

Plans and Procedures for Emergency Response

IAEA-KINS Workshop on the Emergency Preparedness and Response to Nuclear and Radiological Emergencies

19 - 23 June 2023, Daejeon, Republic of Korea

Introduction

Requirement 23: *“The government shall ensure that plans and procedures necessary for effective emergency response are established.”*

Emergency Plans

- A description of objectives, policy, concept of operations structure, authorities and responsibilities
- Basis for a systematic, coordinated and effective response
- Include all activities planned to be carried out by all relevant organizations and authorities (NREP) or
- Focused on the actions to be carried out by a particular organization
- To be prepared, validated and maintained at all levels

Common Planning Problems

- Who is responsible?
- No legal framework
- No regulatory enforcement mechanism (“no teeth”)
- Lack of knowledge of the risks
- Lack of resources
- Lack of organization
- Lack of co-ordination
- Training “for exercises”
- Public education
- Public information
- “Paper plans”

Discussion

- Can you give an example of a challenge you faced in developing an emergency plan?



Compatibility

- Plans must have compatible
 - Terminology
 - Concepts of operations
 - Emergency operations management
 - Organization and functional descriptions
 - Co-ordination, activation and integration
 - Facilities, communications
 - Procedures, methods and equipment used for performing common or integrated tasks
 - Training and exercises
 - Maintenance and quality assurance

Coordination

- All plans should be highly coordinated and consolidated
- National Coordinating Mechanism has the role to ensure harmonization and coordination of planning
- Outlines of plans and procedures described in this lecture provide for a ‘standardized’ starting point

Planning Scope



Planning for Different Hazards

- Common features:
 - Emergency management
 - Communications
 - Public warning
 - Emergency public information
 - Evacuation
 - Mass care
 - Health and medical services
 - Resources management

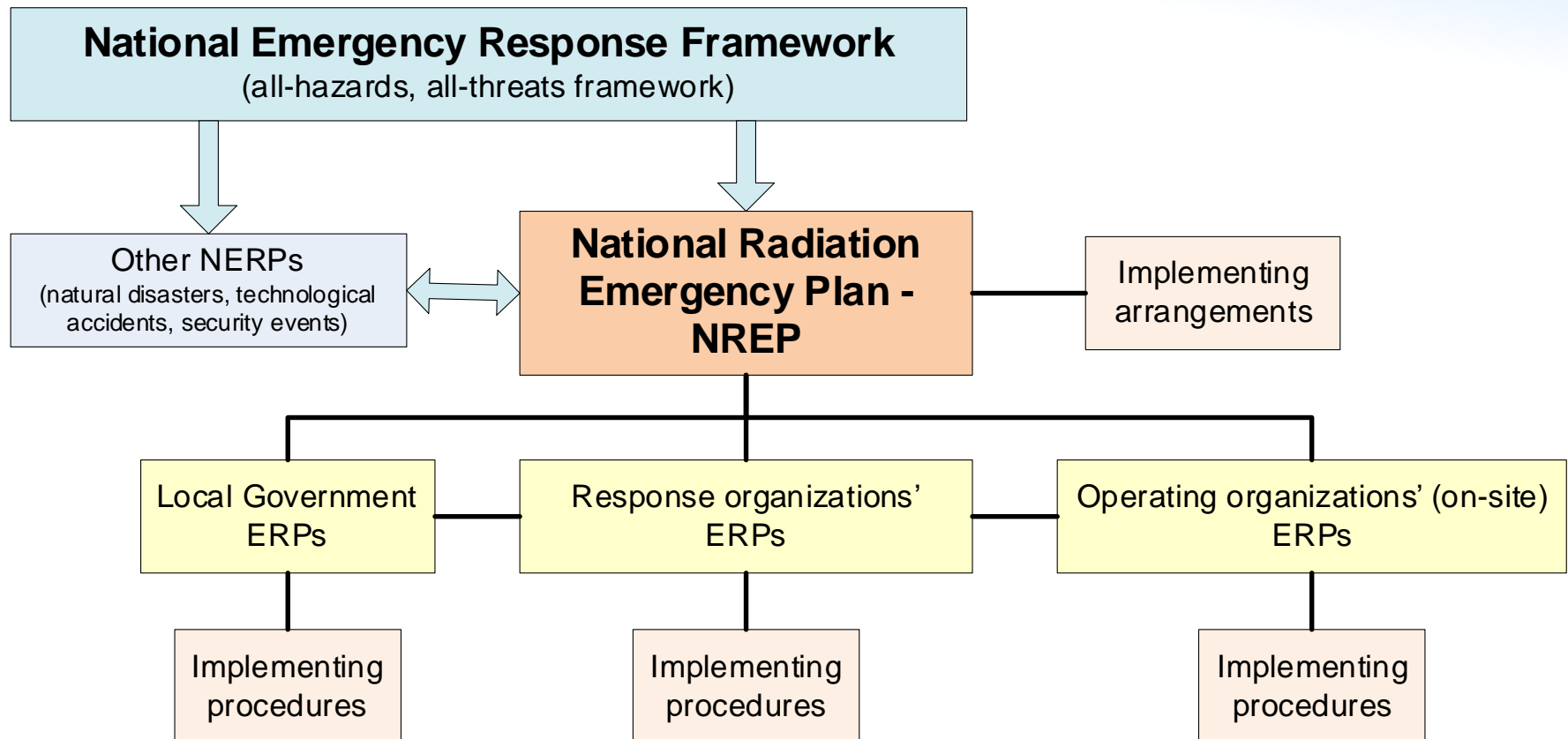
Planning for Different Hazards (cont.)

