

# Joint Capabilities to Combat Weapons of Mass Destruction

*Joint CBRN Defense Conference & Exhibit*

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Presented by:

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- **JRO's Role, Organization and Responsibilities**
- **CBRND Defense Operational Concept**
- **CBRND Core Capability Areas**
- **Modernization Emphasis**
- **JRO Focus Areas**
  - **CBRN Monitoring & Survey**
  - **CBRN Field Analytics**
  - **WMD Consequence Management**
  - **Stand Off Detection**
  - **Developing Joint CbtWMD Leaders**

# *JRO's Role in the CBDP*

*Single office within DOD responsible for the planning, coordination, and oversight of joint CBRN defense operational requirements*

- **Lead joint CBRN defense capabilities development**
- **Develop and maintain the CBRN defense Overarching Operational Concept and the CBRND Modernization Plan**
- **Represent the Services and Combatant Commanders in JCIDS and act as their proponent for coordinating and integrating CBRND operational capabilities**
- **Develop DOD CBD POM with acquisition community support**
- **Facilitate the development of joint doctrine and training and sponsor the development of multi-service doctrine**
- **Oversee, manage and sponsor concept experimentation**

# Joint Staff and J8 Organization

**Chairman of the Joint Chiefs of Staff  
Admiral Mullen, United States Navy**

J-1

J-2

**J-3,  
Operations**

**J-4  
Logistics**

**J-8,  
Force Structure, Resources, &  
Assessment Directorate  
VADM Stanley, U.S. Navy**

**J-5, Strategic  
Plans & Policy**

J-6

J-7

**Deputy Director for  
Resources Acquisition**

**Deputy Director for  
Force Application**

**Deputy Director for  
Force Protection  
RADM Macy, U.S. Navy**

**Deputy Director for  
Force Management**

**Joint Integrated Air and Missile  
Defense Organization (JIAMDO)**

- Homeland Air Security
- Air and Missile Defense

**Joint Requirements Office –  
Chemical Biological, Radiological,  
& Nuclear (JRO-CBRN) Defense**

- CBRN Defense
  - Counter-proliferation
  - Non-proliferation
  - Consequence Management
- Homeland Defense

**Protection Assessment Division**

- Critical Infrastructure Protection
- Improvised Explosive Devices
- Personnel Protection
- Space Control Protection
- Insensitive Munitions
- Electronic Warfare Protection
- Continuity of Operations
- Continuity of Government
- Nuclear Weapons Security

**Services and COCOMS**

## *JRO as a J8 Division*

***Serve as the CJCS' single source of expertise to address all issues involving CBRN defense within passive defense, consequence management, force protection, and homeland security defense and civil support***

- **Chair and operate Combating WMD Working Group in support of Protection FCB**
- **Protection Capability Portfolio Management - Combating WMD**
- **WMD Consequence Management**
- **Nuclear Defense/Stand Off Nuclear Detection**
- **Coordinate Joint Combat Capabilities Assessment actions related to CWMD/CBRND (i.e. IPLs, GWOT LL, 7500)**
- **Joint Staff focal point for CBRN Survivability**
- **Joint Staff principal to BioDefense Policy Coordinating Committee, Homeland Security Council**
- **International Programs Support – NATO; bilateral policy exchanges (South Korea, UK, Japan); Australia, Canada, UK & US Memorandum of Agreement for CBRN defense**

# JRO – CBRND Roles and Responsibilities

## Concepts, Studies/Analysis

- Develop Operational Concepts
- Conduct CBAs
- Participate in experiments, demos and Joint Concept Technology Demos
- Oversee Joint Combat Developer for Experimentation
- Develop / manage studies
- Advocacy for Science & Tech/Modeling & Sim
- Coordinate Threat Capability Assessments
- Develop Analytic Agenda

