Critical Infrastructure Protection within NATO

Khan Jahier
Staff Officer Civil Protection Group
Civil-Military Planning Planning and Support Section
Operations Division - NATO IS
5 main roles:

- Support to NATO Military Authorities in Alliance military operations under Article 5
- Support to NATO Military Authorities in non-Article 5 crisis response operations
- Support to national authorities to deal with the consequences of natural and technological disasters
- Support to national authorities to deal with the consequences of CBRN incidents/attacks
- Cooperation with partners

- Adopted on 31 January 2014.
- Fewer, higher profile/higher impact, value-added deliverables.
- Cross-sectoral synergies with other PGs where practicable.
- Emphasis on protection of Allied and Partner nations’ populations; Partnership; International Organisations and civ/mil cooperation.
Highlights:

Collective Defence

- Para. 12: Enhancing resilience; prevention mitigation; preparedness, response and recovery through exchange of info; training and exercises
- Para 13: Protection of populations and Critical Infrastructure against all hazards

Cooperative Security

- Paras 20-23: Importance of Partnership and engagement of International Organisations

Implementation

- Paras 25-26: Concrete, added-value, deliverable objectives
Partnerships

- Allies
- NATO Partners
- Mediterranean Dialogue Nations
- Partners across the Globe
- Istanbul Cooperation Initiative

Global Partnerships
- Australia, Afghanistan
- Iraq, Japan, Mongolia
- New Zealand, Pakistan, South Korea

Mediterranean Dialogue
- Algeria
- Egypt
- Israel
- Jordan
- Mauritania
- Morocco
- Tunisia

Istanbul Cooperation Initiative
- Bahrain
- Kuwait
- Qatar
- United Arab Emirates

Civil-Military Planning and Support (CMPS)
Planification et soutien civilo-militaires
NON-CLASSIFIED
Emergency Management Phases

- **Prevention/mitigation**
  Attempts to prevent hazards from developing into disasters altogether or reduce the effects of disasters.
  Focuses on long-term measures

- **Preparedness**
  Development of plans of action for when a disaster / incident strikes

- **Response**
  Provision of necessary assistance of emergency services in the disaster / incident area

- **Recovery**
  Restoration of the services, after the initial needs have been met
Consequence management:
“Actions taken to maintain or restore essential services and to lessen the effects of natural or man-made disasters”

- Consequence Management is first and foremost a national responsibility
- Large scale disasters or terrorist acts may:
  - affect more than one nation, or
  - create a situation that is beyond the capability of a single nation to deal with
- In these cases NATO may be well placed to provide collective help to the nation concerned – through civilian and military support means
Preparedness

Tools, methods and guidelines
CEP is developing tools and methods which could enable nations, NMAs, other NATO Bodies, international organisations etc, to enhance their preparedness status:

- Pool of 380 civil experts through reach back
- Teams (AST and RRT)
- Development of “generic” sectoral guidelines and methodologies with regard to emergency management
- Exchange of best practices
- Training and exercises
- Euro-Atlantic Disaster Response Coordination Centre (EADRCC)
- Specific cooperation on CBRN Defence and Critical Infrastructure Protection
Expertise areas, corresponding to the 4 Planning Groups:
- Civil Protection; Industrial Resources and Communication Services; Public Health and Food/Water; Transport (Civil aviation, Ocean shipping and Inland surface transport)

About 380 civil experts:
- Categories and numbers continuously updated according to need;
- Can be contacted at their work place/office;
- Can be deployed to HQ and field operations including through Rapid Reaction Teams (RRT);
- Can take part in an Advisory Support Team (AST)
**Examples of civil expertise available**

<table>
<thead>
<tr>
<th>Civil Expertise</th>
<th>Military Support</th>
</tr>
</thead>
<tbody>
<tr>
<td>Air, Sea, Road Transport</td>
<td>Industrial production and supply</td>
</tr>
<tr>
<td>Airport operations; cargo movement</td>
<td>Veterinary and Phytosanitary</td>
</tr>
<tr>
<td>Aircraft and Ship brokers</td>
<td>Water and water contamination</td>
</tr>
<tr>
<td>Intermodality/Containers</td>
<td>CBRN medical defence</td>
</tr>
<tr>
<td>Ports</td>
<td>Medical supplies</td>
</tr>
<tr>
<td>Shipping experts for movement planning</td>
<td>Movement of casualties</td>
</tr>
<tr>
<td>Shipping experts for execution</td>
<td>Disease surveillance</td>
</tr>
<tr>
<td>Disaster medicine</td>
<td>Communications</td>
</tr>
<tr>
<td>Population movement and evacuation</td>
<td>IT/Cyber security</td>
</tr>
<tr>
<td>Public Information during crisis</td>
<td>Postal services</td>
</tr>
<tr>
<td>CBRN Consequence Management</td>
<td>Waste management</td>
</tr>
<tr>
<td>Disaster and Humanitarian assistance</td>
<td>Critical Infrastructure Protection</td>
</tr>
</tbody>
</table>
Generic methodologies and guidelines

