Project on
Minimum Standards and Non-Binding Guidelines
for First Responders Regarding
Planning, Training, Procedure and Equipment
for Chemical, Biological, Radiological
and Nuclear (CBRN) Incidents

GUIDELINES FOR FIRST RESPONSE TO A CBRN INCIDENT

NATO Civil Emergency Planning
Civil Protection Committee

Foreword

The consequences of Chemical, Biological, Radiological and Nuclear (CBRN) emergencies may stretch national capabilities to their maximum extent. Responsibility for first response remains with individual nations. It is essential that nations build on their resources to respond and mitigate the consequences of an emergency situation to lives, property and the environment. Due to the nature of CBRN incidents, particularly their trans-national effects, co-operation between Euro-Atlantic Partnership Council (EAPC) nations is necessary. The development and adoption of Non-Binding Guidelines and Minimum Standards facilitates and improves national responses and mutual assistance.

The initiative to develop Non-Binding Guidelines and Minimum Standards for First Responders regarding planning, training, procedures and equipment for CBRN incidents, stems from the EAPC Seminar on responses to terrorism which was held in Warsaw in February 2002. It was subsequently included in the Civil Emergency Planning related section of the Weapons of Mass Destruction (WMD) Initiative Stocktaking Report adopted at the Reykjavik Ministerial in May 2002.

The purpose of the initiative is to provide general guidelines that EAPC nations may draw upon on a voluntary basis in order to enhance their preparedness to protect their civilian populations against Chemical, Biological, and Radiological and Nuclear (CBRN) risks. Such guidelines seek to improve understanding and interoperability between nations, thereby contributing to greater efficiency in the use and delivery of national and international assistance, ultimately enhancing interoperability.

The project fills a void at national and international level for consequence management (CM) planning, training, procedures and functional equipment for first responders. National legal responsibilities may be divided in substantially different ways; there can be no universal solution for CBRN-related civil emergency planning. Likewise, the mandates of first responders involved in emergency response may be formulated in substantially different ways from one nation to another. These guidelines are therefore generic in nature. They serve to establish a lowest common denominator through best practice and shared lessons learned.

Introduction

The aim of the response guidelines is to establish procedural guidelines for mid-level strategic/tactical planners responsible for CBRN preparedness and response. The response guidelines provide generic advice and guidance on procedures, capabilities and equipment required to implement an effective response. They are designed to improve multi-agency interoperatbility in first response to a CBRN incident and provide guidance on when regional, national or international assistance may be required. The guidelines have been prepared to help planners in EAPC nations determine their own level of capability through self-assessment. They serve as a checklist. Implementation of the guidelines is entirely optional.

Rather than aiming for standardisation, the response guidelines focus on developing a common understanding of the actions required during the initial response phase (20mins).

In order for a response to be fully integrated it is vitally important that deliberate and effective pre-planning takes place between members of all responding agencies at local, regional, national and, where appropriate, international level.

The development of regular training designed to test agreed roles, responsibilities, capabilities and protocols is also an essential component of the pre-planning process and will provide opportunities for all agencies to develop further their combined response to a CBRN emergency.

The response guidelines are presented as a matrix divided into four sections. They are generic in nature and relate to procedures, capabilities and equipment [1] required to implement an effective response.

[1] Equipment in this project refers to its functional aspects as opposed to recommending specific items.

1. Information gathering, assessment and dissemination

Recognising that a CBRN has, or may occur is critical. Information may be received and disseminated via a number of routes, including intelligence agencies, the public, emergency service control rooms, pre-determined risk information contained in operational response plans, labelling of hazardous substances and transportation containers, first responder observations of signs and symptoms (victims, animals, plants, the surrounding environment).

2. Scene management

The scene should be isolated to mitigate consequences. Effective scene management ("Hot-zone" management) is required to control access to and from the incident scene, control movement of contaminated victims, provide safe working methods for responders and contain the release of any substances.

