the activities of the regulatory body.

I. LEGISLATIVE and STATUTORY FRAMEWORK

1. Legislation
2. Regulations and Guidance
3. Regulatory body establishment and independence
4. Regulatory body staffing and training
5. Regulatory body funding
6. Coordination and cooperation at national level
7. International cooperation

II ACTIVITIES of the Regulatory Body

1. Notification and national register of radiation sources
2. Authorization
3. Safety and security
4. Inspection
5. Enforcement
6. Information Management
7. Quality Management

SOURCES of REFERENCE USED for COMPILING THIS ACTION PLAN:

1. Sierra Leone RaWaSIP June 2005.
2. Country Progress Report, Regional Coordination Meeting, Cairo, Egypt, April 2007

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I. LEGISLATIVE and STATUTORY FRAMEWORK

The purpose of this action plan is to identify the fundamental tasks essential to the establishment / upgrading of a national regulatory infrastructure. It includes references to a range of IAEA and other publications. Member States should consult these publications for more detailed information.

TASKS for each ELEMENT	ACTION BY:	IAEA INPUT	REFERENCES
1 Legislation and Establishment of the Regulatory Body			
1.1 Drafting and Enacting Legislation: 1.1.1 Taking into account the a concise and general nature of the **Protection from** Radiation Act (Act No. 14), draft revised national radiation safety legislation ensuring consistency with IAEA Basic Safety Standards (SS 115) and other referenced IAEA documents. 1.1.2 The legislation, in particular, should address: o establishing regulations and issuing guidance relating to radiation safety and the security of radiation sources; o maintaining, developing and updating a national register of radiation sources; o reviewing and assessing applications for authorization; o issuing, amending, suspending or revoking authorizations; o planning and undertaking inspections; o undertaking enforcement actions including initiation	Government of Sierra Leone (GOV-SIL)	Provision of IAEA Standards, Code of Conduct and other relevant publications (action completed in 2008)	• SS 115 [1] • GS-R-1 [2] • CoC [3] • INSAG Report 17 [4] • GS-G-1.5 [5] • Legislation and Establishment of a Regulatory Body for the Control of Radiation Sources (Draft) [7]

TASKS for each ELEMENT	ACTION BY:	IAEA INPUT	REFERENCES
of prosecutions. • funding of the regulatory body; • enforcement functions; • review and appeal against regulatory decisions; • responsibility for safety (including the safe management and security of radioactive sources) is placed on the person or persons being granted the relevant authorizations; • cradle-to-grave management of sources; • obligations and responsibilities under international treaties, conventions and agreements; • relationships with other national agencies, especially those involved in the regulatory process; • the processes of notification, exclusion and exemption; • transport of radioactive material; • control of radioactive waste; • import and export of radioactive material; • the security of radioactive sources; • processes for intervention including assigned roles and responsibilities for rapid response to loss of control of lost, stolen or orphan sources.		By submission of the draft revised Legislation (Bill and Regulations), the IAEA may be requested to provide review and comments on both draft documents. Draft submitted to IAEA: 3rd Q 2008	• GS-R-1, § 2.1, 2.4 [2] • CoC, § 18, 19 [3]
1.2 Enact the legislation: 1.2.1 Finalize draft Legislation (Bill and Regulations and take necessary measures to promulgate it in due time.	GOV-SIL	Based on IAEA comments.	

TASKS for each ELEMENT	ACTION BY:	IAEA INPUT	REFERENCES
2 Regulations and Guidance			
2.1 Draft regulations/ Review and Revise Existing Regulations: 2.1.1 Review the draft Regulations for consistency with the legislation to ensure they are appropriate to the nature of facilities and radiation practices to be regulated within Sierra Leone. In particular the regulations should address: • Administrative requirements (e.g. notification, authorization); • Radiation protection performance requirements (justification, optimization and dose limitation); • Management requirements; • Verification of protection and safety; • Requirements for the safety of sources; • Occupational and public radiation exposure; • Dose limits; • Medical exposure; • radioactive waste management; • transport of radioactive sources; • emergency exposures situations. • security of radioactive sources including unauthorized access, use or removal of radioactive sources, theft, loss, verification of security measures and response to security incidents;	RPB	As indicated above, by submission of the draft revised regulations, the IAEA may be requested to provide review and comments. Submission to the IAEA: 3rd Q 2008	• SS 115, Detailed Requirements [1] • GS-R-1 § 5.25–5.28 [2] • CoC § 18 [3] • Reference [7] • TECDOC-1355 Security of Radioactive Sources (2003) [19]