- Risks and vulnerabilities analysis Tool
- Public Information in Crisis: “The Budapest Guidelines”
- SAGBATA: decision – making tool
- Guidelines for psychological support to first responders and victims of terrorism
- Checklist and non-binding guidelines for requesting and receiving international assistance
- Radiological treatment protocols
- Guidelines for management of CBRN threats by communication services (postal)
- Memorandum of Understanding (MoU) on the Facilitation of Vital Civil Cross Border Transport
- Non-Binding Guidelines and Minimum Standards on dealing with CBRN incidents (NBG/MS)
Civil Emergency Planning Committee (CEPC)
- Civil Protection Group (CPG)
- Industrial Resources and Communications Services Group (IRCSG)
- Joint Health, Agriculture and Food Group (JHAFG)
- Transport Group (TG)
Issues under development in CEPC and the Planning Groups (1)

- Consequence Management on Ballistic Missile Defence: CEPC AHG on BMD
- Revision of Budapest Guidelines on Public Information in Crisis: CPG AHG on Public information
- Checklist and Non-Binding Guidelines for High Visibility Events – CPG AHG on High Visibility Events assistance
- Liability of Relief Personnel: AHG on Liability of Personnel
- Ageing infrastructure and vulnerabilities to computer technology applied in process control systems: IRCSG (Communications)
- Report on best practices on Electricity, Gas, and Oil Critical Infrastructure Protection: IRCSG (Industry)
Issues under development in CEPC and the Planning Groups (2)

- Role of telemedicine in the management of crisis situations: JHAFG (Health)
- Study on the cooperation between military and civil doctors: JHAFG (Health)
- Desertification and land degradation and energy challenges to agriculture: JHAFG (Agriculture and Food)
- Threat to and vulnerabilities in civil aviation critical infrastructure: TG (Civil Aviation)
- Technical aspects of transport of military equipment by rail: TG (Inland Surface Transport)
- Emerging threats to NATO’s maritime energy security: TG (Ocean Shipping)
- Improving national resilience against all hazards: CEPC and all PG’s
Preparedness

Training and Exercises
Training and exercises

- Crisis Management Exercise (CMX)
- Euro-Atlantic Disaster Response Coordination Centre (EADRCC) annual exercise
- Annual training session for new experts (Brussels)
- Civil-Military Planning and Support Course (Oberammergau)
- Annual or biennial training seminars under the auspices of each Planning Group
- Military training events
International CBRN Training Curriculum
Purpose: to support training of first responders to get a common knowledge base and a minimum level of preparedness when responding to CBRN incidents.

Guidelines for first response to a CBRN incident
Purpose: to establish procedural guidelines for midlevel strategic/tactical planners responsible for CBRN preparedness and response.

CBRN Civ-Mil train the Trainers courses
Twice a year in one of the five dedicated Regional Training Centres (Finland, Bulgaria, Germany, Lithuania and the Joint CBRN Defence Centre of Excellence in the Czech Republic).

Training of CBRN Teams in the EADRCC exercises
Since 2009 CPG is providing a two-days training to CBRN Teams participating in the EADRCC exercises.
Response

Teams
- Rapid Reaction Team
  - Fast deployment of Civil Experts to:
    - Stricken nations
    - Theatres of operation
    - Military HQ
    - Other International Organizations

- Advisory Support Team
  - Civil Experts to support nations in assessing and developing national preparedness, response and recovery capabilities:
    - CBRN risks and recovery
    - Training and exercise activities
    - High visibility events
Response

EADRCC
Euro-Atlantic Disaster Response Coordination Centre (EADRCC):

- Created 1998 – more than 60 operations since:
  
  Earthquakes, Floods, Forest fires, Mudslides, Storms, Extreme weather, Pandemics, Tsunamis, Technological disasters, Humanitarian emergencies, assistance to Greece in Olympic Games, Hurricane Katrina, Pakistan monsoon floods

- Located at NATO HQ, Brussels

- Partnership instrument (open to sixty-nine countries)

- Liaison arrangements (UN-OCHA; EU; NMAs)

- Role:
  
  - Coordination of allied and partner nations’ assistance to each other in case of natural or technological disaster.
  - Coordination, not command and control

- Since 2001 act as a clearinghouse for assistance after CBRN incident

- Annual Consequence Management Field Exercise
Natural Hazards

- Earthquakes
- Floods
- Forest Fires
- Storms
- Land Slides
Technological Hazards

- Industrial Accidents
  - Chemical
  - Radiological
- Transport Accidents with hazardous material
  - Road
  - Sea
  - Air
- Oil Spills
- Unexploded Ordnance
Terrorist Attacks

