



Action Plan for the Implementation of the IRRS and ARTEMIS Recommendations and Suggestions

Adopted: Luxembourg 21 June 2019

General Comments

The present document constitutes the action plan established by the National Health Directorate (DiSa), Department of Radiation Protection (DRP) following the IRRS and ARTEMIS missions received by Luxembourg in 2018, in June and September respectively.

Between the conduct of the missions and the adoption of the present action plan, work has been done to finalize the new legal framework on radiation protection. A new law on radiation protection has been voted by the parliament on 25 March 2019. The DRP has used the opportunity to address manifold recommendations in the process of the new legal framework. For that reason, the below table refers to the new legal framework and considers those recommendations as closed, on the basis that the new legal framework will enter into force shortly after the adoption of the present action plan.

Action Plan

R/S	Recommendation / Suggestion	Action	Schedule for implementation
IRRS – Responsibilities and Functions of the Government			
R1	The Government should establish a comprehensive national policy and strategy for safety.	Preparation of a draft national policy and strategy for safety by the DRP and submission to the Minister of Health for consideration.	2020
R2	The Government should make provisions to give the DRP the authority to issue binding technical requirements as well as guidance for implementation of regulations.	1. Article 137§1f of the radiation protection law voted on 25 march 2019 strengthens the role of the DRP. 2. In the context of the implementation of the radiation protection law, the DRP will define standard licensing conditions that contain the technical requirements and consider publication.	2021
R3	The Minister of Health should establish a mechanism to ensure the effective independence of the DRP.	The DRP will ask for a delegation of signature concerning all decisions to be taken in the frame of the radiation protection law.	2020
R4	The Government should establish the regulatory body within the legal framework and define its functions and responsibilities	The DRP will prepare a proposal to amend the law on the directorate of health and submit it to the Minister of Health for consideration.	2020
R5	Recommendation: The Government should establish provisions on the licensee's responsibility: (a) to verify that products and services provided by suppliers meet expectations for safety; (b) to actively evaluate progress in science and technology as well feedback of experience, in order to identify and to make safety improvements that are considered practicable.	1. Article 45§1a of the radiation protection law provides for the definition of responsibilities through licensing conditions. 2. Article 53 of the radiation protection law imposes a reception test for all new equipment. 3. Article 61§2d of the radiation protection law attributes the responsibility for optimization on the licensee; Article 141§4 introduces the provisions with regard to safety improvements concerning waste management facilities.	done
S1	The DRP should consider formalizing coordination with other authorities having responsibility for safety so as to improve cooperation and liaison.	Review relations with other authorities on aspects such as industrial safety, transport, EPR, fire protection and consider to formalize the coordination.	2022
R6	The Government should make provision for building and maintaining the competence and for the recognition of qualification of all parties having responsibilities in relation to the safety of facilities and activities.	Articles 16-27 and article 29 of the radiation protection law contain the specific requirements for the necessary level of competence and training for professionals having responsibility for safety, including their recognition.	done
IRRS – Responsibilities and Functions of the Regulatory Body			
R7	The DRP should develop a human resources plan that establishes the number of necessary staff and the essential knowledge, skills and abilities.	Preparation human resources plan by the DRP and submission to the Director of Health for consideration.	2022
R8	The DRP should formalize its interaction with authorized parties in carrying out its regulatory functions and responsibilities.	The introduction of an radiation protection expert by the radiation protection law ensures that the DRP no longer needs to advice licensees.	done

S2	The DRP should consider making regulatory documents (e.g. authorizations, inspection reports) and their respective bases for decision publicly available.	Taking into account article 144 of the radiation protection law, the DRP will stepwise enhance publication of regulatory documents.	2019-2023
IRRS – Management System of the Regulatory Body			
R9	The DiSa should develop a policy document with the mission, vision, behavioral expectations, individual and institutional values	Preparation of a policy document by the DRP and submission to the Director of Health for consideration.	2020
R10	The DiSa and the DRP should establish, implement, assess and continuously improve a documented integrated management system to ensure safety, using graded approach, in line with IAEA safety standards.	1. Preparation of additional elements by the DRP to be added at the next revision of the strategic plan. 2. Regular meetings between the DiSa management and the head of DRP to review the goals and to evaluate the achievements.	2019-2023
IRRS – Authorization			
R11	The Government should make provisions to enable the license conditions to be changed during their validity period, if needed.	The radiation protection law provides provisions on maximum licensing periods (Art. 44§6), on automatic license revocation (Art 45§3), on license modifications (Art 46) and on suspension and revocation, fully or partially (Art. 148).	done
S3	The Minister of Health, the Director of Health and DRP should consider making available in advance the generic license conditions to the interested parties and providing to the applicant in a timely manner the justification for their regulatory decisions.	See under R2	
IRRS – Inspection			
R12	The DRP should implement an inspection programme covering all facilities and activities and all topical areas (such as EPR), including medical facilities and activities and foreign companies which have been authorized to perform in the country, taking into account the graded approach.	In the context of the implementation of the radiation protection law, the DRP update the inspection programme.	2021
R13	The Government should make provisions for the DRP to assign the duties of the inspectors and to have the authority for unconditional access to the facilities and to their safety related information in order to perform regulatory inspections.	The necessary provisions are included in article 147 of the radiation protection law.	done
IRRS – Enforcement			
R14	The Government should establish an enforcement policy and strategy in accordance with a graded approach and make the necessary provisions for DRP to implement it.	The necessary provisions are included in articles 147 and 148 of the radiation protection law.	done
IRRS – Regulations and Guides			
R15	The Government should establish legal provisions for justification and	The necessary provisions are included in articles 33 and 37 of the radiation protection law.	done

