



**IEC**  
Incident and  
Emergency Centre

# EPR INSIGHTS

Updates on Emergency Preparedness and Response

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**FOCUS:  
EMERGENCY  
PREPAREDNESS  
AND RESPONSE  
INFORMATION  
MANAGEMENT SYSTEM  
(EPRIMS)**

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The IAEA Emergency Preparedness and Response Information Management System (EPRIMS) has provided the Republic of Belarus with the basis to gauge implementation of IAEA safety standards for emergency preparedness and response (EPR) in the event of a nuclear or radiological emergency.

Belarus is scheduled to receive an IAEA Emergency Preparedness and Response Review Service (EPREV) in 2018. During an EPREV, the country's EPR capabilities are appraised by comparing its arrangements with current international safety standards and good practices. This review is a vital part of the international EPR framework, and we are working hard towards making it a success. As part of the EPREV preparation, Belarus was tasked with providing information on EPRIMS and this has afforded us the chance to view EPR capabilities at a glance, make a self-assessment and to strategize on where to improve.

**“Using EPRIMS is a major boost to the preparedness of any country. It allows for the strategic planning and revision of EPR capabilities by providing a tool for easily accessing all relevant information.”**

The information in EPRIMS is also being used by the EPREV mission team for its preliminary analysis. By the time the mission takes place later this year, the team will be familiar with the current EPR situation in Belarus, including the national legislation and documents that exist or are under development. Team members can then concentrate on developing recommendations for strengthening our EPR.

Belarus has integrated the response system for nuclear and radiological emergencies into the overarching national emergency response system. Several State administrative bodies have responsibilities for nuclear safety and security, and for responding during a nuclear or radiological emergency. In this respect, the Ministry of Emergency Situations (MES) has asked all stakeholders to provide the relevant information to EPRIMS. MES has sent out the appropriate

instructions, analysed the received information, and amended the uploaded data in the system.

EPRIMS distinguishes information into different EPR categories. This approach was welcomed by national response experts as it reduces any ambiguity in the evaluation of a specific activity or facility.

EPRIMS is a vital tool for the international EPR framework because of its simplicity. By offering the system to Member States, the IAEA has provided



*Viktoryia Dziamyanchyk works in the Republican Centre of Emergency Management and Response in Belarus.*

a common database for national authorities to retrieve information related to EPR more easily, especially given that there are multiple stakeholders involved nationwide. Using EPRIMS is a major boost to the preparedness of any country. It allows for the strategic planning and revision of EPR capabilities by providing a tool for easily accessing all relevant information.

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**Viktoryia Dziamyanchyk,**

Deputy Head, Emergency Monitoring and Forecast Unit, Republican Centre of Emergency Management and Response

## ASSISTING MEMBER STATES IN SHARING INFORMATION ON EMERGENCY PREPAREDNESS ARRANGEMENTS

# EPRIMS: IAEA EMERGENCY PREPAREDNESS DATABASE GROWS STEADILY



*EPRIMS is a web-based tool to store Member State emergency preparedness arrangements.*

The Convention on Early Notification of a Nuclear Accident obligates the IAEA to facilitate the effective exchange of information about nuclear or radiological emergencies. EPRIMS aligns with this mandate. EPRIMS was launched in 2015 and, since then, it has grown to become a valuable part of the international EPR framework.

Assessing arrangements for EPR on a national level is a difficult process. Each emergency response system involves a broad range of stakeholders, complex tasks and information requests. EPRIMS enables Member States to merge all details into a single system that provides easy access to an overview. The system also improves global information sharing about preparedness and response arrangements.

EPRIMS is structured to mirror the requirements set in Preparedness and Response for a Nuclear or Radiological Emergency, IAEA Safety Standards Series No. GSR Part 7, published in 2015. This enables users to directly reference the requirements

when assessing their own arrangements, and it also bolsters the implementation of EPR Safety Standards across the globe.

