

**Department of Nuclear Safety and Security**

**IEC**

**INCIDENT AND EMERGENCY  
CENTRE**



**IAEA**

International Atomic Energy Agency

# **IEC - Mission Statement**

**Global Focal Point**

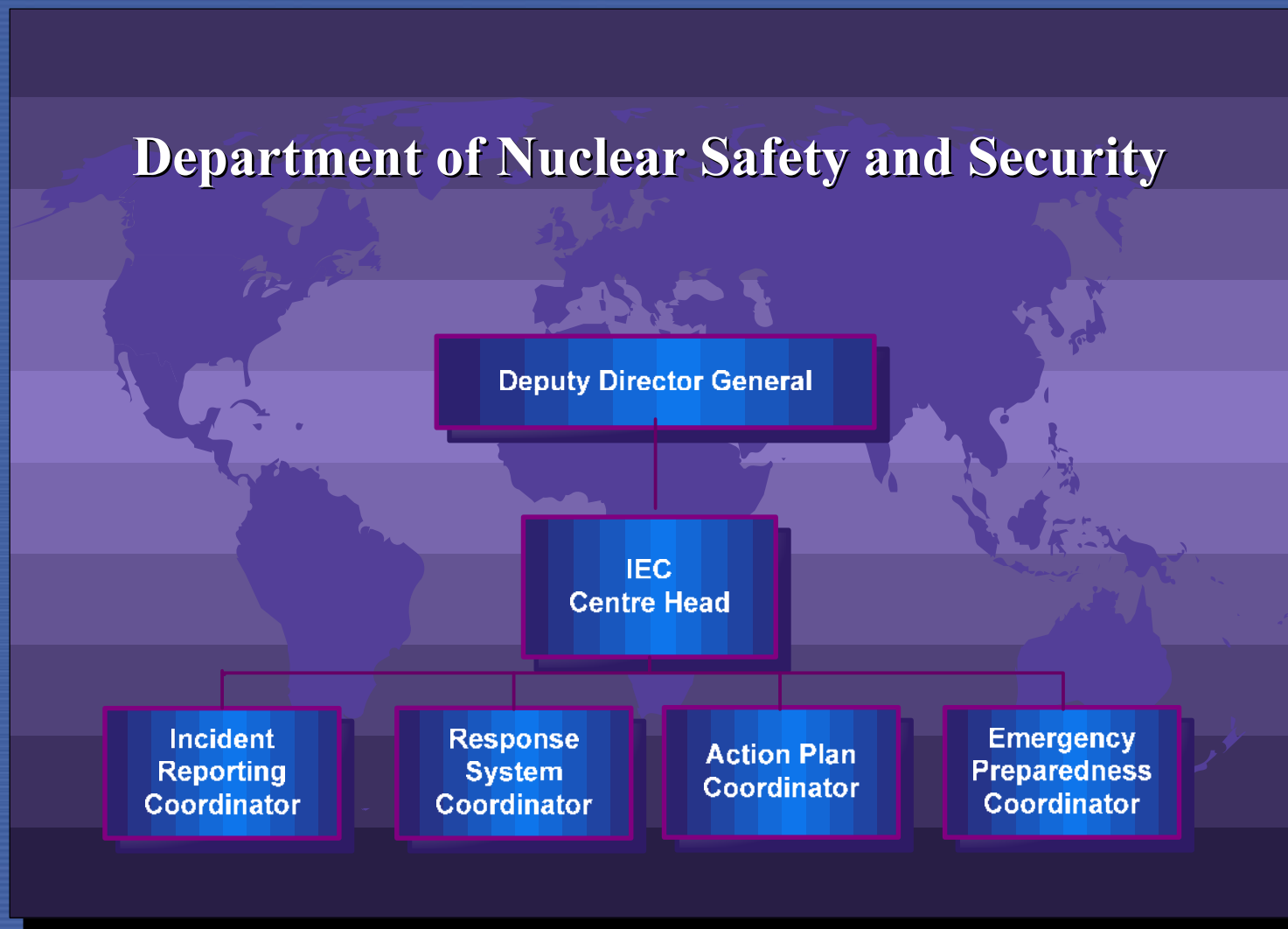
**for**

**International Preparedness,  
Communication and Response**

**for**

**Nuclear and Radiological Safety or  
Security Related Incidents,  
Emergencies, Threats or Events of  
Media Interest**

