SP-ANSR

Secrétariat Permanent
Autorité Nationale de Sûreté Radiologique et de Radioprotection

PRÉSIDENCE DE LA RÉPUBLIQUE DU BÉNIN

Téléphone : +229 21604485
Email : contact.ansr@presidence.bj
Site web : ansr.gouv.bj
01 BP 2039 Cotonou, Bénin

JOINT CONVENTION ON THE SAFETY OF SPENT FUEL MANAGEMENT AND ON THE SAFETY OF RADIOACTIVE WASTE MANAGEMENT

Report of the Republic of Benin

Presented by the National Authority of Radiation Safety and Radiation Protection (ANSR)

SECTION A : Introduction

Under article 1 of Decree No. 2019-182 of July 04, 2019 on accession to the Conventions, Protocols and Agreements of the International Atomic Energy Agency (IAEA) in application to Law No. 2019-25 of July 04, 2019 authorizing accession to the Conventions, Protocols and Agreements of the International Atomic Energy Agency (IAEA), the Republic of Benin has acceded to the Joint Convention on the safety of spent fuel management and on the safety of radioactive waste management adopted on September 05, 1997. This Convention was deposited to the IAEA on September 17, 2019.

This document is the first national report prepared in accordance with Article 32 of the Joint Convention. It will be submitted to the competent authorities in accordance with Article 30 of the aforementioned Joint Convention. It is written eighteen (18) months after the "advisory mission on the regulatory infrastructure for radiation safety and nuclear security (RISS)".

Nuclear security issues are addressed in the law No. 2017-29 of March 15, 2018 on radiation safety and nuclear security in the Republic of Benin and three (03) implementing decree of the said law, in particular:

- decree No. 2023-279 of May 24, 2023 approving and implementing the national nuclear or radiological emergency management plan;
- the decree No. 2023-280 of May 24, 2023 regulating the nuclear safety of facilities and activities involving radioactive materials;
- the decree No. 2023-281 of May 24, 2023 regulating the safety of the transport of radioactive materials.

This first national report mainly addresses the legislative and regulatory framework currently in force in Benin in terms of radiation safety and nuclear security.

The law cited above has created in its article 5 "the Benin Atomic Energy Commission (CBEA)", in its article 7, the regulatory body called "National Authority of Radiation Safety and Radiation Protection (ANSR)" and in its article 9 "a national structure responsible for the management of radioactive waste". At the moment, only the ANSR is functional. Pending the operationalization of the national structure in charge of radioactive waste management, its functions are provided on a transitional basis by the ANSR.

According to the provisions of Article 7 of Law No. 2017-29 of March 15, 2018, "the ANSR is a public body of a scientific and technical nature endowed with legal personality and autonomy. It is independent and exercises its powers impartially, fairly and transparently. As such, its prerogatives prevail over those of other bodies in nuclear matters or ionizing radiation. It is placed under the supervision of the Presidency of the Republic".

The main current challenge to be met by the ANSR is the approval of the draft decree implementing of the law No. 2017-29 of March 15, 2018 on Radiation Safety and Nuclear Security in the Republic of Benin to increase the legitimacy of its regulatory actions. It is about :

1. draft decree fixing the modalities of collaboration between the National Authority of Radiation Safety and Radiation Protection and the institutions;
2. draft decree regulating the safety of the transport of radioactive materials in the Republic of Benin;
3. draft decree on radiation safety and radiation protection in the Republic of Benin;
4. draft decree on the procedures for the exercise of inspectors in radiological safety, nuclear security and nuclear guarantees;
5. draft decree on the decommissioning of facilities and activities involving radioactive materials in the Republic of Benin;
6. draft decree on the composition, attributions, organization and functioning of the Benin Atomic Energy Commission.

The other challenges of the ANSR mainly concern the recruitment of additional full-time human resources, in particular one (01) Legal Officer and four (04) inspectors.

