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**INTEGRATED  
REGULATORY  
REVIEW SERVICE  
(IRRS)**

TO

**THE REPUBLIC OF GABON**

**Centre National de Prévention et de Protection contre les Rayonnements  
Ionisants**

**(CNPPRI)**

Libreville, Gabon

*01 to 05 October 2007*

DEPARTMENT OF NUCLEAR SAFETY AND SECURITY



European Union

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IAEA

# **INTEGRATED REGULATORY REVIEW SERVICE**

## **IRRS**

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 of 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 3<sup>rd</sup> 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. The first full scope IRRS was conducted last year in France”.

**INTEGRATED REGULATORY REVIEW SERVICE (IRRS)**

**REPORT TO**

**THE GOVERNMENT OF GABON**

**Centre National de Prévention et de Protection contre les Rayonnements Ionisants  
(CNPPRI)**

Libreville, Gabon  
*01 to 05 October 2007*



# REPORT

## INTEGRATED REGULATORY REVIEW SERVICE (IRRS)

**Mission date:** 01 to 05 October 2007

**Regulatory body:** CNPPRI (Centre National de Prévention et de Protection contre les Rayonnements Ionisants)

**Location:** CNPPRI Headquarters, Libreville, Gabon

**Regulated facilities and activities:** medical, industrial and research applications

**Organized by:** IAEA

**IAEA Review Team:** MURITH Christophe (Team Leader, Switzerland)  
LAMOTTE Herve (Reviewer, France)  
HAMMOU Azza (Reviewer, Tunisia)  
MANSOUX Hilaire (IAEA/NSRW, Team Coordinator)

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**The number of recommendations, suggestions and good practices is in no way a measure of the status of the regulatory body. Comparisons of such numbers between IRRS reports from different countries should not be attempted.**

## TABLE OF CONTENTS

<b>EXECUTIVE SUMMARY .....</b>	<b>1</b>
<b>I. INTRODUCTION.....</b>	<b>3</b>
<b>II. OBJECTIVE AND SCOPE.....</b>	<b>4</b>
<b>III. BASIS FOR THE REVIEW.....</b>	<b>5</b>
<b>1. LEGISLATIVE AND GOVERNMENTAL RESPONSIBILITIES .....</b>	<b>6</b>
<b>2. RESPONSIBILITIES AND FUNCTIONS OF THE REGULATORY BODY .....</b>	<b>11</b>
<b>3. ORGANIZATION OF THE REGULATORY BODY.....</b>	<b>13</b>
<b>4. ACTIVITIES OF THE REGULATORY BODY .....</b>	<b>15</b>
<b>5. SAFETY AND SECURITY OF RADIOACTIVE SOURCES.....</b>	<b>18</b>
<b>6. MANAGEMENT SYSTEM FOR THE REGULATORY BODY .....</b>	<b>19</b>
<b>7. INFORMATION MANAGEMENT.....</b>	<b>20</b>
<b>8. POLICY ISSUES .....</b>	<b>21</b>
<b>APPENDIX I – LIST OF PARTICIPANTS.....</b>	<b>22</b>
<b>APPENDIX II – MISSION PROGRAMME.....</b>	<b>23</b>
<b>APPENDIX III – SITE VISITS.....</b>	<b>26</b>
<b>APPENDIX IV – MISSION COUNTERPARTS.....</b>	<b>27</b>
<b>APPENDIX V – RECOMMENDATIONS, SUGGESTIONS, GOOD PRACTICES.....</b>	<b>29</b>
<b>APPENDIX VI – REFERENCE MATERIAL PROVIDED BY CNPPRI.....</b>	<b>35</b>
<b>APPENDIX VII – IAEA REFERENCE MATERIAL USED FOR THE REVIEW.....</b>	<b>36</b>
<b>APPENDIX VIII – ACTION PLAN .....</b>	<b>38</b>



## EXECUTIVE SUMMARY

At the request of Centre National de Protection et de Prévention contre les Rayonnements Ionisants (CNPPRI), Gabon, an international team of four experts in radiation safety visited CNPPRI the from 01 to 05 October 2007 to conduct an Integrated Regulatory Review Service (IRRS). CNPPRI is the regulatory body responsible for radiation protection and safety in relation to activities involving radiation sources and radiation facilities in Gabon.

The purpose of this IRRS mission was to conduct a review of CNPPRI's regulatory framework and the regulatory activities in all regulated sources, facilities and activities, to review its regulatory effectiveness and to exchange information and experience in the areas considered by IRRS. It is expected that the IRRS mission will facilitate regulatory improvements in Gabon and throughout the world from the knowledge gained and experiences shared by CNPPRI 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 CNPPRI: medical activities, industrial and research activities, safety and security of radioactive sources. Decommissioning and remediation were not in the scope of the mission, although CNPPRI is involved in these activities at the former uranium mining site of Mounana.

The significance of the IRRS mission for CNPPRI is increased by the revision of the legislative and regulatory framework currently conducted by the management of CNPPRI. The objectives of this revision are:

- to improve the national radiation safety regulatory infrastructure,
- to ensure, to the largest extent possible, its compliance with international standards,
- to implement the regulatory activities assigned to CNPPRI.

The IRRS Review Team consisted of senior regulatory experts from three Member States and one staff member from the IAEA. The IRRS team carried out the review of CNPPRI 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 management system and the information management.

From a series of intensive interviews and discussions with key personnel at CNPPRI, the observation of an inspection, together with the documentation supplied by CNPPRI in advance of the mission, the team presented its findings based on the IAEA safety standards. Additionally, the IRRS team, together with CNPPRI management, discussed some policy issues relating to the regulation of radiation safety. The results of the discussions will serve as a useful basis for the evolution of future IRRS missions and will assist with continuous improvement in the regulation of radiation safety.