## Mission Area Integration

- Develop Modernization Plan
- Coordinate CbtWMD WG
- Support Protection FCB
- Incorporate CWMD/CBRND Aspects for CPR and CPA
- Joint Capability Area coord
- Protection CPM for CWMD/CBRND
- Lead POM development
- Coordinate all Joint Staff/J-8 CWMD efforts
- Conduct Program Reviews and Readiness Reviews
- Coordinate liaison support
- Support International Efforts

## Capabilities Integration

- Identify/develop CBRND materiel capabilities (JCIDS)
- Manage Joint Capabilities Integration Development System documents
- Identify/develop CBRND Passive Defense non-material capabilities
- Provide warfighter advocacy to PMs, T&E, and Science & Tech organizations
- Coordinate Passive Defense doctrine and training issues
- Participate in Multi-national agreements with NATO and CANUKUS

## Consequence Management

- Manage *non-current ops* aspects of consequence mgmt (DSCA & foreign)
- Identify/develop CM, HD, and installation Protection material capabilities gaps (through CSA/other CBAs)
- Advocate CM//HD/IP material capabilities thru CIB (JCIDS)
- Advocate CM/HD/IP non-material capabilities thru applicable agencies (direct support from FLW)
- Advocate CM/HD/IP POM development through MAI

## Medical Integration

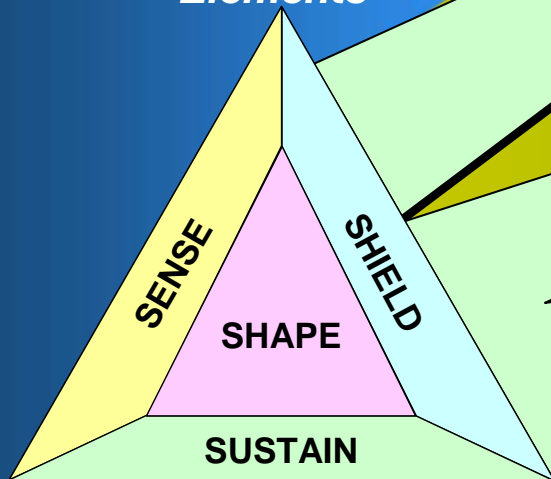
- Integrate and advocate for Medical capabilities across CBRND mission areas
- Manage Medical CBRND JCIDS documents ICW CIB
- Coordinate Medical CBRND capabilities with Services, COCOMs, OSD (ASD HA), Joint Staff, advanced tech developers and Medical S&T
- Participate in NATO Medical CBRN WG and BioMed WG; coordinate with AUSCANUKUS Med Requirements Tm
- Advise the Director, Deputy Director and JRO decision maker on Medical CBRND aspects

# ***CBRN Defense Operational Concept***

***Military  
Mission  
Areas***

***Military  
Strategic  
Objectives***

***CBRND  
Operational  
Elements***



**WMD Elimination**

**WMD Offensive Operations**

**WMD Passive Defense**

**WMD Consequence Management**

**WMD Active Defense**

**WMD Interdiction**

**WMD Security Cooperation &  
Partner Activities**

**WMD Threat Reduction Cooperation**

**Defeat,  
Deter**

**Defend,  
Respond,  
Recover**

**Prevent,  
Dissuade,  
Deny**

**Reduce,  
Destroy,  
Reverse**

# 29 CBRND Core Capabilities Areas

## Sense

1. Chemical Standoff Detection
2. Biological Standoff Detection
3. Chemical Point Detection
4. Biological Point Detection
6. Radiological Standoff Detection
7. CBRN Reconnaissance
8. Field Analytics
11. Radiological Point Detection
23. Medical Diagnostics

## Shield

9. Respiratory and Ocular Protection
10. Biological Prophylaxis
12. Percutaneous Protection
15. Chemical Prophylaxis
17. Fixed Site Collective Protection
21. Expeditionary Collective Protection
22. Radiological Prophylaxis

