


LAW N_o <u>2019/012</u> OF 19 JUIL 2019

TO LAY DOWN THE GENERAL FRAMEWORK FOR RADIOLOGICAL AND NUCLEAR SAFETY, NUCLEAR SECURITY, CIVIL LIABILITY AND SAFEGUARDS ENFORCEMENT

> The Parliament deliberated and adopted, the President of the Republic hereby enacts the law set out below:

CHAPTER I GENERAL PROVISIONS

PRESIDENCE DE LA REPUBLIQUE PRESIDENCY OF THE REPUBLI SECRETARIAT GENERAL SERVICE DU FICHIER LEGISLATIF ET REGLEMENTARE LEGISLATIVE AND STATUTORY AFFAIRS CARD INDEX SERVICE COPIE CERTIFIEE CONFORME CERTIFIED THUE COPY

I - PURPOSE AND SCOPE

<u>Section 1</u>: (1) This law lays down the general framework for radiological and nuclear safety, nuclear security, civil liability and safeguards enforcement.

(2) It shall govern activities and practices relating to the use of radioactive materials and devices emitting ionizing radiation.

As such, this law shall:

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- establish rules for the protection of persons of present and future generations, property and the environment against risks associated with radioactive and nuclear materials and with other sources of ionizing radiation;
- define the requisite physical protection rules for radioactive facilities and materials and nuclear materials;
- specify the mechanisms for preparing and responding to a nuclear accident or radiological emergency; and
- determine the conditions for implementing safeguards agreements and the additional protocol on the non-proliferation of nuclear weapons.

<u>Section 2</u>: This law shall apply to activities, practices and facilities involving exposure to ionizing radiation.

Section 3: The following shall be excluded from the scope of this law:

- exposures due to cosmic radiation, on the ground and background noise;
- exposures due to potassium 40 in the body;
- exposures due to unmodified radionuclide concentrations in raw materials.

II - DEFINITIONS

<u>Section 4</u>: For purposes of this law and the instruments issued for its implementation, the following definitions shall apply:

Accident: Any unintended event, including mishandling, equipment failures or other abnormalities the actual or potential consequences of which are not insignificant in terms of protection or safety;

Activity: Production, use, importation and exportation of ionizing radiation sources for industrial, medical and research purposes, nuclear material or the transportation of radioactive material and the decommissioning of facilities, the management of radioactive waste, or the discharge of effluents and some aspects of remediation of



contaminated sites;

Additional Protocol: Additional Protocol to the Agreement between Cameroon and the International Atomic Energy Agency on the enforcement of safeguards under the Treaty on the Non-Proliferation of Nuclear Weapons;

Approval: Empowerment of a natural person with the specific skills required for the practice of a profession as part of an authorized activity or practice;

Authority in charge of regulation and regulatory control: Body invested with legal powers by the State to ensure radiological and nuclear safety, nuclear security and safeguards enforcement;

Authorization: Deed issued by the authority in charge of regulation and regulatory control to a natural or legal person to undertake the activities or practices referred to in Section 2 of this law;

Authorization holder: Holder of an authorization issued for a practice or activity, with recognized rights and duties relating to this practice or activity;

Background noise: Dose, dose rate or concentration of activities associated with natural sources or other sources of the environment that are not amenable to control;

Competent person in radiation protection: Natural person who is technically qualified for radiological protection issues relating to a particular type of practice, who is designated by the authorization holder to supervise the application of the requirements of international safety standards, national legislation and regulations;

Conditioning: Operations to convert waste materials into suitable parcels for handling, transportation, storage or final disposal;

Controlled area: Area in which special protective measures or security measures are required;

Declaration/Notification: Document submitted by a natural or legal person to the authority in charge of regulation and regulatory control to notify their intention to practise or to undertake any other activity specified in the law;

Decommissioning: Administrative and technical measure taken to lift some or all of the regulatory controls on a facility, save in case of a store or some nuclear facilities used for the final disposal of residue from the extraction and processing of radioactive material, which are closed and not decommissioned;

Dose: Quantity of communicated energy deposited in a medium by ionizing radiation;

Dose limit: Value of the effective dose or the equivalent dose to individuals resulting from controlled practices or activities that must not be exceeded;

Dosimetry: Quantitative study of ionizing radiation received or to be administered;

Emergency response: Implementation of actions to mitigate the consequences of an emergency on the health and safety of persons, quality of life, property and the environment. It may also serve as a basis for the resumption of normal economic and social activity;



Exemption: Determination by the authority in charge of regulation and regulatory control that an activity or practice does not have to be subject to some or all elements of regulatory control in view of the fact that the exposure level due to the activity or practice is too low to warrant the enforcement of such measures;

Exemption level: Value set by the authority in charge of regulation and regulatory control and expressed as a concentration of activity, total activity, dose rate or radiation energy at or below which a source of radiation does not need to be subject to some or all of the elements of regulatory control;

Exportation: Any physical transfer from Cameroon, to an importing State, of nuclear material or other radioactive material, equipment or technology relating to nuclear power;

Exposure: Action of exposing or being exposed to irradiation;

Facilities: Nuclear installations, irradiation facilities, radioactive waste management facilities and any other site where radioactive material is produced, processed, used, handled, stored or finally disposed of, or where radiation generators are installed on a scale such that protection and security must be taken into consideration;

Final disposal: Placing radioactive waste in an appropriate facility with no intention of recovering it;

Inspection: Examination, observation, measurement or testing undertaken by or on behalf of the authority in charge of regulation and regulatory control to evaluate entities, systems, components and materials, as well as operating activities, technical and organizational processes, procedures and staff skills;

Intervention: Any action to reduce or avoid exposure or to reduce the likelihood of exposure to sources not associated with controlled practice or which have gone out of control as a result of an accident;

Inventory of radioactive sources: Listing of all radioactive sources in a facility;

Ionizing radiation: Radiation capable of producing ion pairs in the material;

Justification: Process to determine whether a practice or intervention is overall beneficial, that is, whether the benefits to individuals and the society relating to the introduction or continuation of that practice or such intervention outweighs the harmful effects resulting from that practice or intervention;

