

Convention on Nuclear Safety Joint 8th and 9th Review Meeting – 2023



International Atomic Energy Agency IAEA, Vienna

Country Review Report for Luxembourg

Drafted by Country Group N° 3

Country 7

Rapporteur: Mr. Martin Hitchon

Version: Draft 3 (final)

DISCLAIMER: pursuant to INFCIRC/571/Rev.7, Para. 16-19 and Annex IV, Contracting Parties were invited to comment on the implementation of the CNS reporting guidance. Contracting Parties were also encouraged to submit proposed Good Practices, Challenges, and Suggestions prior to the Review Meeting. The draft Country Review Report documents the preliminary observations identified by the Contracting Parties. The Country Review Report is the result of the CNS Review Process and was agreed by consensus by the Country Group.

Glossary

The Glossary provides here the definitions of “Challenges”, “Suggestion” and “Good Practice” according to Annex IV of INFCIRC/571/Rev.7. The definition of “Area of Good Performance” was agreed upon by the Officers during the CNS Officers’ Meeting on 24-25 September 2019 and confirmed by the Officers at the CNS Officers’ Meeting on 18-19 July 2022.

A **Challenge** is “a difficult issue for the Contracting Party and may be a demanding undertaking (beyond the day-to-day activities); or a weakness that needs to be remediated.”

A **Suggestion** is “an area for improvement. It is an action needed to improve the implementation of the obligations of the CNS.”

A **Good Practice** is “a new or revised practice, policy or programme that makes a significant contribution to nuclear safety. A Good Practice is one that has been tried and proven by at least one Contracting Party but has not been widely implemented by other Contracting Parties; and is applicable to other Contracting Parties with similar programmes.”

An **Area of Good Performance** is “a practice, policy or programme that is worthwhile to commend and has been undertaken and implemented effectively. An Area of Good Performance is a significant accomplishment for the particular CP although it may have been implemented by other CPs.”

Executive Summary

Luxembourg has no nuclear power reactor units and currently has no plans to become a nuclear energy country.

3 out of 3 Challenges from the 7th CNS Review Meeting have been closed

The Country Group highlights the following measures to improve safety in Luxembourg's national nuclear programme: Luxembourg has no nuclear power reactor unit; therefore, this section is not applicable.

The Country Group highlights the following results of international peer review missions of Luxembourg:

- Luxembourg hosted an IRRS mission in June 2018, which resulted in 24 recommendations, 7 suggestions and 3 good practices. The action plan for implementation of the IRRS recommendations and suggestions has been published on the DRP website.
- Luxembourg hosted an ARTEMIS mission in 2018. The action plan for implementation of the ARTEMIS recommendations and suggestions has been published on the DRP website.

The Country Group identified the following Challenges for Luxembourg:

- Challenge 1: Implement the IRRS action plan
- Challenge 2: Reorganize the radiological evaluation centre, who perform nuclear and radiological assessment for nuclear emergencies. As well as updating its missions, procedures and tools and ensuring regular training and drills.
- Challenge 3: Update procedures for information exchange for cross-border cooperation on emergency response in line with HERCA-WENRA Approach
- Challenge 4: Develop a strategy for the management of a post-accident situation

In addition, the Country Group identified [0] Suggestions, [1] Area of Good Performance and [0] Good Practices.

The Country Group concluded that Luxembourg:

- Submitted National Reports for the 8th CNS Review Meeting and for the Joint 8th and 9th CNS Review Meeting, and therefore complies with Article 5.
- Attended the Joint 8th and 9th CNS Review Meeting, and therefore complies with Article 24.1.
- Held a national presentation and answered questions during the Joint 8th and 9th CNS Review Meeting, and therefore complies with Article 20.3.

1. Basic Information on Luxembourg's Nuclear Programme

Luxembourg has no nuclear power reactor units and currently has no plans to become a nuclear energy country.

2. Follow-Up from Previous CNS Review Meeting

2.1 Challenges

Luxembourg provided the following updates on Challenges identified during the 7th CNS Review Meeting:

Challenge 1: Finalizing the update of the legal framework in connection with EU Directives and replacing the Act from 1963.

Luxembourg addressed this Challenge by updating its legal framework with regard to radiation protection, nuclear safety and radioactive waste management. The new law entered into force in 2019. It is the result of the transposition of the EU-BSS directive. It repeals and replaces the former legal framework on those matters, namely the Act from 1963.

Follow Up Status: Closed

Challenge 2: Preparation for the first IRRS mission in June 2018.

Luxembourg addressed this Challenge by hosting their first IRRS mission in June 2018, which resulted in 24 recommendations, 7 suggestions and 3 good practices. The action plan for implementation of the IRRS recommendations and suggestions has been published on the DRP website.

Follow Up Status: Closed

Challenge 3: Further development of arrangements for emergency (implementation of GSR part 7 and HWA) and post-accident situations.

Luxembourg addressed this Challenge by performing a self-assessment on its emergency preparedness and response arrangements with regard to nuclear and radiological emergencies and to shared information on the results through the EPRIMS database. However, no notable progress has been made on post-accident situations, which remains a challenging subject.

Follow Up Status: Closed (three new challenges defined for this area)

2.2 Suggestions

No suggestions were made for Luxembourg, therefore this section does not apply.