TASKS for each ELEMENT	ACTION BY:	IAEA INPUT	REFERENCES
• import and export of radioactive sources; • exemptions for practices and sources.			
2.2 Issue Regulations: 2.2.1 Finalize the regulations and take necessary measures for these to be issued by the GOV-SIL.	GOV-SIL; Appropriate Minister/ RPB	Based on IAEA comments.	
2.3 Drafting and Issuing Guidance Documents: 2.3.1 Draft guidance documents (Codes of Practice) for the implementation of the legislation and regulations. The codes of practice should cover: • Diagnostic radiology • Nuclear medicine • Industrial radiography • Nuclear gauges • Well logging • Other Codes according to priorities identified by the RPB.	RPB	Provide reference material. After submission of the draft guidance documents by the RPB, the IAEA may be requested to provide review and comments. The review process to be initiated as soon as possible in 2009. Continued in 2010.	• GS-R-1, § 5.25 – 5.28 [2] • CoC, § 22(m) [3] • Applying Radiation Safety Standards in Nuclear Medicine [8] • Applying Radiation Safety Standards in Radiotherapy [9] • Applying Radiation Safety Standards in Diagnostic Radiology and Interventional Procedures Using X Rays [10] • Application of the International Radiation Safety Standards in Industrial Radiography and Industrial Irradiators (draft) [11]
2.4 Issue Guidance Documents: 2.4.1 Issue the new guidance documents.	RPB	Based on the IAEA review and comments.	

TASKS for each ELEMENT	ACTION BY:	IAEA INPUT	REFERENCES
3 Regulatory Body Staffing and Training			
3.1 Staffing: 3.1.1 Develop a formal staffing plan based on the functions and responsibilities assigned by the legislation (Present Act No. 14) and taking into account the Sierra Leone's needs, based on the present and future extent of practices 3.1.2 Recruit new technical and support staff of the Secretariat, based on the approved organizational structure.	GOV-SIL; RPB (RPB) 1st Q 2009		• GS-R-1 § 4.6 [2] • CoC § 21 [3] • Building Competence in Radiation Protection and the Safe Use of Radiation sources [12] • Safety Report No. 20 [13] • Authorization for the Possession and Use of Radiation Sources (draft). [14] • Inspection of Radiation Sources and Enforcement (draft) [15]
3.2 Training: 3.2.1 Develop and implement a planned programme of structured training and continuous professional development for personnel of the Radiation Protection Secretariat so that the necessary skills are acquired and maintained, particularly in relation to new technologies, safety and security principles and concepts. 3.2.2 National induction training course on RP for newly recruited staff	RPB RPB Secretariat	Provision of training packages as appropriate, 3 Q 2008 Expert services upon request, when staff recruited.	• GS-R-1 § 4.7 [2] • CoC§ 10 [3]

TASKS for each ELEMENT	ACTION BY:	IAEA INPUT	REFERENCES
4 Regulatory Body Funding			
4.1 Funding: 4.1.1 Provide the RPB with sufficient financial resources to discharge its regulatory functions as assigned by the legislation (Act No.14). 4.1.2 Provide necessary technical and logistic support to ensure carrying out day-to-day regulatory functions of the RPB Secretariat. • Provide sufficient office space to accommodate newly recruited staff. • Provide IT and radiation monitoring equipment • Provide a vehicle for inspection purposes	GOV-SIL	Supplementary provision of essential IT equipment in support of the GOV-SIL commitment, following the allocation of new office space and the recruitment of new technical to the value of EUR 15,000 4Q 2008	• GS-R-1 § 2.2(4) [2] • CoC § 21(b) [3] • Reference [14] • Reference [15]
5 National Coordination and Cooperation			
5.1 National Coordination and Cooperation: 5.1.1 Establish formal cooperative and coordinating arrangements, as appropriate, with other national bodies and organisations involved in radiation safety and security e.g. Customs, Transport. ***Note:*** *Coordination and cooperation can be formalized through*	RPB	Provision of example Memorandum of Understanding (action completed in may 2008)	• GS-R-1 § 3.4 [2] • CoC § 20(m) [3]