3. Saving and protecting lives

Saving lives is the top priority of all responding agencies. Contamination of victims/casualties must be considered as part of the initial assessment and effective methods for rescue, decontamination and medical treatment must be provided. The provision of timely warnings and/or evacuation of the public where appropriate, may also contribute to saving lives by reducing the risk of exposure.

4. Additional/specialist support.

Following the immediate operational response, specialist advice should be sought to assist with consequence management. This may include hazard identification or confirmation and establishing levels of contamination, medical support, transport and treatment of casualties and supplementing emergency service resources. Where necessary, regional, national and international resources can also be used to maintain or provide a sufficient level of emergency provision and response. Specialist advice and resources may also be required as part of the recovery management phase, including the provision of long term health monitoring, psychological support, building and environmental decontamination, re-establishing public confidence and supporting a return to normality.

For clarity, the term "First Responders" refers to individuals and teams that are involved in activities which address the immediate and short-term effects of a CBRN emergency. This includes on-scene personnel from the police, fire brigades and health services acting to minimise the consequences of a CBRN-emergency. It also includes personnel in hospitals, crisis management institutions and those involved in detection, verification and warning.

1. INFORMATION GATHERING:
Gather, assess and disseminate all available information

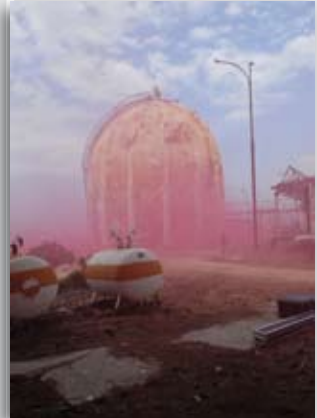| Procedure	Capability	Equipment
Call centres and mobilising centres		
• ecognise that a CBRN incident has or may occur • Gather, assess and disseminate all available information to first responders • Establish an overview of the affected area • Provide and obtain regular updates to and from first responders	• CBRN awareness training for call takers • Method of gathering information (public, intelligence etc) • Method of sharing information between responding agencies • Pre-determined level of response to (suspected/confirmed) CBRN incidents	• Questionnaire • Information technology • Direct telephone lines • Radios • Geographical information (maps) • Response plans for specific risks
First Responders **Approach and arrival at scene**		
• Approach scene with caution and upwind • Carry out scene assessment • Establish Incident Command (each responding agency) • Recognise signs and indicators of CBRN incidents • Determine whether CBRN or hazardous material incident • Estimate number of casualties/victims • Estimate resource requirements • Consider specialist advice/resource requirements	• CBRN awareness training for responders • Weather information • Knowledge and understanding of risk assessment • Knowledge and understanding of response to improvised explosive devices • Knowledge and understanding of roles, responsibilities and capabilities of each responding agency • Effective inter-agency coordination on-site • Common command system and structure	• Personal Protective Equipment (PPE) • Chemical, Biological and Radiological Detection, Identification and Monitoring Equipment (for personnel, boundary monitoring and analysis) • Pocket and/or emergency response guides • Inter-operable communications equipment (eg. handheld radios) • Main scheme radios • Geographical information (maps)

Procedure

- Provide situation report to emergency control rooms etc and request assistance if necessary
- Carry out risk assessment
- Undertake hazard identification
- Do not approach or touch suspect objects/packages– do not operate radios, mobile phones or other electronic devices within vicinity (safe distance +/-400m)
- Consider secondary devices/ targets
- Establish and agree multi-agency response plan
- Identify safe areas for additional first responder vehicles
- Search for secondary devices
- Critical infrastructure considerations

Capability

- Multi-agency communication channels
- Knowledge of geographical area
- Search capability
- Analysis capability
- Knowledge of facilities and critical infrastructure
- Protection of unaffected critical infrastructure and key sites (local, regional, national targets)