EPRIMS replaced the IAEA Radiation Safety Information management System (RASIMS) for EPR matters. This tool originally included EPR information for a limited number of Member States but, over time, it was clear that it lacked sufficient EPR features. Having surveyed the use of RASIMS, and through identification of the EPR information that needed to be added, the IAEA Incident and Emergency Centre (IEC) developed EPRIMS to include features that enable automatic reporting, faster input, better information sharing among Member States, and improved access. EPRIMS is important for the IEC as it fosters international coordination in information exchange at the preparedness stage, which improves regional and national EPR capabilities and harmonizes them with international standards.

EPRIMS was designed and launched by the IEC. The IEC has facilitated the exchange of emergency preparedness and response information for many years. EPRIMS is crucial to these endeavours. Its strength is in the commitment of Member States to use it. For accurate response measures to be implemented in any large scale nuclear or radiological event, cooperation is key and EPRIMS provides a safe, secure and simple tool to facilitate Member State cooperation at the preparedness stage.

EPRIMS, an interactive, web-based tool, offers numerous advantages for Member States. It is not only a tool for information and knowledge sharing, but also a program that provides in-depth analyses of

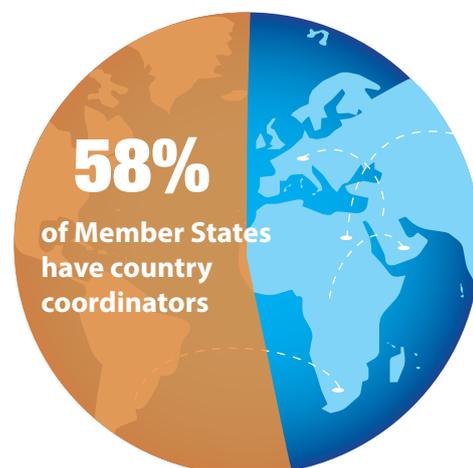
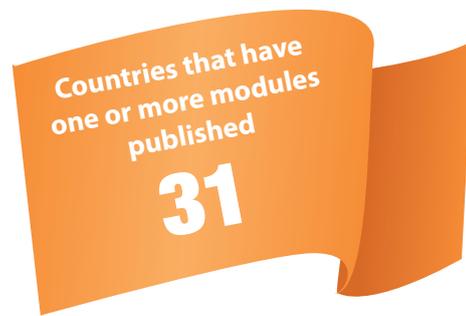
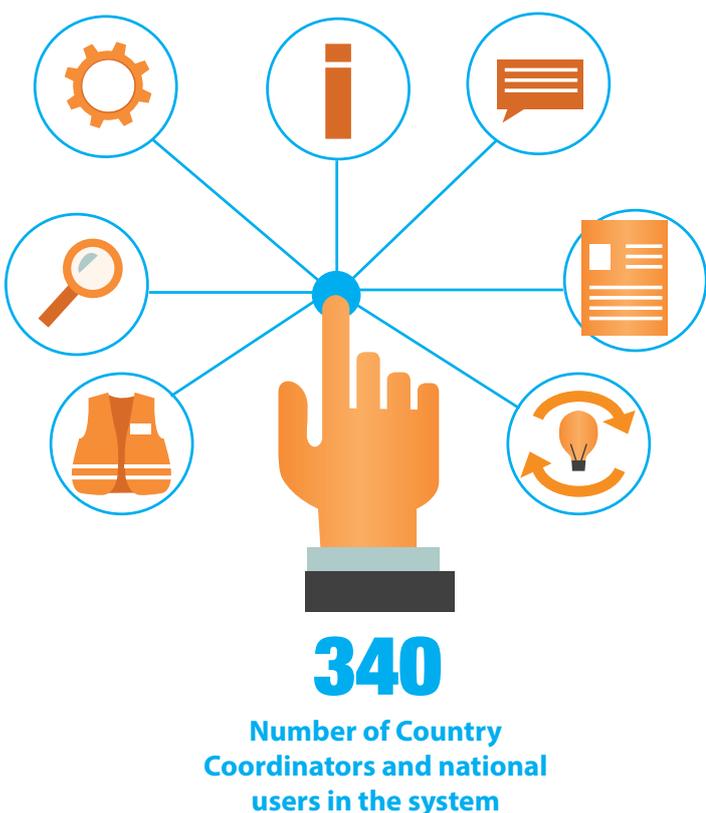
countries' emergency preparedness arrangements, helping to identify areas that need improvement.