Licence: Legal deed issued by the authority in charge of regulation and regulatory control granting authorization to carry out activities or practices involving a significant radiological risk;

Non-facility location: For the implementation of safeguards, any establishment or location not part of a facility, where nuclear material is habitually utilized in quantities equal to or less than one effective kilogram;

Nuclear incident: Unintended event, including mishandling, equipment failures, initiating events, accident precursors, avoided events of few or other anomalies or unauthorized acts, malicious or otherwise, whose actual consequences or potential are not insignificant from the protection or security perspective;



Nuclear facility: (1) Installation (including associated buildings and equipment) in which nuclear material is produced, treated, processed, used, handled, stored or finally disposed of;

(2) Reactor, critical facility, processing plant, manufacturing plant, spent fuel processing plant, isotope separation plant or separate storage facility;

(3) Any location where nuclear material in amounts greater than one effective kilogram is habitually used;

Nuclear material: (1) Plutonium with the exception of plutonium with an isotopic concentration of plutonium-238 exceeding 80%, uranium-233, uranium enriched with uranium-235 or -233, uranium containing the mixture of isotopes found in nature other than in the form of ore or ore residue, and any product containing one or more of the above isotopes.

(2) Raw material or any special fissionable material as defined in Article 20 of the IAEA Statute.

Optimization: Process for establishing levels of protection and security that ensures that exposures, the likelihood of exposure and the value of potential exposures are kept as low as reasonably achievable, taking into account economic and social factors;

Orphan source: Radioactive source that is not subject to regulatory control, either because it has never been subject to such control, or because it has been assigned without proper authorization, abandoned, lost, misplaced or stolen;

Parcel: Packaging and its radioactive contents, as presented for transportation;

Physical protection: Protection measures for nuclear material or authorized facilities designed to prevent unauthorized access to facilities, the unauthorized removal of fissile material or acts of sabotage;

Practice: Any human activity that increases exposure or the likelihood of exposure of people, or the number of people exposed;

Public: Any member of the population, except for purposes of protection and security, when he/she is professionally or medically exposed;

Radioactive contamination: Contamination of any material, surface, medium or individual with radioactive substances;

Radioactive material: Material containing radioisotopes whose activity is recognized as significant by the authority in charge of regulation and regulatory control;

Radioactive source: Source containing radioactive material that is used as a source of radiation;

Radioactive waste: Materials, in any form, resulting from the performance of activities, practices or procedures, not intended for subsequent use, containing or contaminated by radioactive substances and having a mass or volume of activity exceeding the level of release defined by regulation;

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Radioactive waste management: All administrative and technical activities relating to the handling pre-treatment, treatment, conditioning, transportation, storage and final disposal of radioactive waste;

Radioactivity: Phenomenon of spontaneous random disintegration of atoms, usually accompanied by the emission of radiation;

Radiological emergency response plan: Description of the objectives, guidelines and response activities in the event of a radiological and nuclear emergency, and the structure, powers and responsibilities for systematic, coordinated and effective response;

Radiological emergency situation: Incident or accident in which the cause of the actual or perceived danger is overexposure to ionizing radiation or contamination to radioactive material;

Radiological impact assessment: Systematic review to identify potential radiological hazards to the environment from a development, works, equipment or facility project;

Radiological or radiation protection: Protection of persons, property and the environment against exposure to ionizing radiation or radioactive material, including the means of providing such protection;

Raw material: Uranium containing a mixture of isotopes found in nature; uranium with a uranium 235 content below normal; thorium; all the aforementioned elements in the form of metal, alloy, chemical compounds or concentrates; any other material containing one or more of the elements mentioned above;

Registration: Form of authorization for low or moderate risk practices, under which the person responsible for the practice has, as required, prepared and submitted a safety assessment for the facilities and equipment to the authority in charge of regulation and regulatory control;

Release: Removal of radioactive material or radioactive objects associated with authorized practices from any subsequent regulatory control by the authority in charge of regulation and regulatory control;

Safeguards: Set of technical measures enabling IAEA to verify that Cameroon fulfils its international obligations to use nuclear materials and technologies for peaceful purposes only;

Safeguards Agreement: Agreement between Cameroon and the International Atomic Energy Agency, IAEA, on the application of safeguards in the context of the Treaty on the Non-Proliferation of Nuclear Weapons;

Safety: Measures to prevent accidents or, in the event of their occurrence, to mitigate their consequences;

Safety culture: Characteristics and attitudes in organizations and individuals that make protection and safety issues the focus, as a matter of absolute priority, of the attention they deserve in view of their importance:

Sealed source: Radioactive material that is either permanently enclosed in a capsule or fixed in solid form;



Security: Measures to prevent, detect and respond to theft, sabotage, unauthorized access, illegal transfer or other malicious acts involving nuclear and other radioactive material or associated facilities;

Security culture: Characteristics and attitudes in organizations and individuals that make security issues receive the attention they deserve in view of their importance;

Source of ionizing radiation: Substances or appliances emitting ionizing radiation and which may cause exposure to such radiation;

Source register: Tool or instrument used to record information on radioactive sources present on the national territory;

Special fissionable product: Plutonium 239, uranium 233, uranium enriched in uranium 235 or 233 or any product containing one or more of these isotopes;

Storage: Operation that allows the temporary storing of radioactive waste pending its final processing or storage;

Supervised area: Area in which occupational exposure conditions are monitored, even if no protective measures or security provisions are normally required;

Treatment of radioactive waste: Operation to change the characteristics of radioactive waste for safety purposes;

Uranium enriched in uranium 235 or 233: Uranium containing either uranium-235 or uranium-233, or both isotopes in an amount such that the ratio of the sum of the two isotopes to isotope 238 is greater than the ratio of isotope 235 to isotope 238 in natural uranium;

Waste parcel: Packaging product, including the form of the waste and the containers and internal barriers, prepared in accordance with the requirements for handling, transportation, storage or final disposal;

Waste producer: Operating organization, head of a facility or activity that produces waste;

Zone: facility or part of the facility where the radioactive or nuclear materials are used or stored;

III - PRINCIPLES AND PROHIBITIONS

<u>Section 5:</u> For the purpose of implementing this law, the State shall establish the following nuclear policy principles:

- 1- recognition that ionizing radiation applications can produce benefits in many areas, including health and medicine, energy production, scientific research, agriculture, industry and academic training;
- 2- affirmation of the need to protect persons, the society and the environment from the potentially harmful effects of ionizing radiation, including those that may



result from inappropriate use, accidents or malicious acts;

- 3- recognition of the urgent need to manage radioactive waste in order to protect current and future generations against excessive impacts;
- 4- recognition of the importance of establishing and maintaining a legal and regulatory framework for the implementation of relevant international instruments and commitments to which Cameroon is a party.