As for the short-term prospects, actions aimed at improving the dosimetric surveillance of exposed workers and ANSR agents are envisaged. Similarly, actions must be taken to assist the Ministry of Health in the implementation of quality control of ionizing radiation sources, the adoption of the guide of good practices in medical imaging, the issuance of authorizations for the first radiotherapy service and the first nuclear medicine service in the International Hospital of Calavi which will be inaugurated in October 2024.

In the medium term, the ANSR intends to develop, with the support of the IAEA, a national radiation safety and nuclear security policy and strategies aimed at implementing a graduated and efficient approach to the control of the safe and secure use, transport, import and export of ionizing radiation sources, accompanied by a multiannual strategic implementation plan. This may allow a consolidation of the actions of the ANSR on the ground.

Steps will also have to be taken with technical and financial partners (PTF, in french), in particular the United States Nuclear Regulatory Commission (US-NRC), for the completeness of the inventory of ionizing radiation sources already carried out in eight (08) of the twelve (12) departments of Benin and, the sustainability of the implementation of nuclear security measures during Public Events. Indeed, the NRC is currently supporting the census of sources in one of the last four (04) departments that remain to be covered.

Brief overview of Benin

Benin, formerly known as Dahomey and then the Republic of Benin, is a West African state, which covers an area of 114,763 km2 and extends over 700 km, from the Niger River in the north to the Atlantic coast in the south. Benin had 13,301,694 inhabitants in 2021. The country is part of the ECOWAS member states and has as neighbors Togo to the west, Nigeria to the east, Niger to the northeast and Burkina Faso to the northwest.

The primary energy supply in Benin has always been dominated by biomass and petroleum products. The electricity sector in Benin is characterized by a great dependence on the countries of the

subregion, a difficulty in satisfying the constantly increasing demand induced by the development of the country and an acute delay in terms of access to electricity. The deficit in electrical energy and the low rate of access to electricity still constitute strong constraints to Benin's growth today and represent a major challenge in terms of poverty reduction. For the moment Benin does not have any nuclear fuel in use or spent fuel. He also did not express the intention of developing actions in this direction based on his Government's Action Program 2021-2026.

Information about the nuclear regulatory body

The law No. 2017-29 on radiation safety and nuclear security in the Republic of Benin was voted by the National Assembly on September 15, 2017. This law was promulgated on March 15, 2018. This law was developed with the assistance of the International Atomic Energy Agency (IAEA) in accordance with its standard documents such as GSR part 1, GSR part 3, GSR part 7, the Guide to the safety of the transport of radioactive materials (SSR 6) and the Code of Conduct on the safety and security of radioactive sources. This law creates in its article 5 "the Benin Atomic Energy Commission (CBEA, in french)", in its article 7 the regulatory body called "National Authority of Radiation safety and radiation protection (ANSR)" and in its article 9 "a national structure responsible for the management of radioactive waste". At the moment, only the ANSR is functional. Pending the operationalization of the national structure in charge of radioactive waste management, its functions are provided on a transitional basis by the ANSR.

The mission, the attributions, the organization and the functioning of the ANSR are defined in the decree No. 2019-397 of September 06, 2019 approving the statutes of the National Authority of Radiation Safety and Radiation Protection.

Moreover, in addition to the joint convention, Benin has signed and ratified twelve (12) IAEA agreements and conventions, namely :

1. P&I : Agreement on the Privileges and Immunities of the IAEA : In Force 2003-01-30 acceptance: 2003-01-30;
2. VC: Vienna Convention on Civil Liability for Nuclear Damage: in force 2019-12-18 accession: 2019-09-18;
3. CPPNM : Convention on the Physical Protection of Nuclear Material : in force 2019-10-18 accession: 2019-09-18;
4. CPPNM/A: Amendment to the Convention on the Physical Protection of Nuclear Material : in force 2019-10-18 acceptance: 2019-09-18;
5. NOT: Convention on Early Notification of a Nuclear Accident: in force 2019-10-18 accession: 2019-09-18;
6. ASSIST : Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency : in force 2019-10-18 accession: 2019-09-18;
7. JP: Joint Protocol Relating to the Application of the Vienna Convention and the Paris Convention in force 2019-12-18accession: 2019-09-18;
8. NS: Convention on Nuclear Safety in force 2019-12-17 accession: 2019-09-18
9. PVC: Protocol to Amend the Vienna Convention on Civil Liability for Nuclear Damage in force 2019-12-18 accession: 2019-09-18;
10. SUPP: Convention on Supplementary Compensation for Nuclear Damage in force 2019-12-17 accession: 2019-09-18;

