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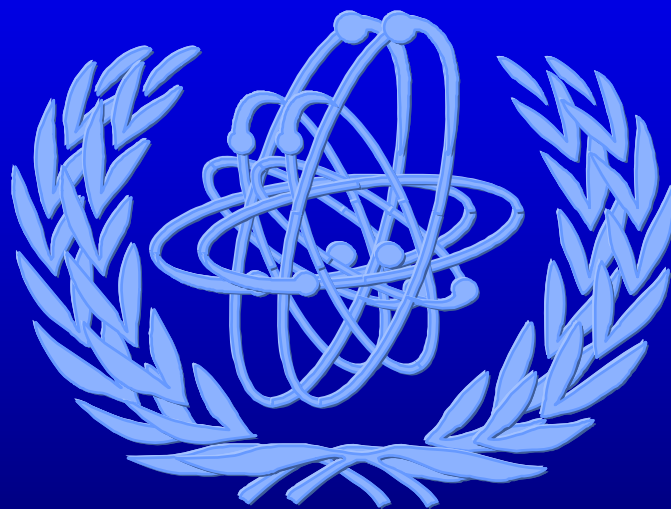
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# Establishing Emergency Response Capability



## Emergency Plans and Procedures

*Lecture*

# Introduction

- **Emergency plan** is a general description of roles and responsibilities of all responding organizations and their relationships
- **National emergency plan** is a summary of more detailed plans developed by individual agencies, governmental jurisdictions, and facilities or operators
  - **It ensures that all other planning is integrated and compatible**
- **Implementing procedures** and resources are needed to carry

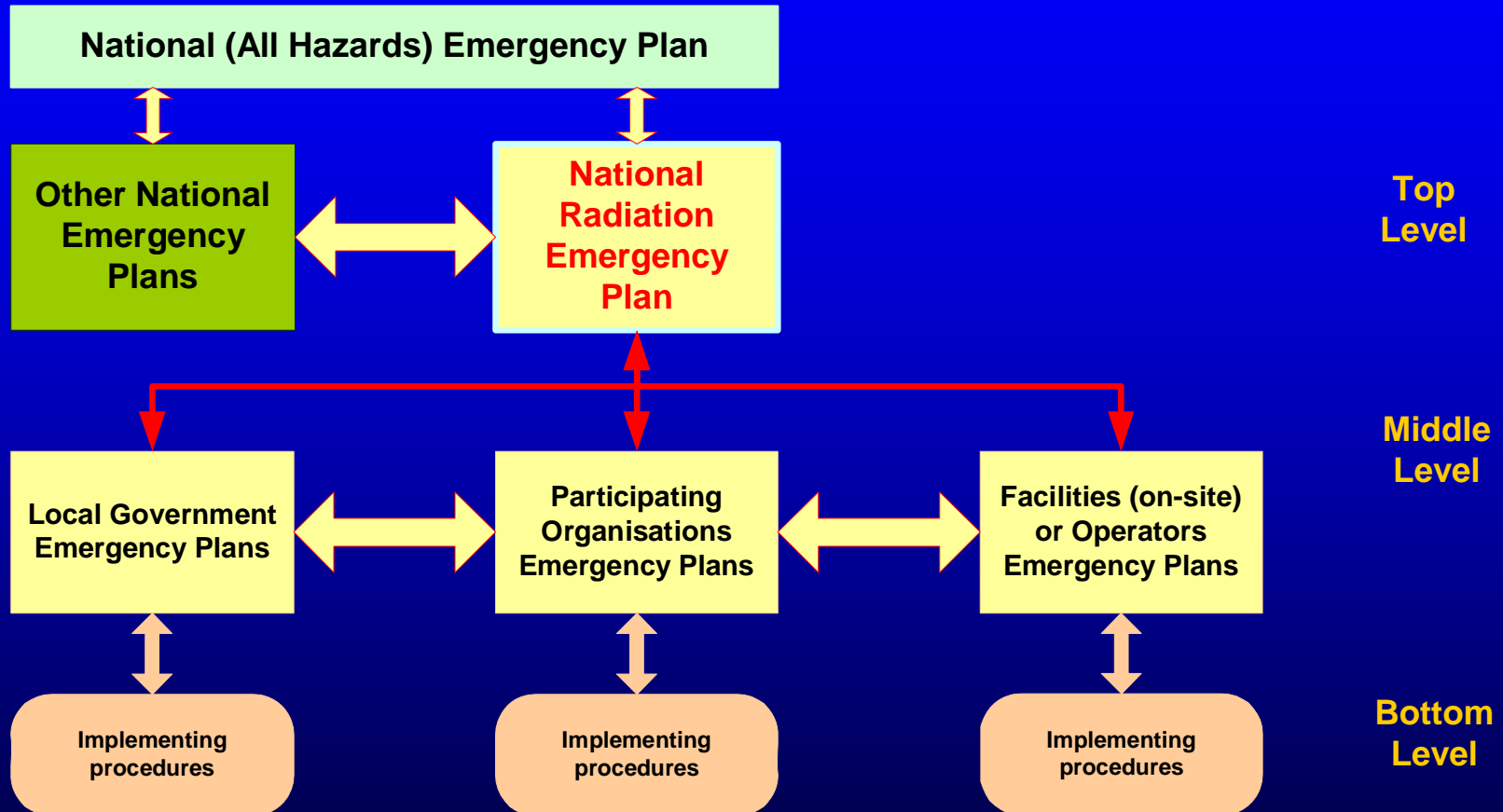
# Introduction (1)