- Some specific considerations
 - Earthquakes: immediate actions to determine (through gathering information and assessment) severity and extent of injuries and damages; search and rescue; debris clearance
 - Flooding: flood fighting; search and rescue; evacuation (designating shelters in advance); monitoring water quality and sanitary conditions; instruct people and keep them informed
 - Hurricanes: sufficient warning time will be available (~72 hours before the emergency); alerting the population; closing schools and businesses; restricting access to the risk areas; ordering evacuation

Unified Planning. All Hazards, All Threats Approach

- Nuclear or radiological emergencies may be caused by or involve different types of hazards
 - Natural, technological, criminal and malicious
- Many organizations will have to be involved
 - Different response plans, procedures, terminology, culture
- Plans and procedures for response to all hazards, should be structured into a coherent and interlocking system
- Emergency plans for nuclear or radiological emergencies make reference and use of all existing arrangements
 - **Build on what exists!**

Unified Planning Concept



National Radiation Emergency Plan (NREP)



- NREP provides basis for emergency preparations by both local and national response organizations
- NREP contains information other organizations need to know about national level response
- Summary of more detailed plans and assures all other planning integrated and compatible

Suggested NREP Outline

- Chapter 1: Introduction
- Chapter 2: Protection Strategy
- Chapter 3: Emergency Response
- Chapter 4: Emergency Preparedness

- References
- Terminology
- Distribution List
- Appendices

Discussion



- Is this similar to the NREP you have in your country?

Chapter 1. Introduction

- Sections
 - 1.1 Purpose
 - 1.2 Scope
 - 1.3 Legal basis
 - 1.4 Participating organizations
 - 1.5 Related emergency response plans and documents
 - 1.6 Terminology

Chapter 2. Protection Strategy

- Sections
 - 2.1 Goals of emergency response
 - 2.2 Hazards assessment
 - 2.3 Planning basis
 - 2.4 National reference level and criteria
 - 2.5 Protective actions and other response actions
 - 2.6 Concept of operations

Chapter 3. Emergency Response

- Sections
 - 3.1 Managing emergency operations
 - 3.2 Identifying and notifying
 - 3.3 Other functional areas
 - 3.4 Information management
 - 3.5 Terminating an emergency
 - 3.6 Analysing the emergency and the emergency response

Chapter 4. Emergency Preparedness

- Sections
 - 4.1 Authorities
 - 4.2 Organization and staffing
 - 4.3 Coordination
 - 4.4 Plans and procedures
 - 4.5 Logistical support and facilities
 - 4.6 Training, drills, and exercises
 - 4.7 Quality management programmes

Suggested Appendices

- A 1 - Authorities, responsibilities and capabilities of national agencies, ministries and response organizations
- A 2 - Legal authorities and agreements
- A 3 - Generic and operational criteria
- A 4 - Emergency planning maps
- A 5 - Facilities and radiological resources
- A 6 - Event specific coordination
- A 7 - Supporting documents
- A 8 - Any additional appendices, as appropriate