11. Agreement between the Republic of Benin and the International Atomic Energy Agency for the Application of Safeguards in Connection with the Treaty on the Non-Proliferation of Nuclear Weapons in force 2019-09-17 Signature: 2005-05-15;
12. Protocol Additional to the Agreement between the Republic of Benin and the International Atomic Energy Agency for the Application of Safeguards in Connection with the Treaty on the Non-Proliferation of Nuclear Weapons in force 2019-09-17 Signature: 2005-05-15.

Benin has no facilities for the treatment, reprocessing or storage of spent fuel. However, sealed radioactive sources are used in industry, and research, and unsealed radioactive sources are used in the medical sector.

SECTION B: Policies and Practices

Radioactive waste management policy

As indicated in the introduction, Benin does not yet have a radioactive waste management policy. It is envisaged that the IAEA will provide assistance for the development of a national policy and strategies of radiation safety and nuclear security, including the radioactive waste management policy.

Radioactive waste management practice

No radioactive waste management practices are defined at the moment by the ANSR.

The criteria used to define and characterize radioactive waste

At the moment, these criteria have not yet been defined.

SECTION C: Scope - Declarations

There is no nuclear fuel cycle facility in Benin.

However, during the inventory of sources in the eight (08) departments of the north and center of Benin, we had discovered two neutron probes containing a source of Americium241-Berylium each. These two probes are declared unused and will probably be managed as radioactive waste if they do not fit into a reuse policy in other sectors in Benin or elsewhere. In addition, three (03) sources of Californium 252 have been inventoried in 2023 and the operators have declared that the three sources are waiting to be returned to the suppliers. Currently, an inventory mission of ionizing radiation sources (IR) is underway in the largest department of Benin. A source of Cs 137 and a source of Americium 241-Berylium from a TROXLER have been declared in an industrial facility in Cotonou. Similarly, two (02) sources of Radium-226 in two (02) lightning rods have been declared to the Agency for the Safety of Air Navigation (ASECNA, in french) in Cotonou in Benin. These sources will be managed as radioactive waste.

SECTION D: Inventories and Lists

List of radioactive waste management facilities to which this Convention applies

Benin does not yet have a radioactive waste management facility.

For the moment, no temporary or definitive storage site has been set up to store radioactive sources which will be classified as radioactive waste.

Inventory of sources

The National Authority of radiation safety and radiation protection (ANSR) carried out awareness-raising missions in 2021 in order to identify all facilities using ionizing radiation sources. In the same year, after the signing of decision No. 069-2021/PR/P-CS/SP-ANSR/SA of March 25, 2021 on the reporting regime for facilities and activities using ionizing radiation in the Republic of Benin, operators were instructed to declare facilities, radioactive materials held and users of ionizing radiation sources. A total of 123 facilities have been identified.

Inventory of radioactive waste

The National Authority of Radiation safety and radiation protection (ANSR) carried out in 2022 and in 2023 the inventory of sources of IR in the eight (08) departments of the north and center of Benin. The census of sources in the 9th department started during this month of August 2024. The remaining three (03) departments will be covered in 2025..

For the moment, an active search for radioactive sources outside regulatory control has not yet been carried out and the unused radioactive sources discovered during the partial inventory have not yet been characterized in order to be able to classify them in one of the categories of waste.