- **The objective of this lecture is to present and explain**
  - **Plan outlines at national, local and operator level are presented, and**
  - **Process of developing and writing implementing procedures**

# Content

- **Radiation emergency plans' outlines**
  - **National Radiation Emergency Plan**
  - **Local government and participating organisations emergency plans**
  - **Facility's (on-site) emergency plan**
  - **Operator's contingency plan**
- **Implementing procedures**
- **Summary**

# Integrated Emergency Planning Concept



# 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**

# National Radiation Emergency Plan

- **NREP provides basis for emergency preparations by both local and national response organizations**
- **NREP should contain information that other organizations need to know about national level response in order to develop effective response capability**
- **It is a summary of more detailed plans and assures that all other planning is integrated and compatible**



# Suggested NREP Outline

- Title (cover) page
- Table of Contents
- **Chapter 1: Introduction**
- **Chapter 2: Planning Basis**
- **Chapter 3: Emergency Response**
- **Chapter 4: Emergency Preparedness**
  
- References
- List of Abbreviations
- Distribution List
- Appendixes

# Title (Cover) Page

- **Title**
- **Version No.**
- **Approval date**
- **Validation date**
- **Signatures**

# Chapter 1: Introduction

- **Sections**
  - **Purpose**
  - **Participating organisations**
  - **Scope**
  - **Legal basis**
  - **Related plans and documents**



# Chapter 2: Planning Basis

- **Sections**
  - **Types of threats**
  - **Planning concepts**
  - **Response roles and responsibilities**
  - **Response organization**



# Chapter 2: Planning Basis (1)

- **Sections**
  - **Response co-ordination**
  - **Response facilities**
  - **Response communications**
  - **Concept of operations**

# Chapter 3: Emergency Response

- **Sections**
  - **Emergency management**
  - **Notification, activation and request for assistance**
  - **Logistics/resource commitments**
  - **Functional response**



# Functional Response

- **Subsections**
  - **Performing mitigation**
  - **Taking urgent protective action**
  - **Providing warnings and instructions to the public**
  - **Protecting emergency workers**
  - **Medical response and mitigating the non-radiological consequences**
  - **Assessing the initial phase**



# Functional Response (1)

- **Subsections**
  - **Keeping the public informed**
  - **Taking agriculture, ingestion and long-term countermeasures**
  - **Conducting recovery operations**
  - **Finance and reimbursement**
  - **Records and data management**





# Chapter 4: Emergency Preparedness

- **Sections**
  - **Authorities and responsibilities**
  - **Organisation**
  - **Coordination**
  - **Plans and procedures**



# Chapter 4: Emergency Preparedness (1)

- **Sections**
  - **Logistical support and facilities**
  - **Training**
  - **Exercises**
  - **Quality assurance and programme maintenance**

# Additional Information

- **References**
- **List of abbreviations**
- **Distribution list**
- **Appendixes**



# Suggested Appendixes

**A 1 - Authorities, responsibilities and capabilities of national agencies, ministries and organizations**

**A 2 - Table of international legal authorities and agreements**

**A 3 - National guidance**

**A 4 - Emergency planning maps**

**A 5 - Facilities and specialized radiological resources**



# **Suggested Appendixes (1)**

**A 6 - Event Specific Coordination**

**A 7 - Implementing procedures**

**A 8 - Supporting documentation**

**A 9 - Preparedness and response terms**



# Participating Organizations or Local Government Radiation Emergency Plan

- **Introduction**
- **Planning basis**
- **Emergency response**
- **Emergency preparedness**
  
