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Contents

Three Workshops at the Fukushima RANET Capacity Building Centre	1	Israel conducts National Response Exercise at Soreq	3	NIRS 2014 Workshop on Radiation Emergency Medicine	5
Belgium joins RANET	2	IACRNE: 24th Regular Meeting	3	Member State Preparedness	5
IEC Response to Recent Events	2	Safety Requirements on Emergency Preparedness and Response	4	New Publications and Translations	6
Recent Exercises	2			Forthcoming Events	7

Three International Workshops hosted by the Fukushima RANET Capacity Building Centre

November Activities at the IAEA RANET Capacity Building Centre

In November 2014, the IAEA Response and Assistance Network (RANET) Capacity Building Centre (CBC) in Fukushima hosted three international workshops. The first course, on ‘Notification, Reporting and Requesting Assistance’ was held on 4–6 November 2014. The event aimed at providing instruction to Member States on the procedures for coordination with the IAEA in the event of a nuclear or radiological emergency. Twelve participants from Asia and the Pacific Region attended the workshop.

From 10 to 12 November, the Fukushima Centre held the first capacity building workshop, which was specifically conducted for Japan and focused on ‘Emergency Preparedness and Response’ (EPR). The workshop was attended by ten participants from municipalities and organizations of Fukushima Prefecture. Its objective was to train participants in the actions to be undertaken in assisting populations during a nuclear or radiological emergency. The training was conducted by technical experts from the

Japan Atomic Energy Agency (JAEA), the Nuclear Regulation Authority (NRA) of Japan, the Cabinet Office of Japan, the International Federation of Red Cross and Red Crescent Societies and the IAEA.

The third workshop was conducted on 17–21 November. It was attended by 25 participants from nine Member States which have registered radiation survey capabilities as Field Assistance Teams in RANET. The event aimed at enhancing the international assistance framework through the exchange of information, experiences and the conduct of field monitoring activities within the Restricted Area surrounding the Fukushima Daiichi nuclear power plant.



An IEC team member conducts field monitoring activities in the Restricted Area around the Fukushima Daiichi NPP. (Photo Credit: P. Kenny/IEC)

Since its designation in 2013, the IAEA RANET CBC has coordinated training activities, workshops and exercises aimed at enhancing nuclear emergency preparedness and response capacity, both in Japan and worldwide.

Additional capacity building activities are currently being planned for 2015.

Belgium joins RANET

On 18 November 2014, the General Directorate of Civil Security of Belgium formally submitted its registration forms to join RANET. Belgium registered in a total of nine National Assistance Capabilities across three of the RANET Functional Areas.

The Assistance Convention stipulates that “States Parties shall, within the limits of their capabilities, identify and notify the Agency of experts, equipment and materials which could be made available for the provision of assistance to other States Parties in the event of a nuclear accident or radiological emergency as well as the terms, especially financial, under which such assistance could be provided.” By joining RANET, Belgium became the 27th State Party to meet this obligation under the Assistance Convention.

Belgium’s registration helps contribute to further strengthening the international assistance mechanism through which Member States may obtain assistance, upon request, in case of a nuclear or radiological emergency.

IEC Response to Recent Events

On 14 February 2014, a radiological accident involving an industrial radiography source occurred in Ventanilla, Callao, Peru, resulting in the overexposure of one individual. Under the Assistance Convention, the Government of Peru requested assistance from the IAEA, and the IEC organized two assistance missions with the involvement of RANET to provide the medical support required for assessment and treatment. During the first mission to Peru (April–May), a team composed of Brazilian, French and IAEA experts provided medical advice and support in dose assessment and recommended that the patient undergo specialized medical treatment.

The second mission, conducted in three stages from June to November 2014, was organized with the objective of providing medical support in the treatment of the Peruvian patient in Brazil. After the successful completion of the medical treatment, the patient returned to Peru in November 2014 and now is undergoing medical follow-up in Lima.