At the end of the inventory, the characteristics of the discovered radioactive sources and the facilities concerned will be integrated into the RAIS+ system to produce the national register of sources.

The radioactive sources mentioned in Section C are all wastes resulting from previous practices.

SECTION E: Legislative and regulatory framework

In Benin, the Constitutional Court is the guarantor of constitutional review, the National Assembly has legislative powers and the government has executive powers.

International legal instruments process

In Benin, with regard to international legal instruments, namely treaties, conventions, international agreements, the government submits to the National Assembly by decree adopted in the Council of Ministers, a draft ratification law.

After the adoption by the National Assembly of the law on ratification of the international legal instrument, the Ministry of Foreign Affairs is the delegate for the signature of said instrument.

After signature by the delegate representing the Beninese State, the obligations of the said legal instrument enter into force and are opposed to the State.

Process on national legal instruments

The hierarchy of standards at the national level is described as follows: the Constitution, the law, decrees, interministerial or ministerial orders and/or Decisions.

1. Any bill is initiated by the government and any bill is initiated by the National Assembly.
   The bill or the proposed law is transmitted to the President of the National Assembly for a vote. The President of the National Assembly, submits the bill or bill proposal to the parliamentary committee in charge of studying the laws. After the favorable opinion of the said parliamentary committee, the bill or the bill proposal is transmitted to the President of the National Assembly who, in turn, convenes an ordinary or extraordinary session for the vote of the law by the Deputies. After the vote by the parliament, the President of the Republic transmits to the President of the Constitutional Court for review of the constitutionality. After a corresponding decision on the constitutionality of the said law by the Constitutional Court, the law is promulgated by the Head of State, President of the Republic, Head of Government. This law becomes enforceable after publication in the Official Journal.

2. The draft decree is drawn up and submitted to the government by a Minister.
   The said draft decree is studied in the Council of Ministers and approved by the government. The decree is signed by the President of the Republic and the Ministers concerned.
   As regards the draft decrees submitted by the ANSR, the opinion of the IAEA is required before their examination and validation by the presidential committee for drafting decrees implementing the laws promulgated.

3. The orders are drawn up and signed by the Sectoral Ministers.

4. The Decisions are elaborated and signed by the President or the person authorized by the texts of the Institutions of the Republic, State Institutions such as the ANSR, State Companies, Government agencies and other public establishments.

The Republic of Benin has a legislative framework necessary to meet its obligations under this Convention. The legislative and regulatory framework in accordance with international norms and standards is set up by Law No. 2017-29 on radiological safety and nuclear security on September 15, 2017 and promulgated on March 15, 2018.

The law applies to all activities involving exposure to ionizing radiation, in particular the production, possession, use, import, export, transit, transport, storage, management of sources of ionizing radiation or any other radioactive material identified by the regulatory body.

Decree No. 2019-397 of September 06, 2019 defines the statutes of the National Authority of Radiation Safety and Radiation Protection which is the regulatory body.

Pending the adoption of the implementing decrees of the law No. 2017-29 of March 15, 2018, the regulatory body (ANSR) has signed seven (07) implementing decisions of the said law.