TASKS for each ELEMENT	ACTION BY:	IAEA INPUT	REFERENCES
written Memoranda of Understanding between the relevant authorities.			
6 International Cooperation			
6.1 Regional Cooperation:	RPB		
6.1.1 Establishment of arrangements for the exchange of safety and security related information, bilaterally and/or regionally, with neighbouring States as might be appropriate (GHA, NIR)		Provision of relevant documentation, international conventions, etc.	
6.2 Cooperation with International Organizations and States:	RPB	Facilitate access to the **Ra**diation **Sa**fety **Re**gulators **N**etwork (RaSaReN Web Site) – action completed in 2008.	• GS-R-1, § 4.11 [2] • CoC, § 12, 20(n) [3]
6.2.1 Continue the exchange of safety and security related information with the IAEA and interested States, as may be appropriate.			

II. **ACTIVITIES of the Regulatory Body**

TASKS for each ELEMENT	ACTION BY:	IAEA INPUT	REFERENCES
1 Notification and National Register of Radiation Sources			
1.1 Notification of Intent to Undertake a Practice Involving Ionizing Radiation: 1.1.1 Establish an effective mechanism of notification to the RPB Secretariat of an intention to carry out a practice involving ionizing radiation.	RPB Secretariat		• SS 115, § 2.7 – 2.8, 2.10 [1] • Reference [14]
1.2 Notification prior to Export of Category 1 or 2 Radioactive Sources: 1.2.1 The appropriate authority in Sierra Leone should take account of the Code of Conduct on the Safety and Security of Radioactive Sources 2004 and the Guidance on the Import and Export of Radioactive Sources 2005. These require that : the regulatory body of an exporting State: (a) obtains the consent of the corresponding regulatory body in the importing State through appropriate bilateral channels or agreements; and (b) issues prior notification of the intent to export a	GOV-SIL /RPB Secretariat	Provision of the Code of Conduct 2004 and Guidance on the Import and Export of Radioactive Sources 2005 (ction completed in May 2008)	• CoC, § 23 – 25 and 28 [2] • GIERS 2005 Parts VII-IX [16] • RS-G-1.9 [6]

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TASKS for each ELEMENT	ACTION BY:	IAEA INPUT	REFERENCES
radioactive source.			
1.3 National Register of Radiation Sources: 1.3.1 Develop and maintain a comprehensive national register of ionizing radiation sources. 1.3.2 Develop and approve formal procedures to identify and classify sensitive information related to radioactive sources. 1.3.3 Implement appropriate measures to protect the confidentiality of information contained in the source register (inventory), particularly in relation to radioactive sources.	RPB Secretariat	IAEA training opportunities to be provided in operation of the **R**egulatory **A**uthority **I**nformation **S**ystem (RAIS 3.0) including training of staff. (action in progress)	• CoC, § 11, 17. Annex 1[3] • Reference [14] • Reference [6]
2 Authorization			
2.1 Establish a System of Authorization: 2.1.1 The RPB should approve and issue formal written guidance on the format and content of documents to be submitted by the applicant in support to applications for authorization. 2.1.2 For both initial and renewal applications, the RPB should review/revise and implement a formal written process and procedures by which it reviews and assesses applications submitted, taking into account the potential magnitude and nature of the radiation hazard associated with the particular facility or activity and for radioactive sources, the nature of the security risk.	RPB Secretariat	An expert mission will be provided upon a request, when the procedures have been available in a draft form. The mission to include advice on the whole regulatory process (notification, authorization, inspection and enforcement)	• SS 115, § 2.7, 2.8, 2.11 – 2.14 [1] • GS-R-1, § 5.3 – 5.6, [2] • CoC, § 22(a) [3] • Reference [14] • Reference [6] • Reference [19]