EPRIMS does not require the use of self-assessment, but the IAEA recommends it as a method for Member States to compare their EPR arrangements against GSR Part 7. Member States must assign a grade ranging from 0 to 5, in assessing to what extent the requirement has been met. Member States decide with which other Member States they would like to share their information. The data provided can be analysed online and summarized to provide reports, either by country, by sub-region, by region or inter-regionally, giving an overview of Member States EPR arrangements and capabilities. In addition, the self-assessment can generate reports for different international fora. In that regard, the system gives a complete and accurate picture of the international measures in place at any given time.

Sharing knowledge about solutions and working on accurate reports also helps to enhance the prognosis and response capabilities in the field of radiological technology. In the preparedness stage, Member States can upload technical information to EPRIMS regarding their nuclear power reactors, including technical schematics and figures. The IEC will reference this information as part of its response assessment and prognosis process, enabling the Centre to better coordinate actions and as a basis for the input required to communicate in plain language to the public.

As of January 2018, 96 Member States had designated Country Coordinators and 23 had begun editing their national information in EPRIMS. Almost 350 users are registered in the system. In 2018, the IAEA will launch an updated version of EPRIMS to build on the lessons learned over the past two years.

## FACTS & FIGURES ABOUT EPRIMS



# INNOVATIVE APPROACHES TO SHARING EPR DATA

## AN IN-DEPTH LOOK AT EPRIMS

**E**PRIMS offers a multitude of features designed to benefit Member States. It has become a central tool to boost national preparedness for nuclear or radiological emergencies. EPRIMS is available to all Member States. All that is needed to get started is the registration of a national coordinator.

EPRIMS offers:

### **Multi-user entry of data**

This feature ensures that a broad spectrum of EPR professionals in each Member State are included in the assessment. The country coordinator for each State can assign user rights to as many national users as required.

Many stakeholders - from policy makers to fire-fighters - play a role in EPR arrangements and capabilities within a country. Modules are structured in accordance with IAEA General Safety Requirements, GSR Part 7, and can be simultaneously edited by multiple users. The country coordinator should endorse or complete the information within the system before sending it to the IEC. The coordinator can also decide to share modules with the IAEA only, or with other Member States ('partner countries', see below).

### **Distinct input for different emergency preparedness categories**

EPRIMS users can enter data separately in accordance with the five different emergency preparedness categories (see GSR Part 7).

The graded approach to EPR based on emergency preparedness categories reflects differences in EPR arrangements for nuclear power plants and other activities. In this way, the platform helps Member States generate category-based reports. They can also compare

their arrangements with those of other Member States for a regional or global understanding.

### **Self-assessment**

EPRIMS can be used by each Member State to measure itself against IAEA safety standards. This is an effective method to determine where improvements are needed in order to meet IAEA safety standards. When adding information, users are asked to choose a performance indicator (0-5) to rate to which extent each requirement has been met. This provides an indication of the level of preparedness in each country and contributes to stronger global nuclear and radiological EPR.

Before a Member State hosts an IAEA EPREV Mission it is requested to perform a self-assessment on EPRIMS. The results of the self-assessment are reviewed by the IEC in consultation with the Host State EPREV Coordinator. The results enable a decision on whether to hold or postpone the mission. In the latter case, assistance or capacity-building activities may be offered.

### **Partner countries**

A special feature of EPRIMS is the ability of Member States to designate "partner countries". This feature allows countries to compare their preparedness with that of other States, and provides a basis for further information sharing for closer EPR cooperation.

Member States may choose partner countries freely and anonymously. Partner countries are often neighbours or countries within the same region.

### **Newsfeed**

The EPRIMS newsfeed greets each user as they enter the tool. The feed provides the latest news about the tool and allows each country to

post announcements for the benefit of other users. The newsfeed feature also ensures that users receive announcements about modules added by other States.

### **National Reports**

Users of EPRIMS can quickly generate national reports based on information validated by each country. These reports can be used in preparing for attending international events, peer reviews, domestic meetings and for training.



*EPRIMS is one of several IT tools used in the IAEA Incident and Emergency Centre. (Photo: IAEA)*

### **EPRIMS Reactor Technical Information database**

EPRIMS contains a database of static nuclear reactor technical information (RTI).

