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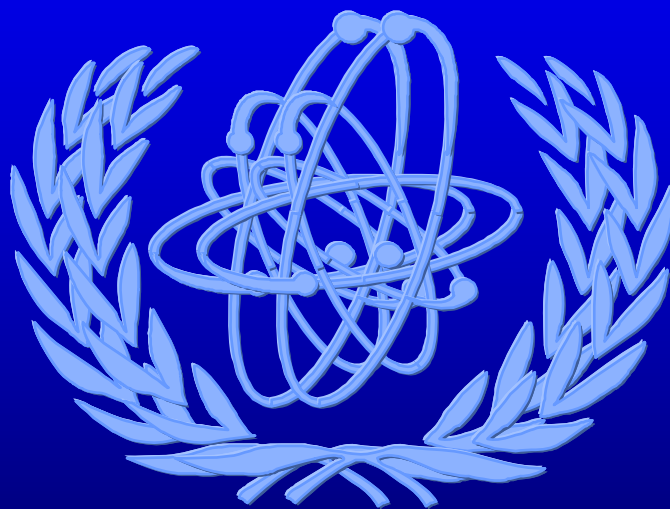
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Establishing Emergency Response Capability



**Step-by-step Approach to
Developing Response Capability**

Lecture

Introduction

- **Minimum level of planning is appropriate in every country, even in those without any known radiological activities, because any country could be affected by an emergency involving transport, lost or stolen sources, or transboundary contamination**
- **Aim of this lecture is to present practical step-by-step process for developing capability to respond adequately to **radiation** emergency**












Content

- **Planning methodology**
- **Getting started**
- **Ten steps (tasks)**
- **Summary**

Planning Metodology

- **Planning methodology is**
 - **Modular**
 - **Based on extensive consultation**
 - **Iterative**

Ten Tasks

Tasks	Implementation Time
Designate National PC	
1. Review national policy	
2. Perform a threat assessment	
3. Develop the planning basis	
4. Allocate responsibilities	
5. Develop an interim capability	
6. Write the NREP	
7. Present the NREP	
8. Implement detailed plans	
9. Test the capability	
10. Establish ongoing QA, maintenance	

Getting Started

- **An existing governmental body or organization should be established or identified to act as national coordinating authority, whose functions include**
 - **ensuring that responsibilities are assigned**
 - **resolving differences**
 - **precluding incompatible arrangements between the various parties**

**Designate a single overall National
Emergency Planning Coordinator
NEPC**

NEP Coordinator

- **In-depth technical and operational knowledge of emergency preparedness and response issues**
- **Decisional authority to ensure an effective coordination process**
- **Be provided with sufficient staff and long term resources to develop and maintain the response capability**
- **Multi-year budget**

**Involve all parties in the planning process
who have interest in development and
implementation of the emergency
plan(s) at the early stage**

Task 1 – Review National Policy

- **Review and document results in NREP**
 - **National laws or acts for emergencies**
 - **International agreements**
 - **Description of roles, responsibilities and capabilities of**
 - ❖ **Major national ministries**
 - ❖ **Local governments and operators**
 - **Description of integration into the planning for other types of emergencies**

Review National Policy

- **Ensure that responsibility for overall coordination for all types of potential radiation emergencies is addressed**
- **Clarify how responsibilities and authorities could change as the emergency progresses**
- **Planning may identify necessary revisions to legal infrastructure**
- **If needed, government policy statements or agreements between response organizations can be used in the interim**



Task 2 – Perform Threat Assessment

- **Conduct national threat assessment to identify practices and facilities that may possibly necessitate emergency interventions within the country**
- **Include facilities outside the country**
- **Determine level of preparedness required by determining which threat categories apply**

