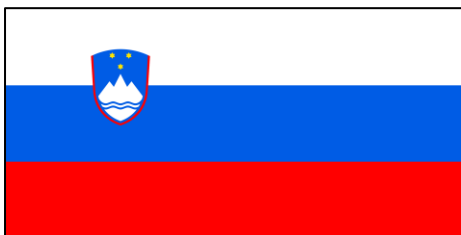




Emergency
Preparedness
Review

EPREV

**FOLLOW-UP TO THE
PEER APPRAISAL OF THE ARRANGEMENTS IN
SLOVENIA REGARDING PREPAREDNESS AND
RESPONSE FOR A NUCLEAR OR
RADIOLOGICAL EMERGENCY**



2022-10-03 – 2022-10-07

International Atomic Energy Agency

FOREWORD

Within the United Nations system, the International Atomic Energy Agency (IAEA) has the statutory functions of establishing standards of safety for the protection of health against exposure to ionizing radiation and of providing for the application of these standards. In addition, under the Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency (Assistance Convention), the IAEA has a function, if requested, to assist Member States in preparing emergency arrangements for responding to nuclear accidents and radiological emergencies.

In response to a request from the Government of Slovenia, the IAEA fielded an Emergency Preparedness Review (EPREV) mission in 2017 to conduct, in accordance with Article III of the IAEA Statute, a peer review of Slovenia's radiation emergency preparedness and response arrangements vis-à-vis the relevant IAEA standards. Subsequently, Slovenia requested a follow-up mission to review the implementation of actions related to the findings of the 2017 EPREV mission. This report summarizes the activities of the EPREV follow-up mission conducted in October 2022.

The number of recommendations, suggestions and good practices is in no way a measure of the status of the emergency preparedness and response system. Comparisons of such numbers between EPREV reports from different countries should not be attempted.

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Executive Summary

At the request of the Government of Slovenia, an international team of experts conducted an EPREV follow-up mission from 3 to 7 October 2022. The purpose of the EPREV follow-up mission was to review the actions undertaken to address the recommendations and suggestions made during the EPREV mission fielded to Slovenia in 2017. The review compared Slovenia's emergency arrangements related to the findings of the 2017 EPREV mission against the IAEA safety standards for preparedness and response for a nuclear or radiological emergency. Although the follow-up mission was not a comprehensive review of emergency arrangements in the country, this report also identifies new findings from interviews and documentation provided to review the actions taken to address the recommendations and suggestions that resulted from the 2017 EPREV mission.

The mission focused on preparedness for nuclear and radiological emergencies as defined in IAEA Safety Standards Series No. GSR Part 7, Preparedness and Response for a Nuclear or Radiological Emergency [1].

The EPREV follow-up mission team consisted of international emergency preparedness and response (EPR) experts from five IAEA Member States as well as a team coordinator from the IAEA Secretariat. The EPREV follow-up mission consisted of a review of reference materials provided by Slovenia, site visits and interviews. During the follow-up mission, the EPREV team primarily interacted with government officials and representatives of response organizations at all levels.

The review team observed an overarching commitment to emergency preparedness and noted that Slovenia has made significant progress in developing and revising emergency arrangements since the 2017 EPREV mission.

The EPREV team highlighted the following accomplishments that have resulted from the process of addressing the recommendations and suggestions of the 2017 EPREV mission:

- The draft National Nuclear and Radiological Emergency Protection and Rescue Plan (hereinafter referred to as the "National Plan") was prepared and updated in a coordinated manner with the participation of all relevant stakeholders. The draft of the National Plan is currently undergoing public review before final approval is given.
- The Protection Strategy was developed as a standalone document and approved at the national level. It is closely based on IAEA safety standards and guidance. It specifies the elements of the Radiation Monitoring Strategy to support decision making on protective actions and other response actions.
- The exercise and training programmes were further developed and conducted including, notably, the conduct of an international exercise on the interface between nuclear safety and security in response to an emergency triggered by a cyber security event.

The team also noted some areas that could benefit from further improvements. In particular:

- Slovenia included criteria for the termination of an emergency in version four of the new draft National Plan, but other arrangements for the smooth transition from an emergency exposure situation to an existing or planned exposure situation and the termination of an emergency have yet to be addressed;
- Emergency plans of response organizations at all levels should be aligned with the revised National Plan once it is approved;

- It should be ensured that integration of all the aspects of the response to a nuclear emergency at the nuclear power plant (NPP) triggered by a nuclear security event is addressed in the National Plan;
- The quality management programme should be implemented by all emergency response organizations in line with clear guidance and procedures;

The EPREV follow-up mission included an exchange of experiences about the effects of pandemic situations on EPR and how different organizations adjusted to the Covid-19 pandemic.

This report serves as the final record of the EPREV follow-up mission. The IAEA will continue to work with Slovenia to enhance its national EPR arrangements as appropriate.

1. INTRODUCTION

1.1. Objective and Scope

The purpose of this EPREV follow-up mission was to conduct a review of the actions taken to address the findings of the 2017 EPREV mission. The follow-up mission did not conduct a comprehensive review of Slovenia's nuclear and radiological emergency preparedness and response arrangements.

The EPREV follow-up mission focused on the arrangements for nuclear or radiological emergencies as defined in IAEA Safety Standards Series No. GSR Part 7, Preparedness and Response for a Nuclear or Radiological Emergency (hereafter: GSR Part 7) [1], which is consistent with the scope of the 2017 EPREV mission. The review was carried out by comparing the revised emergency arrangements in the country against the IAEA safety standards for emergency preparedness and response.

The EPREV follow-up mission is expected to facilitate improvements to Slovenia's emergency preparedness and response arrangements, and those of other Member States, through the knowledge gained, and experiences shared, between Slovenia and the EPREV team and through the evaluation of the effectiveness of Slovenia's arrangements, capabilities and good practices.

1.2. Preparatory Work and Review Team

At the request of the Government of Slovenia, the IAEA conducted an EPREV mission to Slovenia from 5 to 16 November 2017. Following the mission, Slovenia undertook the development and implementation of an Action Plan to revise and update emergency arrangements in line with the findings of the review team and to ensure that good practices were captured for sustainability.

Following the implementation of the national Action Plan, in March 2021, Slovenia requested an IAEA EPREV follow-up mission to conduct a peer review of the revised emergency arrangements. The preparatory meeting was held on November 10, 2021, via videoconference. During the preparatory meeting, an agreement was reached on the arrangements for the EPREV follow-up mission and the tentative composition of the EPREV review team of experts.

1.3. Reference for the Review

The primary reference for the review is GSR Part 7. In addition, IAEA Safety Guides GSG-2, Criteria for Use in Preparedness and Response for a Nuclear or Radiological Emergency [2]; GS-G-2.1, Arrangements for Preparedness for a Nuclear or Radiological Emergency [3]; GSG-11, Arrangements for the Termination of a Nuclear or Radiological Emergency [4]; GSG-14, Arrangements for Public Communication in Preparedness and Response for a Nuclear or Radiological Emergency [5]; and SSG-65, Preparedness and Response for a Nuclear or Radiological Emergency Involving the Transport of Radioactive Material [6] were used as review criteria.

The terms used in this report are consistent with those found in the IAEA Safety Standards referred to in the above paragraph.

2. ACTIONS RELATED TO THE FINDINGS ON GENERAL REQUIREMENTS

2.1. Roles and responsibilities

The 2017 EPREV mission actions related to roles and responsibilities include one suggestion and two recommendations.

2017 EPREV Suggestion 1
<p>Observation: Activities during the preparedness stage are spread amongst various commissions and groups with no clear mechanism for overall coordination.</p>
<p>Basis for suggestion: GSR Part 7 paragraph 4.10 states: “The government shall establish a national coordinating mechanism to be functional at the preparedness stage, consistent with its emergency management system, with the following functions:</p> <ul style="list-style-type: none">(a) To ensure that roles and responsibilities are clearly specified and are understood ...;(b) To coordinate the hazard assessment within the State ...;(c) To coordinate and ensure consistency between the emergency arrangements of the various response organizations, operating organizations and the regulatory body ...;(d) To ensure consistency among requirements for emergency arrangements, contingency plans and security plans of operating organizations ...;(e) To ensure that appropriate emergency arrangements are in place, both on the site and off the site ...;(f) To coordinate arrangements made for enforcing compliance with the national requirements for emergency preparedness and response as established by legislation and regulations ...;(g) To coordinate a subsequent analysis of an emergency, including analysis of the emergency response ...;(h) To ensure that appropriate and coordinated programmes of training and exercises are in place and implemented, and that training and exercises are systematically evaluated;(i) To coordinate effective communication with the public in preparedness for a nuclear or radiological emergency.”
<p>Suggestion: The Government should consider strengthening the national coordinating mechanism to ensure all activities during the preparedness stage are undertaken in an effective manner.</p>

Changes since the 2017 EPREV Mission

The Government of Slovenia appointed the Inter-Ministerial Commission for Monitoring and Implementation of the National Emergency Response Plan for Nuclear and Radiological Accidents (referred to as the Inter-Ministerial Commission), through decision No. 01203-10 / 2021/6, August 18, 2021. The Inter-Ministerial Commission members, drawn from National Ministries, have a leading role in EPR in their respective organizations. This Inter-Ministerial Commission has focused on the development of the National Plan.

After the adoption of the new National Plan, the Inter-Ministerial Commission will continue to exist with an updated structure and mandate. Members of the Inter-Ministerial Commission will be representatives from organizations who are responsible for preparedness for nuclear and radiological emergencies at the national, regional and municipal levels, as well as representatives from the Krško Nuclear Power Plant (Krško NPP). The Commission will perform coordination and advisory tasks in planning for nuclear and radiological emergencies,

training and exercises, and following international standards as well as the implementation of good practices.

Status of the finding

Suggestion 1 is closed on the basis of progress made and confidence in effective completion.

2017 EPREV Recommendation 1

Observation: There are no arrangements to undertake dose assessment or dose reconstruction for members of the public or for issuing recommendations on the restriction of non-public food chain products following a nuclear or radiological emergency.

Basis for recommendation: GSR Part 7 paragraph 4.7 states: “The government shall ensure that all roles and responsibilities for preparedness and response for a nuclear or radiological emergency are clearly allocated in advance among operating organizations, the regulatory body and response organizations.”

Recommendation: The Government should assign roles and responsibilities for dose assessment, dose reconstruction, and recommendations on the restriction of non-public food chain products as part of the preparedness for a nuclear or radiological emergency.

Changes since the 2017 EPREV Mission

The Government of Slovenia has undertaken the revision of several documents, in part to address Recommendation 1 of the 2017 EPREV. This includes:

1. Rule on Special Radiation Protection Requirements and Method of Dose Assessment (SV5), relevant amendments of the Rule were adopted on February 25, 2021;
2. National Plan, version 4, currently in draft.

According to these Government documents, the missing roles and responsibilities have been assigned as follows:

1. For dose assessment, responsibility is assigned to the Slovenian Nuclear Safety Administration (SNSA) (Article 25.a, para. 1 of the SV5);
2. For dose reconstruction, responsibility is assigned to the Slovenian Radiation Protection Administration (SRPA) (Article 25.a, para. 2 of the SV5);
3. For issuing recommendations on non-public food chain products restrictions, responsibility is assigned (in agreement between the Ministry of Health (MoH) and the Ministry of Agriculture, Forestry and Food) to the National Institute for Public Health (Addendum of draft National Plan).