<u>Section 6</u>: The activities and practices referred to in Section 2 above giving rise to exposure to ionizing radiation may only be carried out in compliance with the following basic radiation protection principles:

- justification: no activity or practice involving exposure to ionizing radiation may be adopted unless it produces to the exposed individuals or to society enough benefit to offset any radiation detriment it may cause;
- optimization: any exposure to ionizing radiation from an activity or practice should be kept as low as reasonably achievable, taking into account existing socioeconomic factors;
- dose limit: exposure doses should not exceed the limits laid down by regulation.

<u>Section 7</u>: The following activities and practices shall be and remain prohibited in all circumstances:

- importation of radioactive waste;
- importation of nuclear weapons, devices for the dispersion of radioactive material and nuclear material, as well as their manufacture, possession or activation;
- addition of radioactive material in the manufacture of foodstuffs, cosmetics and household products;
- use of radioactive materials in the manufacture of toys;
- importation of used equipment emitting ionizing radiation.

CHAPTER II AUTHORIZATION

<u>Section 8</u>: Any person intending to engage in an activity or practice or build a facility referred to in Section 2 of this law shall notify in advance the authority in charge of regulation and regulatory control established by this law, of its intention to engage in such activity or practice or to build such facility.

<u>Section 9</u>: No person may undertake to carry out an activity or practice or the construction of a facility referred to in Section 2 of this law, unless it has obtained prior authorization from the authority in charge of regulation and regulatory control.



<u>Section 10</u>: (1) The authorization referred to in Section 9 above may take the form of registration, license or approval.

(2) Registration shall be issued for activities and practices with only low or moderate exposure risk under Classes III and IV facilities.

(3) License shall be issued for activities and practices with a high risk of exposure, under Classes I and II facilities.

(4) Approval shall be granted to natural persons with specific skills for the practice of a profession within the framework of an authorized activity or practice.

(5) The classification of facilities shall be laid down by regulation.

<u>Section 11</u>: The conditions of issuance, renewal, modification, suspension or cancellation of the authorization shall be laid down by regulation for each activity or practice.

<u>Section 12</u>: The technical obligations relating to the use of ionizing radiation sources shall be defined in accordance with the basic radiation protection principles referred to in Section 6 above, by the authority in charge of regulation and regulatory control.

Section 13: The authorization shall be strictly personal. It shall be non-transferable.

<u>Section 14</u>: Radioactive material may be released into the environment according to release criteria and procedures defined by the authority in charge of regulation and regulatory control.

CHAPTER III CONTROL OF IONIZING RADIATION SOURCES AND EXPORTS AND IMPORTS

I - CONTROL OF IONIZING RADIATION SOURCES

<u>Section 15</u>: The authorization holder shall have primary responsibility for the safety and security of the ionizing radiation sources in its keeping.

<u>Section 16</u>: The authorization holder shall keep an updated inventory of the ionizing radiation sources in its keeping. Such inventory shall be made available to the authority in charge of regulation and regulatory control.

<u>Section 17</u>: (1) Every authorization holder shall carry out regular inspection of its ionizing radiation sources and radiological monitoring of the work place and immediate environment.



(2) Conditions for controlling ionizing radiation sources and the working environment referred to in Section 17(1) above shall be laid down by regulation.

<u>Section 18:</u> (1) A national register of ionizing radiation sources shall be opened, kept and updated by the authority in charge of regulation and regulatory control.

(2) Categorization of ionizing radiation sources shall be fixed by regulation.

(3) The authority in charge of regulation and regulatory control shall take measures to protect the information contained in the register referred to in Section 18(1) above.

II - EXPORT AND IMPORT INSPECTION

<u>Section 19</u>: The exportation or importation of radioactive materials and nuclear materials and nuclear-related equipment and technology shall be subject to prior authorization by the authority in charge of regulation and regulatory control.

<u>Section 20:</u> (1) The authority in charge of regulation and regulatory control shall establish a list of radioactive materials and nuclear materials and nuclear-related equipment and technologies, subject to inspection during importation and exportation.

(2) The authority in charge of regulation and regulatory control shall keep a register of nuclear material and radioactive material exports and imports.

(3) The procedures for issuing authorizations for the exportation and importation of radioactive materials and nuclear materials and nuclear-related equipment and technology shall be laid down by regulation.

CHAPTER IV RADIOLOGICAL AND NUCLEAR SAFETY AND NUCLEAR SECURITY

I - COMMON PROVISIONS

<u>Section 21</u>: The State shall, either directly or through the authority in charge of regulation and regulatory control, promote the culture of radiological and nuclear safety and of nuclear security.

<u>Section 22</u>: The authority in charge of regulation and regulatory control shall provide authorization holders with individual dosimetry, environmental monitoring and radiation monitoring equipment calibration services.

<u>Section 23</u>: The authority in charge of regulation and regulatory control shall provide its staff with training to effectively fulfil law enforcement and emergency response functions.



<u>Section 24:</u> The authority in charge of regulation and regulatory control shall sensitize industrialists, health professionals, the public and government authorities on the dangers of orphan sources for radiological and nuclear safety and nuclear security.

<u>Section 25:</u> The Customs Administration and metal waste recycling bodies shall implement appropriate monitoring programmes to detect orphan sources.

II - RADIOLOGICAL AND NUCLEAR SAFETY

<u>Section 26:</u> (1) The authorization holder shall be responsible for the safety of its facilities and for the radiation protection of its workers and the public.

(2) It shall be required to set up a radiation protection programme and a quality assurance programme for its facilities or a management system, where applicable, as well as a radiological emergency plan approved by the authority in charge of regulation and regulatory control.

