Civilian Harm Mitigation and Response (CHMR)

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DoD Policy Definition of Civilian Harm

DoDI 3000.17 Civilian Harm Mitigation and Response (CHMR), December 2023:

"**Civilian casualties and damage to or destruction of civilian objects (which do not constitute military objectives under the law of war) resulting from military operations.** As a matter of DoD policy, other adverse effects on the civilian population and the personnel, organizations, resources, infrastructure, essential services, and systems on which civilian life depends resulting from military operations are also considered in CHMR efforts to the extent practicable. These other adverse effects do not include mere inconveniences."

Personnel: People critical to the operation of an essential service such as the operations and maintenance staff.

Resources: Includes consumables that are needed to provide a critical service such as fuel and medicine.

Essential Services: Clean water and sanitation, food, shelter, electricity/fuel, etc.

Organizations: Organizations such as political, cultural, social, or religious groups that are critical to the working of a city.

Infrastructure: Hardware and equipment that are critical to an essential service.

Systems: Urban services are interconnected and therefore the civilian environment must be thought of as a system of systems.

Civilian Harm Mitigation and Response Action Plan*

CHMR Strategic Importance

- Tactical and operational success can lead to strategic failure if the civilian environment is not protected. This includes the civilian population, infrastructure, essential services, and systems supporting civilian life.
- Joint doctrine mentions aspects of civilian harm mitigation but lacks a clear definition of the "civilian environment." Understanding this environment helps commanders protect civilians and guide their forces.

CHMR Foci and System Safety

- Support commanders with tools and resources that ensure the protection of civilians.
- Integrate civilian harm mitigation into strategy, doctrine, education, training, and operations.
- Update MIL-STD 882E to include civilian harm mitigation objectives in system safety reviews for future weapon systems (September 2023).

Select Other Policy Directives Supporting Civilian Harm Mitigation

DOD DIRECTIVE 3000.09 AUTONOMY IN WEAPON SYSTEMS

1.2. POLICY.

- Autonomous and semi-autonomous weapon systems will enable commanders and operators to maintain judgment over the use of force.
- Systems will undergo rigorous hardware and software verification and validation (V&V) and developmental and operational testing (T&E).
- Systems will be designed with appropriate:
- System safety
- Anti-tamper mechanisms
- Cybersecurity (as per DoDI 8500.01 and MIL-STD 882E)

2.3 USD(R&E).

- Establish standards and evaluation metrics for testing, safety certification, and reliability assessments.
- Focus on mitigating risks of unintended engagements and interference by unauthorized parties.

2.9.b.(5) SECRETARIES OF THE MILITARY DEPARTMENTS

- Ensure system safety, anti-tamper mechanisms, cyber survivability, operational resilience, and cybersecurity are integrated into designs, per DoDI 5000.83 and DoDI 8500.01.

DOD INSTRUCTION 5000.69 JOINT SERVICES WEAPON SAFETY REVIEW (JSWSR) PROCESS

MIL-STD-882E DoD Standard Practice System Safety with Change 1

Provides a standard, generic method for the identification, classification, and mitigation of hazards to:

- Integrate risk management into the overall systems engineering process rather than addressing hazards as operational considerations
- Ensure that the quality of the environment is protected to the maximum extent practical. Integral to these efforts is the use of a system safety approach to identify hazards and manage the associated risks

DoDI 5000.88 Engineering of Defense Systems, para. 3.6.e. System Safety.

- The Lead Systems Engineer (LSE), working under the Program Manager (PM), will:
- Integrate system safety engineering into the overall systems engineering process.
- The LSE will apply MIL-STD-882E methodology to manage environment, safety, and occupational health (ESOH) risks from system-related hazards.
- Additionally, the DoD Joint Software Systems Safety Engineering Handbook will guide the LSE to ensure acceptable levels of software system safety risk.