The IRRS Review Team noted the significant effort made by CNPPRI in the preparation of the mission. Throughout the review the administrative and logistical support was outstanding. The IRRS Review Team made recommendations and suggestions that indicate where improvements are necessary or desirable to further enhance the legal and governmental infrastructure for radiation and safety and improve effectiveness of regulatory controls. These recommendations and suggestions are made to an organization that is seeking to improve its performance and some of them are related to areas in which CNPPRI has already initiated a programme for change. The IRRS Review Team believes that consideration of the following items should be given high priority because the experts

considered that they will contribute significantly to the enhancement of the overall performance of the regulatory system:

- Effective implementation of regulatory activities of CNPPRI, based on the existing legislative and regulatory framework,
- Establishment of a strategic staffing plan and training programme,
- Completion of legislative and regulatory framework for better compliance with international standards.

The IRRS Review Team findings are summarized in Appendix V. There was a strong consensus among the IRRS Review Team that CNPPRI and IAEA Member States have been improving the regulation of radiation safety through IAEA regulatory review missions and services.

## I. INTRODUCTION

At the request of the Administrator of the Centre National de Protection et de Prévention contre les Rayonnements Ionisants (CNPPRI), an IAEA team consisting of three experts from Member States and one staff member from the IAEA visited CNPPRI from October 01 to October 05 2007 to conduct an Integrated Regulatory Review Service (IRRS)<sup>1</sup>.

The purpose of the mission was to conduct a peer review of the CNPPRI regulatory framework and the regulatory activities to review the regulatory effectiveness of CNPPRI 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 and security of radioactive sources; the management system and the 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. Regulatory technical and policy issues were identified after reviewing a broad spectrum of information including insights resulting from the conclusions of the review meetings of the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management and the Convention on Nuclear Safety, international conferences and forums and previous IAEA safety review services.

The mission was conducted from October 01 to October 05 2007. Before the mission, CNPPRI made available a collection of advance reference material for the team to review. This material consisted of legal and regulatory documents, as well as a report prepared earlier in 2007 for a regional coordination meeting on strengthening the control of radiation sources. During the mission the team performed a systematic review of all topics using the advance reference material, interviews with CNPPRI staff and direct observation of their working practices.

IRRS activities took place mainly at the CNPPRI headquarters, Libreville. One site visit took place at the General Hospital of Libreville (see Appendix III).

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<sup>1</sup> This mission was initially organized with the RaSSIA protocol, and later converted into the IRRS Guidelines, but without changing its scope.

## II. OBJECTIVE AND SCOPE

The purpose of the mission was to conduct an IRRS mission to review the Gabonese legal and governmental infrastructure for radiation safety and the effectiveness of the Gabonese regulatory body (CNPPRI) and to exchange information and experience among CNPPRI and the IRRS team with a view to contributing to harmonizing regulatory approaches and creating mutual learning opportunities among regulators.

The key objectives of this mission were to enhance radiation safety by:

- ✓ Providing Gabon (CNPPRI and governmental authorities) with a review of its radiation safety regulatory technical and policy issues;
- ✓ Providing Gabon (CNPPRI and governmental authorities) with an objective evaluation of their and radiation safety regulatory activities with respect to international safety standards;
- ✓ Contributing to the harmonization of regulatory approaches among Member States;
- ✓ Promoting sharing of experience and exchange of lessons learnt;
- ✓ Providing key staff in Gabon (CNPPRI and governmental authorities) with an opportunity to discuss their practices with reviewers who have experience of other practices in the same field;
- ✓ Providing Gabon (CNPPRI and governmental authorities) with recommendations and suggestions for improvement;
- ✓ Providing other States with information regarding good practices identified in the course of the review;
- ✓ Providing reviewers from States and the IAEA staff with opportunities to broaden their experience and knowledge of their own field; and
- ✓ Providing Gabon (CNPPRI and governmental authorities) through completion of the IRRS questionnaire with an opportunity for self-assessment of its activities against international safety standards.

The scope requested by CNPPRI for this IRRS mission was:

- Radiation safety in medical, industrial and research activities;
- Safety and security of radioactive sources;
- Management system; and
- Communication and public information.

Other functions and responsibilities of CNPPRI, like transport regulation, waste management, site rehabilitation, emergency preparedness and response, are not included in the scope of this mission.

### **III. BASIS FOR THE REVIEW**

#### **A) PREPARATORY WORK AND IAEA REVIEW TEAM**

The preparatory work for the mission was carried out by the IRRS Team Coordinator Hilaire Mansoux, NSRW/IAEA. According to the IRRS guidelines, the IRRS Team Leader, Mr. Christophe Murith, is an active senior regulator from an IAEA Member States. In accordance with the request from CNPPRI, and taking into account the scope as indicated above, it was agreed that the IAEA review team would comprise three external experts and one staff members (see Appendix I).

During the preparatory period all documents of the advance reference material (ARM) were sent by CNPPRI to the IAEA and distributed to the experts. All details and organizational aspects were defined with the CNPPRI Administrator Mrs Lily Esther Ndouna Depenaud.

A significant amount of work was carried out by the reviewers and by the IAEA staff before the review in order to prepare the initial impressions about the ARM, to prepare for the interviews and direct observations at the sites and to identify additional relevant material necessary to review during the mission.

An entrance team meeting was conducted on 30 September 2007 to discuss the specifics of the mission, to clarify the basis for the review, background, context and objectives of the IRRS and to agree on the methodology for the review and the evaluation among all reviewers. The reviewers also reported their first impressions of the advance reference material.

#### **B) REFERENCES FOR THE REVIEW**

The main reference documents provided by CNPPRI 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 for all the review areas with the objective of providing CNPPRI with recommendations and suggestions as well as of identifying good practices. The review was conducted through meetings, interviews and discussions with CNPPRI personnel, visits to relevant organizations, assessment of the ARM, 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 given in Appendix II.

The entrance meeting was held on Monday 01 October 2007 with the participation of CNPPRI senior management. Opening remarks were made by the Administrator of the CNPPRI, the IRRS Team Leader and the IRRS Team Coordinator.

The exit meeting was held on Friday 05 October 2007 with the CNPPRI authorities. The main conclusions were presented by the IRRS Team Leader. The draft mission report was handed over to CNPPRI at the end of the meeting.