These assistance missions involved medical experts coming from different countries and institutions who

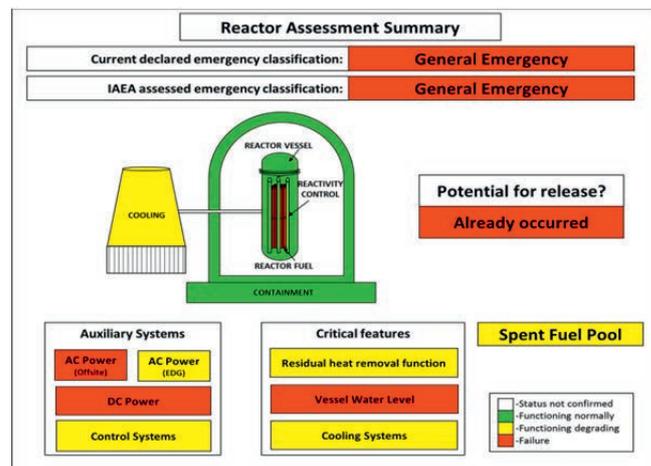
shared their information, knowledge and expertise, thereby contributing to the enhancement of regional medical capabilities in Latin America for the treatment of patients suffering radiation injuries. More information on this project is available on the IAEA web site at: <http://www.iaea.org/technicalcooperation/Regions/Latin-America/News/02172015-PRLA9076.html>

In the last quarter of 2014, 13 events were communicated by counterparts via USIE/NEWS, none of which required significant follow-up by the IEC.

Recent Exercises

The IEC has recently taken part in five different Member State exercises, offering opportunities for IAEA staff to sharpen their ability to handle high-demand emergency situations.

One such exercise took place in Bulgaria and conducted as a ConvEx-2d international exercise. It lasted a full day, and involved a mock scenario in which a strong earthquake damaged a nuclear reactor, leading to the release of radioactive materials into the surrounding environment. In addition to Bulgaria, some 45 Member States and four international organizations took part in the exercise.



Reactor Assessment Summary of the Unit 6 at Kozloduy NPP (Bulgaria) generated by the Technical Team in the IEC during ConvEx-2d

More than 1000 people were directly involved in this exercise in Bulgaria, while the IEC simulated activation of its ‘full response mode’. In this mode, the IEC is staffed continuously to act and coordinate the Agency’s operational response with the involvement of technical experts from throughout the Agency.

Ms. Elena Buglova, Head of the Incident and Emergency Centre, emphasized that these kinds of exercises were

helping the Centre to stay ready and prepared to support Member States in emergencies.

“Exercises also help us strengthen our cooperation with our partners from around the world,” she added, “and they provide an important opportunity to see how our preparations hold up in near-realistic conditions.”

The full-day exercise with Bulgaria helped the Agency strengthen its information sharing process in emergencies. The exercise also provided an opportunity for the IEC to learn more about the participating Member States’ capacity to share information.

Israel conducts National Response Exercise at Soreq Nuclear Research Center

The article was drafted in cooperation with The Israel Atomic Energy Commission (IAEC), the Permanent Mission of Israel to the IAEA and the Preparatory Commission for the Comprehensive Nuclear-Test-Ban Treaty Organization (CTBTO)

On 26 October 2014, Israel conducted a periodic national integrated emergency response exercise, codenamed ‘Bright Sands’. The exercise simulated a scenario of radiation dispersal, due to a malicious act, from the Israel Research Reactor 1 (IRR1) at the Soreq Nuclear Research Center (SNRC).



*The Israeli team during the ‘Bright Sands’ exercise, 24 October 2014
(Photo Credit: Soreq Nuclear Research Center)*

The purpose of ‘Bright Sands’ was to test and evaluate the effective response to a reactor accident in accordance with established national emergency procedures. The exercise simulated the first 24 hours after an accident and included various aspects such as response and mitigation actions on

the ground, risk assessment, interagency coordination and population treatment. All the agencies involved in the response to a nuclear accident participated in the exercise, including the Israel Defense Forces Homefront Command, the Israel Atomic Energy Commission, Israel Police, Fire Brigade and Emergency Medical Services. In addition, observers from various countries and from the IAEA participated in the event.

Pat Kenny, RANET Officer with the Incident and Emergency Centre, was present and observed the high level of preparedness and response of the participating organizations and the command and control demonstrated by the Homefront Command during the exercise. The exercise also provided an ideal opportunity to observe first hand some of the capabilities that Israel had registered in RANET in August 2014.

As an IAEA Member State since 1957, Israel attaches great importance to nuclear safety, emergency preparedness and response, in line with the highest international standards as updated following the accident at the Fukushima Daiichi NPP in Japan. Israel conducts national preparedness exercises on a regular basis, as well as several smaller scale exercises on a facility level, to maintain a high level of coordination between the different agencies involved and to strengthen the effectiveness of response to a nuclear accident.