## Shape

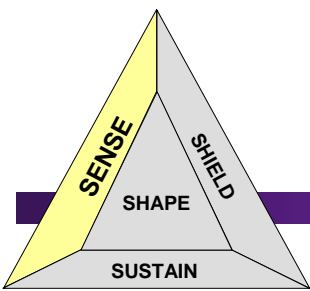
5. Integrated Early Warning
14. Battle or Operating Environment Management Systems
16. Battle or Operating Environment Management Analysis
25. Methods of Control
26. Medical Surveillance

## Sustain

13. Personnel Decontamination
19. Fixed Site Decon and Restoration
18. Equipment Decontamination
20. Biological Therapeutics
24. Chemical Therapeutics
27. Radiological Therapeutics
28. Hazardous Waste Control
29. Remains Disposition

*#s Indicate 2008 Joint Priority List*

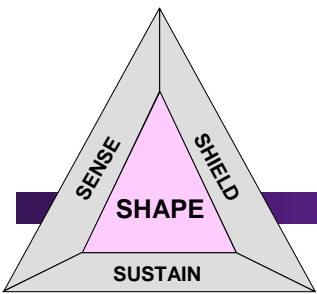




## *Sense Modernization*

- **Detection capability for NTA's, TIMs, lowest levels**
- **Determination of correct detector density and placement**
- **Reduce size/weight/power needs, reduce false positives while increasing range and sensitivity**
- **Solutions support sensor suite integration**
- **Laboratories process large quantities of samples and analyze for CBRN hazards simultaneously**

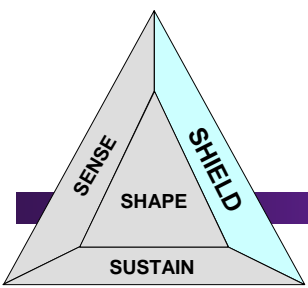
*The capability to continuously detect, identify, and quantify CBRN hazards in air, in water, on land, on personnel, and on equipment or facilities. This capability includes doing this in all physical states (solid, liquid, gas).*



## *Shape Modernization*

- **Expand network connectivity for CBRN-related data flow**
- **Algorithms which accurately predict and assess hazards that support integrated medical and non-medical analysis**
- **Automated planning tools/decision aids to assess CBRN hazard affects and impacts directly to personnel, equipment, and terrain**
- **Medical surveillance providing early biological attack warning interfacing military and civilian systems**

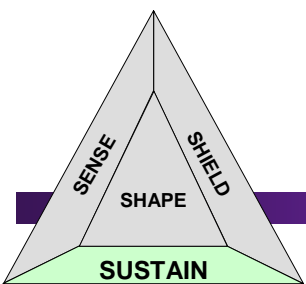
*The capability to characterize the CBRN hazard to the force commander. There are four CBRND core capabilities designated for the Shape area, and all DOTMLPF improvements to CBRND Shape can be categorized under one or more of these core capabilities.*



## *Shield Modernization*

- **Ensuring personnel (including casualties), military working animals, equipment, and facilities are protected against WMD agents, including TIMs and NTAs with minimal or no degradation**
- **Food and Drug Administration (FDA)-approved medical countermeasures that provide broad-spectrum protection from CBRN agents and have an operationally acceptable incidence of adverse reactions**
- **Collective protection is integrated in all critical systems that support operating in an unencumbered environment**

*The capability to protect the force from degradation caused by CBRN hazards by preventing or reducing exposures, applying prophylaxis to prevent or mitigate negative physiological effects, and protecting critical equipment.*



## *Sustain Modernization*

- **Decontamination products against all CBRN threats with reduced personnel hazards, including better mass casualty decontamination capabilities**
- **Improved decontaminants with less detection equipment interference that are environmentally safe, and are nonhazardous to sensitive equipment and electronics**
- **Expanded FDA-approved identification and diagnostic capabilities are fully integrated into command, control, computers, communication, and information intelligence systems**

