A FRAMEWORK FOR TRAINING OF FIRST RESPONDERS AND INTERVENTION TEAMS

17th European ALARA Network workshop on "ALARA in emergency exposure situations"

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• NR emergencies response framework
• Relevant national entities
• The training framework
• Implementation
• Relevant results
• On-going and future work
NR Emergencies Response Framework
Relevant National Organizations – First Responders

Medical Emergency (INEM, IP)
Volunteer, municipal and professional fire brigades
National Police (PSP)
National Guard (GNR)

First Responders
- Identify the NR emergency
- Establish an initial safety perimeter
- Provide feedback to the Incident Commander
- Assist people and protect the population
Relevant National Organizations – ERAS

Evaluation and Recognition Teams

• assess the situation
• establish an initial safety perimeter
• gather information for complementary intervention procedures
• assist people and protect the population and the operational teams
Relevant National Organizations – Intervention Teams

First Responders

- Medical Emergency (INEM, IP)
- Volunteer, municipal and professional fire brigades
- National Police (PSP)
- National Guard (GNR)
- Armed Forces (FA)
- Portuguese Environment Agency (APA)
- Directorate-General for Health (DGS)
- Engineering School of the University of Lisbon (IST)

Evaluation and Recognition Teams

Intervention Teams
- Implement the procedures established in the Guidance
- Follow the instructions of the ATI
Relevant National Organizations – ATI

Medical Emergency (INEM, IP)
Volunteer, municipal and professional fire brigades
National Police (PSP)
National Guard (GNR)
First Responders

Evaluation and Recognition Teams

Technical Intervention Authorities
• Coordinate the intervention
• Real time evaluation of the situation
• Gather and analyze the monitoring results
• Propose countermeasures
• Technical coordination of the information
• Decision support

Intervention Teams

Portuguese Environment Agency (APA)
Directorate-General for Health (DGS)
Engineering School of the University of Lisbon (IST)
Several organizations feeding the Incident Commander with data

- Medical Emergency (INEM, IP)
- Volunteer, municipal and professional fire brigades
- National Police (PSP)
- National Guard (GNR)
- Armed Forces (FA)
- Portuguese Environment Agency (APA)
- Directorate-General for Health (DGS)
- Engineering School of the University of Lisbon (IST)

First Responders

Evaluation and Recognition Teams

Technical Intervention Authorities
How to Harmonize Information

These Organizations may have different capabilities, equipment, procedures and training programs, as a result of their individual needs and competences.

Incoming results from measurements performed:

- Using different equipment
- Using different procedures
- From different operators
- Organizations with different risk perception

Risk evaluation for an effective decision
The First “All Together” Exercise

LivEx/ConvEx-3 (IAEA)

2008

Main Outcome

The need for joint training and coordination
The Training Framework – Foundation Training

Promoted by:
- National Committee for Radiological Emergencies (CNER)
- Organization by ANPC

Short extent:
- 2,5 days duration

Mixed approach:
- Lectures
- LiveEx demonstration

Aims:
- Operationalization of ANPC guidance documents
- Identification of the participating organizations and their role(s) in a NR emergency
- Promotion of the cooperation between the different national authorities involved in a NR emergency
- Train the Trainers

Radiological Emergencies Training Course (CER)
Participants

• More than 150 trainees in 3 CER
• 30 different organizations from national and regional level
  • Civil Protection
  • Armed forces
  • Firefighters
  • Forensics
  • Law enforcement
  • Intelligence
  • Health
  • Public institutions
  • Competent Authorities
  • ATI
  • ....
The Training Framework – Exercises

Aims:

- Share experience
- Work with real radiation sources
- Simulate realistic scenarios
- Interagency team work

- LivEx
- TTX
LivEx/ConvEx-3 (IAEA)

2008

2012

1st CER (Including a LivEX demonstration)
Implementation

LivEx/ConvEx-3 (IAEA)

CURIEX (Almaraz NPP, Spain)

2008

2012

2013

1st CER (Including a LivEX demonstration)
Implementation

LivEx/ConvEx-3 (IAEA)

CURIEX (Almaraz NPP, Spain)

2008

2012

2013

2014

2015

1st CER (Including a LivEX)

2nd CER (Including interactive demonstration)

3rd CER (Including interactive demonstration)
The Training Framework – Capacity Building Exercises

Aims:

✓ Share experience
✓ Work with real radiation sources
✓ Simulate real scenarios
✓ Interagency team work
✓ Work in different radiological background areas

Capacity building exercises

• Radiation detection techniques and procedures
• Sampling procedures
• Decontamination techniques and procedures

• LivEx
• TTX
Implementation

LivEx/ConvEx-3  
(IAEA)

CURIEX  
(Almaraz NPP, Spain)

MonitEx 2015

2008  
1st CER  
(Including a LivEX demonstration)

2012  

2013  

2014  
2nd CER  
(Including interactive demonstration)

2015  
3rd CER  
(Including interactive demonstration)
Implementation

LivEx/ConvEx-3 (IAEA)

2008

1st CER (Including a LivEX demonstration)

2012

2013

2014

CurIEX (Almaraz NPP, Spain)

2015

MonitEx 2015

RadiEx (TTX) / INEX-5 (NEA/OECD)

2016

TrainEx 2016

MonitEx 2016

2nd CER (Including interactive demonstration)

3rd CER (Including interactive demonstration)
Implementation

TrainEx 2016

MonitEx 2016

RadiEx (TTX) / INEX-5
(NEA/OECD)
Feedback

- CNER is the formal forum for evaluation of courses and exercises

- Evaluation includes:
  - participant’s feedback during the courses and exercises
  - collecting written comments through a survey
  - producing an evaluation report for each course and exercises by ANPC

- The main modification proposals are discussed in:
  - course preparatory meeting with the trainers
  - Institutional plenary meeting of CNER

- The current feedback is promising
Relevant Results

✓ Capacity building
✓ Setting and adjusting safety areas
✓ Harmonization of risk perception – “evaluate your risk” and “evaluate the risk”
✓ Perception of the radiological background effect
✓ “See more than what your equipment shows you”
✓ Team building – “know your partner”
✓ **Interagency improved collaboration**

(*e.g.:* CELULEX, participation/collaboration in internal trainings (with armed and security forces))
On-Going and Future Work

RadiEx 2017 (TTX) / ConvEx-3 (IAEA)
EmerRad in Medicine (TTX)
AmostrEx 2017
TrainEx 2017
EmerRad in Medicine (LivEx)
Interface Safety – Security (TTX)

4th CER
(Including demonstration of setting up of response areas and facilities)

2017

2018
Thank you!

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