## 1. LEGISLATIVE AND GOVERNMENTAL RESPONSIBILITIES

### Legislative and statutory framework

#### *GS-R-1 § 2.2 (1)*

The legislative and regulatory framework for the safety of facilities and activities is established through:

- the Law 11/2001 of the 12<sup>th</sup> December 2001 “loi fixant les orientations de la politique de prévention et de protection contre les rayonnements ionisants”,
- the decree 00361/PR/MMEPRH of May 6<sup>th</sup> 2005, “décret fixant les principes généraux de prévention et de protection des travailleurs, des patients, du public et de l’environnement contre les rayonnements ionisants”

In addition, three “arrêtés” have been published:

- Arrêté de mise en place du centre national de prévention et de protection contre les rayonnements ionisants n 00671/MMEPRH of octobre 16 2002
- Arrête fixant les conditions particulières d’utilisation et de stockage des sources radioactives scellées 471/MMEPRH of August 4 2003
- Arrêté fixant les renseignements et les précisions devant accompagner les demandes d’autorisation concernant les sources radioactives et les appareils d’irradiation 399/MMEPRH of April 03 2006

This legislative and regulatory framework is currently being revised for completion and compliance with international standards on many aspects further addressed in this report.

### Establishment of an effectively independent regulatory body

#### *GS-R-1 § 2.2 (2)*

Law 11/2001 establishes a national commission of prevention and radiological safety. This commission is supposed to have only a consultative role, but according to article 11, authorizations have to be granted by the Minister of Energy in its role of president of the commission.

Law 11/2001 also establishes CNPPRI, which is responsible for control of activities and practices (as stated in article 9), which has clearly regulatory functions and responsibilities (as stated in article 6). However, in article 11, CNPPRI is being mentioned as a technical support of the Minister of Energy who is granting authorizations.

The Law does not clearly establish a regulatory body. The regulatory role is shared between the CNPPRI and the Minister of Energy. Since CNPPRI is under the umbrella of the Ministry of Energy, there is no effective independence.

This situation, well known by Gabonese authorities, is one of the main reasons for the on-going revision of the legislation. The IRRS Team understood from the counterparts that the objective of this revision is to clearly establish CNPPRI as the National Regulatory Body. Thus, it is considered in the following of this report that CNPPRI fulfils this role.

In addition, the decree 361 introduces a national regulatory body (a definition is given) but this role is not clearly assigned to CNPPRI or any other organisation

## **Regulatory body - assigned responsibilities, authority, and resources**

### ***GS-R-1 § 2.2 (3)***

The responsibility for authorization, regulatory review and assessment, inspection and enforcement and for establishing safety principles, criteria, regulations and guides is assigned by the law and the decree as follows:

### **Authorization**

Authorizations are given by the Minister of Energy (article 11 of the Law). However CNPPRI is enabled to deliver authorizations (article 6 of the Law). Moreover, the national regulatory body is the only responsible body for granting authorizations (article 18 and 20 of the decree).

### **Regulatory Review and Assessment**

This role is assigned to CNPPRI by both the Law (article 11) and the decree (article 29).

### **Inspection**

Inspections are under the responsibility of CNPPRI in the Law (article 6) and under the responsibility of the national regulatory body in the decree (article 103 and 104).

### **Enforcement**

The Law makes provisions for sanctions but does not assign the responsibility for enforcement to any body. However, referring to the Law, the decree gives enforcement power to the national regulatory authority.

### **Establishing regulations, safety principles, criteria and guides**

This is clearly assigned by the Law to CNPPRI.

### ***GS-R-1 § 2.2 (4)***

Article 7 and 10 of the Law makes provisions for some independence and financial autonomy of CNPPRI. In practice, CNPPRI is directly managed by the cabinet of the Minister of Energy and has no autonomy to manage its budget. From discussions with CNPPRI, the IRRS Team understood that an annual budget has to be submitted to the Cabinet and that allocated funds are not adequate to discharge CNPPRI assigned responsibilities. The IRRS Team observed that the current staff of CNPPRI is sufficient to initiate its regulatory activities. More information on the staffing and training of the regulatory body will be provided in chapter 3.

### ***GS-R-1 § 2.2 (5)***

According to the Law (article 6), CNPPRI is given other responsibilities like occupational and environmental monitoring that could, in principle, conflict with its responsibility for regulating safety. However, these other responsibilities have not yet been established and may not be assigned to CNPPRI in the future.

### ***GS-R-1 § 2.2 (9)***

Articles 40 and 41 of the decree set out requirements for physical protection of radioactive sources.

### ***GS-R-1 § 2.2 (10)***

Gabon has currently no financial indemnification arrangements for third parties in the event of a radiological accident

### ***GS-R-1 § 2.2 (11)***

The Gabonese legislation requires demonstrations that the licence holders possess the infrastructure to ensure that activities in relation to facilities and sources are safe.

## **Operator responsibility**

### ***GS-R-1 § 2.3***

The decree (article 23) explicitly assigns prime responsibility for safety to the operator.

## **Legislative requirements**

### ***GS-R-1 § 2.4***

The legislation (law +decree) promulgated in Gabon provides for the effective control of radiation safety. However, it is not fully compliant with GSR 1 since the following requirements are not properly addressed:

- establishment of a regulatory body with the authority outlined in paragraph 2.6 of GS-R-1;
- adequate funding of the regulatory body;
- continuity of responsibility when activities are carried out by several operators successively and for the recording of the transfers of responsibility;
- creation of independent advisory bodies to provide expert opinion to, and for consultation by, the government and regulatory body;
- means whereby research and development work is undertaken in important areas of safety;
- arrangements for provision of financial security in respect of any liabilities;
- definition of what is an offence and the corresponding penalties;
- implementation of any obligations under international treaties, conventions or agreements;
- how the public and other bodies are involved in the regulatory process

## **Authority of the Regulatory Body**

### ***GS-R-1 § 2.6 (1)-(14)***

Assuming that CNPPRI is the regulatory body, the law and decree give it the authority to:

- develop safety principles and criteria;
- establish regulations and issue guidance;
- require any operator to conduct a safety assessment;
- require that any operator provide it with any necessary information, including information from its suppliers, even if this information is proprietary;
- issue, amend, suspend or revoke authorizations and to set conditions;
- enter a site or facility at any time to carry out an inspection;

However, the legislation does not give CNPPRI the authority:

- to require an operator to perform a systematic safety reassessment or a periodic safety review over the lifetime of facilities;
- to enforce regulatory requirements;
- to communicate directly with governmental authorities at higher levels when such communication is considered to be necessary for exercising effectively the functions of the body;
- to obtain such documents and opinions from private or public organizations or persons as may be necessary and appropriate;
- to communicate independently its regulatory requirements, decisions and opinions and their basis to the public;
- to make available, to other governmental bodies, national and international organizations, and to the public, information on incidents and abnormal occurrences, and other information, as appropriate;
- to liaise and co-ordinate with other governmental or non-governmental bodies having competence in such areas as health and safety, environmental protection, security, and

transport of dangerous goods; and to liaise with regulatory bodies of other countries and with international organizations to promote co-operation and the exchange of regulatory information.