Participating Organizations and Facility Emergency Plans Outline

- Same structure as for the NREP
- Content related to the specific response functions of the participating organizations / facility
- Relationship with the NREP and other relevant plans has to be described
- Emergency management and coordination with other response organizations has to be included

Contingency Plans

- A plan devised for an outcome other than in the usual (expected) plan
- It deals with extra-ordinary events which may develop beyond the planning basis
- Often used when an exceptional risk would have catastrophic consequences
- Such plans enable responders to identify and coordinate in advance the activities of the different government agencies

Contingency Plans for EPC IV

- Since impact may vary widely, the concept “Contingency Plan” is used to address the specific geographic scope of the event
- Applicable also to facilities in Emergency Preparedness Categories I and II, in extra-ordinary events when urgent protective actions may be needed

Implementing Procedures (IP)

- Implementing Procedure (IP) is the step by step description of actions to be carried out
- IP should be:
 - Connected to your response plan
 - Integrated into system
 - Easily readable and traceable
- IPs cover all emergency situations

Discussion



- Why do we need procedures?

Development Steps

1. Gather needed information
2. Define objective(s)
3. Define process (concept of operation)
4. Write and distribute procedure
5. Train response staff
6. Maintain up to date procedures

Procedure Objective(s)

- Extract objectives (major goals) of response plan
- Define specific tasks during response
- Define all possible positions (experts, units, organizations) that are responsible for performing those tasks



Procedure

- Define a process to meet a single objective
- Procedure is a description of the process, i.e. the tasks and positions to meet a single objective

Write the Procedure

- Define common structure and information required for each procedure
- Procedure must be written in manner suitable for user
- A balance between training needs and details in procedures must be found

Train Staff

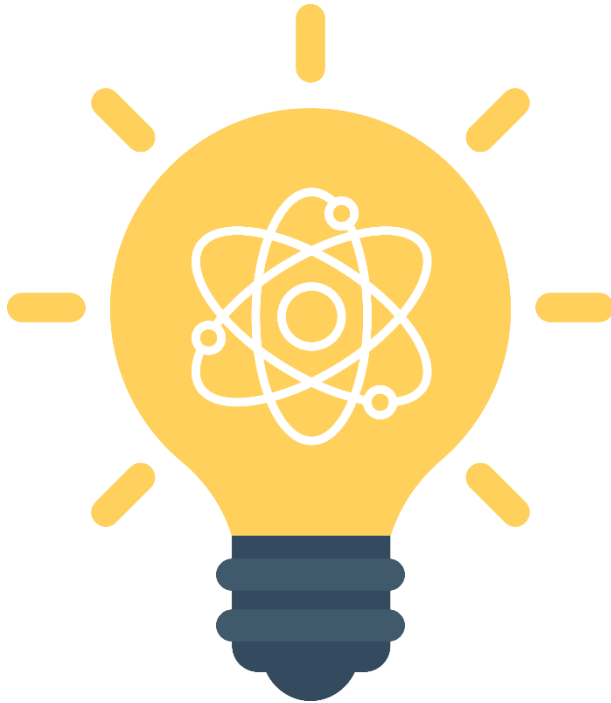
- Approved procedure should not be implemented immediately
- Before procedure becomes effective, staff will need to be **trained**



Maintain Up to Date Procedures

- Procedures not static
- Need to be reviewed, updated, approved, released and distributed regularly
- Measures should be provided for ensuring those performing procedures are aware of, and use, correct operational steps
- QA system for preparation, approval, release and distribution of IPs should be in place

Key Points



- Emergency response plans and procedures form a part of emergency preparedness capability
- Plans and procedures for response to all hazards to be structured into a coherent and interlocking system
- Procedures are needed to carry out emergency response plan

Where to Get More Information

- IAEA GSR Part 7 (2015)
- IAEA GS-G-2.1 (2007)
- IAEA EPR-Method (2003)

iec.iaea.org
iec-information@iaea.org
@IAEAIEC

Thank you!

Ms. Muzna Assi

Emergency Preparedness Officer
Incident and Emergency Centre

m.assi@iaea.org