These new responsibilities were exercised in a Tabletop Exercise held in November 2019, which brought together the main response organizations involved in the National Plan.

For dose reconstruction, provisions are established in Amendments to the Rules on Special Radiation Protection Requirements and the Method of Dose Assessment (SV5) that were adopted on February 25, 2021. These amendments assigned responsibility to SRPA to prepare reports on public exposure in an emergency. These reports are to include an assessment of doses for reference persons from individual groups of the population, the population as a whole, workers and first responders, and will be the basis for identifying exposed population groups.

The SRPA is experienced in this area, as they publish an annual dose assessment report for members of the public in Slovenia. These assessments are carried out on behalf of SRPA by approved radiation protection experts in Slovenia. There are currently 16 SRPA-approved radiation protection experts in Slovenia, 10 of whom are approved to perform dose assessments. Most of these experts work for either the Jožef Stefan Institute (JSI) or the Institute of Occupational Safety.

Status of the finding

Recommendation 1 is closed on the basis of progress made and confidence in effective completion.

2017 EPREV Recommendation 2

<p>Observation: There arrangements for emergency response are reliant upon many contracts between government, operating organizations, and private companies. The provisions of the contracts are not standardized. The contracts are not systematically analysed to ensure all organizations have financial or human resources to fulfil their assigned roles and responsibilities.</p>

<p>Basis for recommendation: GSR Part 7 paragraph 4.8 states: “The government shall ensure that response organizations, operating organizations and the regulatory body have the necessary human, financial and other resources, in view of their expected roles and responsibilities and the assessed hazards, to prepare for and to deal with both radiological and non-radiological consequences of a nuclear or radiological emergency, whether the emergency occurs within or beyond national borders.”</p>

<p>Recommendation: The Government should ensure that all roles and responsibilities are analysed to ensure that organizations have appropriate financial and human resources to complete the assigned expected tasks during emergency preparedness and response.</p>

Changes since the 2017 EPREV Mission

In 2018, the Government of Slovenia undertook the review of capabilities (Assessment of the National Risk Management Capability for Accidents) to fulfil the assigned roles and responsibilities (according to the valid National Plan, version 3) of some relevant response organizations included in the version in place at that time (version 3). The information collected through the process described above was analyzed and assessed by representatives of these organizations to have yielded positive results. In addition, in Krško Municipality, an evaluation was conducted to examine whether the available resources (53 firefighters, with 500 volunteer firefighters and over 3,000 additional potential helpers) were sufficient. This was not a formal analysis, but rather the adequacy of staff and other resources was assessed through exercises. In the case of SRPA and JSI it was concluded that the available resources are sufficient for the urgent phase, but these resources may be stretched in the event of long-term response to a large nuclear accident. However, the gap analysis performed cannot be completed until the new National Plan, version 4, is approved.

It is expected that the results of this analysis will then help to identify actions needed to ensure that the necessary resources are available to all organizations involved in emergency response. Completion of the analysis is foreseen for approximately six months after the approval of the National Plan, version 4. Administration for Civil Protection and Disaster Relief (ACPDR) confirmed that all response organizations with responsibilities in the National Plan will be included in the gap analysis.

In the future, the MoH plans to increase the number of medical staff that may support response to nuclear or radiological emergencies by delivering specific training to target groups of national medical staff.

Status of the finding

Recommendation 2 is closed on the basis of progress made and confidence in effective completion.

2.2. Hazard assessment

The 2017 EPREV mission actions related to hazard assessment include one suggestion.

2017 EPREV Suggestion 2
Observation: The hazard assessment has identified the visit of nuclear powered vessels in Slovenian territorial waters but no assessment of impacts and consequences has been performed.
Basis for suggestion: GSR Part 7 paragraph 4.18 states: “Hazards shall be identified and potential consequences of an emergency shall be assessed to provide a basis for establishing arrangements for preparedness and response for a nuclear or radiological emergency. These arrangements shall be commensurate with the hazards identified and the potential consequences of an emergency.”
Suggestion: SNSA should consider updating the hazard assessment to include potential impacts and consequences of emergencies during the visit of a nuclear-powered vessel.

Changes since the 2017 EPREV Mission

ACPD in cooperation with SNSA updated the National Hazard Assessment for Nuclear and Radiological Emergencies (version 2.2) which was published by the Ministry of Defence on January 17, 2019. The National Hazard Assessment includes events for which national and regional emergency plans must be prepared. Chapter 9 of this document deals with nuclear-powered vessels. It covers the likelihood of an accident involving a nuclear-powered vessel, the probable consequences of such an accident and the need for protective actions. The assessment concluded that the probability of an accident involving a nuclear-powered vessel occurring in Slovenian territorial waters was very small (of the order of 2×10^{-8} to 2×10^{-10} per year) for several reasons: including the shallow depth of the bay which ensures that vessels remain 1 to 2 km from the coastline and the infrequent visits of vessels of this type. The hazard assessment concluded that consequences, if any, would be local and would not extend to the national level. Therefore, the response to an incident involving a nuclear-powered vessel in Slovenian territorial waters may be dealt with at the local rather than at the national level.

Status of the finding

Suggestion 2 is closed on the basis of actions taken.

2022 EPREV follow-up mission observation

The Government of Slovenia has a National Maritime Disaster Protection and Rescue Plan (version 1.0) which was adopted by the Civil Protection Commander for the Coastal Region on February 27, 2018. While this plan deals with maritime disasters and coastal pollution, there is no specific reference to emergencies involving nuclear-powered vessels.

Suggestion 1

Observation: The 2018 Maritime Disaster Protection and Rescue Plan does not include accidents involving nuclear-powered vessels.

Basis for suggestion: GSR Part 7 paragraph 6.18 (b) states: “Emergency plans and procedures are prepared and, as appropriate, approved for any facility or activity, area or location that could give rise to an emergency warranting protective actions and other response actions.”

Suggestion: The Government should update the Maritime Disaster Protection and Rescue Plan to include emergencies involving nuclear-powered vessels.

2.3. Protection strategy for an emergency

The 2017 EPREV mission actions related to protection strategy for an emergency include one recommendation.

2017 EPREV Recommendation 3

Observation: A protection strategy for taking effective protective actions and other response actions in a nuclear or radiological emergency has not been formalized and consistently implemented by all organizations.

Basis for recommendation: GSR Part 7 Requirement 5 states: “The government shall ensure that protection strategies are developed, justified and optimized at the preparedness stage for taking protective actions and other response actions effectively in a nuclear or radiological emergency.”

Recommendation: The Government should ensure that the protection strategy is formalized, and that all emergency plans and procedures are updated by the relevant response organizations to include pre-established operational criteria.

Changes since the 2017 EPREV Mission

The National Protection Strategy for Nuclear and Radiological Accidents (referred to as the Protection Strategy) was adopted by the Government of Slovenia on July 8, 2021. The Protection Strategy provides guidelines for protective actions and other response actions in the event of the following types of nuclear and radiological emergencies:

- A nuclear emergency in Slovenia (at the Krško NPP or a spent fuel pool);
- A nuclear emergency abroad;
- A radiological emergency in Slovenia;
- Other emergencies such as a satellite containing radioactive material falling to earth, an accident involving a nuclear-powered vessel and damage to the tailings repositories at the former Žirovski Vrh mine.

The Protection Strategy addresses all three phases of an emergency and covers optimization and justification of protective actions, consultation with the public and radiation protection of

emergency workers. It also includes guidance on the reference levels to be used in the emergency exposure situation, and a set of criteria (such as generic criteria and operational criteria) to support the decision-making process.

Status of the finding

Recommendation 3 is closed on the basis of actions taken.

2022 EPREV follow-up mission observation
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The Protection Strategy adopted by the Government of Slovenia closely follows IAEA guidance. In addition, the Protection Strategy is contained in a single document which means that all relevant information underlying the protective actions and other response actions for nuclear and radiological emergencies including guidance on justification and optimization can be found in a single location and a clear link can be established between the Protection Strategy and the new draft National Plan. Such an approach is not common and promotes consistency and ensures transparency.

Good Practice 1

Observation: Slovenia has developed a comprehensive Protection Strategy which is contained in a single standalone document.
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Basis for Good Practice: GSR Part 7 Requirement 5 states: “The government shall ensure that protection strategies are developed, justified and optimized at the preparedness stage for taking protective actions and other response actions effectively in a nuclear or radiological emergency.”

Good Practice: The use of IAEA guidance and the development of a Protection Strategy in a single standalone document at the national level facilitates and enhances its application and understanding by different stakeholders.

3. ACTIONS RELATED TO THE FINDINGS ON FUNCTIONAL REQUIREMENTS

3.1. Identifying, notifying and activating

The 2017 EPREV mission actions related to identifying, notifying and activating include three suggestions and one good practice.

2017 EPREV Suggestion 3
Observation: The CSRAO does not have any fixed radiation monitoring capabilities.
Basis for suggestion: GSR Part 7 paragraph 5.17 states: “For facilities and activities in categories I, II and III, and for category IV, arrangements shall be made: (1) to promptly recognize and classify a nuclear or radiological emergency; ...”
Suggestion: The CSRAO should consider installing continuous radiation monitors in the waste storage area.

Changes since the 2017 EPREV Mission

Since 2017, monitoring equipment has been installed in the Central Radioactive Waste Storage Facility (CSRAO). This equipment includes one radiation monitor, which measures dose rates in the waste storage area, close to the entry door. The measurement range of this monitor is 10 nSv/h to 15 mSv/h. The radiation monitor has an alarm function, currently set at 2 mSv/h. However, some equipment necessary for enhanced operability of the monitor is currently unavailable, and as a result, some features (such as capability for remote transmission of the measurement and capability to adjust and test the alarm and its threshold) are temporarily unavailable. The procurement of these equipment is carried out under the IAEA Technical Cooperation Programme. Until the pending items are supplied, the usefulness of the radiation monitor to support the on-site emergency plan is limited.

Status of the finding

Suggestions 3 is closed on the basis of progress made and confidence in effective completion.

2017 EPREV Suggestion 4
Observation: The activation of the SNSA emergency response centre could be delayed due to extensive notification procedures, limiting the ability of SNSA to provide timely advice and recommendations during the initial response to some emergencies.
Basis for suggestion: GSR Part 7 paragraph 5.17 states: “... and (4) upon notification, to initiate a coordinated and preplanned off-site response, as appropriate, in accordance with the protection strategy.”
Suggestion: SNSA should consider further improving its internal notification procedures to streamline notification and activation.

Changes since the 2017 EPREV Mission

To improve internal emergency preparedness, SNSA conducted a cost-benefit analysis. The study concluded that installing a mass notification system would not result in a noticeable increase in the efficiency of notification and further activation of the emergency response centre, but that the cost of procuring and maintaining the system would result in a tangible increase in expenditure.

Since 2017, SNSA has conducted 11 alarming or activation exercises (two per year). The purpose of these exercises was to test activation procedures and determine the time required for activation of the SNSA Emergency Response Team. The results of the exercises showed that the time required to activate the SNSA emergency response team in the event of an emergency is about one hour. The exercises were unannounced and conducted at various times (e.g., weekends, holidays, or otherwise outside of working hours).

Although the current notification system was demonstrated to be effective, SNSA took additional actions to improve the existing methods and procedures for notification of the duty officer, for notification of members of the SNSA Emergency Response Team and activation of the emergency response centre.