<b>RECOMMENDATIONS, SUGGESTIONS AND GOOD PRACTICES</b>	
(1)	<b>BASIS:</b> GS-R1 §2.2 (2) states in part that “ <i>A regulatory body shall be established...</i> ”
R1	<b><u>Recommendation:</u></b> In the current revision of the national legislation for radiation safety, the Government of Gabon should establish and clearly designate a single regulatory body, effectively independent of organizations or bodies charges with the promotion of nuclear technologies or responsible for facilities or activities.
(1)	<b>BASIS:</b> GS-R1 §2.2(3) states in part that: “ <i>Responsibility shall be assigned to the regulatory body for...</i> ”
R 2	<b><u>Recommendation:</u></b> In the revision of the Law 11/2001, Enforcement should be added to the responsibilities of the regulatory body and authorization should be issued by the regulatory body.
(1)	<b>BASIS:</b> GS-R1 §2.2(4)
R 3	<b><u>Recommendation:</u></b> The Government of Gabon should provide the regulatory body with adequate financial resources to discharge its assigned responsibilities.
(1)	<b>BASIS:</b> GS-R1 §2.2(5)
R 4	<b><u>Recommendation:</u></b> Government of Gabon should ensure that potential additional functions assigned to the regulatory body like the occupational and environmental monitoring do not conflict with its function for regulating radiation safety.
(1)	<b>BASIS:</b> GS-R1 §2.4
R 5	<b><u>Recommendation:</u></b> The current legislation should be complemented with the following provisions: <ul style="list-style-type: none"> <li>• establishment of a regulatory body with the authority outlined in paragraph 2.6 of GS-R-1;</li> <li>• adequate funding of the regulatory body;</li> <li>• continuity of responsibility when activities are carried out by several operators successively and for the recording of the transfers of responsibility;</li> <li>• creation of independent advisory bodies to provide expert opinion to, and for consultation by, the government and regulatory body;</li> <li>• means whereby research and development work is undertaken in important areas of safety;</li> <li>• arrangements for provision of financial security in respect of any liabilities;</li> <li>• definition of what is an offence and the corresponding penalties;</li> <li>• implementation of any obligations under international treaties, conventions or agreements;</li> <li>• how the public and other bodies are involved in the regulatory process</li> </ul>
(1)	<b>BASIS:</b> GS-R1 §2.6 states in part that: “ <i>The regulatory body shall have the authority...</i> ”

## RECOMMENDATIONS, SUGGESTIONS AND GOOD PRACTICES

R 6

**Recommendation:**

The authority given by legislation to the regulatory body should be extended, to include :

- to require an operator to perform a systematic safety reassessment or a periodic safety review over the lifetime of facilities;
- to enforce regulatory requirements;
- to communicate directly with governmental authorities at higher levels when such communication is considered to be necessary for exercising effectively the functions of the body;
- to obtain such documents and opinions from private or public organizations or persons as may be necessary and appropriate;
- to communicate independently its regulatory requirements, decisions and opinions and their basis to the public;
- to make available, to other governmental bodies, national and international organizations, and to the public, information on incidents and abnormal occurrences, and other information, as appropriate;
- to liaise and co-ordinate with other governmental or non-governmental bodies having competence in such areas as health and safety, environmental protection, security, and transport of dangerous goods; and to liaise with regulatory bodies of other countries and with international organizations to promote co-operation and the exchange of regulatory information.

## 2. RESPONSIBILITIES AND FUNCTIONS OF THE REGULATORY BODY

### **Regulatory body - fulfilling statutory obligations**

#### ***GS-R-1 § 3.1***

The legislation makes provisions for CNPPRI to define policies, safety principles and criteria. For example regulations are expected for the establishment of exemption criteria, and for clarifying the conditions for registration or licensing activities and facilities. In practice CNPPRI has already issued two arretes related to the information to be given in an application and to the specific conditions for import, use and storage of sealed radioactive sources.

#### ***GS-R-1 § 3.2 (1)***

The legislation makes provisions for CNPPRI to establish, promote or adopt regulations and guides. In practice, no guides have been formerly established by CNPPI. However IAEA standards and associated guidance documents are used by CNPPRI to initiate its regulatory actions, in particular for notification and authorization.

#### ***GS-R-1 § 3.2 (2)***

The decree gives responsibility to CNPPRI to review and assess application for authorizations. To date, a few applications have been received and assessed.

#### ***GS-R-1 § 3.2 (3) (i)-(x)***

For issuing, amending, suspending or revoking authorizations, Chapter III of the decree clearly specifies:

- the facilities (facilities licence) or activities (source licence) covered by the authorization,
- the requirements for notifying for any relevant changes (modifications) to safety related aspects,
- the obligations of the operator in respect of its facility, equipment, radiation source(s) and personnel,
- any limits on operation and use (such as dose or discharge limits, the duration of the authorization,
- the requirements for incident reporting,
- the emergency preparedness arrangements.

However, the records that the operator is required to retain or to make to the regulatory body, once the authorization is given are not specified.

#### ***GS-R-1 § 3.2 (4)-(6)***

CNPPRI is empowered to carry out regulatory inspections; however this activity has not been implemented yet.

As already mentioned, the enforcement responsibility is not clearly assigned in the current legislation. In addition, no enforcement action has been taken yet.