CHMR in MIL-STD-882E W/CHANGE 1

Foreword (Para. 3)

- DoD is committed to protecting personnel from accidental death, injury, and illness, while also **mitigating risks of civilian harm** and safeguarding defense systems and infrastructure.
- This guidance is applicable to system safety professionals and other engineering disciplines, such as fire protection and civilian harm mitigation planning.

Civilian Harm Defined (Para. 3.2.4.)

- Civilian casualties (i.e., death or injury of civilians) and damage to or destruction of civilian objects not constituting military objectives under the law of war resulting from military operations during the conduct of hostilities. Other adverse effects on the civilian population, and the personnel, organizations, resources, infrastructure, essential services, and systems on which civilian life depends are also considered in CHMR efforts to the extent practicable.

System Requirements Identification (Para. 4.4.1.b.)

- Identify and document system requirements like:
- Insensitive Munitions (IM) requirements
- Electromagnetic Environmental Effects (E3) requirements
- **Civilian Harm Mitigation and Response (CHMR) requirements**
- Pollution prevention mandates, design and technology standards
- Ensure these requirements are included in system specifications and relayed to subcontractors and vendors.

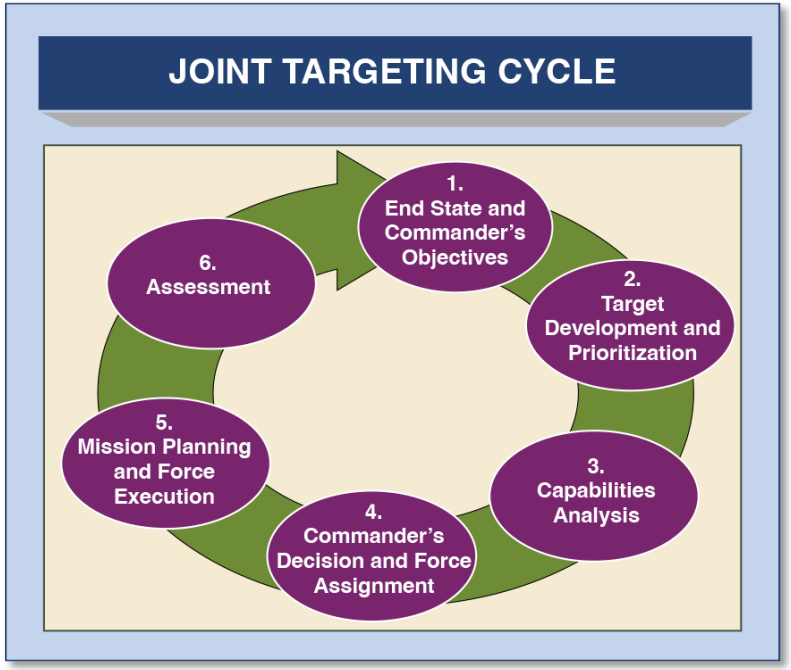
Joint Targeting

CHMR-AP Objective 4:

"Improve knowledge of the civilian environment and civilian harm mitigation capabilities and processes throughout the joint targeting process so that DoD is more effectively prepared to mitigate and respond to civilian harm in any future crisis or conflict."

Joint Targeting Cycle: "An iterative process that is not time-constrained, and steps may occur concurrently, but it provides a helpful framework to describe the steps that must be satisfied to successfully conduct joint targeting."

- Integrates and synchronize joint fires
- Incorporates **design and visualization of desired effects**
- Focuses targeting efforts
- Engages the broader intelligence community
- Develops **shared understanding of the environment** and adversary
- Integrates kinetic and non-kinetic fires to **achieve desired lethal and nonlethal effects on targets**



Source: Joint Publication 3-60

Red Teaming and Civilian Environment Teams

Red Teams are an organizational element composed of trained and educated members that provide an independent capability to fully explore alternatives in plans and operations for Combatant Commanders in the context of the operational environment and from the perspective of adversaries, and others to:

- Counter the influence of institutional and individual bias and error
- Provide insight into the mind-sets, perspectives, and cultural traits of adversaries and other relevant actors
- Help explore unintended consequences, follow-on effects, and unseen opportunities and threats
- Reduce risk by helping organizations anticipate, understand, prepare, and adapt to change

*Ref: JP 5-0 Joint Planning 01 December 2020, Annex J "Red Teams

Civilian Environment Teams Support Red Teams by:

- Adding understanding of the civilian environment
- Providing input to address an unpredictable and opportunistic adversary actions with the civilian environment
- Providing an in-depth understanding of civilian centers of gravity, vulnerabilities, and capabilities
- Assisting in mitigating bias when developing pattern of life and positive identification
- Assisting in developing responses to undesired effects

Effects of Civilian Harm

Conflict impacts civilians in various ways, often affecting different groups such as men, women, children, and vulnerable populations disproportionately. Civilians are not passive victims; they actively participate in their environments. **Understanding** the nuances of civilian harm, **defining it accurately**, and **addressing the risks** through mitigation measures are essential for their protection.


Death


Injury


Property Damage


Displacement


Loss of Livelihood


Loss of Access to Essential Goods and Services

Mitigating these risks requires a deep understanding of how conflict impacts civilian life and **applying proactive measures to prevent harm.**

Engineering Impact on CHMR Targeting Considerations

By leveraging technology, precision design, and advanced data systems, we can significantly enhance the targeting process to ensure that military operations achieve desired effects while minimizing risks to civilians and infrastructure. “Left of bang” engineering efforts ensure that we meet operational goals with ethical responsibility by directly contributing to:

Positive Identification Support
- Technology Solutions
- Sensor Integration

Collateral Damage Mitigation
- Modeling and Simulation
- Advanced Targeting Systems

Weaponeering & Aimpoint Selection
- Precision Engineering
- Testing and Validation

AI-Enabled Tools for Targeting
- AI Development
- Data Analysis Systems

No Strike List & Restricted Target Management
- Database Systems
- Automation

Target System Analysis
- Efficiency Optimization
- Proportionality Tools

JCIDS Manual and CHMR

MANUAL FOR THE OPERATION OF THE JOINT CAPABILITIES INTEGRATION AND DEVELOPMENT SYSTEM (JCIDS):

- Provides detailed guidance to implement the Joint Capabilities Integration and Development System (JCIDS).
- Helps Combatant Commands, Services, and other components develop capability solutions quickly and cost-effectively for the warfighter.

Weapons Safety Guide (JCIDS Manual, Annex H)

- Provides the policies and procedures for the weapon safety review and endorsement of weapons-related JCIDS documents
- References MIL-STD-882E identifying system safety as a baseline weapon safety requirement and states that system safety and acceptable risk requirements inform the development of a System Safety Program (SSP) for the lifecycle of the weapon system

Civilian Protection Center of Excellence*

- **Serves as a hub and facilitator of DoD-wide analysis, learning, and training related to CHMR.**
- **Directly supports the efforts of the combatant commands and the Military Services.**
- **Supports policy, doctrine, and force development, including by:**
  - Advising relevant DoD Components on the development, updating, and maintenance of relevant policies, regulations, standards, and doctrine.
  - Developing training and certification standards for key CHMR personnel, including personnel assigned to civilian harm assessment cells and other personnel who will be tasked to lead civilian harm assessments.
  - Developing CHMR content for integration into professional military education.
  - Supporting the establishment of professional tracks and certification for key CHMR personnel and functions.
  - Developing training, in coordination with the Joint Staff and the Military Departments, for personnel appointed to conduct or to support investigations into incidents of civilian harm.
  - Integrating CHMR approaches in preparation for strategic competition and future conflicts.
  - Identifying and promoting the development and use of capabilities and tactics that support effective CHMR.

* Ref. CP COE DoDI 3000.17 CHMR, December 2023

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