(3) The authorization holder shall be required to have appropriate radiological protection equipment and qualified personnel.

<u>Section 27:</u> (1) The authorization holder shall ensure compliance with the requirements and dose limits laid down by the regulations in force.

(2) It shall ensure that the exposure doses of workers and the public, as well as the environmental release doses are as low as reasonably achievable, taking into account socioeconomic factors.

<u>Section 28</u>: The authorization holder shall take all the necessary measures to protect the public by keeping the doses below the applicable threshold, and take reasonable measures to minimize the harmful effects of the doses on the health of the population immediately and for the future.

<u>Section 29:</u> The requirements for medical exposure and radiation protection for workers, patients, the public and the environment shall be laid down by regulation.

III - NUCLEAR SECURITY

<u>Section 30:-</u> The State shall guarantee nuclear security throughout the national territory.

In this regard, it shall:

- ensure the implementation and maintenance of a physical protection system for nuclear facilities and material and other radioactive material;



- put in place an inspection system for the facilities, activities and practices referred to in Section 2 of this law;
- ensure that responsibility for implementing the physical protection of radioactive material or facilities rests primarily with the authorization holders;
- oversee the preparation, testing and implementation of radiological and nuclear emergency plans;
- lay down requirements for the preservation of confidentiality of information, the unauthorized disclosure of which could compromise the physical protection of nuclear materials and facilities;
- establish or ensure the establishment of a nuclear security plan.

<u>Section 31</u>: The radiological nuclear security threat at the national level shall be defined by the authority in charge of regulation and regulatory control which, in conjunction with the relevant government services and the other competent entities, shall assess the vulnerability of the State to such threat for any authorized activity and practice concerning radioactive and nuclear material, related to risk of accident, potential loss of control, or malicious acts involving such activities, practices or materials.

<u>Section 32</u>: The authority in charge of regulation and regulatory control shall ensure fulfilment of the State's commitments under the provisions of the Convention on the Physical Protection of Nuclear Material and all amendments thereto.

<u>Section 33</u>: The authorization holder shall be required to ensure the physical protection of the radioactive and nuclear materials in its keeping, as well as its facilities in accordance with the applicable laws and regulations and the conditions of the authorization.

<u>Section 34:</u> The authority in charge of regulation and regulatory control shall, in conjunction with the security services, define the reference threat and develop a strategy to deal with such threat.

<u>Section 35:</u> Under the supervision of the authority in charge of regulation and regulatory control, the authorization holder shall put in place physical protection measures intended in particular to prevent the removal and subsequent unauthorized use of the radioactive and nuclear material, the sabotage of facilities hosting such material and attempts at perpetrating such acts.

<u>Suction 36</u>: The authorization holder and any other person shall be prohibited from disclosing confidential information on physical protection and nuclear security measures.

<u>Section 37:</u> (1) In the event of loss, theft or diversion of a radioactive source or nuclear material, the authorization holder shall trigger its internal emergency plan and,



forthwith, contact the authority in charge of regulation and regulatory control and the relevant security services.

(2) Any person who discovers a radioactive source or nuclear material shall be required to inform the authority in charge of regulation and regulatory control, the administrative authority or the relevant security service.

(3) The authority in charge of regulation and regulatory control shall provide technical and logistical support to investigations conducted by security services.

<u>Section 38:</u> The authority in charge of regulation and regulatory control shall conduct activities relating to the implementation of the national strategy for finding, recovery, control and management of orphan sources.

<u>Section 39</u>: Where the authority in charge of regulation and regulatory control locates, seizes or recovers radioactive or nuclear material that is not subject to regulatory control, it shall store them in a safe place with a view to their transfer, at the State's expense, to the body responsible for radioactive waste management.

IV - RADIOLOGICAL AND NUCLEAR EMERGENCY SITUATIONS

<u>Section 40:</u> (1) The authority in charge of regulation and regulatory control, in conjunction with the relevant government services and bodies, shall draw up and submit the national radiological and nuclear emergency plan for validation by the competent State authorities.

(2) The national radiological and nuclear emergency plan shall identify the entities responsible for its implementation, determine the responsibilities and actions that such entities must perform and take into account the nature and extent of potential damage to the population and the environment resulting from radiological emergencies.

(3) The national radiological and nuclear emergency plan shall be approved and rendered enforceable by decree of the President of the Republic.

<u>Section 41:</u> (1) When applying for authorization, the authorization holder shall draw up an internal radiological and nuclear emergency plan and submit same to the authority in charge of regulation and regulatory control for approval. Such plan shall take into account the nature and extent of potential damage to the population and the environment. It shall be updated as and when necessary, and at least once a year.

(2) The authorization holder shall designate the person competent in radiation protection who shall be responsible particularly for the implementation of the internal radiological and nuclear emergency plan and any other measure deemed necessary. It shall make available to the latter the wherewithal for the performance of his/her functions. Such wherewithal must be available at all times and subject to periodic



inspections by the inspectors of the authority in charge of regulation and regulatory control.

<u>Section 42:</u> The Ministry in charge of foreign affairs shall, in conjunction with the authority in charge of regulation and regulatory control, serve as contact point for providing any information or assistance relating to radiological emergencies in accordance with the Convention on Early Notification of a Nuclear Accident and assistance in the event of a nuclear accident or radiological emergency.

<u>Section 43:</u> In the event of an emergency involving a radioactive or nuclear material, the competent administrative authority may trigger the emergency plan under conditions laid down by regulation.

CHAPTER V RESEARCH, EXPLORATION, MINING AND PROCESSING OF RADIOACTIVE ORE

<u>Section 44:</u> (1) The search for, exploration or mining of uranium or thorium ore shall be subject to prior authorization by the authority in charge of regulation and regulatory control.

(2) The authorization referred to in Section 44(1) above shall be a condition for granting of the research, reconnaissance, exploration or mining permit.

(3) The terms and conditions for obtaining the authorization referred to in Section 44(1) above shall be laid down by decree of the President of the Republic.

<u>Section 45:</u> (1) The processing of uranium and thorium ores or any other ore likely to cause exposure to ionizing radiation, the closure and decommissioning of facilities, as well as the safe radiological restoration of sites relating thereto, shall be subject to prior authorization from the authority in charge of regulation and regulatory control.