Status of the finding

Suggestion 4 is closed on the basis of actions taken.

2017 EPREV Suggestion 5

Observation: Not all operating organizations, particularly those in emergency preparedness category III, have an emergency classification system.
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Basis for suggestion: GSR Part 7 paragraph 5.14 states: “The operating organization of a facility or activity in category I, II, III or IV shall make arrangements for promptly classifying, on the basis of the hazard assessment, a nuclear or radiological emergency warranting protective actions and other response actions to protect workers, emergency workers, members of the public and, as relevant, patients and helpers in an emergency, in accordance with the protection strategy (see Requirement 5). This shall include a system for classifying all types of nuclear or radiological emergency as follows:

(a) General emergency at facilities in category I or II for an emergency that warrants taking precautionary urgent protective actions, urgent protective actions ...”

Suggestion: SNSA and SRPA should consider enforcing that all operating organizations, especially those facilities in emergency preparedness category III with radioactive sources, have appropriate classification system(s).
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Changes since the 2017 EPREV Mission

Since 2017, the Government of Slovenia has initiated the revision of three rules to provide clarification on the emergency classification system for the facilities and activities with radiation sources in emergency preparedness category (EPC) III. Those documents include:

1. Rules on the use of radiation sources and radiation activities (JV2/SV2)
 - for industrial and medical high activity sealed radiation sources
2. Rules on the safety assurance of radiation and nuclear facilities (JV9)
 - for industrial facilities to develop/establish instructions for emergency classification; Rules specify requirements for content of these instructions
3. Rules on radiation and nuclear safety factors (JV5)

Slovenia recognizes two classes of emergencies for facilities and activities in EPC III – alert and site emergency.

The SNSA and SRPA are preparing draft amendments for all three rules. Although the drafts of JV9 and JV5 are ready and in public consultation, they require further revision in accordance with recommendations from an Integrated Regulatory Review Service (IRRS) mission conducted earlier this year. The draft Rules (JV2/SV2) are also in the process of further revision based on recommendations and suggestions from the 2022 IRRS mission. Following finalization, the drafts will be provided for public consultation, review by the Expert Council for Radiation and Nuclear Safety, review by the European Commission and for inter-ministerial discussions. It is foreseen that the Rules will be adopted by the Minister by mid-2023.

Status of the finding

Suggestion 5 is closed on the basis of progress made and confidence in effective completion.

3.2. Taking urgent protective actions and other response actions

The 2017 EPREV mission actions related to taking urgent protective actions and other response actions include one suggestion.

2017 EPREV Suggestion 6

Observation: The last study and analysis regarding the evacuation times for the PAZ and UPZ date from 2008. Taking into account the evolution of the available means and municipal infrastructures, these estimates could be updated to better develop procedures for urgent protective actions.

Basis for suggestion: GSR Part 7 paragraph 5.17 states: "... and (4) upon notification, to initiate a coordinated and preplanned off-site response, as appropriate, in accordance with the protection strategy."

Suggestion: The government and municipalities should consider reviewing the evacuation time estimates for the PAZ and UPZ around the Krško NPP using updated data and methodologies.

Changes since the 2017 EPREV Mission

In 2019, the Municipality of Krško and the Municipality of Brežice, with support from the Krško NPP and ACPDR, commissioned a new analysis to estimate the time for evacuation of the population in the precautionary action zone (PAZ) and urgent protective action planning zone (UPZ) of the Krško NPP. The analysis was conducted on the basis of new data on the current transport infrastructure and the population living in the territory of the Municipalities of Krško and Brežice. The results were published in the comprehensive report 'Development of the Evacuation Time Estimates' issued in January 2020. The analysis shows that the time required for evacuation has decreased compared to earlier studies, which is due to the improved infrastructure and public awareness. Following the approval of the new National Plan, version 4, the regional emergency response plans of both Municipalities will be updated to take the new evacuation times into account.

Furthermore, an amendment of the Rules on the safety assurance of radiation and nuclear facilities (JV9) has been drafted. This document requires the nuclear facility to prepare

evacuation time estimates for the PAZ and UPZ and regularly update it (at least every 10 years) or immediately after a major change in the infrastructure or population density.

Status of the finding

Suggestion 6 is closed on the basis of actions taken.

3.3. Protecting emergency workers and helpers in an emergency

The 2017 EPREV mission actions related to protecting emergency workers and helpers in an emergency include two recommendations.

2017 EPREV Recommendation 4
Observation: There are no provisions to provide just-in-time training to non-designated emergency workers.
Basis for recommendation: GSR Part 7 paragraph 5.52 states: “The operating organization and response organizations shall ensure that arrangements are in place for the protection of emergency workers and protection of helpers in an emergency for the range of anticipated hazardous conditions in which they might have to perform response functions. These arrangements, as a minimum, shall include: ... (b) Providing emergency workers not designated in advance and helpers in an emergency immediately before the conduct of their specified duties with instructions on how to perform the duties under emergency conditions (‘just in time’ training); ...”
Recommendation: The Government should ensure that arrangements are established to provide non-designated emergency workers with just-in-time training, immediately before deployment, on how to perform duties under emergency conditions.

Changes since the 2017 EPREV Mission

In 2019, the SNSA developed a poster for first responders that provides information on the basics of radiation and radiation protection as well as precautions that must be taken before conducting response actions in a contaminated area. The ACPDR distributes this poster at training sessions for firefighters and will continue using it as part of training materials in relevant training programmes. The poster will also be included in the training of volunteer firefighters by the Fire Brigade Association of Slovenia.

The ACPDR’s Training Centre for Disaster Relief and SNSA recently developed a “just-in-time” training for non-designated emergency workers and helpers. The (short) training aims to provide information necessary for the safe implementation of response actions in the field. The “just-in-time” training is planned to be conducted by instructors within each response organization. It consists of basic principles of radiation protection, information about personal protective equipment, decontamination and ALARA. Response personnel (potential instructors during emergency response phase) will be instructed during the preparedness stage through an established Train the Trainers Programme for Protection against Ionizing Radiation that was launched by the Minister of Defence on 25 May 2022. It has been included in the plan of education and training in the field of protection against natural and other disasters in 2022. The programme implementation will commence in 2023.

Status of the finding

Recommendation 4 is closed on the basis of progress made and confidence in effective completion.

2017 EPREV Recommendation 5

Observation: Not all emergency workers have access to personal dosimetry.

Basis for recommendation: GSR Part 7 paragraph 5.52 states: “The operating organization and response organizations shall ensure that arrangements are in place for the protection of emergency workers and protection of helpers in an emergency for the range of anticipated hazardous conditions in which they might have to perform response functions. These arrangements, as a minimum, shall include:

...

(c) Managing, controlling and recording the doses received;

(d) Provision of appropriate specialized protective equipment and monitoring equipment; ...”

Recommendation: The Government should ensure that arrangements are established to manage, control, and record the doses of all emergency workers.

Changes since the 2017 EPREV Mission

The Ministry of Interior (MoI) is adequately equipped with personal dosimetry for those units that are expected to enter the hot zone¹. Thermoluminescent dosimeters (TLDs) are provided and monitored by the JSI.

In accordance with the new hazard assessment, the SRPA and the MoH distributed personal dosimeters to the emergency medical services in April 2019. Seventeen emergency medical units and four hospitals received personal dosimeters. The analysis of experience in the use of personal dosimeters took place in December 2019 and January 2020, respectively.

Within the Covid-19 European Social Survey Project for medical and protective equipment, the MoH had assured all emergency medical staff within the public network the financial resources to purchase upgraded complements of personal protective equipment for response to CBRN accidents, including personal dosimeters.

ACPDR has implemented various measures to ensure the protection of response units, and control of the doses they receive. All 44 fire brigades of wider significance² which have the authority to respond in the event of a nuclear or radiological accident were equipped with and trained to use radiation detectors which can also identify the most common radionuclides. In addition, ACPDR has ensured that at least two firefighters per shift from each fire brigade of wider significance have completed a one-day training in Ionizing Radiation Protection, carried out by the Institute for Occupational Safety. The Municipality of Krško has protective equipment for response units, which are equipped with a sufficient number of dosimeters.

¹ Also called ‘inner cordoned off area’.

² Fire brigades with general and additional tasks in CBRN accidents and others; i. e. railway accidents, highway accidents.

Personal dosimetry in case of response to a nuclear or radiological emergency is organized in accordance with the National Plan and the *Act on Protection against Ionizing Radiation and Nuclear Safety*.

The organization of personal dosimetry is stated in document – D - 213 *Organizacija osebne dozimetrije*, version 1. Dosimeters also have been purchased for (1) the MoI and distributed to the police administrations and police stations in the vicinity of nuclear facilities; (2) SRPA and the MoH and distributed to the emergency medical services and firefighters. Personal dosimetry equipment is now in place for all first responders (fire service, police and medical services) and available for non-designated emergency workers.

There are arrangements in place to verify doses received by emergency workers. These arrangements envisage provision of one electronic dosimeter with alert function per team (usually given to the team leader) in addition to the passive dosimeter (TLD) provided to all members of the response team. Passive dosimeters are refreshed yearly, and the dose will be registered after responding to an emergency. Dose registration is organized per organization and will be included in the personnel files.

Status of the finding

Recommendation 5 is closed on the basis of actions taken.

3.4. Medical response

The 2017 EPREV mission actions related to medical response include three recommendations.

2017 EPREV Recommendation 6
Observation: Most general practitioners are trained in recognizing clinical symptoms of radiation exposure during their studies, but there is no periodic refresher training programme in place.
Basis for recommendation: GSR Part 7 paragraph 5.63 states: “Arrangements shall be made for medical personnel, both general practitioners and emergency medical staff, to be made aware of the clinical symptoms of radiation exposure, and of the appropriate notification procedures and other emergency response actions to be taken if a nuclear or radiological emergency arises or is suspected.”
Recommendation: The Ministry of Health should develop arrangements for general practitioners and emergency medical services to be trained to recognize the symptoms of radiation exposure and national response procedures.

Changes since the 2017 EPREV Mission

Since 2017, general practitioners and practitioners working in emergency medical assistance in Slovenia have received annual systematic training. A seminar entitled *The Safety of First Responders was Never Taken for Granted* was held in April 2019.

On May 30, 2021, the instructors of the Healthcare Response in Major Accidents Section of Slovenian Medical Association completed a training according to the Train the Trainers principle on the topic of response to nuclear and radiological emergency. The training was provided by experts from the JSI and the University Medical Centre Ljubljana, Department of

Nuclear Medicine. Because of the cyclical character of the trainings, they will be frequently repeated in cooperation with the Slovenian Medical Association.

The training programme on response to nuclear and radiological emergencies is part of the all-hazard chemical, biological, radiological and nuclear (CBRN) - training and consists of a theoretical and a practical component. The training, which is a three-day course, also covers hazards from the dangerous sources.

Status of the finding

Recommendation 6 is closed on the basis of actions taken.

2017 EPREV Recommendation 7

Observation: Not all relevant healthcare organizations have guidelines for practitioners or healthcare facilities on the transport and treatment of contaminated patients or the treatment of radiation injuries.

Basis for recommendation: GSR Part 7 paragraph 5.64 states: “Arrangements shall be made so that, in a nuclear or radiological emergency, individuals with possible contamination can promptly be given appropriate medical attention. These arrangements shall include ensuring that transport services are provided where needed and providing instructions to medical personnel on the precautions to take.”