Equipment

- Response plans for specific risks

2. SCENE MANAGEMENT:
Isolate scene to mitigate consequences

Procedure	Capability	Equipment
Initial:		
• Consider wind direction • Establish multi-agency command point in safe area (cold zone) • Establish inner and outer cordon (hot/warm/cold zone)	• Common command system and structure • Knowledge and understanding of hot/warm/cold zone	• Pocket and/or emergency response guide • Detection, Identification and Monitoring Equipment (for personnel, boundary monitoring and analysis) • Personal Protective Equipment (respiratory protection, chemical protection suits) • Cordon tape and signage
Containment:		
• Contain contaminant material/liquid • Establish quarantine(holding) area for contaminated victims/casualties (where necessary) • Establish decontamination and triage areas • Cordon off contaminated areas	• Knowledge and understanding of signs, symptoms and effects of substances (chemical, biological and radiological) • Knowledge and understanding of Hazmat management • Knowledge and understanding of decontamination (emergency, mass, clinical) • Knowledge and understanding of medical triage	• Pocket and/or emergency response guide • Cordon tape, signage, barriers • Detection, Identification and Monitoring Equipment (for personnel, boundary monitoring and analysis) • Personal Protective Equipment (respiratory protection, chemical protection suits) • Decontamination equipment (emergency, mass, clinical) • Shelter for victims/casualties form adverse weather

Procedure	Capability	Equipment

Additional considerations:

- Identify and establish multi-agency marshalling area for additional resources
- Establish traffic cordon
- Preserve scene and maintain evidence to the extent possible (criminal investigation)
- Carry out co-ordinated evidence collection

- Identify sites/locations to accommodate large numbers of multi-agency vehicles and resources
- Use pre-determined sites/locations where possible.
- Use available/suitable space with solid foundation
- Knowledge and understanding of scene preservation for criminal investigation (evidence, forensics)
- Effective exhibit handling

- Cordon tape, signage and barriers
- Recording equipment (Video/still cameras)
- Evidence bags
- Detection, Identification and Monitoring Equipment (for personnel, boundary monitoring and analysis)

3. SAVING AND PROTECTING LIVES:
Saving lives, giving warnings or managing evacuation

Procedure	Capability	Equipment
• Determine immediate actions and priorities	• Weather information	• Personal Protective Equipment (respiratory protection, chemical protection suits)
• Evacuate inner cordon (to quarantine area)	• Knowledge and understanding of decontamination (emergency, mass, clinical)	• Recording system for hot zone personnel
• Restrict inner cordon access (protected first responders only)	• Knowledge and understanding of medical triage	• Decontamination equipment (emergency, mass, clinical)
• Provide safe working methods for rescuers	• Sufficient numbers of trained personnel to provide rescue, decontamination, medical support and operational scene management	• Personal property bags (for belongings of decontaminated victims)
• Carry out necessary rescues		• Post decontamination clothing for victims
• Implement decontamination as appropriate (emergency, mass, clinical)	• Safe working methods for hot zone personnel (recording entry and duration of exposure)	• Detection, Identification and Monitoring Equipment (for personnel, boundary monitoring and analysis)
• Consider decontamination of personal property	• Transportation of contaminated victims/casualties	• Medical treatment (trauma, prophylactics etc)
• Implement medical triage and treatment	• Methods for communicating timely advice/warnings to the public	• Transport (ambulance, bus etc)
• Implement responder/rescuer decontamination	• Emergency evacuation plans	• Cordon tape, signage and barriers
• Consider requirements and provide transport for victims/casualties	• Effective links with utility companies	• Prepared documentation
• Provide timely warnings and advice to the public (immediate vicinity and beyond as necessary)	• Management of potential public order problems	• Website
• Consider evacuation (immediate vicinity and beyond as necessary)	• Provision of survivor reception centre	• SMS-messages
• Consider utility shutdown		• Use of media (television, radio)
• Consider public order		
• Consider hospital defence (self presenters)		

4. ADDITIONAL/SPECIALIST SUPPORT:
Alert specialists, notify appropriate authorities, integrate specialist advice and resources

