

Incident and Emergency Preparedness and Response

Objective

To establish effective and compatible national, regional and international emergency preparedness and response capabilities and arrangements for early warning and timely response to actual, potential or perceived nuclear or radiological incidents and emergencies independent of whether the incident or emergency arises from an accident, negligence or malicious act; to improve provision/sharing of information on incidents and emergencies among Member States, international organizations and the public/media.

Emergency Preparedness and Response in 2010

The Agency continued to strengthen global emergency preparedness arrangements and capabilities by: (a) promoting compliance with current standards; (b) developing or refining safety standards and guidelines based on the lessons learned from past responses; and (c) implementing regional and national training and exercises (focusing on nuclear newcomer countries).

The final report on the International Action Plan for Strengthening the International Preparedness and Response System for Nuclear and Radiological Emergencies was completed in 2010. The Action Plan process resulted in the identification of a number of important activities in the areas of international assistance, emergency communications and infrastructure that need to be addressed by Member States, stakeholders and the Agency for the implementation and long term sustainability of the international emergency preparedness and response system. The final report provides a path forward and a strategy aimed at improving the flow and security of data exchanged with Member States and international organizations.

The Inter-Agency Committee on Radiological and Nuclear Emergencies (IACRNE), for which the Agency serves as the coordinating body, coordinates preparedness arrangements of the relevant international organizations. In 2010, the Working Group on Preventing and Responding to Weapons of Mass Destruction Attacks, part of the United Nations Counter-Terrorism Implementation Task Force,

issued a report entitled *Interagency Coordination in the Event of a Nuclear or Radiological Terrorist Attack: Current Status, Future Prospects* acknowledging the role of the Agency in prevention, preparedness and response to such events.

The Agency continued to improve its Incident and Emergency System. For example, the team of on-call specialists available around the clock was expanded to include an external event specialist from the IAEA International Seismic Safety Centre, who is responsible for relaying information on earthquakes to the Emergency Response Manager.

Event Reporting

The Agency continued development of the Unified System for Information Exchange in Incidents and Emergencies (USIE). This will replace the Agency's

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Early Notification and Assistance Conventions (ENAC) web site and the current Nuclear Events Web based System (NEWS) (<http://www-news.iaea.org/news/>). In 2010, preview versions of the system were made available for review by a limited group of users at national authorities. Following this test period, it is expected that the system will become fully operational in early 2011.

In October 2010, a technical meeting was held in Vienna to discuss an information system for sharing emergency radiation monitoring results in real time. Participants from 15 Member States presented their experience and discussed the benefits and key features of such a system. The meeting report focused on the need for a global emergency radiation monitoring information system and included key features of the system and proposals for possible operational arrangements and implementation steps.