(2) The terms and conditions for obtaining the authorization referred to in Section 45(1) above shall be laid down by decree of the President of the Republic.

<u>Section 46:</u> Holders of the authorizations provided for in Sections 44 and 45 above shall take out an insurance policy covering the radiological risk.

<u>Section 47</u>: Holders of the authorizations referred to in Sections 44 and 45 above shall be responsible for the radiation safety and nuclear security of their activities or practices.

<u>Section 48:</u> Holders of the processing authorizations referred to in Sections 44 and 45 above shall keep records, numbered and initialled by the Ministry in charge of mining and the authority in charge of regulation and regulatory control, containing quantities



of ores mined and processed and any other information relating thereto.

<u>Section 49</u>: Holders of the authorizations referred to in Sections 44 and 45 above shall take all necessary measures to protect workers, the public and the environment during the research and mining and after the closure of the mine, in accordance with the regulations in force.

<u>Section 50:</u> Holders of the authorizations referred to in Sections 44 and 45 above shall maintain their facilities in a safe state. They shall ensure that releases of radioactive contaminants are within regulatory limits and as low as reasonably achievable, taking into account socioeconomic factors.

<u>Section 51:</u> (1) Holders of the authorizations referred to in Sections 44 and 45 above shall put the mine area in a safe radiological state for present and future generations.

(2) The authority in charge of regulation and regulatory control shall certify the safe nature of the site referred to in Section 51(1) above in accordance with the relevant criteria established by regulation.

(3) The restoration procedures referred to in Section 51(1) above shall be carried out in accordance with the laws and regulations in force.

<u>Section 52:</u> When, after closure of the facility, an unforeseen release of radioactive material into the environment is detected, the national radiological and nuclear emergency plan shall be activated at the request of the authority in charge of regulation and regulatory control, in conjunction with security services.

CHAPTER VI TRANSPORTATION OF RADIOACTIVE MATERIALS

<u>Section 53:</u> (1) Without prejudice to the provisions of the existing legislation on transportation of dangerous goods, the transportation, transhipment or land transit of radioactive material shall be subject to prior authorization by the authority in charge of regulation and regulatory control.

(2) The dispatch and receipt of radioactive material shall also be subject to prior authorization by the authority in charge of regulation and regulatory control.

(3) The terms and conditions for issuing the authorizations referred to in Section 53(1) and (2) above shall be laid down by separate instruments.

<u>Section 54:</u> The holder of the prior authorization for transportation, transhipment or land transit shall be responsible for the radiological safety and security of radioactive material during transportation, transhipment or transit.



Section 55: (1) Radioactive material shall be transported in parcels bearing their own danger labels

(2) Vehicles, trailers and other equipment used for transporting radioactive material shall bear distinguishing marks and appropriate labels indicating the danger.

(3) The marks and labels referred to in Section 55(1) above shall be defined by regulation.

<u>Section 56:</u> (1) The packaging of parcels containing radioactive material must be adapted to their nature, to the dangers they may cause and the means used for loading, transporting and unloading them.

(2) Conditions for parcelling, loading and unloading radioactive materials shall be laid down by regulation.

<u>Section 57</u>: (1) All vehicles, trailers or other machines used for the transportation of radioactive materials must comply with the design and equipment technical requirements relating thereto.

(2) The technical requirements for the design and equipment of vehicles, trailers or other machines referred to in Section 57(1) above shall be laid down by separate instruments.

<u>Section 58</u>: Subject to the general provisions provided for in this law, safety and security rules for the transportation of radioactive materials shall be laid down by regulation, in accordance with international regulations.

<u>Section 59</u>: Any holder of an authorization for transportation, transhipment or transit of radioactive materials shall take out an insurance policy covering persons and property for liabilities arising from their risks.

CHAPTER VII MANAGEMENT OF RADIOACTIVE WASTES

<u>Section 60</u>: (1) Without prejudice to existing legislation on the management of dangerous wastes, radioactive waste management, notably as concerns handling, processing, transportation, warehousing, storage and elimination, shall be subject to prior authorization by the authority in charge of regulation and regulatory control.

(2) The authorization holder shall be responsible for the safety and security of the radioactive waste produced or in its keeping.

(3) Conditions for the management of radioactive waste shall be laid down by regulation.



<u>Section 61</u>: The safety and security rules applicable to the management of radioactive waste and orphan radioactive sources shall be laid down by regulation.

<u>Section 62</u>: Any natural or legal person that imports a high-activity radioactive source shall, prior to importation, show proof to the authority in charge of regulation and regulatory control that it has taken appropriate contractual and financial measures to ensure that such radioactive source is returned to the supplier after use.

<u>Section 63</u>: Importation of radioactive waste into the national territory shall be forbidden.

Section 64: Management of radioactive waste shall be governed by regulation.

<u>Section 65</u>: The following principles shall be applied by all natural, legal, public or private persons at all stages of radioactive waste management:

- 1- persons and the surrounding environment shall be conveniently protected against radioactive risks;
- 2- waste production shall be maintained at the lowest possible level;
- 3- excessive constraints for present and future generations shall be avoided;
- 4- protective measures shall be taken in accordance with the relevant international criteria and standards;
- 5- biological, chemical and other risks that may be associated with radioactive waste management shall be properly taken into account.

CHAPTER VIII ENFORCEMENT OF SAFEGUARDS

<u>Section 66</u>: (1) The State and authorization holders shall cooperate fully with the International Atomic Energy Agency (IAEA) for the enforcement of safeguards, notably by:

- promptly disclosing the information required under the Safeguards Agreement and the Additional Protocol;
- allowing the duly authorized representatives of the authority in charge of regulation and regulatory control as well as IAEA inspectors access to facilities and locations outside facilities (LOFs), as provided for under the Safeguards Agreement;
- cooperating with IAEA inspectors and assisting them in the performance of their tasks;
- providing the services requested by IAEA inspectors.



(2) The State shall undertake to issue the requisite permits, including multiple entry visas, to enable IAEA inspectors to perform their safeguard duties, in accordance with the Safeguards Agreement and any other related protocol.