Procedure	Capability	Equipment
Notification:		
• Notify appropriate authorities at local, regional and national level (governmental and responder agencies)	• Pre-agreed responsibilities for notification	• List of notifications (specialists etc) for mobilising centres
• Notify specialists (chemical, biological, radiological/nuclear, medical)	• Scientific support (chemical, biological, radiological/nuclear, medical)	• Information technology
		• Direct telephone lines
• Consider international support and conventions (IAEA, WHO, OPCW)	• Local, regional, national response plans	• Geographical information (maps)
• Provide situation reports to all notifications	• Methods to request regional, national and international support	• Response plans for specific risks
	• Bilateral agreements (cross border assistance)	• Transport of specialists
	• Methods to transport specialists to required location	
Assessment:		
• Prepare impact assessment (en-route/on site)	• Prediction (dispersion modelling)	• Detection, Identification and Monitoring Equipment (for personnel, boundary monitoring and analysis)
• Establish effect on population	• Plan for short, medium and long term actions and effects	
• Establish effect on critical infrastructure	• Analyse samples	• Geographical information (maps)
• Establish effect on environment	• Knowledge of critical infrastructure locations	• Response plans for specific risks
• Carry out incident specific and environmental sampling	• Pre-established agreement to augment resources (private industry, public service, international aid/support)	• Critical infrastructure site locations
• Hazard prediction		• Hazard Prediction tools
• Dispersion modelling		• Meteorological equipment
• Radiation monitoring		
• Consider emergency provision requirements for immediate		

4. ADDITIONAL/SPECIALIST SUPPORT: (continued)
Alert specialists, notify appropriate authorities, integrate specialist advice and resources

Procedure	Capability	Equipment
and wider area • Assess resource requirements (short, medium and long term)		
Integration of support: • Specialist advice and/or additional resources to be incorporated into incident plan	• Common command system and structure • Welfare and accommodation for responders	• Provision of food and drink, administration facilities, sleeping accommodation for responders and supporting resources
Substance identification: • Substance confirmation	• Additional analysis capability	• Designated laboratories
Victim/casualty support: • Provide information to hospitals • Provide clinical countermeasures • Provide information to General Practitioners • Provide health surveillance (short-medium term) • Provide emergency accommodation • Establish casualty bureau	• First aid and treatment centres • Post incident clinical counter measures • Post incident medical care • Sufficient numbers of trained personnel to provide (short – medium term) medical support, casualty bureau staff	• Pre-identify potential accommodation • Prophylactics etc • Information technology • Dedicated telephone numbers/lines • Provision of food and drink, sleeping accommodation and administration facilities for victims
Information to public: • Implement communication plan • Provide timely warnings or advice to public • Provide regular updates • Provide health advice to public	• Pre-agreed communication plan • Pre-agreed communication channels/method • Pre-agreed advice (what to do, where to go, what to expect etc)	• Prepared literature • Website • SMS-message • Use of media (television, radio)

Procedure	Capability	Equipment
Site decontamination/ restoration and remediation:		
• Decontaminate responder vehicles/equipment	• Environmental impact assessment	• Detection, Identification and Monitoring Equipment
• Decontaminate hospitals	• Declared environmental/ infrastructure decontamination capability	• Specialist equipment and personnel to decontaminate large sites
• Recover and decontaminate contaminated bodies	• Legal powers of enforcement regarding building and environmental decontamination	• Mortuaries for contaminated bodies
• Decontaminate/restore affected buildings		• Personnel and equipment to remove contaminated waste/ rubble
• Decontaminate and remediate impact on environment	• Effective staged implementation plan	
• Dispose of medical waste	• Mass fatality plan	
• Dispose of site waste/rubble	• Body identification	
	• Waste/rubble removal	
Post incident and long term considerations:		
• Provide multi-agency debriefings for all responders	• Critical incident debriefing	• Network of counsellors
• Provide psychological counselling for victims and responders	• Psychological counselling (responders, victims, affected population)	• Health monitoring facilities
• Provide long term health monitoring (victims and responders)	• Large scale health monitoring	• Temporary/permanent accommodation
	• Liaison with family	• Fund raising facilities
	• Long term accommodation	
	• Financial assistance for victims	

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