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A photograph of three soldiers in full combat gear, including helmets and backpacks, standing in a field. They are silhouetted against a bright, hazy sky with a sun low on the horizon, creating a lens flare effect. The soldiers are looking towards the horizon, which is marked by distant hills or mountains. The ground is dark and appears to be a dirt or gravel path.

HANDBOOK ON BEST PRACTICES FOR CIVILIAN HARM MITIGATION AND RESPONSE IN U.S. MILITARY OPERATIONS

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Introduction

“Avoiding civilian casualties is a central operational challenge in Afghanistan and Iraq and it will be a challenge in any future conflict as well.”

- General David Petraeus, Foreword to the Joint Civilian Casualty Study report, August 2010.

The human cost of contemporary armed conflict underscores the importance of concrete and pro-active measures by the U.S. and other armed forces to avoid, minimize, and respond to harm. Some civilian harm may be unavoidable in war but taking seriously the commitment to mitigate such harm has long distinguished the United States from its adversaries. This commitment is also reflected in the seriousness with which the U.S. takes its responsibilities under the law of war. Recent conflicts have illuminated the strategic importance of maintaining U.S. credibility and legitimacy through civilian harm mitigation and response (CHMR), both for populations in specific operations and on the global stage. In an era of peer or near-peer competition, including great power competition, demonstrable respect for human life, human rights, and international norms is an important foundation for global influence and stability.

These values are at the core of U.S. credibility and legitimacy and remain one of our chief strategic advantages. Meaningful investment to mitigate and respond to civilian harm resulting from U.S. military operations and security partnerships should be an enduring issue of strategic and operational concern. CHMR measures seek to improve existing military efforts, whether it is improving understanding of the operational environment or improving the targeting process. Better preparation to mitigate civilian harm results in a military force that is more protective of the population and more lethal to its enemies.

There is an emerging body of documented lessons and best practices that can inform practical efforts to mitigate and respond to civilian harm. The evolving nature of contemporary warfare makes it essential to continually learn from past and ongoing operations to sustain, systematize, and replicate or adapt what works. The documentation and dissemination of lessons learned and best practices is therefore essential. As of 2021 there is no consolidated resource of U.S. military practice on civilian harm mitigation and response. This Best Practices Handbook is an initial contribution for this purpose from the Center for Excellence in Disaster Management and Humanitarian Assistance (CFE-DMHA), a Department of Defense (DOD) Center and U.S. Indo-Pacific Command direct reporting unit. It is intended as an introduction to documented and established U.S. military best practices on CHMR for interested personnel at all levels and all areas of DOD.

This Handbook focuses on lessons and best practices to mitigate and respond to civilian harm associated with U.S. military operations and those of partners whom they advise or support. CHMR is one essential component of the “protection of civilians” (POC). POC encompasses a broad swath of concern for civilian harm, the obligation of parties to conflict to respect and protect civilians, and a range of policy and practice efforts, by a diversity of civilian and military actors, which endeavor to spare civilians from the effects of armed conflict. “Civilian harm mitigation and response” (CHMR) refers more specifically to the action taken to anticipate, avoid, minimize, and respond to civilian harm as a consequence of kinetic military operations. Civilian harm in conflict

includes civilian casualties (direct injuries and loss of life), damage to civilian property, public services, and infrastructure, and the indirect effects arising from these (such as displacement, family separation, and public health crises), as well as other abuses (such as forced recruitment and sexual assault).

This Handbook is based on a review of unclassified literature from the U.S. military, research institutions, and non-governmental organizations (NGO). It includes best practices captured in Joint Doctrine and Service Tactics, Techniques, and Procedures (TTP); significant DOD after-action studies; and research and policy on specific issues or operations. This Handbook is not intended as an exhaustive catalogue of U.S. efforts for CHMR but rather summarizes important practices from which valuable lessons can be drawn upon for future operations. It focuses on operational aspects of CHMR and does not include all aspects of doctrine, organization, training, materiel, leadership and education, personnel, and facilities, though these are all important areas with significant implications for effective CHMR.

Lessons and key areas of best practices discussed in this Handbook are organized thematically as they relate to different functions and responsibilities of a military command. This is intended to facilitate the identification of areas where best practices can be incorporated in the planning and decision-making processes of combatant commands and components. Several critical points of emphasis emerge from this literature review, summarized below and in “key take-away” sections throughout.

A Summary of Key Lessons

Leadership

- CHMR is not a siloed responsibility. Lessons from Afghanistan and elsewhere illustrate that efforts to spare civilian lives, civilian property, and infrastructure are central to mission effectiveness and imply a mission-wide orientation towards CHMR, which cuts across warfighting functions.
- Leadership is essential to orient forces towards CHMR best practices, to establish a mindset shift, and to avoid errors that result in civilian harm.

Understanding and Analysis

- Effective CHMR entails an intentional focus on understanding the operational environment from the civilian perspective and incorporating this understanding in mission planning and execution.
- Existing analysis tools can be usefully applied to quickly build an understanding of the challenges and threats that civilians face.
- Cultivating all sources, including civil society organizations, the at-risk community, and specialist expertise, facilitates multi-dimensional situational awareness.