At the preparedness stage, Member States can use the RTI to provide technical information regarding their nuclear power reactors, including schematics and figures. EPRIMS is linked to the IAEA Power Reactor Information System (PRIS) database to avoid Member States having to enter the same information in two different systems.

EPRIMS RTI helps the IAEA Reactor Assessment Tool users to develop assessments and prognoses during nuclear emergencies, one of the IAEA's response roles. Technical experts analysing a nuclear power plant emergency rely heavily on verified technical details about



*A screenshot of the Reactor Accident Timeline Assessment Tool, an IAEA tool in development. This will support the IAEA in communicating the evolution of an emergency.*

a facility in order to assess how an event might progress.

The RTI includes a database of photos of reactors. These photos, verified by the Member States, can be accessed and used by Public Information Officers to communicate effectively, promptly and clearly with the public during a nuclear or radiological emergency.

## IAEA EMERGENCY PREPAREDNESS REVIEW

# IAEA REVIEWS SLOVENIA'S EMERGENCY PREPAREDNESS AND RESPONSE FRAMEWORK

In early November 2017, a team of international experts and IAEA staff members assessed Slovenia's arrangements for nuclear and radiological EPR. The EPREV was carried out at the request of the Slovenian Government.

The IAEA offers several kinds of peer review and advisory services to strengthen nuclear safety in Member States. EPREVs are based on the IAEA safety standards in nuclear and radiological EPR. So far 39 countries have hosted EPREVs.

David Nodwell, Deputy Chief of Planning and Programme Development at the Ontario Office of the Fire Marshall and Emergency Management, led the seven-person review team in Slovenia, which included experts from Canada, Finland, the Netherlands, Portugal, South Africa and the IAEA. The team, which compared the national emergency response capabilities with the IAEA safety standards, was impressed by Slovenian officials' commitment, openness and transparency.

The team identified and shared several strengths of the EPR arrangements and highlighted areas where further progress will be needed.

"The arrangements for a nuclear or radiological emergency are generally well developed. Many of the areas for improvement identified by the team are common to many countries," Nodwell said.

Prior to any EPREV, the host Member State is requested to assess its EPR capabilities. The IEC recommends that this is completed using EPRIMS. Information about EPR capabilities provided through EPRIMS in advance of an

EPREV helps the IAEA decide whether a peer review or capacity-building activities are suitable.

The self-assessment also highlights areas that need to be improved in advance. EPREV missions are based on the requirements from Preparedness and Response for a Nuclear or Radiological Emergency, IAEA Safety Standards Series No. GSR Part 7. As EPRIMS uses the same structure, a consistent approach to strengthening nationwide preparedness and response is ensured.



Findings from the IAEA review of Slovenia's emergency preparedness and response arrangements for nuclear or radiological emergencies were presented at a press conference in Ljubljana, Slovenia, by IAEA and Slovenian officials. (Photo: M. Breitingner/IAEA)

The EPREV team in Slovenia identified several strong points, including specialized tools and communications software that share technical data during an emergency and the sustained commitment to emergency preparedness by all response organizations in the country.

The EPREV team also complimented the excellent coordination between the nuclear power plant operator, local officials, and national officials.

It highlighted areas where further progress is needed, including: development of a monitoring strategy to ensure that resources are coordinated and data is available to decision makers in a

timely manner; strengthening of the coordination mechanism to ensure all relevant response organizations are integrated into the planning process; and updating national arrangements to include a comprehensive protection strategy for all nuclear and radiological hazards in the country. Furthermore, the review team recommended that the Slovenian authorities conduct frequent drills and exercises to test arrangements for radiological emergencies.

The Slovenian Government has announced that it intends to adopt an action plan to address the findings and to host a follow-up EPREV mission in approximately three years.