# Current Organizational Structure as of 2005



**IAEA**

**IEC**  
Incident and Emergency Centre

# IEC – Rationale - Why are we needed

## TODAY'S WORLD:

➡ Expansion of use of nuclear power and use of radiation sources

➡ 21<sup>st</sup> century threats

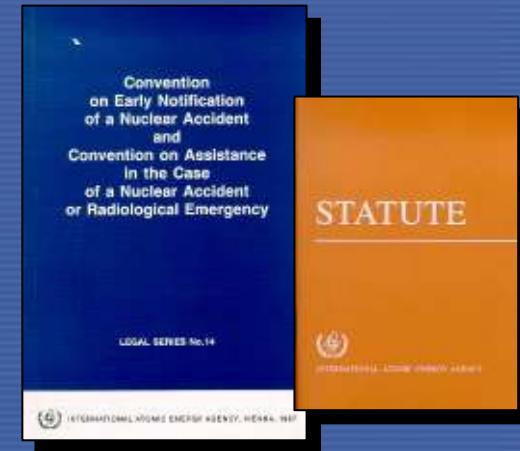


➡ Treaty obligations

# IEC – Rationale - Why are we needed

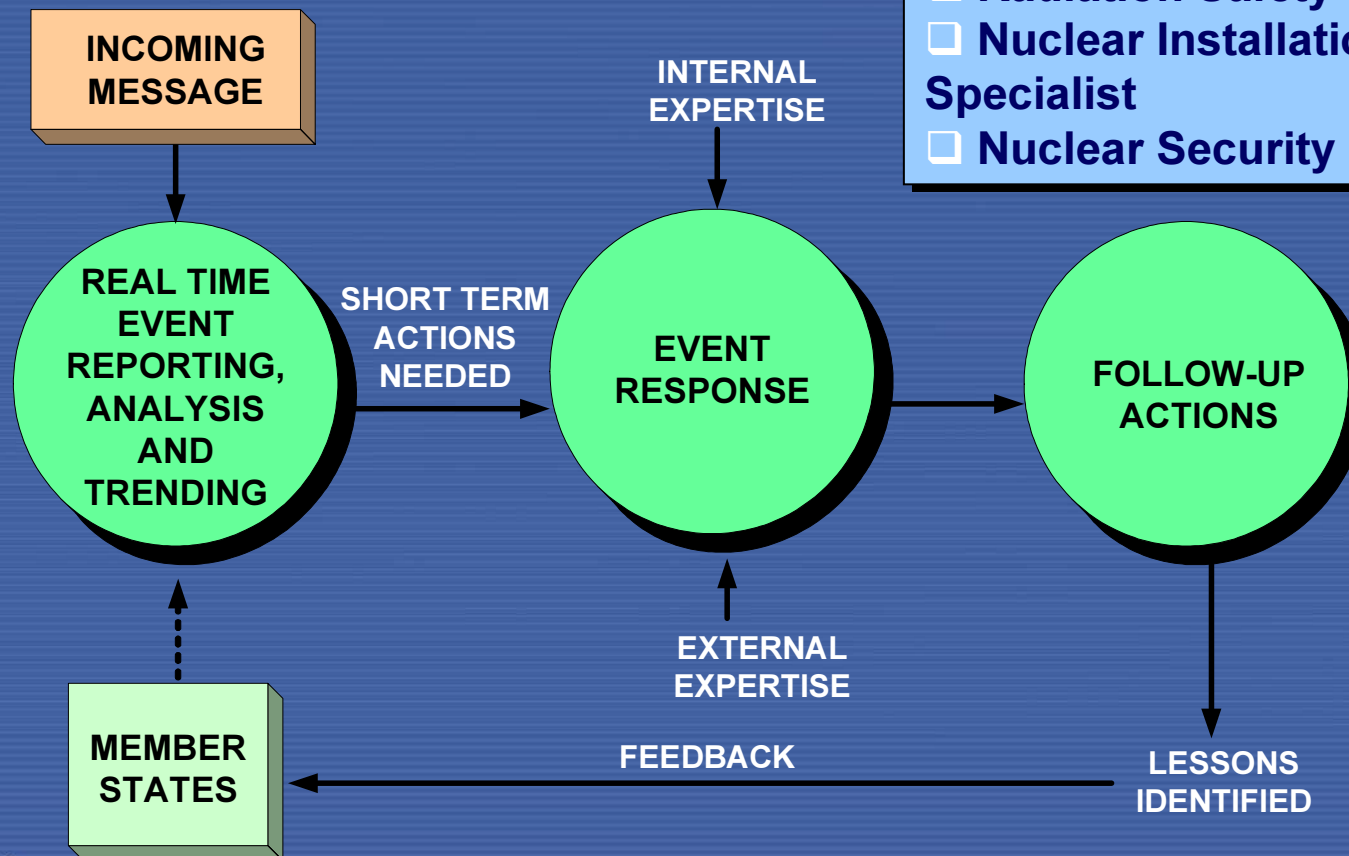
## IEC Activities based on:

- IAEA Statute
- Convention on Early Notification of a Nuclear Accident
- Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency
- Convention on Physical Protection of Nuclear Material



# IEC – Flow of Response

## 24/7 Coverage



### ON CALL:

- ☐ Emergency Response Manager
- ☐ Logistics Support Officer
- ☐ Radiation Safety Specialist
- ☐ Nuclear Installation Safety Specialist
- ☐ Nuclear Security Specialist

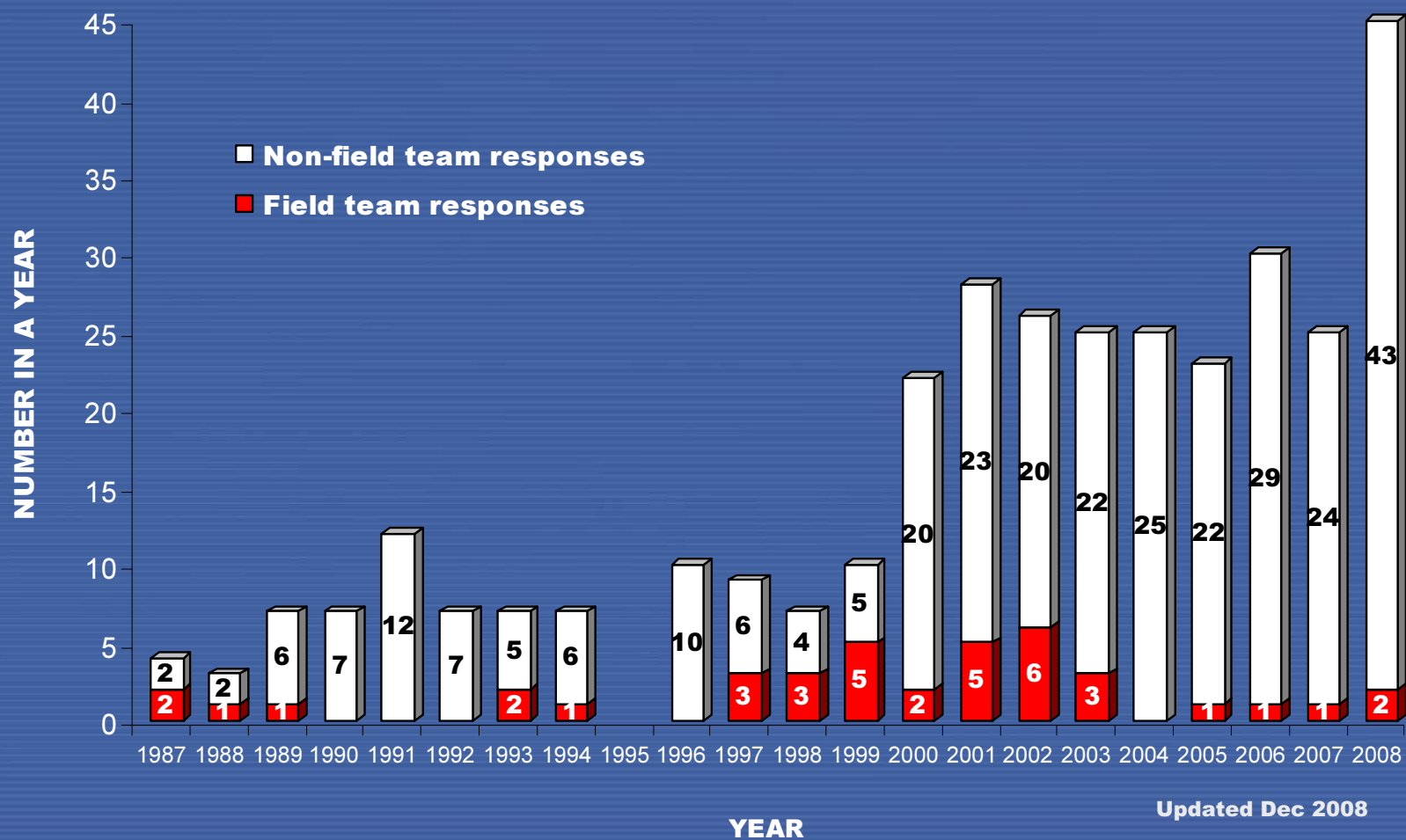


# Response Plans and Protocols

We follow procedures as agreed to MS:



# IEC - Responses





# Assistance Mission Chile 2005



**Radiological  
Accident  
Coordination of  
medical assistance  
and dose  
reconstruction**

# Assistance Mission Venezuela 2006



Recovery of Radiation Source



# Assistance Mission Benin, 2008

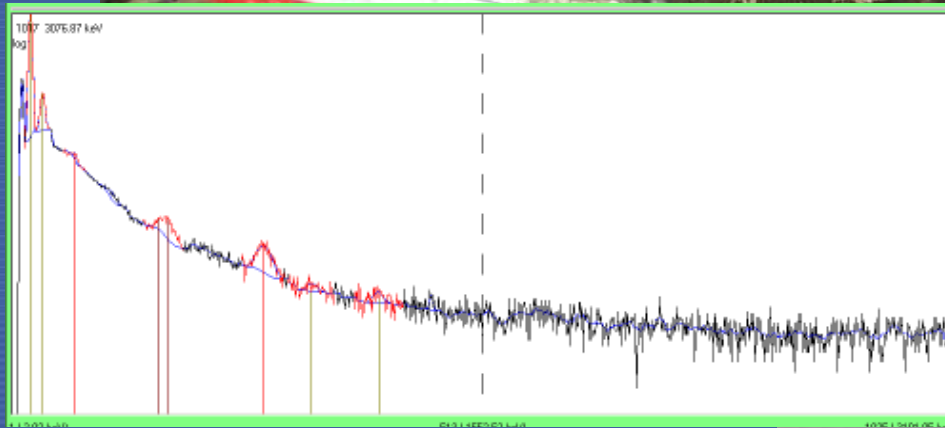


# Assistance Mission Benin, 2008

found source



AMNV.340 TN model 5020



# Assistance Mission Tunisia, 2008





# Fact Finding Mission - Tokaimura Japan, September 1999



**Criticality Accident**  
**INES Rating: 4**  
**Casualties: 3**  
**No major off-site release**



# Assistance Mission - Sarov Russia, September 1997

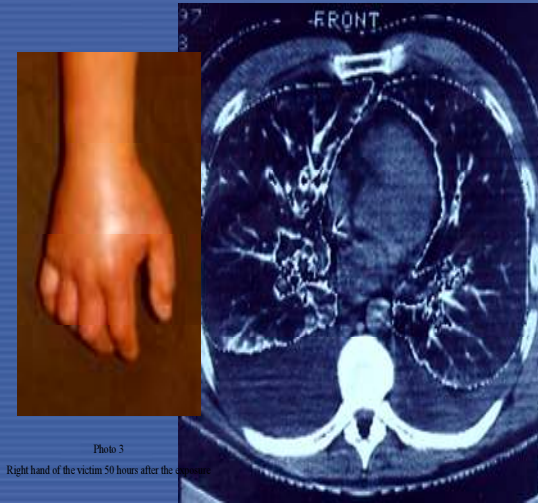
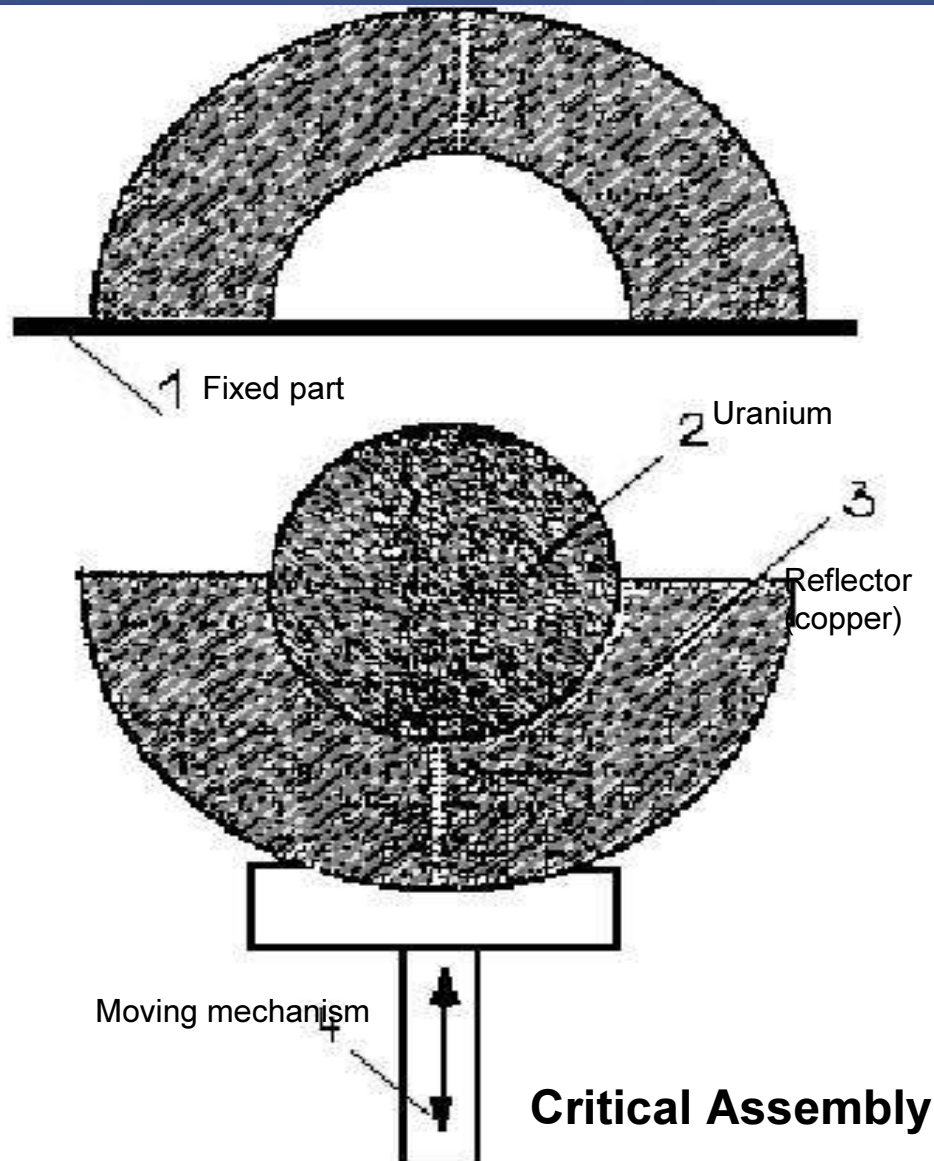


Photo 5. Computer tomographic image of the thorax at the level of Th-10  
Note compression of the lung by pleural fluid and intensification of the lung pattern.

## Criticality Accident

Casualties: 1 (dead within 3 days)

High neutron radiation dose

IEC  
Incident and Emergency Centre

# Expert Mission - Paks NPP Hungary, April 2003



**Fuel Cleaning Accident**

**INES Rating: 3**



# Emergency notification – ENATOM/ENAC

## Forsmark NPP, Sweden, March 2007

**ENAC**  
Emergency Notification and Assistance Convention

Current User: 20000008  
IEC Status: Normal/Ready  
Date/Time (UTC): 2007-09-11 15:06

**Emergencies** | Submitted Messages | My Tasks | Documents | External Links | Address Book | Help | Logc

### Emergencies

This page displays a list of emergencies and provides a facility to filter and find one(s) of interest.

**Find Emergencies**

To find other emergencies, specify criteria and click the *Find* button.