Learning from Civilian Harm

- Where civilian harm occurs, the military can learn from it and adapt its operations to mitigate future harm in a manner that enhances mission effectiveness.
- Tracking civilian harm is part of critical operational data and a key enabler for continuous learning and adaptation of operations.
- Creation of Civilian Casualty (CIVCAS) cells is now widely recognized as best practice for civilian harm mitigation and response. Effective CIVCAS cells require dedicated resources and expertise, an ability to maintain unbiased assessments, incorporation into plans before missions begin, and support from command leadership.
- CHMR lessons from past missions should be incorporated into new operational plans.

Urban Operations

- The civilian population is an essential element of urban environments and needs to be treated as a Center of Gravity (COG) on par with other COGs, considered in planning, analysis, and execution of urban operations.
- Understanding the reverberating effects of operations in the urban environment is crucial. This includes physical damage beyond the intended target as well as second- and third-order effects that may be cumulative.

Planning and Preparation

- Existing plans should be reviewed for effective incorporation of CHMR issues, and new or revised planning should incorporate CHMR measures.
- CHMR should be integrated into training and education at all levels, and into military exercises.

Public Engagement

- Public engagement is critical to realize the benefits to credibility and legitimacy that result from CHMR.
- External actors are key sources of civilian harm incident reports.
- Transparency in civilian harm reporting is paramount for maintaining credibility.

Security Cooperation and Security Force Assistance

- CHMR lessons and best practices should be topics of active exchange between the U.S. military and partner forces.
- U.S. Security Cooperation efforts should assess partner nation capacity and capability for CHMR, including political will, skills, and equipment, and tailor CHMR support accordingly.
- Learning from civilian harm incidents is just as important for partner nations and U.S. advisers as for U.S. operations. Partner nations should be encouraged to develop and deploy tools such as CIVCAS cells.

This Handbook additionally identifies some key gaps in best practices — and in the documentation of best practices. Taken together, these gaps speak to a potential forward agenda to invest in the collection and documentation of lessons learned. For example, it will be valuable to examine lessons from past operations through the lens of peer and near-peer conflict with a view to informing

necessary adaptations to the unique considerations and characteristics of great power competition.

Efforts to fill these gaps should take a variety of forms. Post-operation after-action reviews, which comprehensively examine the consequences of U.S. military operations for civilian populations, are one approach that warrants more systematic investment. However, in order to make new insights and lessons readily available in a timely manner for planners and operators, lighter-touch methods should also be employed. For example, timely post-operations interviews should be conducted with key personnel involved in targeting and other pre-strike analysis, or with those tracking and assessing civilian harm, to distill their approach, understand how the information was used, how they adapted processes along the way, and what they would recommend for future operations. In addition, discussions could be convened across combatant command staff where examples of Concepts of Operations and Standard Operating Procedures for CHMR measures can be shared and lessons learned can be exchanged.

Civilian harm is all too common in the history of warfare, with much civilian suffering since the World Wars of the last century now recognized as tragic and in great part avoidable. There are concrete measures that military actors can take to minimize civilian harm, which will ultimately lead to better outcomes for civilians and U.S. forces alike. The U.S. military prides itself on being a learning and continuously adapting organization, and has led or readily adopted many of these advances. This Handbook seeks to provide a introduction to documented best practice, to help ensure that these lessons can be applied to future operations and that growth in this area continues.



U.S. Navy guided-missile destroyer USS Chung-Hoon (DDG 93) transits the Pacific Ocean during Exercise Rim of the Pacific (RIMPAC) 2020.

Photo by Mass Communication Specialist 1st Class Devin M. Langer

Source: <https://www.dvidshub.net/image/6333548/uss-chung-hoon>

Key Areas of Identified Best Practice Leadership

“Effective protection of civilians depends on adaptive units, a command climate that emphasizes its importance, and leaders who can make timely and appropriate decisions based on critical situations on the ground.”

- JP 3-0, Joint Operations, III-46

Studies of U.S. practice have consistently highlighted the importance of leadership in promoting best practices in CHMR.¹ Effective leadership is essential for instilling the mindset necessary for CHMR, establishing effective coordination for an objective that cuts across echelons and functions, promoting best practices and avoiding error, and strengthening the protection capabilities of U.S. partners. As cited in U.S. Army doctrine, “Effective mission command can contribute to minimizing incidents of civilian harm, while deficient mission command can result in failure to protect civilians adequately.”² The 2010 Joint Civilian Casualty Study, commissioned by US CENTCOM, also emphasized the importance of leadership in mitigating and responding to civilian harm.³

Leadership plays a unique role in shaping the mindset of U.S. forces for CHMR. As described by the North Atlantic Treaty Organization (NATO), an important element of effective CHMR is enabling a shift in mindset from one that is “enemy-centric” to one that is “population-centric,” recognizing that the protection of civilians is core military business.⁴ Leadership at all levels is vital to reinforce this mindset, which complements the traditional warrior ethos. Leadership is essential for CHMR to establish coordination across units and functions, and incorporate feedback and direct activities at all levels. As emphasized throughout this pamphlet, CHMR cuts across warfighting and staff functions across strategic, operational, and tactical levels.⁵