	communicate them to the interested parties.		
R16	The DRP should issue additional guidance to assist both its staff and the authorized parties for the implementation of the regulations.	The DRP has foreseen to issue additional guides in the context of the implementation of the radiation protection law.	2019-2023
R17	The DRP should establish the process for the review and revision of regulatory documents	Establishment of a process to periodically review the main documents	2023
R18	The Government should make provisions within the regulations for the safe and secure storage of radioactive sources in line with the requirements of the Code of Conduct on the safety and security of radioactive sources.	The necessary provisions are included in article 53§4 and articles 130 and 132 of the radiation protection law.	done
IRRS – Emergency Preparedness and Response			
S4	The Government should consider making provisions within the regulations for requiring, within the authorisation process, facilities on-site emergency preparedness and response arrangements for all class II facilities.	The necessary provisions have been integrated into the radiation protection regulation (Art. 19).	done
R19	The DRP should review on-site emergency preparedness and response arrangements prior to the start of operation of the facility or activity, that could necessitate emergency response actions.	The necessary provisions have been integrated into the radiation protection regulation (Art. 19).	done
S5	The Government should consider formalising the exercise program to ensure that all organizations and functions of a nuclear emergency response are tested at suitable intervals, including the officials who are responsible for making decisions on protective actions, and analysed to identify lessons learnt.	Preparation of a draft exercise program by the DRP and submission the other concerned authorities for consideration.	2019
IRRS – Additional Areas			
R20	The Government should make provisions in the legal framework for the clear allocation of responsibilities in medical exposure between the authorized party (head of the establishment) and the medical practitioners.	Art 61 of the radiation protection law defines the responsibilities of the establishment, while article 87 attributes the responsibility for the medical exposure to the medical practitioner.	done
R21	The DRP should make provisions to ensure that: (a) the calibration of dosimeters used for patient dosimetry or for calibration of sources is traceable to a SDL; (b) the calibration of radiotherapy units is subject to an independent verification prior to first use.	Concerning a) the necessary provisions have been integrated into the radiation protection law (Art. 4§5 and Art. 18§2) and its regulation (Art. 17 and Art. 30 and Art. 41) Concerning b) the appropriate provisions are drafted for their be inclusion into the license conditions of the radiotherapy centre.	done
R22	The Government and the DRP should revise the current legal and	The necessary provisions have been integrated into the radiation protection law	done

	regulatory framework to bring it in line with the requirements of IAEA GSR Part 3 for strengthening the medical exposure control and should ensure their full implementation.		
S6	The DRP should consider specifying criteria when and how the investigation should be conducted regarding unintended medical exposure.	The DRP has foreseen to issue additional guides in the context of the implementation of the radiation protection law.	2020-2021
R23	The Government and the DRP should revise the current legal and regulatory framework to bring it in line with the requirements of GSR Part 3 for strengthening the occupational exposure and should ensure their full implementation.	The necessary provisions have been integrated into the radiation protection law	done
S7	The DRP should consider establishing an appropriate calibration frequency for workplace monitoring equipment.	The DRP will more focus on the validity of calibration certificates during its inspections and draw conclusions about the necessity for additional requirements.	2019-2022
R24	The DRP should make provisions to ensure that nuclear security measures do not compromise safety and safety measures do not compromise nuclear security.	The DRP will review the corresponding license conditions.	2020
ARTEMIS			
R1	The Ministry of Health should enhance the regulatory framework for the safe predisposal management of radioactive waste, the decommissioning of facilities and remediation activities in accordance with relevant IAEA safety standards.	The DRP will review the corresponding license conditions.	2020-2021
R2	The Ministry of Health should establish a mechanism to ensure the effective independence of DRP as a regulatory authority from the operational radioactive waste management facility and activities.	The DRP will analyse possible mechanisms to be proposed to the Minister of Health for consideration	2019-2020
R3	DRP should strengthen provisions for the authorization of all the radioactive waste management activities that are performed in the country, including those that are implemented by qualified foreign companies.	The radiation protection law introduced the obligation for regulatory control other those who have a responsibility with regard to a practice. This includes the case mentioned by the recommendation.	done
S3	DRP should consider further developing the safety provisions and procedures for establishing the safety case and safety assessment for facilities and activities in the predisposal management of radioactive waste.	The DRP will prepare a guidance document	2023
R4	The Government should establish and regularly update the national policy and strategy considering	Preparation by the DRP of an national strategy concerning waste management in an existing exposure situation following a radiological incident.	2022

	provisions for the management of radioactive waste generated by potential emergency situations or other new identified waste streams.		
S2	DRP should consider the need of increasing the number of staff devoted to fulfil the provided recommendations and suggestions including the radioactive waste management programme.	The DRP will request more staff.	2019