- the decision No. 069-2021/PR/P-CS/SP-ANSR/SA of March 25, 2021 on the system of declarations of facilities and activities using ionizing radiation in the Republic of Benin obliges the operators of existing facilities before the establishment of the ANSR to declare their facility, the sources of ionizing radiation in use, the personnel assigned to work on these sources;
- the decision No. 070-2021 /PR/P-CS/SP-ANSR/SA of March 25, 2021 on the regime of Authorizations issued by the National Authority of Radiation Safety and Radiation Protection is taken in accordance with Article 10 of the Nuclear law which provides; "no one may exercise the activities or practices referred to ... without a prior authorization issued by the Authority ...";
- the decision No. 071-2021/PR/P-CS/SP-ANSR/SA of March 25, 2021 on the regime of Inspections carried out by the National Authority of Radiation Safety and Radiation Protection is taken in accordance with Article 11 of the Nuclear law which provides "... activities and practices involving nuclear materials or sources of ionizing radiation in the economic and social sectors, public and private, are subject to periodic or unannounced inspections by the Authority in accordance with standards in the field";
- the decision No. 072-2021/PR/P-CS/SP-ANSR /SA of March 25, 2021 on Radiation protection in a situation of medical exposure in the Republic of Benin ;
- the decision No. 073-2021/PR/P-CS/SP-ANSR/SA of March 25, 2021 on radiation protection of workers in facilities and activities using ionizing radiation;
- decision No. 117-2021/PR/P-CS/SP-ANSR/SA of May 06, 2021 on the responsibilities and obligations of Holders of authorizations for facilities and activities in the field of ionizing radiation in the Republic of Benin; and,
- the decision No. 118-2021 /PR/P-CS/SP-ANSR/SA of May 06, 2021 on the safety and security of the transport of radioactive materials in the Republic of Benin.

The regulatory body (ANSR) has the mission of regulating the use of ionizing radiation sources in Benin. These regulatory missions are specified in Article 5 of Decree No. 2019-397 of September 06, 2019 approving the statutes of the National Authority of radiation safety and radiation protection (ANSR). It is about :

- design, propose and monitor the application of regulations in the field of radiation safety and nuclear security;
- issue authorizations in the field of applications of the atom in the context of medical, industrial and research activities, the transport of radioactive substances, the export and import of nuclear materials and any radioactive source;
- issue authorizations for the management of radioactive waste;
- inspect and evaluate the facilities and activities, objects of authorization, for the purpose of verifying their compliance with the provisions of the law, regulations, terms and conditions of authorization;
- define and collect fees for authorizations and approvals;
- establish and maintain a national register of ionizing radiation sources;
- ensure the application of the regulations in terms of safeguards.

The correct fulfillment of the mission of the regulatory body (ANSR) will allow the development of nuclear applications in Benin and a safe and secure use for the benefit of the population. Compliance with legislative and regulatory texts ensures the adequate protection of current and future generations against the harmful effects of ionizing radiation.

Regulatory body

As indicated above, Law NO. 2017-29 of March 15, 2018 created the regulatory body: the National Authority of radiation safety and radiation protection (ANSR).

Decree No. 2019-397 of September 06, 2019 approving the statutes of the ANSR defines the responsibilities of the regulatory body (ANSR) and recalls certain provisions of the Law. The ANSR is a public body of a scientific and technical nature, endowed with a legal personality and financial autonomy. It is independent of the operators and exercises its powers impartially, fairly and transparently. For its operation, the ANSR is an establishment that receives an annual grant (endowment) from the State but it also collects royalties from the authorizations issued. It can also receive donations, bequests and resources from the support of technical and financial partners.

The regulatory body (ANSR) is composed of two bodies :

- the Supervisory Board, and
- the Permanent Secretariat.

The Supervisory Board (high council) is the decision-making and management control body of the Permanent Secretary. It is composed of six (06) members designated by the ministries concerned and the representative of the President of the Republic. The Supervisory Board is chaired by the representative of the President of the Republic. They are appointed for a term of three (03) renewable once.

The Permanent Secretariat is headed by a Permanent Secretary appointed by decree taken in the Council of Ministers for a term of five (05) renewable once. He executes the decisions of the Supervisory Board and the daily management acts of the regulatory body (ANSR), in particular those related to authorization and inspection issues.