A decontamination shower used during the exercise (Photo Credit: Soreq Nuclear Research Center)

IEC Staff News

The IEC welcomes Andrew Bramnik (USA) as Emergency Response Training Officer.

24th Regular Meeting of the Inter-Agency Committee on Radiological and Nuclear Emergencies

At the invitation of the IAEA, the 24th Regular Meeting of the Inter-Agency Committee on Radiological and Nuclear Emergencies (IACRNE) took place in Luxembourg from 19 to 21 November 2014, hosted by the European Commission. Representatives of 11 IACRNE member organizations participated in the meeting (CTBTO, EC, EUROPOL, FAO, IAEA, ICAO, INTERPOL, OECD/NEA, UNDP, WHO and WMO). Representatives of the International Federation of Red Cross and Red Crescent Societies (IFRC) attended the meeting as observers.

The Meeting recapitulated conclusions and outcomes from the 23rd Regular Meeting and noted the following: reports on IACRNE activities and reports on EPR activities in organizations and entities represented at the meeting; information on international exercises; and conclusions of the 18th Meeting of the Inter-Agency Committee on Radiation Safety (IACRS). The meeting discussed and endorsed five standard operating procedures, established two ad-hoc IACRNE work groups to contribute to the development of two safety guides and considered and endorsed a proposal for the committee's work plan. The IACRNE also welcomed UNDP as its 18th member.

Overall, 11 conclusions were adopted. The next IACRNE Regular Meeting will be held on 24–26 November 2015.

Commission on Safety Standards endorses Safety Requirements on Emergency Preparedness and Response

The IAEA's Commission on Safety Standards (CSS) endorsed the Safety Requirements on Preparedness and Response for a Nuclear or Radiological Emergency at its 36th meeting held on 3–4 November 2014. At the meeting,

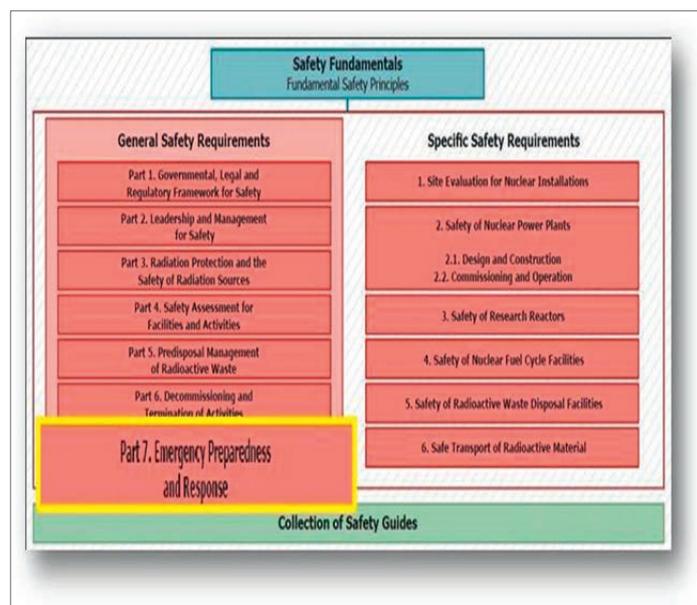
several members of CSS commended the draft Safety Requirements and expressed their appreciation of the process used for their development.

The objective of the Safety Requirements is to ensure an adequate level of preparedness and response to a nuclear or radiological emergency, irrespective of its cause. The Requirements apply to preparedness and response in relation to all facilities, activities and sources of ionizing radiation with the potential for causing radiation exposure, environmental contamination or concern on the part of the public warranting protective actions and other response actions.

As a revision of the current edition of the IAEA Safety Standard No. GS-R-2, issued in 2002, the Safety Requirements take into account:

- Experience gained from responses to emergencies since 2002, including, but not limited to, the accident at the Fukushima Daiichi nuclear power plant, as well as findings from exercises conducted since 2002;
- Feedback obtained by Member States on the application of the requirements established in Safety Standard No. GS-R-2;
- Relevant developments in the field, as well as recommendations of the International Commission on Radiological Protection (ICRP);
- Experiences of the relevant international intergovernmental organizations.

The endorsed Safety Requirements are expected to be published as Part 7 of the General Safety Requirements within the IAEA Safety Standard Series (i.e. Safety Standard No. GSR Part 7) by the end of 2015.