### **Regulatory body – discharging its main responsibilities**

#### ***GS-R-1 § 3.3 (1)-(5)***

Being in its early stage of implementation, CNPPRI has only established processes for dealing with notification and application through the preparation of forms to be filled by operators. No guidance to the operator for developing and presenting safety assessments have been prepared yet.

### **GS-R-1 § 3.3 (6)**

CNPPRI has no established communication with other competent governmental bodies and the public. The Administrator of CNPPRI is the National Liaison Officer with IAEA.

### **GS-R-1 § 3.3 (7) (13)**

There are no mechanisms through which CNPPRI

- ensures that operating experience is appropriately analysed and that lessons to be learned are disseminated;
- ensures that appropriate records relating to the safety of facilities and activities are retained and retrievable;
- ensures that its regulatory principles and criteria are adequate and valid, and take into consideration internationally endorsed standards and recommendations;
- establishes and inform the operator of any requirements for systematic safety reassessment or periodic safety review;
- advises the government on matters related to the safety of facilities and activities;
- confirms the competence of personnel responsible for the safe operation of the facility or activity; and
- confirms that safety is managed adequately by the operator.

### **Regulatory body – cooperation with other relevant authorities**

#### **GS-R-1 § 3.4**

Except in the specific circumstances of the rehabilitation of the Mounana site (former mining activities) where CNPPRI is cooperating with the other ministries (health, labour, environment), there are no coordination and cooperation at the national level, although article 21 of the decree provides for cooperation between CNPPRI and the Custom Offices to regulate the import and export of radiation sources.

### **Regulatory body – additional functions**

#### **GS-R-1 § 3.5**

CNPPRI carries out additional functions in occupational and environmental monitoring. However, these functions are not fully implemented and could be taken out of its responsibilities in the framework of the current legislation revision.

<b>RECOMMENDATIONS, SUGGESTIONS AND GOOD PRACTICES</b>	
(1)	<b>BASIS:</b> GS-R-1 chapter 3
R 7	<b><u>Recommendation:</u></b> CNPPRI should, based on the current legislation and with available resources, establish a strategy for gradual effective implementation of its statutory obligations. This strategy could be adjusted when the new legislation is issued.
(1)	<b>BASIS:</b> GS-R-1 §3.3 (1)
S 1	<b><u>Suggestion:</u></b> CNPPRI should expedite and implement the processes for notification, authorization and inspections with no delay, which should be not impacted by the on-going legislative revision
(1)	<b>BASIS:</b> GS-R-1 §3.4
S 2	<b><u>Suggestion:</u></b> CNPPRI should initiate cooperation with other relevant authorities, through the establishment of memorandum of understandings, in particular the Custom Offices.

### 3. ORGANIZATION OF THE REGULATORY BODY

#### **Organizational structure, size and activities**

##### **GS-R-1 § 4.1**

CNPPRI is attached to the Cabinet of the Ministry of Energy, and reports directly to the Cabinet. There is currently no formal organizational structure for CNPPRI but there is staff assigned to it. The structure and size of CNPPRI are not adequate but should allow the start of the regulatory activities. The adequacy of the structure and size will be assessed when the national inventory of sources and facilities is completed.

The lack of inspection equipment and appropriate premises shows that allocated resources are inadequate.

There is a draft decree establishing the organization of CNPPRI that should be issued with the revised radiation safety legislation. One of the important components of this draft organization that was presented to the IRRS Team is the “Conseil d’administration”. It should be formed with 14 representatives from different ministries, the parliament and other national institutions. The objective of this structure is to facilitate the establishment of cooperation and collaboration of CNPPRI with other national authorities.

#### **Use of consultants and contractors**

##### **GS-R-1 § 4.3**

The law allows CNPPRI to seek advice and assistance from national and international experts and consultants.

There are currently no arrangements made to benefit from this, apart from the technical assistance received from the IAEA through its technical cooperation projects.

#### **Staffing and Training of the Regulatory Body**

##### **GS-R-1 §4.6-4.8**

Currently, the staff of CNPPI consists of :

- The Administrator,
- the Deputy Administrator,
- the administrative and financial director and
- a team of 18 technical staff with some competences in legal affairs, radiation safety (3 people went to the PGEC in Morocco) biomedical and computer engineering, physics, radiology.

Since the full scope picture of activities and facilities to regulate is not known, it is currently not possible to fully assess the adequacy of this staff with the functions and responsibilities of CNPPRI. However, the IRRS Team considers that the current staff is sufficient and qualified to initiate the regulatory activities. However, the situation will have to be re-assessed periodically, when the volume of activity increases, and after the national inventory of sources and facilities to regulate is completed (see chapter 4).

Some of the CNPPRI staff has received IAEA initial training, but there is no training programs already established to ensure that proper skills are acquired and that adequate levels of competence achieved and maintained.

#### **Relations with the operators**

##### **GS-R-1 §4.10**

There is currently very little relationship between CNPPRI and the operators.

## International cooperation

### GS-R-1 §4.11

Gabon has not signed any international conventions relating to various aspects of safety. No formal arrangements are made bilaterally or regionally, with neighbouring States and other interested States regarding safety.

Through the technical cooperation programme of IAEA and AFRA programme, Gabon and CNPPRI have some informal relationships with regional counterparts.