SECTION F: Other general safety provisions

Responsibilities of the authorization holder

The decision No. 117-2021/PR/P-CS/SP-ANSR/SA of May 06, 2021 details the responsibilities and obligations of the holders of authorizations for facilities and activities in the field of ionizing radiation related to workers, the ANSR and the facility. They have the responsibility, among other things, to :

- designate Radiation Protection Officer (RPO) to assist them in carrying out their mission in the field of radiation protection;
- set up appropriate work spaces (monitored area and controlled area) and storage of radioactive materials;
- implement a program of radiological control of workplaces, individual dosimetric monitoring and enhanced medical supervision of personnel;
- maintain an up-to-date inventory of sources of ionizing radiation and all other radioactive materials;
- regularly provide appropriate radiation protection training to all users of ionizing radiation sources;

- notify the ANSR of any modification or cessation of the activity and take the necessary safety and security measures;
- establish and maintain a nuclear safety and security culture within the facilities;
- ensure the management of radioactive waste and their traceability;
- notify all abnormal or accidental situations to the ANSR.

Human and financial resources

The regulatory body (ANSR) has competent human resources but not enough at the moment.

Article 24 of Decree No. 2019-397 of September 06, 2019 approving the statutes of the ANSR empowers the Permanent Secretary to recruit staff in accordance with the plan approved by the supervisory board of the ANSR. The necessary material and financial resources made available each year to the ANSR by the Presidency of the Republic are sufficient to carry out the missions as defined by Law No. 2017-29 of March 15, 2018. Recruitment will be made as and when the needs arise to increase the capacities of the regulatory body.

Quality assurance

The ANSR has developed the architecture of its integrated management system (IMS) from December 2022 to October 2023. It is the IAEA standards described in the GSR Part 2 that are applicable in the IMS. The vision, the mission, the processes / procedures of management, support and the core business of the Authority are contained in the Quality Manual, the Registration Manual and the Manual of Processes and Procedures. This document has been reviewed and evaluated by an expert recruited by the IAEA. The staff of the ANSR has begun to take into account the recommendations of the expert and plans to continue the continuous improvement of the IMS. In the near future, by 2025, the operators of facilities with radioactive waste will be invited to set up a IMS with meticulous documentation ensuring coherent and traceable processes.

Radiation protection during exposure

Title IV of the nuclear Law is devoted to the organization of radiation protection and radiological safety.

Thus, according to the nuclear law :

- any practice likely to be the cause of exposure to ionizing radiation must be justified by the net benefits it provides on social and economic levels;
- protection against ionizing radiation must be optimized so that the magnitude of the individual doses, the number of people exposed and the probability of exposure are kept at the lowest level that is reasonably achievable taking into account social and economic factors;
- the exposure of people to ionizing radiation must be strictly restricted so that the doses received to the whole body or to the organs are always below the limits set by the regulations.

Management of radioactive waste, transport of radioactive materials and radiological emergency plans

No one may undertake radioactive waste management activities without first obtaining an authorization from the regulatory body (ANSR) in accordance with the provisions provided for in article 24 of Law No. 2017-29 of March 15, 2018.

The conditions and procedures for the management of radioactive waste from their production to their disposal, including categorization, collection, sorting, packaging, treatment and disposal, are defined in the draft decree on radiological safety and radiation protection pending approval.

The import of radioactive waste is prohibited in the Republic of Benin in accordance with the provisions provided for in Article 4 of Law No. 2017-29 of March 15, 2018. The conditions are set in such a way that the spent sources are returned to the suppliers at the end of use.

The transport of radioactive materials is subject to the prior authorization of the regulatory body (ANSR). For the moment, users who wish to carry out the transport of radioactive materials arrange a vehicle for the occasion. No public or private structure holds the approval for the transport of radioactive materials in Benin.

To deal with any accidental situation involving radioactive materials, a national radiological emergency plan is drawn up and adopted by decree taken in the Council of Ministers.

An internal emergency plan is required for any facility using ionizing radiation sources in Benin.

Decommissioning

Arrangements are being made for the upcoming approval of a decree ruling on the decommissioning of facilities in accordance with IAEA standards.

SECTION G: Safety of spent fuel management

This section is not developed in this report because Benin does not have a nuclear power plant.