Recommendation: The Ministry of Health should issue guidelines on the initial treatment and transport of contaminated patients.

Changes since the 2017 EPREV Mission

In 2019 the MoH published guidelines and procedures for emergency medical services responding in CBRN emergencies. These guidelines are available on the MoH’s website and include procedures for the transport and treatment of contaminated patients and the treatment of radiation injuries. Where possible, the goal is to decontaminate patients before transporting them to medical facilities. Procedures for decontamination are also included in these guidelines. A pocketbook is available with step-by-step algorithms and checklists for what needs to be done.

Training for practitioners on these guidelines is provided in two training courses – one for general trauma and another for severe trauma. These training courses are delivered annually. Before attending these practical courses, participants are required to study the guidelines and the pocketbook and to pass an examination. The pocketbook is updated approximately every 3 to 4 years.

Status of the finding

Recommendation 7 is closed on the basis of actions taken.

2017 EPREV Recommendation 8

Observation: There are no plans or procedures for identifying populations at risk of increased incidences of cancer and longer-term medical actions.

Basis for recommendation: GSR Part 7 paragraph 5.68 states: “Arrangements shall be made for the identification of individuals who are in those population groups that are at risk of sustaining increases in the incidence of cancers as a result of radiation exposure in a nuclear or radiological emergency. Arrangements shall be made to take longer term medical actions to detect radiation induced health effects among such population groups in time to allow for their effective treatment. These arrangements shall include the use of pre-established operational criteria in accordance with the protection strategy.”

Recommendation: The Government should develop arrangements for the identification and longer-term medical actions of at-risk populations following a nuclear or radiological emergency.

Changes since the 2017 EPREV Mission

Amendments to the *Rules on Special Radiation Protection Requirements and the Method of Dose Assessment (SV5)* were adopted on February 25, 2021. These amendments assigned responsibility to SRPA to prepare reports on public exposure in an emergency. These reports are to include an assessment of doses for reference persons from individual groups of the population, the population as a whole, workers and first responders, and will be the basis for identifying exposed population groups. These assessments are carried out by SRPA-approved radiation protection experts in Slovenia. Most of these experts work for either the JSI or the Institute of Occupational Safety.

The 2019 guidelines for practitioners and healthcare facilities on the transport and treatment of contaminated patients or the treatment of radiation injuries also contain guidelines for the medical treatment and surveillance of exposed people, in order to detect radiation induced health effects so that effective treatment can be delivered. These guidelines on the medical treatment and surveillance of exposed people are based on those provided by the IAEA. While Slovenia does not have a whole-body counter to measure levels of internal contamination, exposed population groups will be identified in the dose assessment commissioned by the SRPA.

Status of the finding

Recommendation 8 is closed on the basis of actions taken.

3.5. Communicating with the public throughout an emergency

The 2017 EPREV mission actions related to communicating with the public throughout an emergency include two recommendations.

2017 EPREV Recommendation 9

Observation: The arrangements for communicating with the public are focused on procedures for issuing press releases and for providing factual information. There are no arrangements in place to ensure that public information puts the health hazards into perspective and to address public concern regarding possible health effects.

2017 EPREV Recommendation 9

Basis for recommendation: GSR Part 7 paragraph 5.72 states: “The government shall ensure that a system for putting radiological health hazards in perspective in a nuclear or radiological emergency is developed and implemented with the following aim:

- To support informed decision making concerning protective actions and other response actions to be taken;
- To help in ensuring that actions taken do more good than harm;
- To address public concerns regarding potential health effects.

In the development of such a system, due consideration shall be given to pregnant women and children as the individuals who are most vulnerable with regard to radiation exposure.”

Recommendation: The Government should further develop its public communications arrangements to provide additional information on the health hazards and health effects, and to address the most vulnerable members of the public.

Changes since the 2017 EPREV Mission

The draft National Plan, version 4, includes provisions for communicating with the public before and during an emergency.

The SNSA in consultation with the ACPDR has developed a poster that informs the public in an easy-to-understand language about exposure pathways, actions to be taken, and the impact of radiation on the most vulnerable members of society, and it puts health hazards in perspective. The poster was developed in alignment with GSG-14 [5]. It avoids any use of scientific quantities and units and numerical data. It is available online as part of the communications programme during preparedness and response. The poster has been approved by SNSA and ACPDR and is planned to be attached to each relevant press release. SNSA has identified a list of organizations, facilities, and locations (e.g., schools, kindergartens, hospitals, and areas near the NPP) where informational materials, including the poster, will be distributed during the preparedness stage.

The poster has already been used in real events. The media and the public accepted it without any additional concerns. As an additional arrangement, the SNSA officer on duty is available to respond to any inquiries from the public regarding the health hazard. For the convenience of various members of the public (e.g., colour-blind people), a description of each graphic representation of the prepared information is provided on the Government website.

Status of the finding

Recommendation 9 is closed on the basis of actions taken.

2017 EPREV Recommendation 10

Observation: The arrangements for public communication of the off-site organizations do not address the issue of media and social media monitoring to identify rumours or incorrect information.

Basis for recommendation: GSR Part 7 paragraph 5.74 states: “Arrangements shall be made to identify and address, to the extent practicable, misconceptions, rumours and incorrect and misleading information that might be circulating widely in a nuclear or radiological emergency, in particular those that might result in actions being taken beyond those emergency response actions that are warranted (see Requirement 16).”

2017 EPREV Recommendation 10

Recommendation: The Government should ensure that effective media and social media monitoring is in place to identify incorrect information reaching the public, and in those cases to respond to it as soon as possible.

Changes since the 2017 EPREV Mission

The Government Communication Office (GCO) is assigned responsibility for media and social media monitoring to identify rumours and misleading information that may reach the public.

In March 2019, a system for rapid warning in case of misinformation (Rapid Alert System (RAS) network, which falls under the auspices of the European External Action Service (EEAS)) was established, within which the national contact point for Slovenia is designated.

To prevent rumours and maintain public trust, the draft National Plan, version 4, envisages provision of information to the public every 30 mins or every time there are major changes in the status of the situation. To refute any rumours, SNSA, when appropriate, will contribute to the provision of factual information to the GCO, which will then be able to disseminate accurate information to the public.

ACPDR will ensure that personnel from the Department of Public Communication will work in coordination with the GCO.

In addition, the GCO has primary responsibility for communicating high level Government decisions with the support of relevant Ministries and organizations. The GCO utilizes credible experts from appropriate organizations including Ministries, academics or other experts who have the public's trust, to provide information and assurance to the public where appropriate.

Status of the finding

Recommendation 10 is closed on the basis of actions taken.

3.6. Taking early protective actions

The 2017 EPREV mission actions related to taking early protective actions include one suggestion and one recommendation.

2017 EPREV Suggestion 7

Observation: There are no arrangements to manage returns to a restricted area during a nuclear or radiological emergency.

Basis for suggestion: GSR Part 7 paragraph 5.79 states: "Returns to these areas for short periods of time shall be permitted if justified (e.g. to feed animals left behind) and provided that those individuals entering the area are:

- (a) Subject to controls and to dose assessment while in the area;
- (b) Instructed on how to protect themselves;
- (c) Briefed on the associated health hazards."

Suggestion: The government and municipalities should consider developing arrangements for response organizations to manage returns to a restricted area, including allowable justifications for returns, controls, and instructions.

Changes since the 2017 EPREV Mission

In 2019, SNSA developed and issued a *Procedure for Short-Term Returns to Exclusion Zone* that provides criteria, information on controls and protection for members of the public entering a restricted area during an emergency. This procedure establishes criteria based on radiation dose rates, according to which members of the public may be allowed to enter restricted areas for short stays (less than 5 hours). The procedure is based on restricting the dose to 1 mSv per entry. It requires taking radiation protection and control measures while in the restricted area and checking for contamination when leaving the area. There has not been an opportunity to test this procedure in exercises, however SNSA plans to test it during their next field exercise.

Status of the finding

Suggestion 7 is closed on the basis of actions taken.

2017 EPREV Recommendation 11

Observation: There is no joint plan for measurements during all phases of a nuclear or radiological emergency. Nor is there prioritization of radiation measurements in order to meet the needs for initiating new protective actions, or lifting those already implemented. The existing procedures could be expanded to ensure effective use of all resources in an optimal manner.

Basis for recommendation: GSR Part 7 paragraph 5.82 states: “Monitoring in response to a nuclear or radiological emergency shall be carried out on the basis of a strategy to be developed at the preparedness stage as part of the protection strategy. Arrangements shall be made to adjust the monitoring in the emergency response on the basis of prevailing conditions.”

Recommendation: The Government should further develop a comprehensive national monitoring strategy, as part of the protection strategy, for supporting timely decision making of protective actions and other needs of society. The strategy should take into account all resources and capabilities in Slovenia and possibilities to receive international assistance.

Changes since the 2017 EPREV Mission

The 2021 Protection Strategy devotes several parts to radiation monitoring and the main aspects of the monitoring strategy to provide a basis for adopting or lifting protective actions. The Protection Strategy includes operational intervention levels to be compared to monitoring results in line with IAEA guidance. The main components of the Radiation Monitoring Programme are described in Section 3.1 of the Protection Strategy document and complemented by Article 34 of the Rules on monitoring radioactivity. The basis is provided in Attachment 8 of the Rules. No document exists so far that compiles all relevant information pertaining to radiation monitoring in emergency. To close this gap and provide support to the Protection Strategy, a Radiation Monitoring Programme will be prepared after the draft National Plan, version 4, is approved. An assessment of monitoring capabilities has been carried out and will be used in the preparation of the Radiation Monitoring Programme. Monitoring procedures will be prepared by the organizations responsible for radiation monitoring.

The Protection Strategy does not consider decontamination of dwellings or soil as an early protective action, but as an action related to the remediation phase after the emergency is terminated. Hence, no radiation monitoring is planned during the emergency to assess the need for decontamination.

In a nuclear or radiological emergency, an overall emergency monitoring programme would be led by SNSA. Within this framework, monitoring programme of food and drinking water would be led by SRPA. The results of this monitoring programme would be used by SRPA to assess the risk to human health. Based on these findings, the Administration for Food Safety, Veterinary Sector and Plant Protection would establish their own sampling and analysis programme to supplement that of SRPA. The Administration for Food Safety, Veterinary Sector and Plant Protection is responsible for ensuring that non-compliant food is not commercially available.

All radioactivity analyses are carried out by two laboratories in Slovenia (JSI and Institute of Occupational Safety). If radioactivity analysis capacity is challenged following a nuclear emergency at the Krško NPP, the Administration for Food Safety, Veterinary Sector and Plant Protection could introduce a ban on food produced locally in the area surrounding the NPP (the perimeter would be recommended by SRPA) to prevent potentially contaminated food entering the market (inspectors can prohibit sale of products on the market immediately). This ban could be relaxed as measurement capacity becomes available, and if monitoring results demonstrate compliance with established criteria.

The Administration for Food Safety, Veterinary Sector and Plant Protection are very familiar with responding to food emergencies. In an emergency, the sampling and measurement programme is developed on a case-by-case basis following a risk assessment which is carried out when the emergency occurs. A general plan is available to support this process for all emergency types (not specifically nuclear or radiological emergencies).

Status of the finding

Recommendation 11 is closed on the basis of progress made and confidence in effective completion.