<b>RECOMMENDATIONS, SUGGESTIONS AND GOOD PRACTICES</b>	
(1)	<b>BASIS:</b> GS-R-1 §4.1 states: <i>“The regulatory body shall have an organizational structure and size commensurate with the extent and nature of the facilities and activities it must regulate, and it shall be provided with adequate resources and the necessary authority to discharge its responsibilities.”</i>
(2)	<b>BASIS:</b> Preamble to the BSS under “the regulatory authority” states: <i>“Such a regulatory authority must be provided with sufficient powers and resources for effective regulation...”</i>
(3)	<b>BASIS:</b> Preamble to the BSS under the regulatory authority states: <i>“The type of regulatory system adopted in a country will depend on the size, complexity and safety implications of the regulated practices and sources...”</i>
S 3	<b><u>Suggestion:</u></b> Once the national inventory of sources and facilities to be regulated is completed, CNPPRI should make a detailed analysis of its staffing needs in terms of number, qualifications, competencies and experience, in order to fulfil its functions effectively and efficiently.
(1)	<b>BASIS:</b> GS-R-1 §4.7 states: <i>“in order to ensure that the proper skills are acquired and that adequate levels of competence are achieved and maintained, the regulatory body shall ensure that its staff members participate in well defined training programmes. This training should ensure that staff is aware of technological development and new safety principles and concepts.”</i>
R 8	<b><u>Recommendation:</u></b> CNPPRI should establish and implement a comprehensive training programme for the regulatory staff. This programme will be adjusted to the growth of activities and acquisition of experience and knowledge by the staff.
(1)	<b>BASIS:</b> GS-R-1 §4.11 states in part: <i>“National authorities, ..., shall establish arrangements for the exchange of safety related information, bilaterally or regionally, with neighbouring States and other interested States, and with relevant intergovernmental organizations, both to fulfil safety obligations and to promote co-operation.”</i>
S 4	<b><u>Suggestion:</u></b> Gabon and CNPPRI should consider adherence to international conventions on safety that are relevant to the country.

#### 4. ACTIVITIES OF THE REGULATORY BODY

##### **Notification**

##### ***GS-R-1 §5.2, GS-G-1.5 §3.25***

The notification process is introduced by the decree. In practice, there is not yet any implementation and no national register of sources exists. In 2007, CNPPRI has initiated a national inventory of sources and facilities to be regulated. A specific budget has been granted, notifications forms have been prepared. Based on former information gathered by CNPPRI, phone directory and commercial register screening, a preliminary list of companies to visit has been established. This inventory campaign should start soon and will be announced through media release. It will serve as the starting point of the establishment of the national register of sources. The IAEA Regulatory Authority Information System (RAIS), for which three staff of CNPPRI received training, will be used.

##### **Authorization**

##### ***GS-R-1 §5.3***

The authorization process is established by the regulatory framework but it is not fully implemented yet. Some authorizations have been issued in the last three years but without clearly defined procedures. The graded approach to apply a control commensurate to the magnitude and nature of the hazard (categorization of sources and practices, registration or licence) is not used. There is a unique application form, valid for all categories of sources and practices. The IRRS Team was informed that the graded approach will be considered after reviewing feed-back from the inventory campaign.

##### ***GS-R-1 §5.4***

There is currently no further guidance than the information provided on the application form.

##### ***GS-R-1 §5.5***

The principle of a formal decision to be taken by the regulatory body to grant or refuse an authorization, within a specified time frame is established by the decree. In practice, some decisions to grant authorizations have been taken. Yet, the formal decision of refusal of an authorization has never been taken. The absence of formal decision within the allocated time frame is not addressed.

##### ***GS-R-1 §5.6***

The decree provides for amendment, renewal, suspension or revocation of the authorization. However, there are currently no clearly defined and established procedures.

##### **Review and assessment**

##### ***GS-R-1 §5.7 - 5.11***

At this stage of development of the regulatory activities of CNPPRI, there is no established process for review and assessment of applications. Safety objectives, principles and criteria that operators have to comply with are not yet defined.

##### **Inspection**

##### ***GS-R-1 §5.14 - 5.17***

Inspection process is introduced by the legislation. Both announced and unannounced inspections can be performed. The decree mentions the principle of mandated inspectors without further clarification on the process.

The inspection process is currently not implemented. This regulatory activity will start when the inventory is completed and authorizations granted.

During the IRRS mission, a visit to the hospital of Libreville (Centre Hospitalier de Libreville) was organized. Two IRRS team members and two staff of CNPPRI met with the technical staff of the radiotherapy and radiology department. The inspection guidelines of IAEA were used by CNPPRI to conduct the meeting. The IRRS team members were observers and did not interfere in the meeting. The experience was considered very positive and very encouraging for all parties involved.

### Enforcement

#### GS-R-1 §5.18 - 5.23

The enforcement responsibility is not clearly assigned by the legislation. There is no comprehensive enforcement policy in the radiation safety regulatory infrastructure of Gabon.

Due to the lack of effective regulatory control by CNPPRI, non-compliance situations have never been formally established and enforcement actions never considered.

### Regulations and Guides

#### GS-R-1 §5.25- §5.28

The regulatory framework makes provisions for additional regulations that need to be issued. Due to the early stage of development of the regulatory activities of CNPPRI, there are currently no regulations and guides being developed. CNPPRI is referring to IAEA standards and guidance to establish its activities.

<b>RECOMMENDATIONS, SUGGESTIONS AND GOOD PRACTICES</b>	
(1)	<b>BASIS:</b> GS-G-1.5 §3.25 states that: <i>"The regulatory body should maintain a national register of radiation sources. The main input of data to the inventory is provided via notification."</i>
S 5	<b>Suggestion:</b> CNPPRI should prepare a written procedure prior to conducting the inventory campaign in order to formalize the methodology and the process, optimize the resources and ensure the efficiency of the collection of data.
(1)	<b>BASIS:</b> GS-R-1 §5.3 states in part that: <i>“.demonstration of safety, which shall be reviewed and assessed by the regulatory body in accordance with clearly defined procedures."</i>
(2)	<b>BASIS:</b> GS-R-1 §5.6 states <i>"any subsequent amendment, renewal, suspension or cancellation of the authorization shall be undertaken in accordance with a clearly defined and established procedure. The procedure shall include requirements for the timely submission of applications for renewal or amendment of authorizations. For amendment and renewal, the associated regulatory review and assessment shall be consistent with the requirements of para. 5.3."</i>
(3)	<b>BASIS:</b> GS-R-1 §5.7 states: <i>"Review and assessment shall be performed in accordance with the stage in the regulatory process and the potential magnitude and nature of the hazard associated with the particular facility or activity."</i>
(4)	<b>BASIS:</b> GS-R-1 §5.8 states: <i>"In connection with its review and assessment activities, the regulatory body shall define and make available to the operator the principles and associated criteria on which its judgements and decisions are based."</i>
S 6	<b>Suggestion:</b> CNPPRI should develop a set of procedures to clearly describe the different steps of the authorization process that include:

## RECOMMENDATIONS, SUGGESTIONS AND GOOD PRACTICES

	<ul style="list-style-type: none"> <li>• Review and assessment of initial application,</li> <li>• Review and assessment of renewal or amendment of authorization,</li> <li>• Principles and criteria on which the formal decisions of granting or refusal are based,</li> <li>• Requirements for the timely submission of applications for renewal or amendment,</li> <li>• The consequences for operators in case of absence of formal decision within the specified time frame.</li> </ul> <p>These procedures should implement the graded approach to adjust the extent of the control to the magnitude and nature of the hazard.</p>
(1)	<b>BASIS:</b> GS-R-1 §5.4 states that: <i>“The regulatory body shall issue guidance on the format and content of documents to be submitted by the operator in support of applications for authorization.”</i>
S 7	<b>Suggestion:</b> CNPPRI should develop guidance documents for applicants that take into account the categorization of sources and practices identified during the inventory.
(1)	<b>BASIS:</b> GS-R-1 §5.14 states in part: <i>“The regulatory body shall establish a planned and systematic inspection programme.”</i>
S 8	<b>Suggestion:</b> CNPPRI should develop and implement a programme of inspections. The type of inspection should gradually move from a technical visit to a comprehensive regulatory control.
S 9	<b>Suggestion:</b> Based on IAEA guidance and other regulatory bodies’ good practices, CNPPRI should develop inspection procedures and checklists adapted to the facilities and activities existing in the country.
(1)	<b>BASIS:</b> GS-R-1 §5.18-5.24
S 10	<b>Suggestion:</b> Based on the revised legislation, CNPPRI should consider the development a comprehensive enforcement programme.
(1)	<b>BASIS:</b> GS-R-1 §5.28 states that: <i>“In developing regulations and guides, the regulatory body shall take into consideration comments from interested parties and the feedback of experience. Due account shall also be taken of internationally recognized standards and recommendations, such as IAEA safety standards.”</i>
S 11	<b>Suggestion:</b> CNPPRI should develop regulations and guides, as appropriate and needed, according to existing and planned facilities and activities, using a graded approach and taking into account international safety standards.

## 5. SAFETY AND SECURITY OF RADIOACTIVE SOURCES

There are requirements related to safety and security of radioactive source in the decree (articles 40 to 43), related to the conditions of access to facilities containing radioactive sources and to storage conditions.

The article 36 of the decree introduces the principle of return of disused sources to a supplier or a manufacturer.

There are no specific provisions regarding the management of orphan and vulnerable sources.

CNPPRI does not have access to equipment and facilities for the handling, transport and temporary storage of radioactive sources following recovery of an orphan or vulnerable source.

There are no safe and secure storage areas at ports of entry to Gabon.

CNPPRI has not established communication with scrap metal dealers to encourage them to have appropriate monitoring programmes to detect radioactive sources.

At present the relevant Government authority has no formal process for assessing the transport safety arrangements for imported or exported sources while in transit from the State to its destination.

Gabon has not yet implemented provisions of the “Code of Conduct on safety and security of radioactive sources” and the complementary “Guidance on the Import and Export of Radioactive Sources”. Import and export of radioactive sources are activities subjects to the standard authorization regime, without specific regulatory controls on radioactive sources of Category 1 and 2.

Gabon has not yet expressed political support to the “Code of Conduct on safety and security of radioactive sources” and the complementary “Guidance on the Import and Export of Radioactive Sources”.

<b>RECOMMENDATIONS, SUGGESTIONS AND GOOD PRACTICES</b>	
(1)	<b>BASIS:</b> BSS §2.34
(2)	<b>BASIS:</b> Code of Conduct on the Safety and Security of Radioactive Sources
<i>S 12</i>	<b><u>Suggestion:</u></b> The Government of Gabon and CNPPRI should consider adding more provisions related to the safety and security of radioactive sources in the regulatory framework currently being revised.
<i>S 13</i>	<b><u>Suggestion:</u></b> The Government of Gabon should express its political support to Code of Conduct on safety and security of radioactive sources” and the complementary “Guidance on the Import and Export of Radioactive Sources” by writing to the Director General of IAEA.

## **6. MANAGEMENT SYSTEM FOR THE REGULATORY BODY**

CNPPRI has not yet developed procedures to regularly review the quality and efficiency of its activities. It is however a real concern for the Administrator, since it was the subject selected for the policy issues session (see chapter 8).

The IRRS Team acknowledged that the priority for CNPPRI is to start its activities and to formalize them with procedures. With experience and time will come the need for the review of the quality and efficiency of the activities and the establishment of a proper management system. The IAEA safety standards GS-R-3 “Management System for Facilities and Activities” will provide a sound basis for this task.

## 7. INFORMATION MANAGEMENT

### Regulatory Activity Information Management

The Law (article 6) makes provisions for CNPPRI to set up a system of collection and sharing of information in the field of radiation safety.

CNPPRI has not yet established and implemented procedures for the collection and the dissemination of information related to radiation safety.

CNPPRI has not yet established and implemented procedures to ensure security of sensitive information.

CNPPRI plans to use the Regulatory Authority Information System (RAIS) to manage all the information related to its regulatory activities (national register of sources and facilities, authorizations and inspection).

### Public information and communication

Public Information Management is not formally addressed in CNPPRI. However, some communication and information of the public took place on the rehabilitation of the Mounana site and its environmental monitoring. A newsletter has been issued and some public information meetings took place.

RECOMMENDATIONS, SUGGESTIONS AND GOOD PRACTICES	
(1)	<b>BASIS: GS-R-1 §3.3(6)</b> <i>“In order to discharge its main responsibilities, ..., the regulatory body shall communicate with, and provide information to, other competent governmental bodies, international organizations and the public”</i>
S 14	<b>Suggestion:</b> Within the context of starting its activity through the national inventory campaign, CNPPRI should implement the Law provision and decide on the appropriate level of information to be provided to other governmental bodies, and to the public.

## 8. POLICY ISSUES

### 8.1 Enhancing Regulatory Effectiveness and Competence

#### **Background:**

Challenges in maintaining and enhancing regulatory effectiveness and competence remain in many Member States. There is still no consensus on how to measure regulatory effectiveness.