SECTION H: Safety of radioactive waste management

Issues related to the safety of radioactive waste management are addressed in the draft decree on radiation safety and radiation protection. Unfortunately this project is still not yet broadcast. The regulatory body (ANSR) ensures the roles of radioactive waste management pending the operationalization of the structure in charge of the management of this radioactive waste.

As mentioned earlier in Section D, the inventory of ionizing radiation sources is partial and the active search for radioactive sources outside regulatory control has not yet been carried out. The unused radioactive sources discovered during the partial inventory have not yet been characterized in order to be able to classify them in one of the categories of waste. However, safety and security instructions have been given to operators to keep these sources in safe and secure conditions until the management chain for these sources is defined.

For the moment, no temporary or definitive storage sites have been set up for radioactive waste.

On the security front, the ANSR collaborates with the institutions concerned to define the reference threat and to implement the related security measures.

SECTION I: Cross-border movements

Chapter 2 of Title VI of the Nuclear Law is devoted to the control of imports and exports.

Thus, Article 47 provides "No one shall export, import, transhipment or transit of a controlled article without the authorization of the ANSR", article 48 provides "the ANSR establishes the rules relating to the import and export and transit of controlled articles in collaboration with the ministries and institutions concerned" and article 49 provides "the ANSR controls the export and import, re-export, transit and transhipment of material, and nuclear technology to ensure security and protect the strategic interests of the Republic of Benin".

SECTION J: Sealed sources removed from service

There are in Benin, at the stage of the partial inventory of sources, some sealed radioactive sources. At the moment, they are stored at the operator's premises while waiting to find a reuse channel for them or to store them temporarily or permanently as radioactive waste.

SECTION K: General initiatives to improve safety

There are many general initiatives aimed at improving safety. They have been described in the paragraph that mentioned the prospects in the introduction to this report.

SECTION L: Annexes

Annex 1: Report of the advisory mission on regulatory infrastructure for radiation safety and nuclear security (RISS) to the Republic of Benin.

Annex 2: Law No. 2017-29 of March 15, 2018 on radiation safety and nuclear security in the Republic of Benin.

Annex 3: Decree No. 2019-397 of September 06, 2019 approving the statutes of the National Authority of Radiation Safety and Radiation Protection.

Annex 4: Decree No. 2023-279 of May 24, 2023 approving and implementing the national nuclear or radiological emergency management plan.

Annex 5: Decree No. 2023-280 of May 24, 2023 regulating the nuclear safety of facilities and activities involving radioactive materials.

Annex 6: Decree No. 2023-281 of May 24, 2023 regulating the safety of the transport of radioactive materials.

Annex 7: Decision No. 069-2021/PR/P-CS/SP-ANSR/SA of March 25, 2021 on the reporting regime for facilities and activities using ionizing radiation in the Republic of Benin.

Annex 8: Decision No. 070-2021/PR/P-CS /SP-ANSR /SA of March 25, 2021 on the regime of Authorizations issued by the National Authority of Radiation Safety and Radiation Protection.

Annex 9: Decision No. 071-2021/PR/P-CS/SP-ANSR/SA of March 25, 2021 on the regime of Inspections carried out by the National Authority of Radiation Safety and Radiation Protection.

Annex 10: Decision No. 072-2021/PR/P-CS/SP-ANSR/SA of March 25, 2021 on Radiation protection in a medical exposure situation in the Republic of Benin.

Annex 11: Decision No. 073-2021/PR/P-CS/SP-ANSR/SA of March 25, 2021 on radiation protection of workers in facilities and activities using ionizing radiation.

Annex 12: Decision No. 117-2021/PR/P-CS/SP-ANSR/SA of May 06, 2021 on the responsibilities and obligations of Holders of authorizations for facilities and activities in the field of ionizing radiation in the Republic of Benin.

Annex 13: Decision No. 118-2021/PR/P-CS/SP-ANSR/SA of May 06, 2021 on the safety and security of the transport of radioactive materials in the Republic of Benin.

Annex 14: Document of the quality architecture (IMS) of the ANSR.