3.7. Managing radioactive waste in an emergency

The 2017 EPREV mission actions related to managing radioactive waste in an emergency include one recommendation.

2017 EPREV Recommendation 12
Observation: There are no arrangements for the management of large volumes of radioactive waste generated during a nuclear or radiological emergency, including its identification, characterization, categorization, transport and storage. No planning exists also for the management of contaminated human remains and animal remains.
Basis for recommendation: GSR Part 7 Requirement 15 states: “The government shall ensure that radioactive waste is managed safely and effectively in a nuclear or radiological emergency.”
Recommendation: The Government should establish arrangements to manage radioactive waste for the emergencies postulated in the hazard assessment.

Changes since the 2017 EPREV Mission

Guidelines for the safe management of radioactive waste following a nuclear or radiological emergency were published by the Agency for Radioactive Waste Management (ARAO) in

September 2021. These guidelines address the identification, characterization, categorization, transport and storage of radioactive waste. The management of contaminated biological waste is also addressed.

The new draft National Plan, version 4, does not assign responsibilities to ARAO, since ARAO is not considered to be a response agency. However, ARAO contributed to the development of the National Plan through the Ministry of the Environment. When the new draft National Plan is adopted, ARAO’s emergency response plan will be reviewed. It is expected that the guidelines for radioactive waste management will be updated in 2025 and 2030. The site emergency plan for the CSRAO which is managed by ARAO is updated after exercises (conducted every three years) and after a change in the hazard assessment, change in regulations, in the state plan, the organizational structure of ARAO, etc.

Status of the finding

Recommendation 12 is closed on the basis of actions taken.

3.8. Mitigating non-radiological consequences

The 2017 EPREV mission actions related to mitigating non-radiological consequences include one recommendation.

2017 EPREV Recommendation 13
Observation: The Government does not have any arrangements to mitigate the non-radiological consequences of a nuclear or radiological emergency.
Basis for recommendation: GSR Part 7 paragraph 5.90 states: “Arrangements shall be made for mitigating the non-radiological consequences of an emergency and those of an emergency response and for responding to public concern in a nuclear or radiological emergency. These arrangements shall include arrangements for providing the people affected with: (a) Information on any associated health hazards and clear instructions on any actions to be taken (see Requirement 10 and Requirement 13); (b) Medical and psychological counselling, as appropriate; (c) Adequate social support, as appropriate.”
Recommendation: The Government should develop arrangements to address the non-radiological consequences of a nuclear or radiological emergency and the emergency response.

Changes since the 2017 EPREV Mission

The draft National Plan, version 4, addresses the provision of social and psychological support in the urgent phase of an emergency. While the plan defines the responsibilities of the Ministries in the event of a nuclear and radiological emergency, including arrangements for mitigation of non-radiological consequences, specific actions are described in the emergency plans of each responsible Ministry. According to the draft, the Ministry of Labor, Family, Social Affairs and Equal Opportunities is one of the responsible organizations for the provision of psychosocial support for those affected by a nuclear or radiological emergency.

According to the draft National Plan, version 4, ACPDR is responsible for establishing a National Information Centre that will be involved in the provision of information on the consequences of the emergency, psychological and spiritual assistance, translation services and assistance in family reunion.

In fulfilment of the Resolution on the National Mental Health Program for the period 2018-2028 the MoH is in the process of establishing regional mental health centres, which will help to improve mental health services.

In 2019, the MoH developed and approved guidelines for the operation of emergency medical services in case of CBRN emergencies. Training for medical doctors on the provision of psychological assistance in case of an emergency is carried out at least once every three years.

In 2018, the Government of Slovenia adopted guidelines for the planning, training and implementation of psychological assistance in the event of a disaster.

Long-term non-radiological consequences are not addressed in the National Plan.

Status of the finding

Recommendation 13 is closed on the basis of actions taken.

3.9. Requesting, providing and receiving international assistance

The 2017 EPREV mission actions related to requesting, providing and receiving international assistance include one suggestion.

2017 EPREV Suggestion 8
Observation: There are at least two assistance arrangements utilized in Slovenia in requesting assistance from other States: the IAEA RANET and EU ERCC. However, there is incomplete knowledge of which assistance systems and decision making mechanisms are to be used when determining whether to request international assistance.
Basis for suggestion: GSR Part 7 paragraph 5.94 states: “Arrangements shall be put in place and maintained for requesting and obtaining international assistance from States or international organizations ... in preparedness and response to a nuclear or radiological emergency... These arrangements shall take due account of compatibility arrangements for the capabilities to be obtained from ... different States so as to ensure the usefulness of these capabilities.”
Suggestion: SNSA and ACPDR should consider developing procedures for requesting and receiving assistance to ensure timely decision making and high compatibility of arrangements for assistance received through different mechanisms in case of a nuclear or radiological emergency.

Changes since the 2017 EPREV Mission

Since the 2017 EPREV Mission, ACPDR and SNSA have both developed internal procedures (ON 5.3.3) for identifying needs and for requesting and providing assistance in a nuclear or radiological emergency. These procedures have been harmonized between the two organizations, tested in several dedicated IAEA exercises on international assistance (ConvEx-2b) and jointly reviewed on an annual basis. SNSA’s procedure for requesting and providing assistance includes an appendix which identifies the type of assistance that may be potentially required in Slovenia in a nuclear or radiological emergency.

The decision to request assistance rests with the Government, but once this decision has been made, SNSA and ACPDR would work together to assess what assistance is needed and to make the request based on the needs identified for that emergency. If a request is to be made through the IAEA Response and Assistance Network (RANET), SNSA will send this request as the designated Competent Authority for the IAEA Assistance Convention. If international assistance is required from the European Union (EU), then ACPDR will manage this request. In addition, a request for assistance may also be made by ACPDR to countries with which Slovenia maintains bilateral agreements.

Status of the finding

Suggestion 8 is closed on the basis of actions taken.

3.10. Terminating an emergency

The 2017 EPREV mission actions related to terminating an emergency include one recommendation.

2017 EPREV Recommendation 14
Observation: There are no arrangements in place for terminating a nuclear or radiological emergency in the National Plan.
Basis for recommendation: GSR Part 7 Requirement 18 states: “The government shall ensure that arrangements are in place and are implemented for the termination of a nuclear or radiological emergency, with account taken of the need for the resumption of social and economic activity.”
Recommendation: The Government should establish arrangements for the termination of a nuclear or radiological emergency in accordance with the protection strategy and ensure that supporting procedures are updated by all response organizations.

Changes since the 2017 EPREV Mission

General and specific pre-requisites for the termination of a nuclear or radiological emergency are included in the recently developed Protection Strategy. These follow the guidance provided in GSG-11 [4]. Criteria for the termination of an emergency have been included in the new draft National Plan, version 4. However, other arrangements for the smooth transition from an emergency exposure situation to an existing or planned exposure situation and termination of an emergency, such as the arrangements for the transfer of responsibilities, protection of workers, medical follow-up, waste management and compensation, are not included in either the new draft National Plan, version 4, or in the Protection Strategy. Instead, these arrangements and the responsibilities assigned to different institutions that would play a role in the termination of an emergency are being developed in a separate strategic document by SNSA in conjunction with the Ministry of the Environment. There is no timeline for the completion and the adoption of these arrangements, as an update to legislation will also be required.

Status of the finding

Recommendation 14 remains open since the arrangements for the termination of a nuclear or radiological emergency have not been completed.

4. ACTIONS RELATED TO THE FINDINGS ON REQUIREMENTS FOR INFRASTRUCTURE

4.1. Organization and staffing for emergency preparedness and response

The 2017 EPREV mission actions related to organization and staffing for emergency preparedness and response include one suggestion.

2017 EPREV Suggestion 9
Observation: While many organizations expressed concern about their staffing levels, few have conducted a detailed analysis of the staffing requirements to fulfil their assigned responsibilities.
Basis for suggestion: GSR Part 7 paragraph 6.10 states: “Appropriate numbers of suitably qualified personnel shall be available at all times (including during 24 hour a day operations) so that appropriate positions can be promptly staffed as necessary following the declaration and notification of a nuclear or radiological emergency. Appropriate numbers of suitably qualified personnel shall be available for the long term to staff the various positions necessary to take mitigatory actions, protective actions and other response actions.”
Suggestion: The Government, through the national coordinating mechanism, should consider an analysis of staffing levels of response organizations to determine whether there are sufficient qualified personnel for the required positions during an emergency.

Changes since the 2017 EPREV Mission

An analysis of the staffing levels and capabilities of the JSI, the Institute of Occupational Safety, and national and regional CBRN units was carried out by each individual organization and without reference to total levels or capabilities within the country. Staffing levels were also analyzed through evaluation of participation in exercises.

An *Assessment of the National Risk Management Capability for Accidents* was prepared in 2018 and again in 2020, which included an assessment of the national capability (including hospitals, fire fighters etc.) to prepare for and respond to nuclear and radiological emergencies. The assessment was performed against the valid National Plan, version 3.

In addition, as part of the EU Civil Protection Mechanism, ACPDR, in cooperation with the SNSA, carried out, in 2020, a capability assessment of the financial, administrative and material resources required for the management of risks for nuclear and radiological emergencies. Resources such as those provided through the EU Civil Protection Mechanism and specifically the RescEU European reserve of resources have been identified as mechanisms to help support with staffing levels in an emergency (additional resources to be called upon in an emergency).

After the new draft National Plan, version 4, is adopted, a gap analysis of staffing levels and capabilities will be carried out and the actions required to address any gaps will be identified (as set in Chapter 4 of the National Plan, version 4). This gap analysis will also include an assessment of the staff resources required for evacuations such as social services and medical care. This assessment is expected to be performed within six months of the adoption of the National Plan, version 4.

Status of the finding

Suggestion 9 is closed on the basis of progress made and confidence in effective completion.

4.2. Plans and procedures for emergency response

The 2017 EPREV mission actions related to plans and procedures for emergency response include four recommendations.

2017 EPREV Recommendation 15
Observation: The current National Plan does not fully address the latest international requirements, is not based on the latest national hazard assessment, and does not fully reflect the latest draft version of the Radiation Protection and Nuclear Safety Act.
Basis for recommendation: GSR Part 7 paragraph 6.17 states: “Each response organization shall prepare an emergency plan or plans for coordinating and performing their assigned functions as specified in Section 5 and in accordance with the hazard assessment and the protection strategy. An emergency plan shall be developed at the national level that integrates all relevant plans for emergency response in a coordinated manner and consistently with an all-hazards approach. Emergency plans shall specify how responsibilities for managing operations in an emergency response are to be discharged on the site, off the site and across national borders, as appropriate...”
Recommendation: The Government should ensure that the revision of the National Plan addresses all aspects of the international safety standards.

Changes since the 2017 EPREV Mission

In 2018 the SNSA completed an assessment of their current plan relative to the requirements of GSR Part 7 [1]. This review formed the basis for a new draft National Plan, version 4. The draft was subsequently prepared by the ACPDR in consultation with relevant stakeholders. Currently, the draft National Plan, version 4, is undergoing a public review for a period of 30 days. The plan addresses three scenarios including: a nuclear accident at Krško NPP, a nuclear accident abroad, and a radiological accident (satellite re-entry). These scenarios were selected based on the hazard assessment that was completed earlier. Once the public review of the plan is completed and comments are reviewed, the approval process for the plan will commence.