There are a number of factors to take into account regarding effectiveness and competence:

- Harmonization with International practices
- Commitment to resource planning
- Commitment to knowledge management
- Assessment of workforce competencies
- Commitment to staff training and development
- Commitment to continuous improvement and safety management systems
- Promote sharing experience and lessons learned
- Use of regulatory performance indicators

#### **Discussion:**

CNPPRI is very much sensitized to building and maintaining a competent and efficient team. Like in the technical field, the assistance that IAEA could provide in these matters to CNPPRI would be very much appreciated. The recently developed working material on “guidance for radiation safety regulatory bodies in the establishment and maintenance of a staffing plan and a training programme” was briefly described. The experience shared by the members of the IRRS team during the discussion provided an opportunity to identify key factors. For example, it is very important that the management of the regulatory body has enough power and autonomy to identify the appropriate qualifications and select the appropriate candidates. Radiation safety being a cross cutting subject, the connection of the regulatory body with the different university and professional networks is also an important factor for acquiring and maintaining a qualified staff.

Moreover, it is important that the regulatory body should put a lot of effort to be known and recognized by the other actors, mainly the operators. The recognition by the operators is a good criterion of quality and efficiency of the regulatory activities. The recent experience of the French regulatory body that recently had new functions and responsibilities in radiation protection, in particular in the medical sector, was shared.

To establish an efficient regulatory body, a strategy has to be developed. The elements of this strategy that seem to be of primary importance for CNPPRI are:

- Clear identification of functions and responsibilities,
- Definition of tasks and job descriptions,
- Sharing of information and individual experiences and training,
- Establishment of a training programme, with external and internal resources
- Definition of performance indicators, like the number of inspections and the duration of a review and assessment of an application
- Periodic monitoring and analysis of the performance indicators.

## APPENDIX I – LIST OF PARTICIPANTS

INTERNATIONAL EXPERTS		
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**APPENDIX II – MISSION PROGRAMME**

<b>Date/time</b>	<b>Programme</b>	<b>Participants</b>
01 OCTOBRE		
09:00–10.00	Entrance meeting with senior officials of CNPPRI	Full IRRS Team Senior officials of CNPPRI
10.00–11.00	Review of IRRS programme	Full IRRS Team and CNPPRI
11.00 – 13.00	Discussions on the status of the national regulatory infrastructure component 1 – <b>‘Legislative and Statutory Framework’</b> <ul style="list-style-type: none"> <li>• Legislation.</li> <li>• Regulations and guidance.</li> <li>• Regulatory body establishment and independence.</li> <li>• Regulatory body staffing and training.</li> <li>• Regulatory body funding.</li> <li>• Co-ordination and co-operation at the national level.</li> <li>• International co-operation.</li> </ul>	Full IRRS Team and CNPPRI
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 CNPPRI
18.00–23.00	Preparation of findings and drafting of IRRS report	IRRS Team

02 OCTOBRE		
09.00–13.00	Discussions on the status of the national regulatory infrastructure component 2 – ‘Activities of the Regulatory Body’ <ul style="list-style-type: none"> <li>• Notification and national register of radiation sources.</li> <li>• Authorization</li> <li>• Safety and security of radioactive sources</li> <li>• Inspection</li> <li>• Enforcement.</li> <li>• Information management.</li> </ul> Quality management	Full IRRS Team and CNPPRI
13.00–14.00	Lunch	
14.00–17.00	Continued discussions on the status of the national regulatory infrastructure component 2 – ‘Activities of the Regulatory Body’	Full IRRS Team and CNPPRI
17.00–23.00	Preparation of findings and drafting of IRRS report	IRRS Team

03 OCTOBRE		
09.00–13.00	IRRS Team observation of regulatory inspections of medical facilities (diagnostic imaging, radiation therapy).	IRRS Team members working in smaller groups or as individuals, CNPPRI staff
09.00–13.00	IRRS Team working at HQ with relevant regulatory staff to clarify issues arising from discussions and to begin preparation of preliminary draft report.	IRRS Team member and CNPPRI
13.00–14.00	Lunch	
14.00–23.00	Preparation of preliminary draft report	IRRS Team

04 OCTOBRE		
9.00–13.00	Presentation of the draft report with recommendations and suggestions by IRRS Team to CNPPRI  Preliminary draft made available to the regulator for review	Full IRRS Team and CNPPRI
13.00–14.00	Lunch	
14.30–16.00	Drafting of IRRS preliminary draft report	Full IRRS Team
16.00–18.00	Policy issues discussion session	IRRS Team and CNPPRI
18.00–23.00	Preparation of preliminary draft report	Full IRRS Team

05 OCTOBRE		
09.00–13.00	Exit meeting  Summary of findings and recommendations, action plan	Full IRRS Team and CNPPRI
13.00–14.00	Lunch and depart	

## **APPENDIX III – SITE VISITS**

1. Radiology and Radiotherapy department of the General Hospital of Libreville

#### APPENDIX IV – MISSION COUNTERPARTS

Item	Subject Area	IRRS Experts	Counterparts
	<b>Legislative and governmental responsibilities</b>	C. Murith H. Lamotte A. Hammou H. Mansoux	<ul style="list-style-type: none"> <li>• Mrs Lily Ndouna Depenaud (Administrator)</li> <li>• Mr Kassa Mombo (Deputy Administrator)</li> <li>• Mrs Ngningone Aline (Administrative and Financial Director)</li> <li>• Mrs Massande (Director of environmental information)</li> <li>• Mr Brilly Ragambe (Biomedical Engineer)</li> <li>• Mr Moundhanga (IT Engineer)</li> <li>• Mme Onanga (Lawyer)</li> <li>• Mr Chaley (Radiation Safety Engineer)</li> <li>• Mrs Angouba (Radiology Operator)</li> </ul>
	<b>Responsibilities and Functions of the Regulatory Body</b>		
	<b>Organization of the regulatory body</b>		
	<b>Activities of the Regulatory Body</b>		
	<b>Management System for the Regulatory Body</b>		
	<b>Policy Issues</b>		
	<b>Public Information</b>		
	<b>Safety and Security of Radioactive Sources</b>		

## REVIEWERS AND CONTRIBUTORS