Currently, nine international intergovernmental organizations — the Food and Agriculture Organization of the United Nations (FAO), International Labour

Organization (ILO), International Maritime Organization (IMO), INTERPOL, United Nations Office for the Co-ordination of Humanitarian Affairs (OCHA), Pan American Health Organization (PAHO), United Nations Environment Programme (UNEP), World Health Organization (WHO) and the World Meteorological Organization (WMO) — have formally agreed to jointly sponsor the Safety Requirements publication, with additional organizations also announcing their interest in doing so.

NIRS Workshop on Radiation Emergency Medicine

Medical experts from 13 countries (India, Indonesia, Republic of Korea, Malaysia, Mongolia, Myanmar, Oman, Pakistan, Philippines, Saudi Arabia, Sri Lanka, Thailand and Vietnam) participated in the 2014 NIRS Workshop on Radiation Emergency Medicine in Asia from 4 to 6 November 2014 in Chiba City, Japan. The event was organized by the National Institute of Radiological Sciences (NIRS), in cooperation with the IAEA and the WHO.



Participants at the NIRS Workshop (Photo Credit: NIRS)

The workshop, held at the NIRS Training Centre, hosted a wide range of activities, including: lectures, discussions, physics laboratory exercises, table top exercises and practical drills. The drills were focussed primarily on medical response to radiation emergencies, demonstrating to the participants the medical management of patients with external radioactive contamination and wound decontamination procedures.

Information on the role of the Incident and Emergency Centre, as well as the most recent radiation emergencies worldwide, was also part of the programme.

In addition, an open session with participants was organized to analyse radiation medicine gaps in the region and discuss possible solutions to improving these areas from the medical perspective.

The workshop provided a comprehensive overview of medical response to radiation emergencies enabling, the participants to join emergency teams in this capacity. The activity concluded with a visit to the Heavy Ion Medical Accelerator (HIMAC) at the NIRS.

Member State Preparedness

Inter-Regional Level:

- Training Course on First Response to Radiation Emergencies: Procedures for Ports and Customs Offices (USA, Las Vegas, 20–24 October)
- Training Course for Trainers on Emergency Consequence Management (Austria, Vienna, 17-21 November)

Regional Level:

- Training Course on Public Communications during an Emergency (Tajikistan, Dushanbe, 13-17 October)
- Training Workshop on Radiation Emergency Medicine at NIRS (Japan, Chiba City, 4-6 November)
- Regional Workshop to Standardize Biodosimetry Methodologies and its Dissemination to Support Medical Emergencies Response (Argentina, Buenos Aires, 17-21 November)

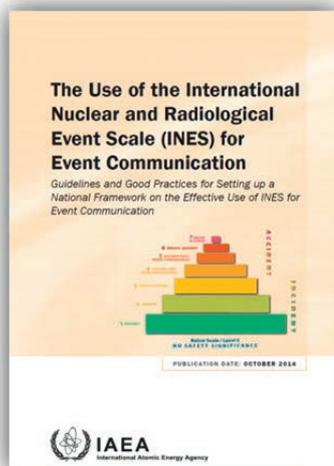
National Level:

- Training Course on Communication with the Public in a Nuclear or Radiological Emergency (Philippines, Quezon City, 20-24 October)
- Training Course on First Response to a Radiological Emergency (Dominican Republic, Santo Domingo, 27-31 October)
- Training Course on Medical Preparedness and Response for a Nuclear or Radiological Emergency at the Scene (United Arab Emirates, Abu Dhabi, 9-11 November)
- Training Course on Medical Preparedness and Response for a Nuclear or Radiological Emergency at the Hospital (United Arab Emirates, Abu Dhabi, 14-16 November)

New Publications and Translations

The Use of the International Nuclear and Radiological Event Scale (INES) for Event Communication: Guidelines and Good Practices for Setting up a National Framework on the Effective Use of INES for Event Communication (2014).

The Guidelines and Good Practices are intended to assist Member States in establishing or improving their national framework in order to effectively integrate INES as part of their communication strategy. The objective is also to illustrate the practices and approaches that can be adopted to meet the fundamental goals of INES.



This publication is targeted those with responsibilities in the establishment or the maintenance of national arrangements that are tasked with reporting event information and with communicating this information to the general public and technical community, and decision makers. This includes employees of the operating organizations, civil service personnel and senior government officials.