Radioactive waste storage facilities and facilities using radioactive sources are included in the Protection Strategy, but not in the draft National Plan, version 4, as it is assessed that potential accidents occurring at these type of facilities will not affect large territories and, therefore, will not lead to severe, national consequences that would merit their inclusion in the National Plan. Instead, there are instructions for response to emergencies involving the use of radioactive sources such as a spill or unintentional inhalation.

Status of the finding

Recommendation 15 is closed on the basis of progress made and confidence in effective completion.

2017 EPREV Recommendation 16
Observation: Emergency plans and procedures are not established at all response organizations.
Basis for recommendation: GSR Part 7 paragraph 6.17 states: “Each response organization shall prepare an emergency plan or plans for coordinating and performing their assigned functions as specified in Section 5 and in accordance with the hazard assessment and the protection strategy. An emergency plan shall be developed at the national level that integrates all relevant plans for emergency response in a coordinated manner and consistently with an all-hazards approach. Emergency plans shall specify how responsibilities for managing operations in an emergency response are to be discharged on the site, off the site and across national borders, as appropriate. The emergency plans shall be coordinated with other plans and procedures that may be implemented in a nuclear or radiological emergency, to ensure that the simultaneous implementation of the plans would not reduce their effectiveness or cause conflicts...”
Recommendation: ACPDR and municipalities should ensure that plans are established at all response organizations and that on- and off-site plans are coordinated in case of a nuclear or radiological emergency.

Changes since the 2017 EPREV Mission

Once the draft National Plan, version 4, has been approved, all organizations at all levels (national, regional, local and facility levels) with responsibilities identified in the National Plan are expected to revise their plans to be consistent with the National Plan, version 4. This is expected to happen within six months of the adoption of the National Plan, version 4.

The Decree on the Development of Emergency Response Plans provides assurance that this process of revision of plans will be undertaken.

Status of the finding

Recommendation 16 remains open based on the observation that this process has not yet started.

2017 EPREV Recommendation 17
Observation: There are no plans or procedures that address the response to emergencies initiated by nuclear security events or that address the safety/security interface.
Basis for recommendation: GSR Part 7 paragraph 6.17 states: “Each response organization shall prepare an emergency plan or plans for coordinating and performing their assigned functions as specified in Section 5 and in accordance with the hazard assessment and the protection strategy. An emergency plan shall be developed at the national level that integrates all relevant plans for emergency response in a coordinated manner and consistently with an all-hazards approach. Emergency plans shall specify how responsibilities for managing operations in an emergency response are to be discharged on the site, off the site and across national borders, as appropriate. The emergency plans shall be coordinated with other plans and procedures that may be implemented in a nuclear or radiological emergency, to ensure that the simultaneous implementation of the plans would not reduce their effectiveness or cause conflicts. Such other plans and procedures include: (a) Emergency plans for facilities in category I and for areas in category V; (b) Security plans and contingency plans ...;

2017 EPREV Recommendation 17

- (c) Procedures for the investigation of a nuclear security event, including identification, collection, packaging and transport of evidence contaminated with radionuclides, nuclear forensics and related activities ...;
- (d) Evacuation plans;
- (e) Plans for firefighting.”

Recommendation: The government should establish arrangements for preparedness and response for a nuclear or radiological emergency initiated by a nuclear security event.

Changes since the 2017 EPREV Mission

The MoI developed arrangements (contingency plan and procedures) to respond to terrorist attacks or other malevolent acts against Krško NPP. This plan and associated procedures are aimed at countering and interdicting the attackers that might attempt to cause damage to the NPP and cause a severe release of radioactive materials. In addition to other actions improving the prevention of nuclear security threats that might affect the plant, they performed different actions to improve preparedness against emergencies caused by nuclear security events, such as:

- Revising the Threat Assessment and ensuring that consequences of this assessment were considered in the hazard assessment of the NPP to establish the corresponding Emergency Response Plan;
- Improvement of training of police officers present at the site and cooperation and coordination with the on-site security guards of the NPP;
- Improving understanding of police officers about the safety security interface and cooperation with the personnel responsible for NPP safety;
- Signature of a Memorandum of Understanding between MoI and the NPP, to improve cooperation and joint exercises between police officers and NPP staff.

It is envisaged that in December 2022 a new NPP Security Plan will be in place, elaborating further on the above referred improvements and documents.

Status of the finding

Recommendation 17 is closed on the basis of progress made and confidence in effective completion.

2017 EPREV Recommendation 18

Observation: The National Plan does not include a concept of operations to serve as a basis for the development of response organization plans and procedures.

Basis for recommendation: GSR Part 7 paragraph 6.18 states: “The appropriate responsible authorities shall ensure that: (a) A ‘concept of operations’ for emergency response is developed at the beginning of the preparedness stage ...”

Recommendation: The Government should develop a concept of operations.

Changes since the 2017 EPREV Mission

The SNSA has developed a *Concept of Operations for the Implementation of Protection, Rescue and Relief*. This Concept of Operations addresses all nuclear and radiological

emergencies for all EPCs, except EPC V which is not applicable for Slovenia. This concept of operations was submitted to ACPDR and now forms a part of the draft National Plan, version 4, which is currently under public review and expected to be finalized in the near future.

Status of the finding

Recommendation 18 is closed on the basis of actions taken.

2022 EPREV follow-up mission observation
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Actions taken under Recommendation 17 of 2017 EPREV address the on-site response to a nuclear security event, such as a terrorist attack, that may cause significant damage to the plant and result in the subsequent release of radioactive materials into the environment. However, the overall coordination of emergency response to these types of events including the off-site response (as required in GSR Part 7 Requirement 6) is not adequately covered in the current plans. The response to these types of events should be integrated and coordinated with relevant response organizations under the Unified Command and Control System defined in the National Plan.

2022 EPREV Follow-Up Suggestion 2
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Observation: There is no integration in the National Plan of the overall response to a nuclear emergency caused by a nuclear security event at the Krško NPP to ensure adequate, coordinated and integrated emergency response to this type of emergency.
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Basis for suggestion: GSR Part 7 paragraph 5.6 states: Arrangements for response to a nuclear or radiological emergency shall be coordinated and integrated with arrangements at the local, regional and national levels for response to a conventional emergency and to a nuclear security event.

Suggestion: The Government should consider inclusion of provisions in the National Plan to ensure that emergency responders interact with security forces and that emergency response activities are carried out in a coordinated and integrated manner in the event of a nuclear emergency arising from a security event in the NPP.
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4.3. Training, drills and exercises

The 2017 EPREV mission actions related to training, drills and exercises include one recommendation and two suggestions.

2017 EPREV Recommendation 19

Observation: Not all the specific functions that need to be performed in an emergency have a consistent and appropriate schedule for training, refresher training and exercises. For nuclear emergencies, training is available and drills and exercises are regularly performed, but not for radiological emergencies, particularly those involving dangerous sources.
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Basis for recommendation: GSR Part 7 paragraph 6.28 states: “The operating organization and response organizations shall make arrangements for the selection of personnel and for training to ensure that the personnel selected have the requisite knowledge, skills and abilities to perform their assigned response functions. The arrangements shall include arrangements for continuing refresher training on an appropriate schedule and arrangements for ensuring that
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2017 EPREV Recommendation 19

personnel assigned to positions with responsibilities in an emergency response undergo the specified training.”

Recommendation: The Government and municipalities should identify the needs for training and exercises at all levels of responsibility and competences and establish adequate training programmes and exercises involving all response organizations.

Changes since the 2017 EPREV Mission

A new *Training Program for Ionizing Radiation Protection* has been confirmed (604-21/2022-2 of 25 May 2022). Complementary training of members of rescue and other services and units on response to a nuclear or radiological emergency will be included in the plan of education and training in the field of protection against natural and other disasters in the Education Center for Civil Protection and Disaster Relief in 2022. The trainings are intended for civil protection units, fire brigades of general importance and other voluntary fire brigades, police, emergency medical units and, depending on the needs, other units and services.

The Municipality of Krško has prepared a plan for annual trainings, exercises, and drills, which will be supplemented with appropriate content. Specific trainings are available for management, e.g. for mayors, civil protection staff, representatives of ministries and police. These trainings are regularly planned and executed.

A national exercise is scheduled for November 2022 and the national exercise for 2023 is in preparation. Municipal, regional, national and international participation will be included in future planning.

Status of the finding

Recommendation 19 is closed on the basis of actions taken.

2017 EPREV Suggestion 10

Observation: The SNSA does not regularly exercise its responsibility to provide advice and assessment to licensees and first responders during a radiological emergency.

Basis for suggestion: GSR Part 7 paragraph 6.31 states: “The personnel responsible for critical response functions shall participate in drills and exercises on a regular basis so as to ensure their ability to take their actions effectively.”

Suggestion: SNSA should consider conducting exercises to test the capability of the officer on duty to provide advice remotely during initial response to a radiological emergency.

Changes since the 2017 EPREV Mission

Since March 2018, at least once per year, the SNSA duty officers participate in the on-call consulting training, for which SNSA prepares various realistic scenarios. On-call consulting training for SNSA duty-officers is included in the long-term training plan of the SNSA Emergency Response Team and carried out annually. Besides the yearly practical training there is also a yearly theoretical training that covers specific dedicated procedures. Such an approach ensures that new staff can be easily integrated in the programme.

Status of the finding

Suggestion 10 is closed on the basis of actions taken.

2017 EPREV Suggestion 11

Observation: The national and organizational exercise programmes in place do not fully cover all postulated emergencies and do not include the participation of all response organizations.

Basis for suggestion: GSR Part 7 paragraph 6.30 states: “Exercise programmes shall be developed and implemented to ensure that all specified functions required to be performed for emergency response, all organizational interfaces for facilities in category I, II or III, and the national level programmes for category IV or V are tested at suitable intervals.”

Suggestion: ACPDR should consider developing an exercise programme that tests and evaluates all response organizations periodically, and considers the response to a variety of postulated nuclear and radiological emergencies, including those initiated by nuclear security events.

Changes since the 2017 EPREV Mission

The last national nuclear exercise was conducted in 2019. The Municipalities, Krško NPP, civil protection and different Ministries were invited to participate. The purpose of the exercise was to test (1) the emergency preparedness of the Krško NPP; (2) coordination at different levels of response (national, regional, local, and facility levels); and (3) correct understanding and implementation of assigned roles and responsibilities. It was conducted in the form of a tabletop exercise.

The ACPDR developed an annual exercise plan. According to the plan, the emergency arrangements for radiological and nuclear safety are tested every three and five years respectively. In November 2022 a national nuclear exercise is planned.

New staff are enrolled in the training programme and start with an introductory training programme.

At the moment there are 110 different training programmes, from introduction, advanced, to exercises for different target groups and expert levels.

Status of the finding

Suggestion 11 is closed on the basis of actions taken.

2022 EPREV follow-up mission observation

Significant work has been undertaken in Slovenia since 2017 in the fields of nuclear safety, nuclear security and emergency preparedness. In May 2022, a three-day exercise (Exercise KiVA²⁰²²) which encompassed each of these three fields was prepared and conducted by SNSA in cooperation with the IAEA and the Austrian Institute of Technology. The exercise scenario was based on a cyber security attack in a fictitious nuclear facility. Many key cyber security, nuclear safety and nuclear security stakeholders from Slovenia and other countries participated. The exercise was enhanced by the preparation of specially designed exercise information and

the use of process equipment models employed by nuclear facilities, as well as software and hardware frequently used by cyber attackers. The review team recognized that this novel exercise strengthened the foundations for nuclear and cyber security.