- **References**
- **List of abbreviations**
- **Distribution list**
- **Appendixes**



# Suggested Appendixes

**A 1 - Organization authorities, responsibilities and capabilities**

**A 2 - Agreements**

**A 3 - Emergency planning maps and emergency zone data**

**A 4 - Facilities and specialized radiological resources**

**A 5 - Implementing procedures**

**A 6 - Supporting documentation**

# Facility (On-site) Emergency Plan

- **Introduction**
- **Planning basis**
- **Emergency response**
- **Emergency preparedness**
  
- **References**
- **List of abbreviations**
- **Distribution list**
- **Appendixes**





# Suggested Appendixes

**A 1 - Organization authorities, responsibilities and capabilities**

**A 2 - Agreements**

**A 3 - Emergency planning maps and diagrams**

**A 4 - Emergency classification system**

**A 5 - Facilities and specialized radiological resources**

**A 6 - Implementing procedures**

**A 7 - Supporting documentation**



# Mobile Source Operator's Contingency Plan

- **Sections**
  - **Responsibility**
  - **Entry conditions**
  - **Cautions**



# Contingency Plan Outline (1)

- **Sections**
  - **Immediate response actions**
  - **Emergency preparedness**
- **Distribution list**
- **Appendixes**
  - **A 1 - Contact numbers**
  - **A 2 - Guidance for radiological assessor or radiation protection officer**
  - **A 3 - Guidance for local off-site officials**



# Implementing Procedures (IP)

- **Implementing procedure is a step by step description of the actions to be carried out**
- **IP should be:**
  - **Connected to your response plan**
  - **Integrated into a system**
  - **Easily readable and traceable**
- **IP is not a stand-alone document**



# Why We Need Procedures

- **Emergencies can happen at any time**
  - **The most experience staff may be on leave, sick, etc.**
  - **There is a relatively high turnover in emergency response staff**
- **Without written documentation the response system can be dangerously ineffective**
- **Procedures form basis for training the emergency staff**



# Development Steps

- **Gather needed information**
- **Define the objective(s)**
- **Define the process (concept of operation)**
- **Write and distribute procedure**
- **Train the response staff**
- **Maintain procedure up to date**



# Needed Information

- **You will need:**
  - **an overall concept of operations**
  - **organisation-specific concepts of operations**
  - **Specific objective(s)**
  - **Position(s) according to the organisational structure**