<u>Section 67</u>: The authority in charge of regulation and regulatory control shall set up and implement a national nuclear materials accounting and control system comprising:

- a system for measuring nuclear material quantities;
- a system for assessing the accuracy and exactness of measurements;
- procedures for determining discrepancies between the quantities measured;
- procedures for drawing up a physical inventory and an inventory of losses;
- a system for assessing unmeasured stocks;
- a system of transcript reports to monitor stock trends and nuclear materials flows;
- procedures for the proper implementation of inventory methods and rules by authorization holders;
- procedures for preparing reports to be submitted to IAEA.

<u>Section 68</u>: Any natural or legal person wishing to carry out research and development on nuclear fuel cycle shall be bound to obtain prior authorization from the authority in charge of regulation and regulatory control.

<u>Section 69</u>: (1) The possession and use of nuclear material and technologies shall be subject to an authorization from the authority in charge of regulation and regulatory control.

(2) Any holder of the authorization referred to in Section 69(1) above shall:

- carry out the inventories prescribed by the authority in charge of regulation and regulatory control;
- submit periodic reports to the authority in charge of regulation and regulatory control;
- take measures concerning nuclear materials and implement programmes to control such measures as specified by the authority in charge of regulation and regulatory control;
- carry out periodic inventories of nuclear materials in line with the conditions and periodicity specified by the authority in charge of regulation and regulatory control;
- promptly report any loss of nuclear materials to the authority in charge of regulation and regulatory control or to the competent public authorities;



- provide the authority in charge of regulation and regulatory control descriptive information, including any subsequent amendments thereto, concerning any nuclear facility;
- apply physical protective and other safety measures for nuclear materials;
- prepare a report on planned future activities as specified by the authority in charge of regulation and regulatory control.

<u>Section 70</u>: Any natural or legal person in possession of nuclear materials or carrying out research and development activities relating to nuclear combustion cycle, as well as any competent State authority shall provide IAEA the necessary access and cooperation for carrying out the requisite inspections, in accordance with the Safeguards Agreement and the Additional Protocol.

CHAPTER IX

AUTHORITY IN CHARGE OF REGULATION AND REGULATORY CONTROL

<u>Section 71:</u> (1) The authority in charge of regulation and regulatory control shall ensure the protection of persons, property and the environment against the harmful effects of ionizing radiation.

(2) The authority in charge of regulation and regulatory control shall implement the national policy on radiological and nuclear safety, nuclear security and application of safeguards, in conjunction with the competent State services.

<u>Section 72</u>: In the performance of its duties, the authority in charge of regulation and regulatory control shall act independently vis-à-vis users and entities responsible for the use of ionizing radiation sources.

<u>Section 73</u>: The duties, organization and functioning of the authority in charge of regulation and regulatory control shall be laid down by decree of the President of the Republic.

CHAPTER X FINANCIAL PROVISIONS

<u>Section 74</u>: Any application for issuance of an authorization provided for in this law shall be subject to payment of fixed fees for granting or renewal of the said authorizations, the amounts of which shall be determined by regulation.

<u>Section 75</u>: (1) The duly authorized conduct of the activities or practices provided for in Section 2 of this law shall be subject to payment of fees, calculated on the basis of the annual turnover of the facilities of the authorization holder.

(2) The rate and conditions of payment, allocation and breakdown of the tax provided for in Section 75(1) above shall be determined by regulation.



<u>Section 76</u> (1) Regarding the categorization of sources provided for in Section 18 of this law, authorization holders shall be liable to a hazardous substance tax, as the case may be.

(2) The tax referred to in Section 76(1) above shall be deducted from the taxable profit, within a maximum limit equivalent to 5%.

(3) The rate and conditions of payment, allocation and breakdown of the fees provided for in Section 76(1) above shall be determined by regulation.

<u>Section 77:</u> (1) A radiation tax is hereby instituted for all import and export transactions.

(2) The rate, conditions of payment, allocation and breakdown of the tax provided for in Section 77(1) above shall be determined by regulation.

CHAPTER XI INSPECTIONS, RESPONSIBILITIES AND PENALTIES

I-INSPECTIONS

<u>Section 78:</u> (1) The activities or practices referred to in Section 2 of this law shall be subjected to scheduled or spot inspections by the authority in charge of regulation and regulatory control, in accordance with the regulations in force.

(2) The inspections referred to in Section 78(1) above shall be carried out by sworn inspectors of the authority in charge of regulation and regulatory control.

(3) In the performance of their duties, the sworn inspectors of the authority in charge of regulation and regulatory control shall have the status of special jurisdiction investigating officers.

(4) The powers of inspectors and inspection arrangements shall be defined by regulation.

<u>Section 79</u>: Inspectors may, if need be, request the assistance of law enforcement bodies to ensure the smooth performance of their duties.

<u>Section 80</u>: Inspectors shall benefit from the jurisdictional privilege provided for by Section 634(2) of the Penal Code for crimes and offences committed in the exercise of their duties.

<u>Section 81:</u> (1) Without prejudice to the prerogatives of the Public Prosecutor and of those of general jurisdiction investigating officers, the sworn inspectors of the authority in charge of regulation and regulatory control or of other relevant services, in particular those in charge of the environment, mining and health, shall be responsible for



reporting any breaches of the provisions of this law, gathering evidence thereof, tracking the defaulters and their accomplices and, where necessary, referring them to the Public Prosecution Department.

(2) Before assuming duty, the officials referred to in Section 81(1) above shall take the oath before the High Court of their area of appointment, at the request of the authority in charge of regulation and regulatory control, in accordance with the conditions laid down by an implementing decree of this law.

(3) The oath provided for in Section 81(2) above shall be formulated as follows: "I swear and promise to perform my duties as a radiation protection inspector correctly and loyally, and to fulfil in every circumstance the obligations such duties bestow on me".

(4) The oath-taking shall lead to issuance of a professional card stating the date of the oath. The professional card must be presented to the presumed perpetrator of the reported breach or offence.

(5) In the performance of their duties, sworn officials shall be bound to carry their professional card and, save in case of *flagrante delicto*, a duly signed mission warrant.