Status:

Country:

Type:

### List of Emergencies

List of **Actual** emergencies for **Sweden** with **Terminated** status(es)

State	Emergency	Last Update	Status ↓	Action
Sweden	Bomb threat against Forsmark NPP	2007-04-13 05:40	Terminated	<a href="#">View Status</a>

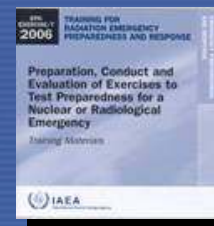


**Bomb threat against  
Forsmark NPP – IEC set to  
Basic Response Mode**

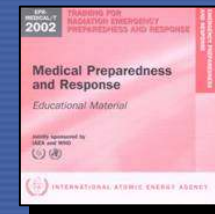
**21 March 2007,  
07:30 hrs UTC**



# Standards, Guidance and Tools for Strengthening States' Preparedness



Exercise-TM, 2006

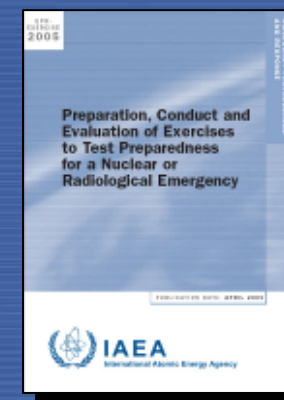


Medical-TM, 2002

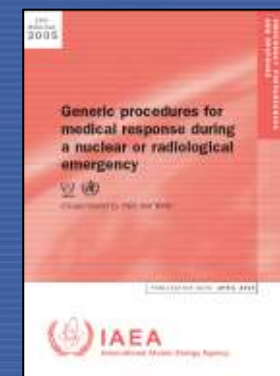
## EPR Series



Methods, 2003



Exercise, 2005



Medical, 2005

# Counterparts

- ❑ Member States' Competent Authorities
- ❑ Regulatory Bodies
- ❑ Emergency Planners
- ❑ Emergency Managers
- ❑ First Responders
- ❑ Radiological Assessors
- ❑ Medical Community



Incident



# Training on Emergency Monitoring in Chernobyl Exclusion Zone





# ConvEx-3 Mexico, 2008





# First Responders Manual Exercise



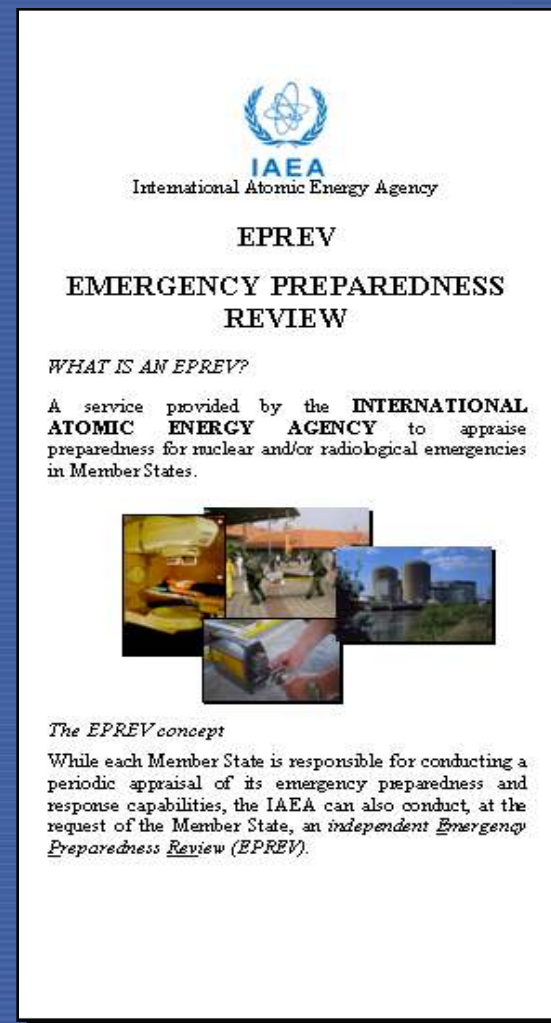
**RDD Exercise in Indonesia using  
FIRST RESPONDER MANUAL  
(IAEA, 2005)**



# Emergency Preparedness Review

## EPREV missions

- ☐ Indonesia 2004
- ☐ Peru 2005 (PAHO)
- ☐ Qatar 2006
- ☐ Egypt 2007
- ☐ Russia 2007
- ☐ Tajikistan 2007
- ☐ Uzbekistan 2008
- ☐ Tunisia 2008
- ☐ Montenegro 2008
- ☐ Kyrgyzstan 2008