Good Practice 2
Observation: Exercise KIVA conducted in 2022 provided an opportunity to test relevant countermeasures to disable cyber-attacks against an NPP.
Basis for Good Practice: GSR Part 7 6.31 states: “The personnel responsible for critical response functions shall participate in drills and exercises on a regular basis so as to ensure their ability to take their actions effectively”
Good Practice: This original exercise strengthens the foundations for nuclear security in the nuclear sector, and specifically in computer security in NPPs.

4.4. Quality management

The 2017 EPREV mission actions related to quality management include one suggestion and one good practice.

2017 EPREV Suggestion 12
Observation: There are inconsistent quality management programmes in place to ensure the availability of emergency response organizations, equipment, and resources.
Basis for suggestion: GSR Part 7 paragraph 6.34 states: “The operating organization, as part of its management system, and response organizations, as part of their emergency management system, shall establish a programme to ensure the availability and reliability of all supplies, equipment, communication systems and facilities, plans, procedures and other arrangements necessary to perform functions in a nuclear or radiological emergency ...”
Suggestion: The Government should ensure that response organizations implement a quality management programme.

Changes since the 2017 EPREV Mission

SNSA issued practical guidelines, 1.07 *Establishment, introduction, implementation and continuous improvement of a comprehensive management system*, targeted at operating organizations (both nuclear facilities and organizations using radioactive sources), technical support organizations and other organizations, having tasks and responsibilities in various fields of nuclear and radiation safety, which provides instructions and recommendations regarding the establishment, implementation, and continuous improvement of a quality management system. The guidelines are not of a binding nature.

The draft National Plan, version 4, provides for the availability and reliability of all supplies, equipment, communications systems and facilities, plans, procedures, and other activities necessary to perform functions in a nuclear or radiological emergency.

ACPDR plans to conduct a periodic gap analysis (at the end of each planning cycle) to identify gaps and develop a program to address them.

ARAO has an ISO 9001 accredited quality management system in place.

The Administration for Food Safety, Veterinary Sector and Plant Protection does not have a formal quality management programme but Regulation (EU) 2017/625 requires that a system of internal audits is carried out to verify activities.

While quality management programmes exist in some emergency response organizations, there is no mechanism to ensure that quality management programmes exist in all emergency response organizations.

Status of the finding

Suggestion 12 remains open based on the need for a comprehensive quality management programme for all emergency response organizations.

5. POLICY ISSUE: IMPLICATIONS OF THE PANDEMIC AND ASSOCIATED CHALLENGES ON ALL LEVELS OF EMERGENCY PREPAREDNESS AND RESPONSE

A brief policy discussion took place during the mission and provided an opportunity for the members of the EPREV Team and staff of the Slovenian regulatory body, response organizations and Krško NPP to discuss experiences, challenges and lessons learned in the area of emergency preparedness and response arising from the Covid-19 Pandemic to ensure that the impact of Covid-19 on emergency preparedness and response arrangements is properly managed.

Participants spoke about the challenges of rapidly adjusting to the pandemic related restrictions in order to continue their operations with “work from home” solutions; establishing virtual emergency operations centres, when necessary, remote access to computer servers and Covid-19 safety protocols for operational staff required at their respective organizations.

The management of risk on emergency response functions was also discussed. In particular, the risks of evacuations during a pandemic and how to implement social distancing during the transport and housing of evacuees was discussed. In some IAEA Member States, revised reference levels were implemented or considered to be put in place in case of a nuclear emergency.

Some organizations highlighted that functions related to EPR processes were not overly affected. For example, in the regulatory activities the implementation of a graded approach was used to adjust annual inspection plans in such a manner that safety would not be compromised. This included virtual inspections, remote interviews and discussion of documentation, and others.

Adjustments were also required for activities such as conducting training activities, drills, and exercises with other participating organizations through virtual mechanisms.

Emergency response organizations also experienced issues with the adequacy of staffing levels when responding to the pandemic became a priority over other planned activities. In some cases, activities were postponed temporarily so that staff could focus on managing issues associated with the pandemic. Similarly, the operator developed protocols and procedures to deal with staff shortages.

Some Covid-19 pandemic response experiences are useful for improving nuclear and radiological preparedness and response.

Appendix I: EPREV Follow-Up Mission Team Composition

No.	Name and LAST NAME	Position	Organization
1.	Mr David NODWELL	Team Leader	Canada
2.	Ms Katerina KOUTS	Team Coordinator	IAEA
3.	Ms Lyudmila SIMEONOVA	Reviewer	Bulgaria
4.	Ms Veronica SMITH	Reviewer	Ireland
5.	Mr Peter VAN BEEK	Reviewer	Netherlands
6.	Mr Ramon DE LA VEGA	Reviewer	Spain

Appendix II: Mission Schedule

Agenda				Slovenia only activity
EPREV Follow-Up Mission in Slovenia				IAEA only activity
				IAEA and Slovenia activity
Day	Time	Location	Activity	Participants
Sunday 2022-10-02	10:00 – 13:00	Grand Hotel Union Eurostars, Lotus Meeting Room	Briefing, refresher presentation, review mission plan, review preliminary observations/impressions and assignment of priorities	<ul style="list-style-type: none"> IAEA team
	13:00 – 14:00	Lunch		
	14:00 – 16:00	Grand Hotel Union Eurostars, Lotus Meeting Room	<ul style="list-style-type: none"> Discuss schedule, final administrative arrangements and clarifications as required Present latest changes in national framework (Slovenia EPREV Coordinator) 	<ul style="list-style-type: none"> IAEA team Slovenia Coordinator
	16:00 – 17:00	Grand Hotel Union Eurostars, Lotus Meeting Room	Discuss impact of national changes on preliminary observations	<ul style="list-style-type: none"> IAEA team Slovenia Coordinator
Monday 2022-10-03	09:00 – 12:00		Entrance meeting:	<ul style="list-style-type: none"> IAEA team Slovenia representatives (senior management and focal points)
	09:00 – 09:30		<ul style="list-style-type: none"> Opening remarks and introductions (Slovenia: SNSA Director; ACPDR Deputy Director General) 	
	09:30 – 09:40		<ul style="list-style-type: none"> Opening remarks and introductions (IAEA Team Leader) 	
	09:40 – 10:10		<ul style="list-style-type: none"> EPREV objectives and process (IAEA Coordinator) 	
	10:10 – 10:40		<ul style="list-style-type: none"> Coffee Break 	
	10:40 – 11:25		<ul style="list-style-type: none"> Slovenia's national framework for EPR (Slovenia Coordinator) 	
	11:25 – 11:35		<ul style="list-style-type: none"> Introduction of all organizations (Slovenia organizations) 	
	11:35 – 11:40		<ul style="list-style-type: none"> Arrangements for the mission (Slovenia Coordinator) 	
	11:40 – 12:00		<ul style="list-style-type: none"> Group photo with all participants 	
	12:00 – 13:00	Lunch		
	13:00 – 14:00		Meetings with stakeholders³:	<ul style="list-style-type: none"> Slovenia representatives as needed⁴
	13:00 – 14:00	Grand Hotel Union Eurostars, Lotus Meeting Room	Meeting with SNSA representatives (Recs 1, 9; Sugs 4, 5, 7)	<ul style="list-style-type: none"> IAEA Team A Slovenia representatives (SNSA)
13:00 – 14:00	Grand Hotel Union Eurostars, Orhideja Conference Room	Meeting with ACPDR representatives (Rec 5; Sugs 1, 9)	<ul style="list-style-type: none"> IAEA Team B Slovenia representatives (ACPDR) 	

³ Interviews are expected to finish as much as possible with clear statements from IAEA reviewer(s) about their perception about the status of the relevant recommendations/suggestions. This is for transparency purposes and due to time limitations.

⁴ The specific timing for every entity is still under consideration.

Agenda EPREV Follow-Up Mission in Slovenia				Slovenia only activity	
				IAEA only activity	
				IAEA and Slovenia activity	
Day	Time	Location	Activity	Participants	
	14:00 – 17:00	Grand Hotel Union Eurostars, Orhideja Conference Room	Meeting with SNSA and ACPDR representatives (Recs 2, 3, 4, 10, 11, 13, 14, 15, 16, 17, 18, 19; Sugs 2, 3, 8, 10, 11, 12)	<ul style="list-style-type: none"> IAEA Team Slovenia representatives (SNSA, ACPDR, Education Centre for Civil Protection) 	
	17:00 – 18:00	Grand Hotel Union Eurostars, Lotus Meeting Room	IAEA team meeting with Slovenia Coordinator to discuss open items	<ul style="list-style-type: none"> IAEA team Slovenia Coordinator 	
	18:00 onwards	Grand Hotel Union Eurostars, Lotus Meeting Room	IAEA team meeting ⁵	<ul style="list-style-type: none"> IAEA team 	
Tuesday 2022-10-04	TEAM C	09:00 – 10:30		Travel to Krško	<ul style="list-style-type: none"> IAEA Team C Slovenia representatives (Municipality of Krško, Fire Brigade Krško)
		10:30 – 13:00	Cesta krških žrtev 14, 8270 Krško	Interviews (Recs 2, 4, 5, 19; Sags 6, 7, 9, 11)	
		13:00 – 14:00		Lunch	
		14:00 – 15:30		Travel to Ljubljana	
	15:30 – 16:00	Government Communication Office: Gregorčičeva 25, Ljubljana	Interviews (Rec 10)	<ul style="list-style-type: none"> IAEA Team C Slovenia representatives (GCO) 	
	TEAM D	09:00 – 10:00	MoI: Litostrajska vesta 54, Ljubljana	Interviews (Recs 5, 13, 17; Sag 2)	<ul style="list-style-type: none"> IAEA Team D Slovenia representatives (MoI and Police)
		10:00 – 10:10		Travel to Agency for Radwaste Management	<ul style="list-style-type: none"> IAEA Team D
		10:10 – 11:10	Agency for Radwaste Management: Litostrajska cesta 58a, Ljubljana	Interviews (Rec 12; Sag 3)	<ul style="list-style-type: none"> IAEA Team D Slovenia representatives (ARAO and CSRAO)
		11:10 – 11:40		Travel to Brinje	
		11:40 – 12:10	Central Radioactive Waste Storage Facility: Brinje 40, 1262 Dol pri Ljubljani	Visit and interviews (continued)	
		12:10 – 12:40		Travel to Ljubljana	<ul style="list-style-type: none"> IAEA Team D
		12:40 – 13:40		Lunch	
		13:40 – 15:15	Administration for Food Safety, Veterinary Sector and Plant Protection: Dunajska 22, Ljubljana	Interviews (Rec 12; Sag 3)	<ul style="list-style-type: none"> IAEA Team D Slovenia representatives (Administration for Food Safety, Veterinary Sector and Plant Protection including Ministry of Agriculture, Forestry and Food)

⁵ At the end of each day IAEA and Slovenia coordinators will discuss details of next day activities, as needed.