(6) The oath taken by a radiation protection inspector shall remain valid when he/she is transferred within the country.

<u>Section 82:</u> The authority in charge of regulation and regulatory control shall draw up an inspection schedule. The authority shall appoint inspectors.

<u>Section 83:</u> (1) Authorization holders shall allow inspectors free access to their facilities.

(2) Authorization holders may not deny inspectors access to their facilities, under pain of the penalties provided for in this law.

(3) The authority in charge of regulation and regulatory control shall keep and file reports on every inspection mission carried out or denied.

II - CIVIL LIABILITY

<u>Section 84</u>: The operator of a nuclear facility shall be solely liable for any nuclear damage suffered in any place wherever upon proof that such damage has been caused by a nuclear incident in that nuclear facility.

<u>Section 85</u>: Liability for any nuclear damage caused by nuclear material stolen, lost, jettisoned or abandoned shall lie with the last operator authorized to keep the material.

<u>Section 86:</u> Nuclear damage shall entail liability irrespective of the place where such damage is sustained.



<u>Section 87</u> During transportation of nuclear material, the consignor shall be liable for nuclear damage up to when the consignee takes possession of the material, save otherwise specified in a contractual clause between the two operators.

<u>Section 88</u>: The minimum amount of liability of the operator of a nuclear facility shall be fixed in accordance with the provisions of the Vienna Convention on Civil Liability for Nuclear Damage, the 1997 Vienna Convention on Supplementary Compensation for Nuclear Damage and the 2004 Paris Convention on Nuclear Third Party Liability for damage caused by a nuclear incident.

<u>Section 89</u>: (1) National courts shall have jurisdiction in the event of a nuclear incident in Cameroon, and having consequences even beyond the national territory, irrespective of the nationality of the perpetrators or victims.

(2) The law applicable in the case referred to in Section 89(1) above shall be the Cameroonian law and international conventions to which Cameroon is party.

<u>Section 90</u>: (1) The operator of a nuclear facility shall not be liable for nuclear damage where it is established that such damage was caused by a nuclear incident directly due to an act of armed conflict, hostilities, civil war or insurrection.

(2) Where the operator of a nuclear facility proves that the nuclear damage resulted wholly or partly either from gross negligence by the person suffering the damage or from an act or failure to act by such person with intent to cause damage, the operator may be relieved wholly or partly from the obligation to pay compensation in respect of the damage suffered by such person.

<u>Section 91</u>: (1) Depending on the magnitude of nuclear damage likely to be caused, the operator of a nuclear facility shall be required to take out an insurance or other financial security covering his/her liability for nuclear damage.

(2) The insurance policy must be produced whenever requested by the authority in charge of regulation and regulatory control.

(3) The State shall ensure payment of claims for compensation for nuclear damage which have been established against the operator.

<u>Section 92</u>: The right to compensation for nuclear damage shall be extinguished if an action is not brought:

- within 30 (thirty) years from the date of the nuclear incident, in case of death or personal injury;
- within 10 (ten) years from the date of the nuclear incident, for any other nuclear damage.



<u>Section 93:</u> (1) The civil liability of the holder of an authorization to carry out an activity or a practice involving an ionizing radiation source other than that of a nuclear material shall be governed by ordinary law.

(2) The holder of an authorization to carry out an activity or a practice involving a source of ionizing radiation other than that of a nuclear facility shall be civilly liable for financial damages pronounced against any person under its responsibility.

III – CRIMINAL LIABILITY

<u>Section 94</u>: The authorization holder may be criminally liable for offences committed in carrying out an activity or practice for which it was issued an authorization.

<u>Section 95</u>: The liability of the authorization holder shall not preclude the criminal liability of persons that commit or are accomplices of the offences referred to in Section 94 above.

<u>Section 96</u>: The authorization holder may be held jointly and severally liable to fines and costs, with persons that commit or are accomplices of offences committed in carrying out an activity or practice for which it was issued an authorization.

<u>Section 97</u>: The rules applicable in case of extradition shall be those provided for under the Criminal Procedure Code.

IV – ADMINISTRATIVE PENALTIES

<u>Section 98</u>: (1) Where it is established that the obligations under an authorization are not fulfilled, the authority in charge of regulation and regulatory control shall, without prejudice to criminal or civil penalties, issue a warning to the authorization holder inviting it to comply with such requirements within a period of no more than 30 (thirty) days.

(2) Where the authorization holder fails to comply upon the expiry of the deadline mentioned in Section 98(1) above, the authority in charge of regulation and regulatory control may:

- automatically and at the expense of the authorization holder, order the enforcement of prescribed measures;
- order the temporary suspension of the authorization until the relevant conditions are fulfilled.

<u>Section 99</u>: In case of high risk of exposure of persons or severe damage to property or the environment, the authority in charge of regulation and regulatory control may, forthwith:

- withdraw the authorization;
- order a change of work place;



- issue an order for ionizing radiation sources or any other radioactive material to be stored in compliance with safety and security conditions.

<u>Section 100</u>: (1) The authority in charge of regulation and regulatory control may, with the support of forces of law and order, seal any facility which continues to operate in violation of a decision to suspend or withdraw an authorization.

(2) Decisions of the authority in charge of regulation and regulatory control shall be subject to appeal in accordance with the instruments in force. However, such appeal shall not stay the administrative penalty taken against the authorization holder.

V – CRIMINAL PENALTIES

Section 101: (1) Whoever:

- (a) drives after consuming alcoholic beverages, tranquilizers or products that may affect their ability as a driver of a vehicle carrying nuclear or radioactive material;
- (b) smokes while transporting nuclear or radioactive material;
- (c) fails to place the distinctive marks and hazard labels indicative of the type of radioactive or nuclear material and the risks it poses to parcels, vehicles, trailers or other machines, as required by regulation;
- (d) packages, loads or unloads radioactive or nuclear material in violation of the regulations in force;
- (e) transports radioactive or nuclear material using a vehicle, trailer or any other machine that does not meet the requirements relating to their design and equipment;
- (f) transports radioactive or nuclear material without insurance cover for liability resulting from risks associated with the transport of such material;
- (g)moves about without a safety data sheet or with a safety data sheet that is not relevant for the type of radioactive or nuclear material transported and associated risks;
- (h) moves about without a routing plan or changes the routing plan without authorization,

shall be punished with imprisonment for from 6 (six) months to 2 (two) years or fine of from 300,000 (three hundred thousand) to 1,000,000 (one million) CFA francs, or both such imprisonment and fine.