*The capability to conduct decontamination and medical actions that enable the quick restoration of combat power, maintain/recover essential functions that are free from the effects of CBRN hazards, and facilitate the return to pre-incident operational capability as soon as possible.*

## *Non-Material Solutions*



- **Enablers that facilitate DOD capabilities**
- **Joint experimentation is planned that will explore and link joint concepts to non-materiel issues, gaps, and proposed solutions**
- **JRO's Non-Materiel team of the Capabilities Integration Branch established to facilitate the development of multi-Service and joint doctrine and development and presentation of CWMD/CBRN/WMD CM training and leader development.**

# *WMD Consequence Management Modernization*



- **These measures may use similar specialists and equipment as passive defense; however, they are intended to mitigate CBRN hazards to unprotected personnel over the long term as opposed to those immediate actions required to maintain operational tempo during a military operation**
- **Similar to the requirement for homeland defense, interoperable equipment and interagency doctrine/mutual aid agreements must continuously be developed to facilitate support and pre-coordination between DOD assets and lead federal agencies**

***The capability to protect public health and safety; restore essential government services; and provide emergency relief to governments, businesses, and individuals affected by the consequences of a CBRN or a high-explosive situation.***

## *The Challenge*



- **Global conflict hasn't changed, the difference is WMD proliferation**
- **Expanding roster of radical fundamentalists makes international cooperation even more important**
- **Adversaries may employ irregular, catastrophic, disruptive strategies including asymmetric attacks and WMD to challenge US power**

***Military forces must be prepared to deal with the full spectrum of threats and they must be able to operate in all WMD environments, unconstrained by these effects.***

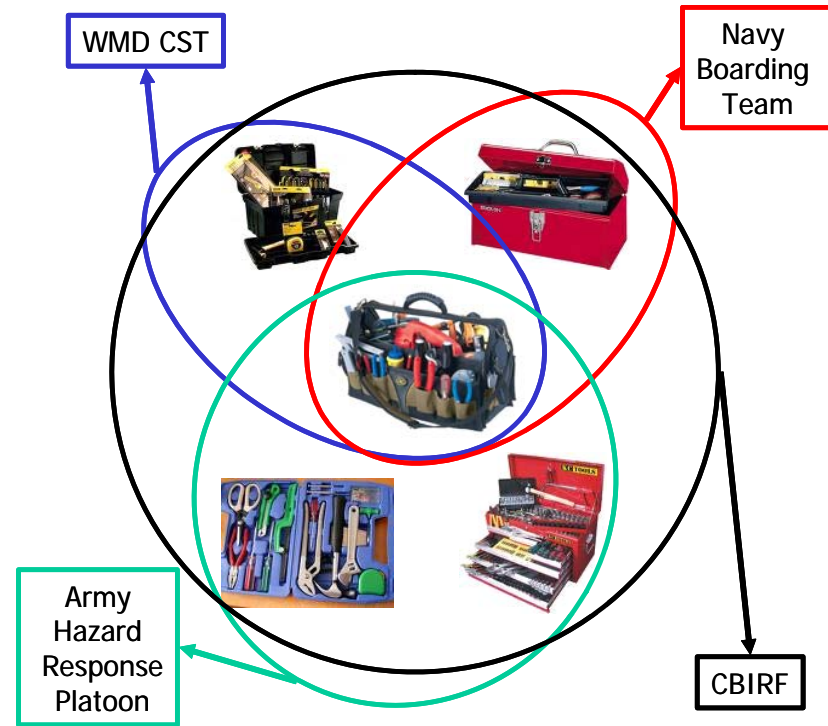
- **CBRN Monitoring & Survey**
- **CBRN Field Analytics**
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# CBRN Monitoring & Survey