3. Measures to Improve Safety

3.1 Changes to the Regulatory Framework and the National Nuclear Programme

Since the last Review Meeting, the Country Group took note of the following changes to the regulatory framework and the national nuclear programme

- Luxembourg updated its legal framework with regard to radiation protection, nuclear safety and radioactive waste management. The new law entered into force on August 1, 2019. It is a transposition of the EU-BSS Directive and repeals and replaces the Act from 1963. Within this law, Article 148 introduces administrative measures that entitle the Minister of Health to suspend or revoke, partially or completely, the license. Article 149 defines the penal sanctions. Article 147 contains the legal basis for inspections and inspector powers (from 8th RM CRR).
- In the process of the establishment of the new legal framework, the main regulatory acts have been repealed and replaced by a single regulatory act on radiation protection that entered into force in August 2019 (from 8th RM CRR).
- An inspection program including guidelines supporting the inspection process has been put into place. The program defines the different inspection types and was based on IAEA TECDOC-1526 in order to ensure compliance with international standards (from 8th RM CRR).
- Luxembourg has also reviewed its nuclear emergency plan, taking into account GSR part 7. The new version was adopted on May 15, 2019 (from 8th RM CRR).

3.2 Safety Improvements for Existing Nuclear Power Plants

Luxembourg has no nuclear power reactor unit; therefore, this section is not applicable.

3.3 Response to International Peer Review Missions

The Country Group took note of the following implemented or planned measures in response to the results of international peer review missions:

- Luxembourg hosted an IRRS mission in June 2018, which resulted in 24 recommendations, 7 suggestions and 3 good practices. The action plan for implementation of the IRRS recommendations and suggestions has been published on the DRP website.
- Luxembourg hosted an ARTEMIS mission in 2018. The action plan for implementation of the ARTEMIS recommendations and suggestions has been published on the DRP website.

4. Implementation of the Vienna Declaration on Nuclear Safety (VDNS)

Luxembourg has no nuclear installations and no plan for their construction therefore it did not provide information on the implementation of the VDNS.

5. Results of the Review

5.1 General Quality of the National Report

Contracting Parties and officers were invited to provide general comments on Luxembourg's implementation of the obligations of the CNS (e.g., report submitted on time), addressed all articles, addressed the Vienna Declaration on Nuclear Safety, and addressed all Challenges, the general quality of its National Report, transparency issues, and the compliance with the CNS guidance documents and Major Common Issues identified in the previous CNS Review Meeting.

With regards to the general quality of the National Report and transparency issues, the members of the Country Group made the following observations:

- The Report is qualified to be comprehensive and reader friendly.

With regards to the compliance with the requirements of the CNS and its Guidelines, the members of the Country Group made the following observations:

- The Report for the 8th CNS Review Meeting was submitted before the deadline of 15 August 2019.
- The Report for the Joint 8th and 9th CNS Review Meeting was submitted before the deadline of 5 August 2022.
- The content and structure of Luxembourg's National Report for the Joint 8th and 9th CNS Review Meeting complies with the CNS guidance.
- The directions of the Summary Report of 7th CNS Review Meeting were taken into consideration in the Report for the Joint 8th and 9th CNS Review Meeting.

5.2 Participation in the Review Process

With regards to Luxembourg's participation in the review process, the members of the Country Group made the following observations.

In the 8th CNS Review Cycle, Luxembourg

- posted questions to Contracting Parties.
- delivered answers to the questions of Contracting Parties on time.

In the 9th CNS Review Cycle, Luxembourg

- posted questions to Contracting Parties.
- delivered answers to the questions of Contracting Parties on time.
- delivered its national presentation during the Joint 8th and 9th Review Meeting.

5.3 Challenges

The Country Group identified the following Challenge(s) for Luxembourg:

- Challenge 1: Implement the IRRS action plan
- Challenge 2: Reorganize the radiological evaluation centre, who perform nuclear and radiological assessment for nuclear emergencies. As well as updating its missions, procedures and tools and ensuring regular training and drills.
- Challenge 3: Update procedures for information exchange for cross-border cooperation on emergency response in line with HERCA-WENRA Approach
- Challenge 4: Develop a strategy for the management of a post-accident situation

5.4 Suggestions

The Country Group identified the following Suggestion(s) for Luxembourg:

- No suggestions were identified for Luxembourg

5.5 Good Practices and Area of Good Performance

During the peer review of Luxembourg's National Report, the Contracting Parties were invited to recommend Good Practices and to highlight Area of Good Performance.

The Country Group identified the following Good Practices:

- No good practices were identified for Luxembourg

The following Area of Good Performance of Luxembourg's were commended by the Country Group:

- Area of Good Performance 1: Taking an active and constructive role in the issuance of HERCA-WENRA approach for a better coordination of protective actions during a nuclear emergency

5.6 Response to COVID-19 Situation

The Country Group took note of the following information related to the COVID-19 pandemic:

Luxembourg reported that the licensees took the following actions [or implemented the following safety measures] to address difficulties [or impacts] from the pandemic:

- No information provided about licensee actions.

Luxembourg reported that the regulator took the following actions [or implemented the following safety measures] to address difficulties [or impacts] from the pandemic:

- Regulatory activities concerning non-nuclear facilities were maintained during the pandemic.
- Non-essential inspections were postponed and the regulatory body worked with reduced staff.
- Radiation monitoring of air, water and soil was maintained.
- Laboratory staff alternated between remote work and in-office work.

Luxembourg identified the following lessons learned [or areas for improvement] [or enhancements]:

- No official lessons learned assessment has been completed, however the decision-making process established during the pandemic is relevant for a transition and post-accident phase.
 - The decision-making was accelerated without compromising normal legal procedures
 - Fast activation of additional resources (human and financial)

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6 Fulfilment of CNS Review Requirements

The Country Group concluded that: Luxembourg

- Submitted National Reports for the 8th CNS Review Meeting and for the Joint 8th and 9th CNS Review Meeting, and therefore complies with Article 5 and in time, following Rule 39 of INFCIRC/573/Rev.6.
- Attended the Joint 8th and 9th CNS Review Meeting, and therefore complies with Article 24.1
- Held a national presentation and answered questions, and therefore complies with Article 20.3