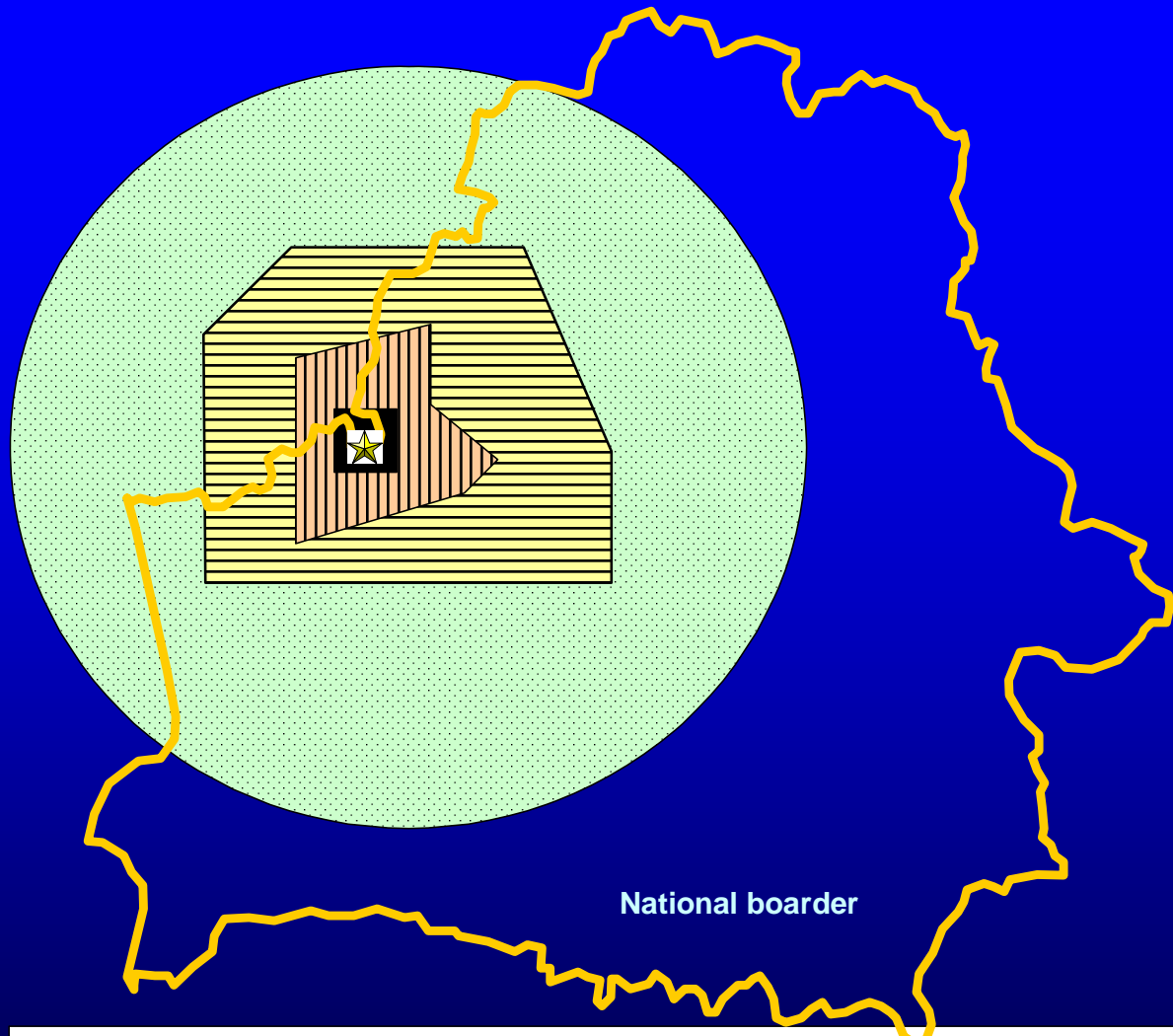
Threat Assessment

- **Identify**
 - **Threat category of facilities within the country**
 - **Threat category I and II facilities outside the country in nearby countries that are within food restriction planning radius**
 - **Threat category of jurisdictions within the country**
 - **Operators of mobile dangerous sources (threat category IV) that can result in emergencies throughout the country**







Threat Assessment (1)

- **Minimum level of threat should be assumed to exist for all jurisdictions**
- **Countries should assess their vulnerability to emergencies that can occur anywhere**
 - **Types of radioactive material shipments through the country, and main routes and focal points (e.G. Distribution centres)**
 - **Uses of dangerous mobile sources (e.G. For medical or industrial uses)**
 - **Locations at which there is significant probability of encountering dangerous source that has been lost, abandoned, stolen or illicitly transported**