## MEET THE IEC STAFF



**“One of the key aspects of preparedness is targeting activities, including training, drills and exercises, based on the needs of the response organization. EPRIMS was designed, in part, to give Member States a platform for comprehensive self-assessments so that they can prioritize efforts at the local, national, regional, and international levels. I’ve been happy to hear of the conversations that have taken place nationally in order to complete the self-assessments in EPRIMS. I look forward to working with additional countries to complete their self-assessments and strengthen the international EPR framework throughout 2018.”**

*Mark Breitinger (seen on the left) is an Emergency Preparedness Officer. The photo was taken during a national exercise with international observers conducted in Botswana in 2015. The scenario, injects, and radiological data were developed in cooperation with IAEA experts and all the information was shared with the international observers for use in their countries.*

**10.01.2018**

# IAEA EMERGENCY PREPAREDNESS AND RESPONSE NEW DEVELOPMENTS

## Safety Guide on Arrangements for the Termination of a Nuclear or Radiological Emergency

In December 2017, the IAEA published a new Safety Guide on Arrangements for the Termination of a Nuclear or Radiological Emergency (IAEA Safety Standards Series No. GSG-11), co-sponsored by 10 International Organizations. The Guide covers the transition from an emergency exposure situation to either an existing exposure situation or a planned exposure situation. It includes detailed prerequisites that authorities can require be fulfilled in order to declare that an emergency has ended. The document also provides guidance on adapting and lifting protective actions.

The Safety Guide supports the implementation of the Safety Requirements publication Preparedness and Response for a Nuclear or Radiological Emergency (IAEA Safety Standards Series No. GSR Part 7). The IAEA is developing training materials and workshops to assist States in the implementation of the new Guide. For information on upcoming training, see the IAEA Events page, or contact: IEC-information@iaea.org.

### Translated publication

Preparedness and Response for a Nuclear or Radiological Emergency, General Safety Requirements No. GSR Part 7 - Translated into French (Russian, Arabic, Chinese and English versions are also available).

[www.iaea.org/publications/epr-series](http://www.iaea.org/publications/epr-series)

### DID YOU KNOW? THE IEC WELCOMED



>950 visitors in 2017

Visitors include delegations from Member States, staff of the Permanent Missions and formal tour groups linked to events in the Vienna International Centre.

## IAEA Designates Capacity Building Centre in Japan for EPR

In September 2017, the IAEA designated an IAEA Capacity Building Centre (CBC) in Japan for EPR, adding to a growing network of education and training facilities worldwide. The designation of Japan's National Institute of Radiological Sciences (NIRS) as the new CBC was marked at a ceremony during the 2017 IAEA General Conference.

"With the designation of this new CBC, Japan has once again underscored its commitment to education and training as an essential part of emergency preparedness and response in the region and internationally," said IAEA Deputy Director General Juan Carlos Lentijo, Head of the Department of Nuclear Safety and Security. There are now four IAEA CBCs for EPR: two in Austria, and one each in Japan and the Republic of Korea.



Koji Noda, Managing Director of Japan's National Institute of Radiological Sciences (NIRS), with IAEA Deputy Director General Juan Carlos Lentijo, Head of the Department of Nuclear Safety and Security, at the signing ceremony in Vienna on 20 September 2017. (Photo: W. Gruenwald/IAEA)



# EVENTS

Contact Point for Events: [IEC-Information@iaea.org](mailto:IEC-Information@iaea.org)

## SELECTED IAEA-ORGANIZED EVENTS IN 2018

22 - 25  
Jan

### **Workshop on the Revised Safety Requirements in Emergency Preparedness and Response (GSR Part 7), Bratislava, Slovakia.**

Purpose:

- Raise Member States' awareness of the revised safety requirements in emergency preparedness and response;
- Discuss the revisions' impact on national emergency preparedness and response frameworks;
- Identify areas that require further guidance and support to facilitate their application.

26 - 29  
March

### **Workshop on Notification, Reporting and Requesting Assistance, Vienna, Austria.**

Purpose:

- Improve Member States' awareness and understanding of the existing emergency communication arrangements;
- Improve emergency communication between contact points and the IEC, including through the Unified System for Information Exchange and other official forms of communication;
- Promote adherence to the Early Notification Convention and the Assistance Convention;
- Increase participation in ConvEx exercises; and e) promote and review the concepts of the Response and Assistance Network (RANET).