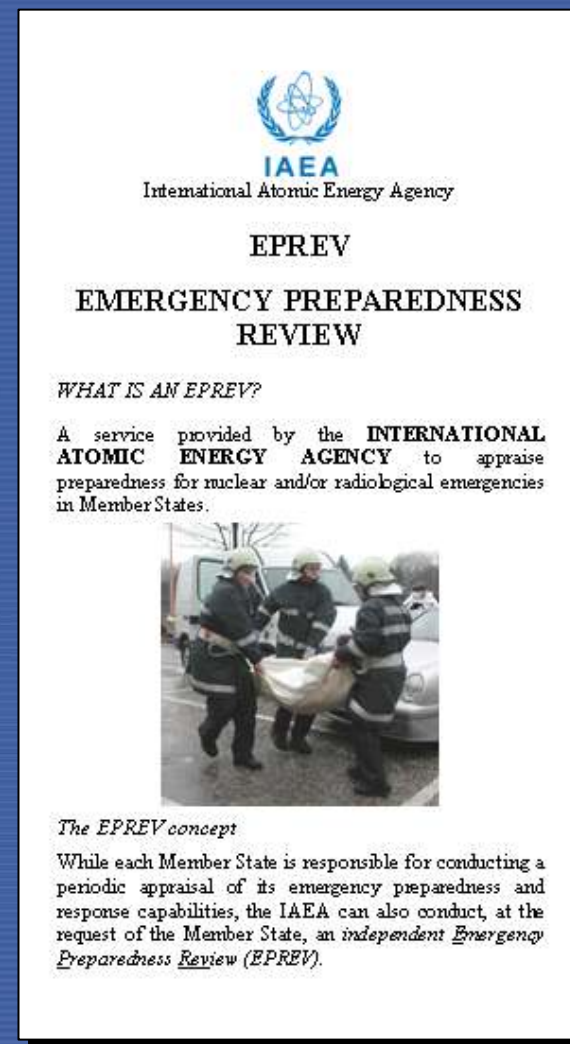
# Emergency Preparedness Review

## □ EPREV missions

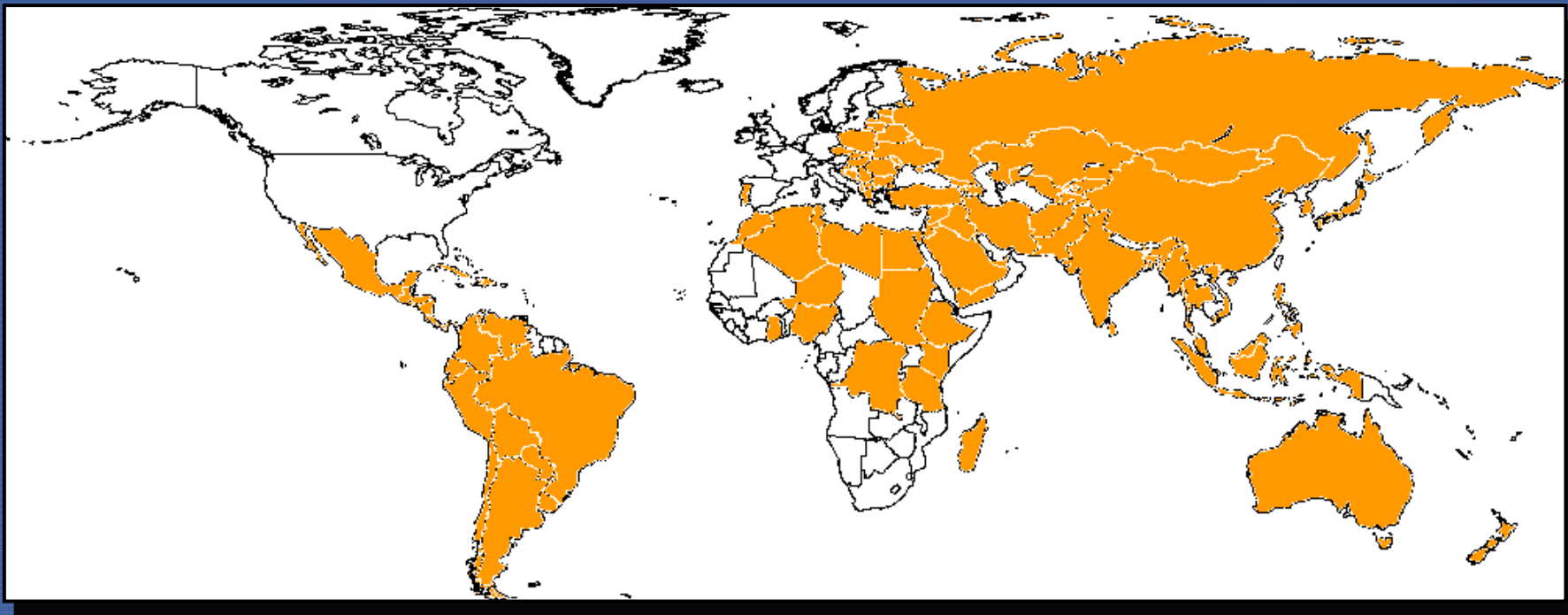
- Indonesia 2004
- Qatar 2006
- Egypt 2007