- Common set of components
- Configured into kits
- Supports each Services' mission requiring
  - dismantled CBRN reconnaissance
  - WMD confirmation or denial
  - characterization of a hazardous materiel event or accident
- Acquisition Strategy
  - Commercial-Off-The Shelf (COTS)
  - Government-Off-The Shelf (GOTS), and
  - Non-Developmental Item (NDI)



- **Current laboratory variants are not sustainable**
- **Common analytical capabilities across the CWMD portfolio increases confidence, sampling capability, and supports both Homeland Defense & forward deployed CBRN detection capabilities**
- **Key capabilities will focus on a modular approach**
  - **Analytical equipment**
  - **Analytical processes**
  - **Personnel staffing**
  - **Expandable laboratory design**



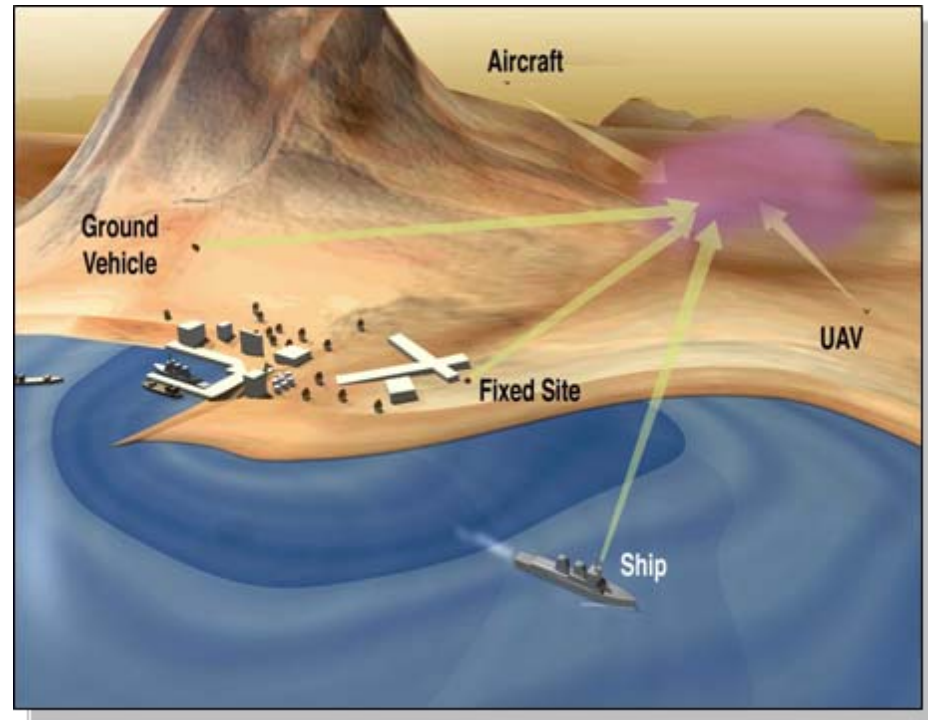
# WMD Consequence Management

- **Standardize and “institutionalize” CM capabilities**
  - detection
  - identification
  - decontamination
  - protection
- **Treat WMD CM as a “core” mission**
- **Complete DOTMLPF approach**



# *Stand Off Detection*

- Continued high priority capability for warfighters
- Includes CB and Radiological/nuclear – vapor & liquid/solid
- Heightened interest in “pre-event” detection of SNM
- Technical challenges of distance, shielding, power, platform, etc.



# *Developing Joint CbtWMD Leaders*

- **Problem** - Shortage of senior leaders able to plan and conduct CbtWMD operations in an uncertain environment
- **Approach** – use education, training and exercises as substitute for years of experience and assignments



- **Joint Professional Military Education (JPME) curriculum development support**
- **JPME course and exercise participation (Joint Forces Staff College; USMC Command and Staff College; Joint Flag Officers Warfighting Course)**
- **National Defense University Center for the Study of WMD – JPME focal point for combating WMD**
- **COCOM staff training and exercise support – USNORTHCOM and USSTRATCOM**



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