National boarder

	Facility (Cat I, II or III)		PAZ (Cat I, IV & V)		Food restriction radius (Cat IV & V)
	On-site (Cat I, II or III)		UPZ (Cat II, IV & V)		All jurisdictions (Cat IV)



Task 3 – Develop Planning Basis

- **Gather and document information about possible accidents and local areas**
 - **Operator information**
 - **Off-site information**
 - **Off-site environmental conditions**

- **Describe information in NREP**

Information Needs for Planning Basis

- **National laws and regulations**
- **Responsibilities**
- **Facility or operator information**
- **Off-site general information**
- **Off-site environmental conditions**

**The information should be documented and
briefly described in NREP**



Task 4 – Concept of Operations and Responsibilities

- **Develop a basic concept of operations describing the response to each basically different emergency type**
- **Determine and assign the roles and responsibilities of each group, organisation or individual involved in emergency preparedness and response**

Emergency Threat Category for Government Jurisdictions

Threat category	Local planning jurisdictions	National planning Countries
I	Responsible for UPA within PAZ and UPZ	With territory within PAZ, UPZ or food restriction radius
II	Responsible for UPA within UPZ	With territory within UPZ or food restriction radius
II	Responsible for providing emergency services	Containing category III facility
IV	All	All
V	None	With territory within food restriction planning radius



Critical Tasks

- **Worksheet with list of tasks that are critical to a successful response should be prepared**
- **One copy of this worksheet should be distributed to each organization that may have a role in off-site response**
- **Each organization should be asked to complete portions of worksheet that it believes applies to it, indicating if it is responsible for the task**
- **All completed worksheets should then be assessed at the national and local levels to identify gaps, overlaps and conflicts**



Task 5 – Develop an Interim Capability

- **Establish an interim emergency response capability**
- **Establish a notification point where potential radiation emergencies can be reported and assistance obtained**

- **This task should not be overlooked**



Task 6 – Write NREP

- **Develop National Radiation Emergency Response Plan**
- **NREP should address all facilities and jurisdictions identified in task 2**
- **In developing the plan, consider data gathered in tasks 1, 2, 3 and 4**

Task 7 – Present NREP

- **Give formal presentations to organisations that may be involved, directly or indirectly, in maintenance and implementation of the plan**
- **This will achieve a common understanding of the response concepts and principles**
- **It will allow unforeseen issues to be raised and resolved before they become real difficulties**

Task 8 – Implement Detailed Plans

- **Develop infrastructure and functional capabilities needed to implement the NREP for each facility and jurisdiction identified in task 2**
- **This will include plans, procedures, staff, organisation, facilities, equipment and training**
- **A group should be assigned responsibility to assist and help in this effort**



Task 9 – Test Capability

- **Conduct drills and exercises**
 - **Drills provide training**
 - **Exercises test and verify the adequacy of entire system to include plans, procedures, facilities, equipment and training**
- **Identify and correct deficiencies**



Task 10 – Establish Ongoing QA and Maintenance

- **Ensure that emergency response capability is maintained and periodically validated**
- **All groups should develop means to maintain and update emergency response programme, including the following:**
 - **review of plan and procedures**
 - **review of training programme**
 - **exercise programme**
 - **feed-back process for lessons learned during exercises and real emergencies**



Remember

A long-term staff and budget must be provided to ensure that the capability is maintained



Ultimately

- **Country should adopt legislation to clearly allocate responsibilities for preparedness and response for radiation emergency**
- **Regulatory body should require that emergency plans be prepared for on-site area for any practice or source, which could necessitate emergency response**
- **Regulatory body should ensure that these plans are integrated with those of other response organizations as appropriate before commencement of operation**



Summary

- **Minimum level of planning is appropriate in any country**
- **Developing national emergency response capability requires a systematic approach**
- **The process is modular, requires extensive consultations with all relevant organisations and is iterative**
- **Implementing ten step process will provide capability to respond adequately to any radiation emergency**



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)