## □ EPREV missions on assessment of medical capabilities for response

- Peru 2005 (performed by PAHO)



# Trained Countries in the Area of EP&R

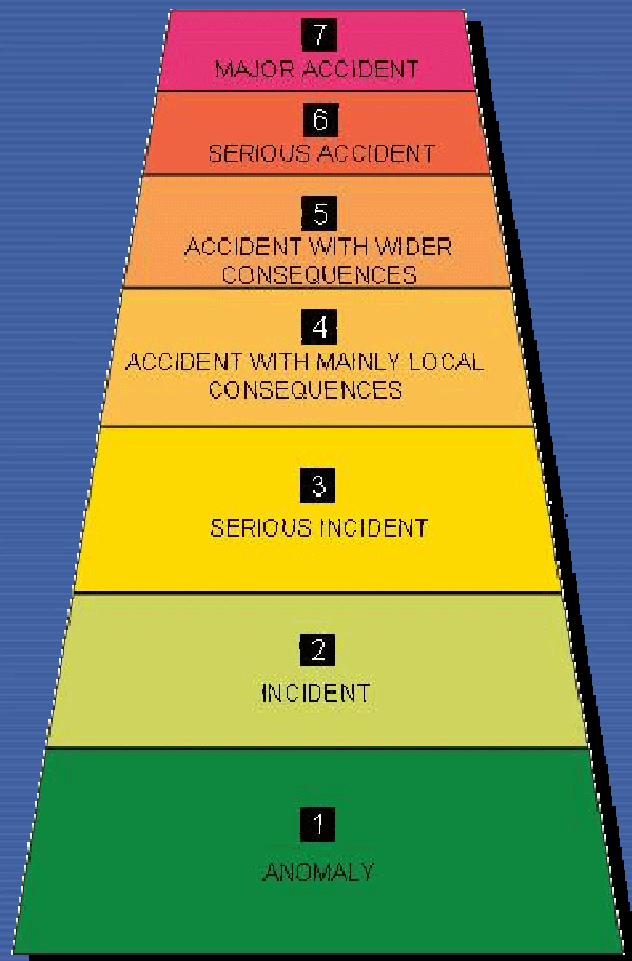


 IAEA Trained

**Trained Specialists in the Area of EP&R (06.1997 – 12.2008): 6120**



# IEC – Incident Reporting



## INES

Methodology for communicating the safety significance of events applicable to all types of nuclear and radiological events

- ☐ At nuclear facilities
- ☐ Involving radiation sources
- ☐ During transport of radioactive material



# G8 Summit



“At previous summits, we agreed to enhance global controls on nuclear and radioactive materials and facilities in order to minimize the risk of the malicious use of these materials and facilities. We are implementing those decisions. **However, we recognize that we must also enhance as necessary our ability to effectively respond to nuclear and radiological accidents and incidents if they do occur. We welcome the establishment of the IAEA Incident and Emergency Centre and will support the IAEA in this work.**”

## G8 Summit documents - New: Chair's summary

- Declaration on trade (17.4 KB)
- Report on the Nuclear Safety and Security Group (36 KB)
- Report on the G8 Support to the UN Counter-Terrorism Efforts (25.9 KB)

# Future Directions

- ☐ Harmonize reporting mechanisms
- ☐ Focus on security response capabilities (limited by availability of resources)
- ☐ Increase Member State preparedness (Action Plan)
- ☐ Increase outreach effort ensuring Member States are aware of IEC capabilities and services