Agenda EPREV Follow-Up Mission in Slovenia				Slovenia only activity
				IAEA only activity
				IAEA and Slovenia activity
Day	Time	Location	Activity	Participants
	16:00 – 17:00	Grand Hotel Union Eurostars, Lotus Meeting Room	Meeting and additional interviews and visits as needed ⁶	<ul style="list-style-type: none"> IAEA team Slovenia Coordinator
	17:00 – 18:00	Grand Hotel Union Eurostars, Lotus Meeting Room	IAEA team meeting with Slovenia Coordinator to discuss open items	<ul style="list-style-type: none"> IAEA team Slovenia Coordinator
	18:00 onwards	Grand Hotel Union Eurostars, Lotus Meeting Room	<ul style="list-style-type: none"> IAEA team meeting Report writing 	<ul style="list-style-type: none"> IAEA team
Wednesday 2022-10-05	09:00 – 10:00	SRPA: Ajdovščina 4, Ljubljana	Interviews (Recs 1, 2, 5, 8; Sags 5, 7)	<ul style="list-style-type: none"> IAEA Team Slovenia representatives (SRPA, JSI, Institute of Occupational Safety)
	10:00 – 11:00	SRPA: Ajdovščina 4, Ljubljana	Interviews (Recs 1, 5, 6, 7, 8, 9, 13; Sags 5, 7)	<ul style="list-style-type: none"> IAEA Team Slovenia representatives (MoH including representatives from National Institute of Public Health, University Medical Centre Ljubljana and Department of Nuclear Medicine)
	11:00 – 12:00	SRPA: Ajdovščina 4, Ljubljana	Policy discussion	<ul style="list-style-type: none"> IAEA team Slovenia representatives (SNSA, ACPDR, SRPA, MoH, Krško NPP)
	12:00 – 13:00		Lunch	
	13:00 – 18:00	Grand Hotel Union Eurostars, Lotus Meeting Room	<ul style="list-style-type: none"> IAEA team meeting Report writing Prepare press release and preliminary draft of Executive Summary 	<ul style="list-style-type: none"> IAEA team
	18:00	—	Preliminary draft report and press release submitted to Slovenia EPREV Coordinator	<ul style="list-style-type: none"> IAEA team
	18:00 – 20:00	Gostilna Sokol Ljubljana, a Ciril Metodov trg 18, Ljubljana	Hospitality Dinner	<ul style="list-style-type: none"> IAEA team Slovenia team
Thursday 2022-10-06	08:00 – 08:30	Grand Hotel Union Eurostars, Lotus Meeting Room (emails or Webex, if needed)	Meeting to agree on press release content	<ul style="list-style-type: none"> IAEA Coordinators Slovenia Coordinator

⁶ IAEA coordinator will communicate to Slovenia coordinator the entities that are needed for those meetings. This communication will be done the day before.

Agenda EPREV Follow-Up Mission in Slovenia				Slovenia only activity
				IAEA only activity
				IAEA and Slovenia activity
Day	Time	Location	Activity	Participants
	08:30 – 12:00	Slovenian organizations on their premises	Slovenia team reviews report and prepares written comments	<ul style="list-style-type: none"> • Slovenia team
	08:30 – 12:00	Grand Hotel Union Eurostars, Lotus Meeting Room	Draft Executive Summary	<ul style="list-style-type: none"> • IAEA Coordinator • IAEA Team Leader
	12:00 – 13:00		Lunch	
	13:00	—	Slovenia submits report with written comments	<ul style="list-style-type: none"> • Slovenia Coordinator
	13:00 – 16:00	Grand Hotel Union Eurostars, Lotus Meeting Room	IAEA team meeting to address comments and finalize report	<ul style="list-style-type: none"> • IAEA team • Slovenia Coordinator, as needed
	16:00 – 18:30	Grand Hotel Union Eurostars, Lotus Meeting Room	Meeting to agree on report and Executive Summary	<ul style="list-style-type: none"> • IAEA team • Slovenia Coordinator • Slovenia representatives, as needed
	19:00 onwards	Grand Hotel Union Eurostars, Lotus Meeting Room	Meeting to finalize Exit Meeting presentations	<ul style="list-style-type: none"> • IAEA Coordinator • IAEA Team Leader
Friday 2022-10-07	09:00	—	Delivery of agreed report	<ul style="list-style-type: none"> • IAEA team
	09:00 – 11:45	Grand Hotel Union Eurostars, Orhideja Conference Room	Exit meeting:	<ul style="list-style-type: none"> • IAEA team • IAEA Coordinator • Slovenia team (senior management) • Slovenia ACPDR Director of Prevention, Training and International Cooperation Office, SNSA Director
	09:00 – 09:30		<ul style="list-style-type: none"> • Coffee 	
	09:30 – 09:40		<ul style="list-style-type: none"> • Introduction (Slovenia Coordinator) 	
	09:40 – 10:25		<ul style="list-style-type: none"> • Mission’s main observations (presentation; IAEA Team Leader) 	
	10:25 – 10:35		<ul style="list-style-type: none"> • Next steps (IAEA Coordinator) 	
	10:35 – 11:00		<ul style="list-style-type: none"> • Discussion 	
	11:00 – 11:30		<ul style="list-style-type: none"> • Closing remarks (Slovenia, ACPDR Director of Prevention, Training and International Cooperation Office; SNSA Director) 	
	11:30 – 11:45		<ul style="list-style-type: none"> • Closing remarks (IAEA Coordinator) 	
	11:45			

Appendix III: Attendees to EPREV Follow-Up Mission Meetings

No.	Name	Organization
Administration for Civil Protection and Disaster Relief		
1.	Andreja Ferlin Lubi	Administration for Civil Protection and Disaster Relief
2.	Branko Sojer	Administration for Civil Protection and Disaster Relief
3.	Franja Turk Stojanovič	Administration for Civil Protection and Disaster Relief
4.	Jože Pogačar	Administration for Civil Protection and Disaster Relief
5.	Mojca Zupan	Administration for Civil Protection and Disaster Relief
6.	Olga Andrejek	Administration for Civil Protection and Disaster Relief
7.	Stanislav Lotrič	Administration for Civil Protection and Disaster Relief
8.	Tanja Novak	Administration for Civil Protection and Disaster Relief
Administration for Food Safety, Veterinary Sector and Plant Protection		
9.	Jernej Drogenik	Administration for Food Safety, Veterinary Sector and Plant Protection
10.	Matjaž Guček	Administration for Food Safety, Veterinary Sector and Plant Protection
11.	Nadja Škrk	Administration for Food Safety, Veterinary Sector and Plant Protection
12.	Vida Znoj	Administration for Food Safety, Veterinary Sector and Plant Protection
Cabinet of the Prime Minister		
13.	Dragan Barbutovski	Cabinet of the Prime Minister
Central Radioactive Waste Storage Facility		
14.	Jernej Gjörköš	Central Radioactive Waste Storage Facility
15.	Simona Sučić	Central Radioactive Waste Storage Facility
Government Communication Office		

No.	Name	Organization
16.	Andrej Savelli	Government Communication Office
17.	Nataša Marvin Sinjeri	Government Communication Office
Fire Fighters Brigade Krško		
18.	Rudi Vrščaj	Fire Fighters Brigade Krško
Ministry of Interior of Republic of Slovenia		
19.	Irena Utroša	Ministry of Interior of Republic of Slovenia
20.	Slavko Koroš	Ministry of Interior of Republic of Slovenia
Ministry of Interior of Republic of Slovenia – Police Directorate Novo mesto		
21.	Robert Perc	Ministry of Interior of Republic of Slovenia – Police Directorate Novo mesto
Ministry of Health		
22.	Darko Čander	Ministry of Health
23.	Luka Gorup	Ministry of Health
24.	Mirko Stopar	Ministry of Health
25.	Nejc Hribernik	Ministry of Health
National Institute of Public Health		
26.	Nuška Čakš Jager	National Institute of Public Health
Slovenian Nuclear Safety Administration		
27.	Anja Grabner	Slovenian Nuclear Safety Administration
28.	Igor Grlicarev	Slovenian Nuclear Safety Administration
29.	Igor Osojnik	Slovenian Nuclear Safety Administration
30.	Igor Sirc	Slovenian Nuclear Safety Administration

No.	Name	Organization
31.	Metka Tomažič	Slovenian Nuclear Safety Administration
32.	Michel Cindro	Slovenian Nuclear Safety Administration
33.	Saša Kuhar	Slovenian Nuclear Safety Administration
Slovenian Radiation Protection Administration		
34.	Damijan Škrk	Slovenian Radiation Protection Administration
35.	Nina Jug	Slovenian Radiation Protection Administration
36.	Tomaž Šutej	Slovenian Radiation Protection Administration
University Clinical Center Ljubljana		
37.	Katja Zaletel	University Clinical Center Ljubljana
38.	Lucija Šarc	University Clinical Center Ljubljana
Urban Municipality of Krško		
39.	Aleš Benje	Urban Municipality of Krško
40.	Melita Čopar	Urban Municipality of Krško

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- [1] FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS, INTERNATIONAL ATOMIC ENERGY AGENCY, INTERNATIONAL CIVIL AVIATION ORGANIZATION, INTERNATIONAL LABOUR ORGANIZATION, INTERNATIONAL MARITIME ORGANIZATION, INTERPOL, OECD NUCLEAR ENERGY AGENCY, PAN AMERICAN HEALTH ORGANIZATION, PREPARATORY COMMISSION FOR THE COMPREHENSIVE NUCLEAR-TEST-BAN TREATY ORGANIZATION, UNITED NATIONS ENVIRONMENT PROGRAMME, UNITED NATIONS OFFICE FOR THE CO-ORDINATION OF HUMANITARIAN AFFAIRS, WORLD HEALTH ORGANIZATION, WORLD METEOROLOGICAL ORGANIZATION, Preparedness and Response for a Nuclear or Radiological Emergency, IAEA Safety Standards Series No. GSR Part 7, IAEA, Vienna (2015).
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- [3] FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS, INTERNATIONAL ATOMIC ENERGY AGENCY, INTERNATIONAL LABOUR OFFICE, PAN AMERICAN HEALTH ORGANIZATION, UNITED NATIONS OFFICE FOR THE COORDINATION OF HUMANITARIAN AFFAIRS, WORLD HEALTH ORGANIZATION, Arrangements for Preparedness for a Nuclear or Radiological Emergency, IAEA Safety Standards Series No. GS-G-2.1, IAEA, Vienna (2007).
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- [6] INTERNATIONAL ATOMIC ENERGY AGENCY, Preparedness and Response for a Nuclear or Radiological Emergency Involving the Transport of Radioactive Material, IAEA Safety Standards Series No. SSG-65, IAEA, Vienna (2022).

Acronyms

ACPDR	Administration for Civil Protection and Disaster Relief
ARAO	Agency for Radioactive Waste Management
CBRN	Chemical, Biological, Radiological and Nuclear
ConvEx	Convention Exercise (of the IAEA)
CSRAO	Central Radioactive Waste Storage Facility
EPC	Emergency Preparedness Category
EPR	Emergency Preparedness and Response
EPREV	Emergency Preparedness Review
ERCC	Emergency Response Coordination Centre (of the EU)
EU	European Union
GCO	Government Communication Office
IAEA	International Atomic Energy Agency
IRRS	Integrated Regulatory Review Service
JSI	Jožef Stefan Institute
MoH	Ministry of Health
MoI	Ministry of Interior
NPP	Nuclear Power Plant
PAZ	Precautionary Action Zone
RANET	Response and Assistance Network (of the IAEA)
SNSA	Slovenian Nuclear Safety Administration
SRPA	Slovenian Radiation Protection Administration
UPZ	Urgent Protective Action Planning Zone