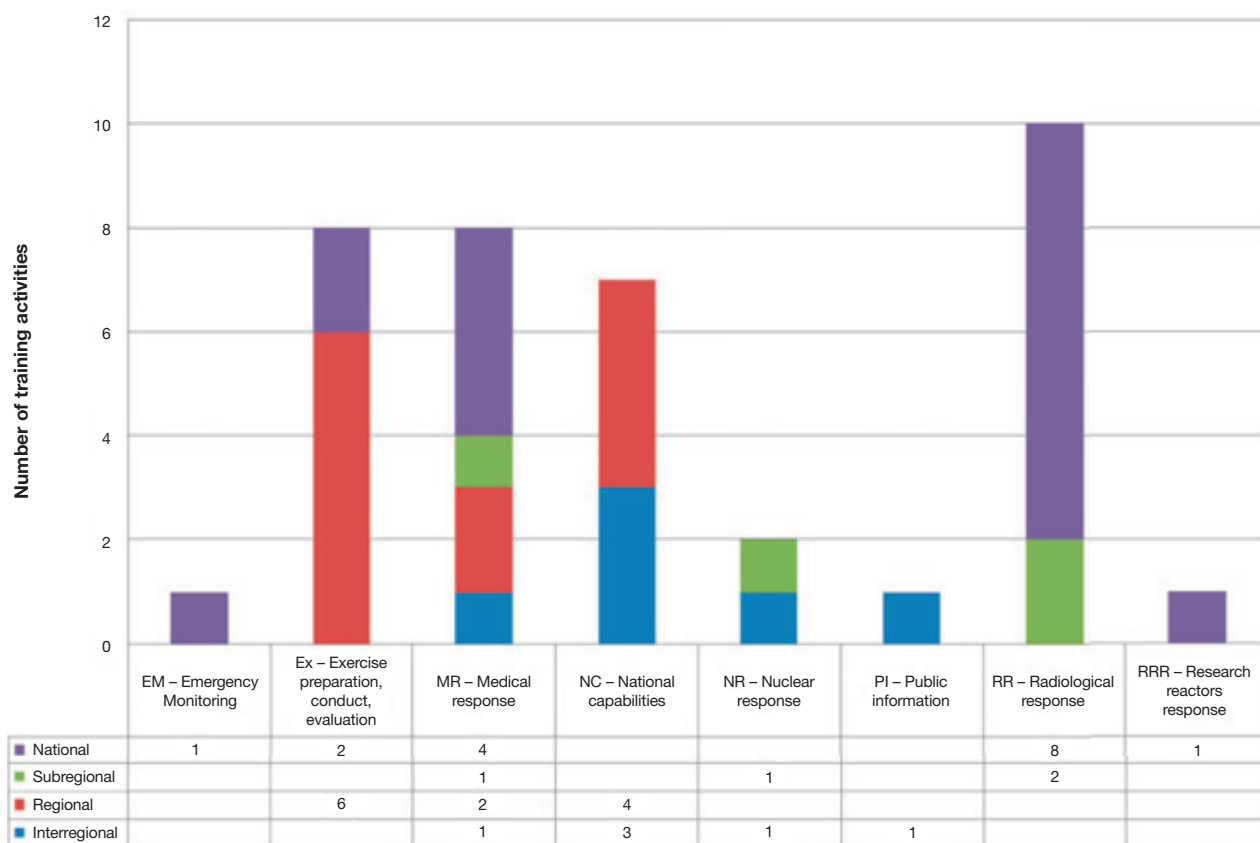


FIG. 1. Workshops and courses devoted to emergency preparedness and response by field of training in 2010.

Capacity Building and Assistance to Member States

The Agency organized 38 training events that included workshops and courses on various aspects

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of emergency preparedness and response. Figure 1 provides details on the areas in which the training events were held.

In 2010, the Agency, through the Incident and Emergency Centre (IEC), conducted regular exercises with Member States to test: whether they have a contact point that can respond to incoming messages promptly at all times; whether the competent authorities in Member States can be activated on short notice; and whether those

competent authorities are familiar with the notification procedures according to the Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency (Assistance Convention) and the Convention on Early Notification of a Nuclear Accident (Notification Convention). The results indicated that fax messages could not be delivered to 23% of the contact points. Furthermore, only half of the contact points responded to the exercise messages and only 21% of them responded within 30 minutes. However, 78% of the competent authorities that were alerted responded promptly within the time frame.

An evaluation of Member State self-assessments of national emergency preparedness and response capabilities underlined the need to continue efforts to strengthen these measures. In 2010, six Member States (Azerbaijan, Belarus, Philippines, Qatar, Romania and Thailand) demonstrated their willingness to improve their preparedness and response programmes by requesting IAEA Emergency Preparedness Review (EPREV) missions. The IEC also carried out 13 missions to assist Member States in the development and strengthening of different aspects of national emergency preparedness and response systems.