(2) The penalties provided for in Section 101(1) above shall be doubled in case of recidivism.



Section 102: (1) Whoever:

- (a) fails to meet the obligation to draw up and update the inventory report referred to in Section 16 of this law;
- (b) obstructs the conduct of an inspection mission,

shall be punished with imprisonment for from 3 (three) to 12 (twelve) months or fine of from 250,000 (two hundred and fifty thousand) to 500,000 (five hundred thousand) CFA francs, or both such imprisonment and fine.

(2) The penalties provided for in Section 102(1) above shall be doubled in case of obstruction with violence or assault.

<u>Section 103</u>: Any authorization holder who fails to declare the loss, theft or diversion of a radioactive source or a nuclear material mentioned in Section 37 of this law shall be punished with imprisonment for from 6 (six) months to 2 (two) years or fine of from 500,000 (five hundred thousand) to 2,000,000 (two million) CFA francs or both such imprisonment and fine.

Section 104: Whoever:

- (a) is in breach of the regulatory provisions relating to the exposure dose limits for workers and members of the public, as well as environmental release doses;
- (b) discloses confidential information on physical protection and nuclear safety measures,

shall be punished with imprisonment for from 5 (five) to 10 (ten) years or fine of from 1,000,000 (one million) to 10,000000 (ten million) CFA francs.

Section 105: (1) Whoever:

- (a) continues to carry out an activity or a practice in breach of a decision to suspend or withdraw an authorization;
- (b) engages in any of the activities or practices mentioned in Section 2 of this law without authorization,

shall be punished with imprisonment for from 5 (five) to 10 (ten) years or fine of from 2,000,000 (two million) to 20,000,000 (twenty million) CFA francs.

(2) Whoever, through carelessness, clumsiness, negligence or non-observance of the rules and conditions of the authorization, causes exposure to ionizing radiation or a radiological accident, shall be punished with the penalties provided for in Section 105(1) above.



<u>Section 106</u>: Whoever imports, manufactures, possesses or activates nuclear weapons and radiological dispersion devices shall be punished with imprisonment for from 10 (ten) to 30 (thirty) years or a fine of from 20,000,000 (twenty million) to 100,000,000 (one hundred million) CFA francs.

Section 107: (1) Whoever:

- (a) adds radioactive and nuclear material in the manufacture of food products, cosmetic products and household products;
- (b) uses radioactive and nuclear material in the manufacture of toys;
- (c) imports used appliances that emit ionizing radiation;
- (d) introduces radioactive waste into the territory of Cameroon,

shall be punished with imprisonment for from 6 (six) to 20 (twenty) years or a fine of from 50,000,000 (fifty million) to 500,000,000 (five hundred million) CFA francs.

(2) In case of recidivism, the punishment shall be life imprisonment.

Section 108: (1) Whoever:

- (a) keeps, uses, transfers, cedes, alters or alienates or disperses nuclear material without the required authorization;
- (b) steals or conceals nuclear material or radioactive emissions;
- (c) uses nuclear material and radioactive emissions for purposes other than those for which it was granted authorization;
- (d) demands nuclear material by way of intimidation, including by use of force;
- (e) threatens to use nuclear material:
 - i. with intent to cause death or serious injury to another or substantial damage to property and the environment,
 - ii. with intent to force a natural or legal person, an international organization or a State to do or refrain from doing something;
- (f) uses radioactive sources or nuclear material for criminal or terrorist purposes,

shall be punished with imprisonment for from 10 (ten) to 20 (twenty) years and a fine of from 20,000,000 (twenty million) to 500,000,000 (five hundred million) CFA francs.



(2) Where the acts provided for in Section 108(1)(a) and (e)(ii) lead to death of another, the punishment shall be life imprisonment.

(3) In case of recidivism, the punishment shall be death.

<u>Section 109</u>: Any holder of a mining permit or the authorization referred to in Section 44 of this law who:

- by failing to keep his facility safe and stable, causes serious injury to another, even unintended;
- releases radioactive contaminants into the natural receiving environment in violation of the limits prescribed by applicable regulations,

shall be punished with imprisonment for from 10 (ten) to 20 (twenty) years and a fine of from 20,000,000 (twenty million) to 500,000,000 (five hundred million) CFA francs.

<u>Section 110</u>: Any holder of a mining permit or the authorization referred to in Section 44 of this law who, by failing to keep his facility safe and stable, causes the death of another, even unintended, shall be punished with life imprisonment.

<u>Section 111</u>: Whoever wholly or partly destroys a radioactive source or a facility or impedes the functioning thereof with intent to sabotage shall be punished with life imprisonment.

<u>Section 112</u>: The provisions of Section 54 of the Penal Code relating to suspended sentence shall not be applicable to the criminal penalties provided for in this law.

<u>Section 113</u>. The court to which a matter relating to the offences provided for in this law is referred may order the facility concerned to be closed and sealed, and the equipment seized.

<u>Section 114</u>: Anyone who becomes aware of an offence referred to in this law and the enabling instruments thereof must report such offence directly and forthwith to the competent authorities.

CHAPTER XII MISCELLANEOUS, TRANSITIONAL AND FINAL PROVISIONS

<u>Section 115</u> Natural or legal persons engaged in an activity or a practice provided for under this law must comply with the provisions thereof within 12 (twelve) months of its publication.

<u>Section 116</u>: The terms and conditions for the application of this law shall, as and when necessary, be laid down by separate instruments.

SECTION 117: All previous provisions repugnant to this law, in particular Law No. 95/8 of 30 January 1995 on radioprotection, are hereby repealed.

SECTION 118: This law shall be registered, published according to the procedure of urgency, and inserted in the Official Gazette in English and French./-

YAOUNDE, 19 JUIL 2019 QUE DU RAVAI PAUL BIYA PRESIDENT OF THE REPUBLIC