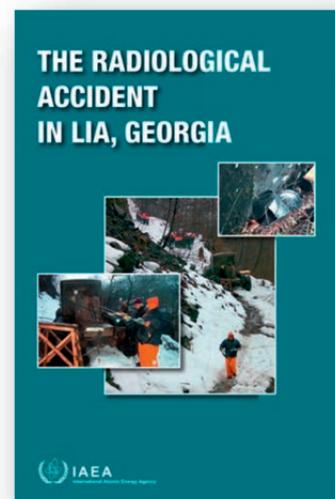
The Guidelines and Good Practices discuss the functional elements and infrastructure components necessary to achieve the goals associated with each functional element, i.e. reporting the information of an event, analysing it and communicating it to the public using INES. The publication also addresses the use of INES in both emergency and non-emergency situations.

INES provides a systematic and internationally-recognized procedure for identifying the significance of an event in terms of risks to safety.

The publication may be downloaded at: http://www-pub.iaea.org/MTCD/Publications/PDF/INES_web.pdf

The Radiological Accident in Lia, Georgia (2014)

A serious radiological accident occurred in Georgia on 2 December 2001, when three inhabitants of the village of Lia found two metal objects in the forest while collecting firewood. These objects were ^{90}Sr sources with an activity of 1295 TBq. The three inhabitants used the objects as heaters when spending the night in the forest. The major cause of the accident was the improper and unauthorized abandonment of radiation sources in Georgia and the absence of clear labels or radiation signs on the sources warning of the potential radiation hazard.



Under the Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency (Assistance Convention), the Georgian authorities requested assistance from the IAEA to advise on the dose assessment, source recovery and medical management of those involved in the accident.

Following this request, the IAEA assembled and dispatched two field teams. The first undertook a preliminary medical evaluation for the prognosis and treatment of the overexposed individuals. The second assisted in the training of the recovery team, searching and locating the radioactive sources, implementing the recovery operation, characterizing the radioactive sources, conducting a radiological survey of the accident site and facilitating medical assistance to the overexposed people.

This report provides the detailed information on the accident and presents the findings and conclusions and lessons learned from the treatment of the overexposed victims. The aim is to help to avoid similar occurrences by improving safety, and to minimize the consequences of any such events that do occur.

The publication may be obtained at: <http://www-pub.iaea.org/books/IAEABooks/10602/The-Radiological-Accident-in-Lia-Georgia>

Forthcoming Events

IEM on Assessment and Prognosis in Response to a Nuclear or Radiological Emergency

From 20 to 24 April 2015, the IAEA's Headquarters in Vienna will host the International Experts Meeting (IEM) on Assessment and Prognosis in response to a Nuclear or Radiological Emergency.

This IEM, which is the ninth such meeting since the first IEM in March 2012, is being organized as part of the IAEA's Action Plan on Nuclear Safety, adopted by the Member States in response to the accident at the Fukushima Daiichi nuclear power plant in March 2011. Under this Action Plan, the IAEA Secretariat was asked to organize International Experts Meetings to analyse all relevant technical aspects and learn the lessons from the accident.

The overall objective of IEM 9 is to provide a forum for experts from Member States and international organizations to discuss issues, challenges and solutions related to the assessment and prognosis process in response to a nuclear or radiological emergency. The meeting will focus on the exchange of information, knowledge and experience related to national and international assessment and prognosis capabilities, as well as to the operational arrangements for the implementation of the IAEA's assessment and prognosis process.

Specifically, IEM 9 will address the following topics: assessment and prognosis during a nuclear and radiological emergency; assessment and prognosis resulting from a nuclear security event; environmental modelling and monitoring during nuclear or radiological emergencies, assessment of the impact of a nuclear or radiological emergency on food, feed, drinking water and agricultural products; assessment and prognosis at the international level and the provision and management of technical data to support assessment and prognosis.

More information is available at:

<http://www-pub.iaea.org/iaeametings/50718/International-Experts-Meeting-on-Assessment-and-Prognosis-in-Response-to-a-Nuclear-or-Radiological-Emergency-IEM-9>

Other Forthcoming Events (Selection)

- Workshop on Notification, Reporting and Requesting Assistance (Austria, Vienna, 7–9 April)
- Train the Trainers Workshop on First Response to Radiation Emergency (Austria, Vienna, 13–17 April)
- Workshop on Monitoring during a Nuclear or Radiological Emergency (Japan, Fukushima, 13–17 April)

**International Experts Meeting on
Assessment and Prognosis in Response to
a Nuclear or Radiological Emergency**

IAEA Action Plan on Nuclear Safety
IAEA Headquarters
20–24 April 2015
Vienna, Austria