# Procedure Objective(s)

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

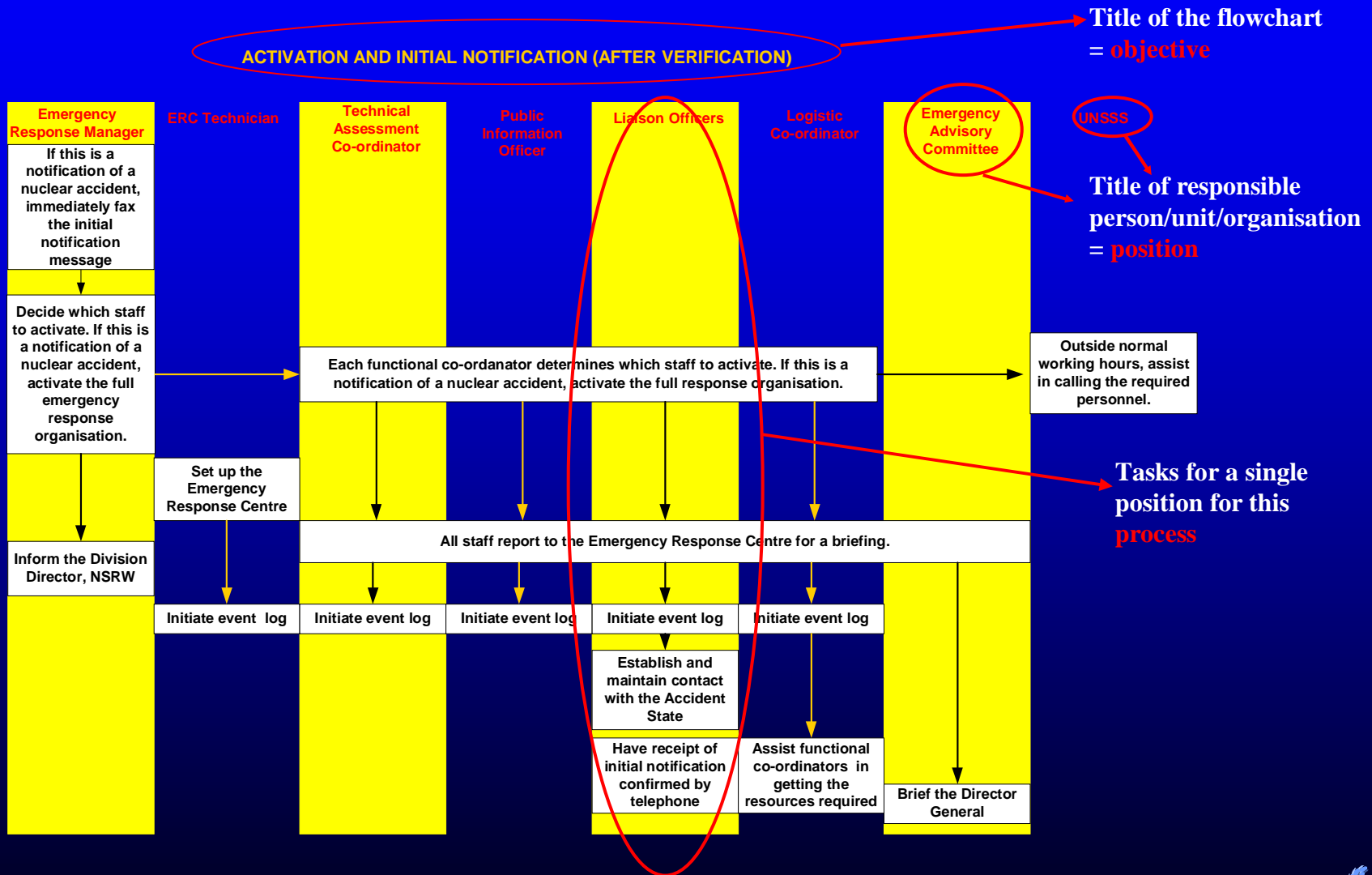




# Process

- **Define a process to meet a single objective**
- **A process is the description of the tasks and the positions to meet a single objective**

# Define Process – Example



# Write Procedure

- **Define the common structure and information that should be covered in each procedure**
- **The procedure must be written in a manner suitable for the user**
- **A balance between training needs and details in the procedures must be found**



# Guidelines for IPs

- **Put clear criteria for decision points and clear indications on where to go in IPs if it is “Yes” or “No”**
- **IPs should be self-contained whenever possible**
- **Precautions and risks should be clearly highlighted with the word “Attention” or “Caution” and shown before actions that they refer to**
- **IPs should be field tested to ensure maximum realism is built into IPs and to determine if actions can be done as expected**



# Train Staff

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



# Maintain up to Date

- Procedures are not static
- They need to be reviewed, updated, approved, released and distributed **regularly**
- Measures should be provided for ensuring those performing a procedure are aware of and use the appropriate, correct procedures



# QA System for IPs

- QA system for preparation, approval, release and distribution of IPs should be in place
- Changes to the procedures need to be controlled
  - Reviewed, approved, released and distributed regularly
- Ensure that qualified operating staff review and practice all IPs over period of time (part of continuous training programme)
- Adopt common IP structure and format



# Suggested IP Structure

- Title page
- Header
- Sections
  - **Entry conditions**
  - **Responsibility**
  - **Cautions**
  - **Limitations (optional)**
  - **Needed before use (optional)**
  - **Purpose – customer (optional)**





# IP Structure (1)

- **Sections**
  - **Summary (optional)**
  - **Definitions (optional)**
  - **Steps**
  - **Reporting (optional)**
- **Distribution list**
- **Attachments (optional)**



# Summary

- **Suggested plan outlines at national, local, facility or operator level have been presented**
- **Other formats or structures can be entirely adequate**
- **Structure of radiation emergency plan should be consistent with that of other existing emergency response plans**



# Summary

- **Procedures are needed to carry out the emergency response plan**
- **A procedure is a step-by-step description of the actions**
- **A procedure is not a stand-alone document**
- **A system for preparation, approval, release, distribution and maintenance should be in place**

# Where to Get More Information

**INTERNATIONAL ATOMIC ENERGY  
AGENCY**

**Method for the development of emergency  
response preparedness for nuclear or  
radiological accidents**

**IAEA TECDOC-953**

**IAEA, Vienna (new addition, 2002)**