TASKS for each ELEMENT	ACTION BY:	IAEA INPUT	REFERENCES
2.1.3 Establish and approve formal written process and procedures to approve, amend, reject, suspend or revoke applications for authorization in accordance with the legal requirement.	RPB Secretariat		• GS.R-1 § 5.5 (1, 2) [2]
2.1.4 In accordance with national legislation, if appropriate, establish and approve formal written process and procedures by which aggrieved applicants may appeal regulatory decisions.	RPB Secretariat		• GS.R-1 § 2.4 (7), [2]
2.2 Authorization of the Import and Export of Radioactive Sources: 2.2.1 The appropriate authority of Sierra Leone should take account of the Code of Conduct on the safety and security of radioactive sources 2004 and the Guidance on the Import and Export of Radioactive Sources 2005. These require that: The regulatory body of an exporting State should ensure that: • for export, it has notified and obtained the consent of the importing State through appropriate bilateral channels or agreements; • the receiving State has the appropriate technical and administrative capability, resources and regulatory structure to ensure the management of the sources in a manner consistent with the Code of Conduct and the Guidance on the Import and Export of Radioactive Sources.	GOV-SIL/ RPB Secretariat/ Customs Administration	National Training Course for Customs and Law Enforcement Officers. A formal request to be submitted ASAP. Expected delivery of training to be determined by NSNS.	• CoC, § 23 – 25 and 28 [2] • GIERS 2005 Parts VII-IX [16]. • Reference [14]

TASKS for each ELEMENT	ACTION BY:	IAEA INPUT	REFERENCES
The regulatory body of the importing state: • Ensures that the recipient is authorized to receive and possess the source in accordance with the national legislation (if any) or with the relevant international guidance. • Ensures that the appropriate regulatory framework exists.			
3 Safety and Security of Radioactive Sources			
3.1 Defining levels of safety and security 3.1.1 Establish procedures designating different levels of safety and security based on source categorization including a graded approach to the security of Category 1-3 sources. 3.1.2 Establish procedures for addressing specific situations regarding radioactive sources including: • found, lost or stolen sources; • cessation of licensed operations for economic reasons; • handling, transport and storage of recovered orphan or vulnerable sources; • safe and secure storage of sources at ports of entry; • scrap metal monitoring; • tracking the movement of high-risk sources; • safety and security of radioactive sources routinely stored	RPB Secretariat	IAEA may provide, upon a request, an Expert Mission for one week to review and advise on procedures	• CoC, § 18, 20[3] • CoC, § 9, 13 (b), 15, 19 (g), 22 (g) • Reference [6] • Reference [19]

TASKS for each ELEMENT	ACTION BY:	IAEA INPUT	REFERENCES
on vehicles or at field sites.			
4 Inspection			
4.1 Inspection System: 4.1.1 Establish the inspection programme taking into account the potential magnitude and nature of the radiation hazard associated with particular facilities or activities.	RPB Secretariat	An expert mission, consolidated for all regulatory activities. Timing: up to two weeks in 1st-2nd Q 2009	• GS-R-1, § 5.14 – 5.17 [2] • CoC, § 20(h), 22(I,) 19(h) [3] • Reference [15] • Reference [6] • Reference [19]
4.1.2 Develop and approve formal written process and inspection procedures appropriate to the types of radiation practices regulated.	RPB Secretariat		• Reference [15]
4.1.3 Establish and approve formal written protocols clearly defining the duties and responsibilities of inspectors in the conduct of inspections.	RPB Secretariat		• Reference [15]

TASKS for each ELEMENT	ACTION BY:	IAEA INPUT	REFERENCES
5 Enforcement			
5.1 Establish a System of Enforcement: 5.1.1 Establish and approve formal policy and written procedures for enforcement actions appropriate to the nature of the alleged breach including, if appropriate, any necessary cooperative arrangements with other government agencies (justice, police, security, etc).	RPB (and other agencies as may be appropriate)	An expert mission, upon a request, consolidated for all regulatory activities. 1st-2nd Q 2009	• GS-R-1, § 5.18 – 5.24 [2] • CoC, § 20 (i), 22 (j) [3] • Reference [15]
6 Information Management			
6.1 Information Collection and Dissemination: 6.1.1 Develop and approve formal procedures for collecting and disseminating information to radiation users, professional groups having input to radiation practices and to the public where appropriate.	RPB / Secretariat with the cooperation of relevant Government agencies.	Expert mission upon a request in 2009	• CoC, § 13 [3] • GS-R-1, § 3.3(6), (7), (11) [2]
7 Quality Management			
7.1 Quality Management Programme: 7.1.1 Establish an approved quality management programme to ensure work efficiency and effectiveness of the RPB and its Secretariat.	RPB/Secretariat	Expert mission, upon a request, to review the and advise on the programme (2009)	• GS-R-1, § 4.5 [2] • TECDOC-1090 [17] • ISO 9000 [18]

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