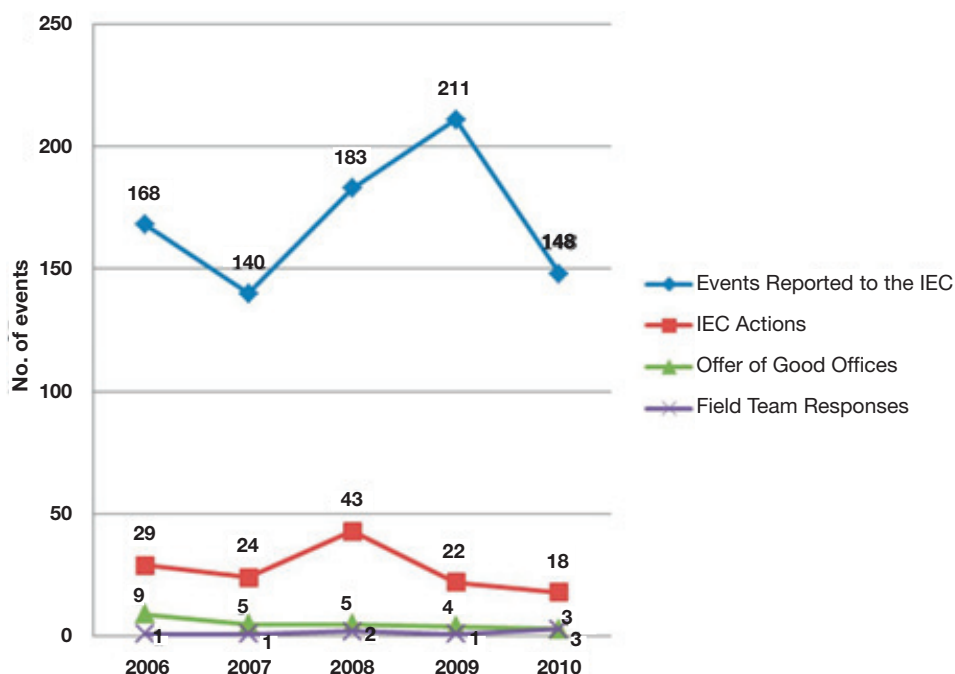


FIG. 2. Responses by the Agency's IEC, 2006–2010.

Event Response

In 2010, the Agency's IEC was directly informed, or became aware indirectly through the media, of 148 events involving or suspected to involve ionizing radiation. In 18 cases, the Agency took action, such as authenticating and verifying information with external counterparts, sharing and providing official information, offering its services, or deploying field teams (Fig. 2). In three cases, in Latin America, the Agency responded to requests for assistance under the Assistance Convention as a result of: (1) severe overexposure of an individual's hands involving injury to tissue from an industrial radiography source; (2) overexposure of a patient during an interventional radiology procedure; and (3) discovery of a radioactive source in a public place.

Using its Response and Assistance Network (RANET), the Agency facilitated two assistance missions, biodosimetry analysis, and medical advice and treatment. Based on a review of the spectrum of events that have occurred — from the detection of orphan sources in scrap metal, to severe radiation burns to individuals following the improper handling of industrial radiography sources, to earthquakes affecting areas where radiation sources might be located — two key conclusions were drawn: (a) natural disasters require follow-up in terms of the information exchanged and offers of the Agency's good offices for possible support to the stricken countries; and (b) a number of events

were reported in countries where operators possess extensive experience and capabilities.

Key Emergency Preparedness and Response Publications

The Agency published the fifth edition of the *Joint Radiation Emergency Management Plan of the International Organizations (EPR-JPLAN 2010)*. This publication updated the roles and responsibilities

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of the 13 sponsoring international organizations as well as coordination of international activities in responding to a nuclear or radiological emergency.

The publication on the *IAEA Response and Assistance Network (EPR-RANET 2010)* was updated to include changes in the concept of the network. Based on past experience, the functional areas of assistance were restructured to facilitate easier registration. The duties of the assistance team leader were also clarified.