

# IRPA 12

## Emergencies Planning Preparedness and Response:

**II.3.1 Nuclear and Radiological Emergencies (27)**

**II.3.2 Medical Response in Emergencies (19)**

**II.3.3 Emergency Aftermath and Recovery (12)**



**IAEA**

International Atomic Energy Agency

- 65 Good quality papers/posters submitted
- Regionally-
  - 40% Europe, 25% Latin America, 20% Asia, 10% North America, 5% Africa
- Substantive areas
  - Risk assessment, Strategies and Planning (27), Measurement capabilities (18), Modeling capabilities (9), Decision support (3), Training/exercise (7), Actual Emergencies (5)

# Nuclear and Radiological Emergencies/Aftermath

- Active and thoughtful efforts to develop national preparedness worldwide (e.g., China, Russia-Murmansk, Argentina, Ukraine - Chernobyl Shelter)
- New Focus on malicious acts. Mass casualty event may overwhelm national capabilities of a country with advanced resources – depends on number of casualties
- Polonium 210 Incident – Most relevant radiation emergency in past several years. Need to triage thousands, assess levels of Po intake for hundreds. Many facilities. Must examine lessons learned.
- Many new tools, e.g. ARGOS CBRN decision support system, MOIRA system for alternate assessment of rehabilitation strategies). Tools must be developed well in advance.

# Nuclear and Radiological Emergencies/Aftermath

- New Focus on recovery “phase”
- Stakeholder engagement is essential: Communication with the public
- International cooperation and harmonization recognized as essential, but little work presented
- Some big exercises (Sweden, TOPOFF posters) but few presentations on lessons learned.

# Medical Response in Emergencies

- Exciting new developments in treating radiation injuries (Mesenchymal Stem Cell injection (France, Japan))
- New methods for triage using cytogenetic procedures
- International assistance in medical response may be needed & pre-established arrangements are essential
  - Not every country has developed capabilities in highly specialized treatment of radiation injuries
  - Arrangements for regional assistance should be in place
- Lack of international criteria on range of issues (e.g., decontamination/decorporation)
- Must resolve legal issues in advance in order to:
  - Facilitate availability of medical data in emergency & afterwards
  - Transportation of patients to assisting country



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# Enduring Lessons/Challenges (Domestic)

- Consequences will depend dramatically on steps taken to prepare for accident or attack.
- Arrangements must be in place that include clear authorities and responsibilities among relevant organizations
- Criteria and policies for implementation of protective actions must be prepared in advance. Lack of preparation has led decision makers to make mistakes.
- Actions must be developed in collaboration with public and stakeholders to ensure their support IN ADVANCE

# Enduring Lessons/Challenges (International)

- Serious efforts to accelerate international cooperation necessary
- States must recognize that they may **NEED** assistance (eliminate donor/recipient mentality)
- Essential that we elaborate and to build on the existing arrangements/capabilities (Conventions/RANET)

# Response Assistance NETwork

- RANET can facilitate enhancement of regional and international capabilities for assistance
- RANET concept is built on practical experience of MS
- Conventions and Statute provide firm legal basis
- Expectation: RANET should enhance radiation emergency response capabilities worldwide