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<http://www-pub.iaea.org/iaeametings/50718>

- Second Meeting of the Programme Committee of the International Conference on Global Emergency Preparedness and Response (Austria, Vienna, 22–23 June)
- Train the Trainers Workshop on Notification, Reporting and Requesting Assistance (Austria, Vienna, 23–25 June)
- Meeting of the INES Advisory Committee (Austria, Vienna, 2–3 September)
- Preparatory meeting for RANET JAT Exercise (Japan, Fukushima, 9–11 September)

International Conference on Global Emergency Preparedness and Response

The IAEA has continuously supported the work of its Member States in Emergency Preparedness and Response (EPR), in particular since the accident at the Chernobyl nuclear power plant (NPP) in 1986. The accident at the Fukushima Daiichi NPP in 2011 again emphasized the need to strengthen emergency preparedness and response at the national as well as at the international levels.

From 19 to 23 October 2015, the IAEA's Headquarters in Vienna will host the International Conference on Global Emergency Preparedness and Response.

Organized by the IAEA in cooperation numerous international agencies and organizations, the EPR conference will bring together emergency responders as well as relevant stakeholders in order to achieve the following:

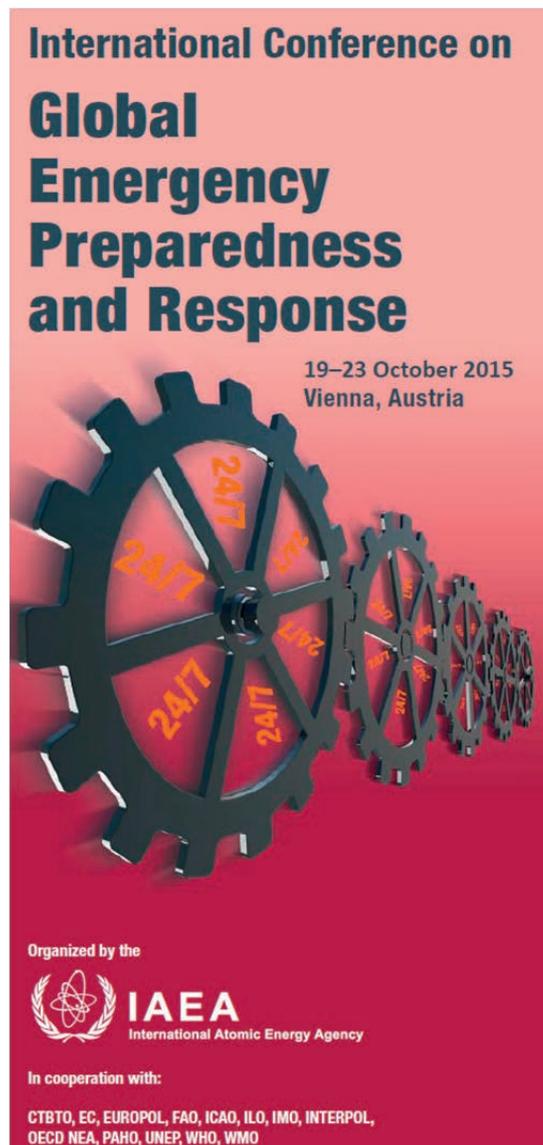
- Present contemporary EPR solutions;
- Exchange information on national EPR arrangements and capabilities;
- Share strategies, experiences and good practices in EPR; and
- Discuss challenges and priorities in further strengthening readiness to respond to any nuclear or radiological incident or emergency.

The topics covered will include: emergency management, protection strategies, communications, public health and medical response, waste, international cooperation, education and training and past experiences.

The conference is targeted at governmental officials with responsibilities in EPR, experts in EPR as well as in nuclear security matters, representatives of response and operating organizations, emergency responders, public information officers and others involved in EPR for nuclear and radiological incidents and emergencies.

More information is available at:

<http://www-pub.iaea.org/iaeameetings/45986/International-Conference-on-Global-Emergency-Preparedness-and-Response>



**International Conference on
Global
Emergency
Preparedness
and Response**

19–23 October 2015
Vienna, Austria

Organized by the
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International Atomic Energy Agency

In cooperation with:
CTBTO, EC, EUROPOL, FAO, ICAO, ILO, IMO, INTERPOL,
OECD NEA, PAHO, UNEP, WHO, WMO

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