- Critical Infrastructure
  - Telecom
- Industrial Facilities
  - Chemical
  - Radiological
- Transportation Means
  - Road
  - Sea
  - Air

- Transportation Infrastructure
  - Seaports
  - Airports
  - Railways Stations
- Dirty - Bomb
  - Chemical
  - Radiological
  - Biological
- Soft Targets
Response

Military support to CM operations
Unique military capabilities that can be used: air transport (strategic/helicopter), medical, CBRN, logistics, surveillance, command and control

NATO Military assisted in major disasters (e.g. Pakistan earthquake in 2005, Pakistan floods in 2010)
Preparedness

Specific cooperation on CBRN
Approved by the Heads of States and Government at the Strasbourg/Kehl Summit (2009)

- Mission Statement: « With due respect to the primarily military mission of the Alliance, NATO will work actively [...] within its competencies and whenever it can bring added value, through a comprehensive political, military and civilian approach ».

- 3 « Pillars » for NATO’s action:
  - Preventing Proliferation
  - Protecting against WMD Attack or CBRN Event
  - Recovering from WMD Attack or CBRN Event

- 3 Strategic Enablers:
  - CBRN intelligence and reachback
  - International outreach and partnership
  - Public Diplomacy
Preparedness

Specific cooperation on CIP
Since 2003:

**Critical Infrastructure** is those facilities, services and information systems which are so vital to nations that their incapacity or destruction would have a debilitating impact on national security, national economy, public health and safety and the effective functioning of the government.
- Total of 380 civil experts on a great range of topics
- 20 experts specifically on CIP
  - General Critical Infrastructure (5)
  - Electricity CIP (3)
  - Gas CIP (3)
  - Oil CIP (3)
  - Industrial Security (2)
  - Cyber Security (4)
In 2003, CEPC developed a Concept Paper and a Road Map. 
Main action areas:
- Ensure information sharing among CEP stakeholders as well as with other NATO and Partners civilian and military authorities
- Assist in the development of training and education programmes to be used at national level
- Contribute to the identification of critical infrastructure from a functional perspective, relying both on physical assets of importance as well as on overall systems and networks supporting the interrelations and interdependencies between them
- Identify research and development contributions to the CIP
- Streamline CIP in exercises conducted within EAPC framework
- Increase awareness of CIP
In 2009, CPG developed a Working Paper on Critical Infrastructure Protection which identified NATO’s overall objectives in the area of critical infrastructure.

In 2009, CPG prepared a paper entitled "Critical Infrastructure Protection activities within NATO." 

In 2010, CPG conducted a survey to understand the current state of affairs of national CIP programmes and the desired level of ambition for NATO with respect to critical infrastructure.

In 2011, CPG developed a paper entitled "Towards a better coordination of Critical Infrastructure Protection activities within CEP."
Exchange of best practices on Energy CIP, including:

- system of electricity generation, transmission and delivery
- system of natural gas production, transmission and delivery; and
- system of oil production, transportation, refining and delivery

Future work will include renewables and public-private partnerships
Exchange of information and best practices on new and evolving information and electronic communication Technologies;

Advice on civil/commercial aspects of Cyber Security, including protection of critical communications and information infrastructure and support to national authorities a) to improve their resilience and b) to mitigate/manage the CEP consequences of cyber attack;

Support provided through *Training and Exercises*; *Exchange of Best Practices* (including cyber-related reports and deliverables) and the provision of *advisory expertise*;

IRCSG is identified as a stakeholder in the NATO Cyber Defence community
Examples of work: *Seminars and Training Events*

- Seminar in 2008 that focused on Cyber Defence with experts from nations, NMAs and International Organisations.
- IRCSG conducted a joint seminar on cyber security in process control systems (SCADA) in 2011 and will conduct its 2014 seminar on CEP vulnerabilities associated with aging infrastructure.

**Recent reports**

- Social networking and its implications in operational theatres (2012)
- Security implications associated with cloud computing (2011)
A comprehensive programme:

Aims to provide a mechanism to rapidly identify, develop and deliver innovative technical and conceptual counter-measures as part of the Alliance’s response to terrorism and other asymmetric threats.

Translates best practices and lessons learned to the civilian force protection environment, where appropriate.

Critical Infrastructure Protection

- Overarching project involving protection of NATO’s infrastructure, personnel and citizens (Force Protection doctrine)
- Operational dimension with a focus on the protection of military deployable infrastructure (forward operating bases) and air and sea ports
Protection of Harbours and Ports

- Includes CIP dimension;
- Includes the development of a deployable, computer based decision support system comprising a comprehensive database of scenarios, solutions and simulations in order to maximize the protection of a specific area.
- Includes a portable underwater detection and deterrence system
Questions?
NATO HQ - Brussels
Civil Military Planning and Support Section
cmps@hq.nato.int

+32-2-707-5117
+32-2-707-7900

CEP Website:
https://cep.hq.nato.org/