23 - 27  
April

### **Technical Meeting on the Draft International Nuclear and Radiological Event Scale (INES) User's Manual, Vienna, Austria.**

Purpose:

- To review and discuss the draft text of the revised INES User's Manual addressing the methodology to rate events associated with sources of radiation and arrangements to communicate the safety significance of the events and the associated INES rating to the public.

06 - 10  
June

### **Ninth Meeting of the Representatives of Competent Authorities under the Early Notification Convention and the Assistance Convention, Vienna, Austria.**

Purpose:

- Share key challenges in national EPR arrangements;
- Discuss issues in the implementation of the IAEA safety standards dealing with EPR;
- Examine arrangements for the IAEA assessment and prognosis process;
- Discuss some sharing information tools.

01 - 05  
Oct

### **International Symposium on Communicating Nuclear and Radiological Emergencies to the Public, Vienna, Austria.**

Purpose:

- Promote effective public communication as a key to an efficient response to a nuclear or radiological emergency;
- Share the latest developments, experiences and good practice regarding emergency public communication;
- Bring together officials responsible for communicating with the public and the media in a nuclear or radiological emergency, including those without a daily communication function.

International Symposium on

## **Communicating Nuclear and Radiological Emergencies to the Public**

1-5 October 2018, Vienna, Austria



# RECENT EVENTS

02 - 05  
Oct

## Workshop on Emergency Preparedness and Response Requirements in Melbourne, Australia

As one in a series of global events, an IAEA workshop was held in Melbourne, Australia, to train experts in the application of IAEA safety standards on nuclear and radiological EPR. The 20 participants from Australia, Georgia, India, Indonesia, Jordan, Malaysia, Myanmar, New Zealand, and Viet Nam learned about concepts addressed in the IAEA General Safety Requirement publication Preparedness and Response for a Nuclear or Radiological Emergency (GSR Part 7). The participants learned about EPR requirements in areas such as emergency management systems, protection strategies, resilience of emergency arrangements, protection of emergency workers, and cooperation in case of a trans-boundary emergency. Since the adoption of GSR Part 7 in 2015, the IAEA has held multiple workshops throughout the world to teach emergency planners and responders how to apply the new requirements within their national EPR frameworks.

16 - 20  
Oct

## Technical Meeting to Review the Draft Safety Guide on Preparedness and Response for an Emergency during the Transport of Radioactive Material (DS469), Vienna, Austria

Sixty-two emergency response and transport safety experts from regulatory bodies, national competent authorities and emergency management agencies took part in the IAEA Technical Meeting to review the draft Safety Guide. The participants, representing 44 Member States and one international organization, shared experiences of emergencies during transport of radioactive materials and other dangerous goods, and national arrangements, to identify areas for improvement in the draft text of the Safety Guide. The revised Safety Guide will supersede its previous version from 2002, and set out guidance and recommendations aiming to achieve the highest levels of emergency preparedness and response for the transportation of radioactive material. It will also support the implementation of IAEA Regulations for the Safe Transport of Radioactive Material, IAEA Safety Standards Series No. SSR-6. (Photo: S. Harvey/IAEA).



06 - 24  
Nov

## First IAEA School of Radiation Emergency Management for Africa in Traiskirchen, Austria

At the School, 31 participants from 27 IAEA Member States in Africa gained a comprehensive understanding of the international nuclear and radiological EPR framework. They learned how to facilitate effective implementation and coordination of sustainable EPR programmes and how to assess and improve radiation emergency preparedness systems based on IAEA safety standards and technical tools. The intensive course included lectures, training sessions, practical exercises and field visits. In 2017, five Schools of Radiation Emergency Management were conducted in Austria (one for Europe and one for Africa), Japan (for Asia), Mexico (for Latin America) and the Republic of Korea (for ASEAN countries). A total of 146 participants from 68 Member States took part. (Photo: IAEA)



## IMPRESSUM

EPR Insights: Updates on Emergency Preparedness and Response

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**IAEA**

International Atomic Energy Agency

*Atoms for Peace and Development*

**Department of Nuclear Safety and Security**

Vienna International Centre, PO Box 100, 1400 Vienna, Austria

<https://www.iaea.org/topics/epr> | [Official.Mail@iaea.org](mailto:Official.Mail@iaea.org)