In Afghanistan, for example, the International Security Assistance Force (ISAF) command issued Tactical Directives to constrain the use of force in response to concerns over high numbers of civilian casualties in 2007, with supplementary instructions following in 2008. It was not until a new Tactical Directive was issued in 2009, however, that operations improved and civilian casualties from ISAF operations were reduced. Notably, “[t]he 2009 Tactical Directive was not substantively different than previous guidance, but it was emphasized heavily by the commander and at subordinate echelons, improving consistent implementation and promoting creative problem solving at the tactical level.”⁶ As described by Major General Davis, Chief of the Strategic Advisory Group to the ISAF Commander, the 2009 Tactical Directive “was the first to make the point that civilian casualties could cause ISAF to fail in its mission. It linked our main effort to protect the population with the need to do everything in our power to avoid civilian casualties. It was a significant shift in mindset.”⁷

¹ See, for example, the JCOA Enduring Lessons; and Lewis, *Improving Lethal Action*.

² U.S. Army, ATP 3-07.6, 3-31.

³ Sarah Sewall and Larry Lewis, *Joint Civilian Casualty Study* (2010) (Executive Summary, unclassified), p. 16.

⁴ NATO POC Handbook, Annex A. Note that population-centric approaches require more than mindset shift, including different capabilities and tools as well, as discussed further in this Handbook.

⁵ NATO POC Handbook, p. 63.

⁶ Lewis, *Improving Lethal Action* (2014), p. 9.

⁷ Maj. Gen. Gordon B. Davis, quoted in Center for Civilians in Conflict, *Civilian Harm Tracking: Analysis of ISAF Efforts in Afghanistan* (2014), p. 5.

Key Takeaways:

- CHMR is not a siloed responsibility. Lessons from Afghanistan and elsewhere illustrate that efforts to spare civilian lives, civilian property, and infrastructure are central to mission effectiveness and imply a mission-wide orientation towards CHMR, which cuts across warfighting functions.
- Leadership is essential to orient forces towards CHMR best practices, to establish a mindset shift, and to avoid errors that result in civilian harm.



Afghan and coalition security force members search a courtyard during a mission in Zurmat district, Paktiya province, Feb. 9, 2013. Photo by Pfc. Codie Mendenhall
Source: <https://www.dvidshub.net/image/893215/paktiya-province-mission>

Understanding and Analysis

Understanding the operational environment from a population-centric perspective is essential, because “you cannot protect what you do not understand.”⁸ Traditional military analysis focuses on the adversary, but it often lacks focus on the civilian population. Leveraging existing assessment processes with a focus on the civilian population rather than the adversary can improve population-centric understanding and support better CHMR.⁹ The U.S. Army’s ATP 3-07.6 on the Protection of Civilians and NATO doctrine provide a framework for incorporating a population-centric perspective into U.S. military operations.¹⁰ This chapter briefly summarizes two key issues: specific issues to analyze and methods of information collection.

⁸ NATO POC Handbook, p. 63.

⁹ See Joint Publication 2-0, Intelligence, I-16, I-17. “PMESII” stands for “political, military, economic, social, information and infrastructure” systems, a shorthand to capture all or most facets of an adversary or other actor.

¹⁰ U.S. Army ATP 3-07.6, Protection of Civilians (2015), chapter 2; see also NATO, *Protection of Civilians: Allied Command Operations (ACO) Handbook* (2020), chapter 3.

Understanding the civilian population can either appear too daunting to attempt or so simple that it is assumed to already be a regular part of conventional military analysis; both of these appearances are deceiving. There are numerous military analysis tools that make understanding the civilian population feasible and effective, but this requires an intentional focus on issues that are not routinely captured. The common thread in strengthening understanding for more effective protection of civilians is to conduct analysis from the civilian perspective: how will the actions of the U.S. or its adversary affect the civilian population? How will the civilian population react to the threats in their environment and how will this, in turn, affect the operating environment?

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A starting point for this analysis is the PMESII-PT (political, military, economic, social, information, infrastructure, physical environment, and time) framework for understanding the operational environment.¹¹ Units conducting PMESII-PT analysis will typically focus on discerning the adversary's intent and likely courses of action – in other words, it focuses on the adversary's perspective. Comparable tools can be applied to the civilian population.¹² A starting point for analysis includes the following questions:¹³

- Where is the civilian population?
- What is the relationship between the civilian population and civilian structures and infrastructure essential to the health and safety of the civilian population?
- Who are the primary sources of threats that civilians are exposed to and what form do these take? Which populations are most vulnerable to these threats and why? How are these risks manifested and what consequences do civilians experience as a result?
- What are the likely courses of action by the affected civilian population in response to these threats, including if fighting takes place in their vicinity or if an armed actor assumes control of their area? Will they flee? Shelter in place? Take up arms and defend themselves?
- What indirect effects may result from damage to civilian property, public services, and critical infrastructure?

As with other types of information and intelligence collection, the force will and should consider numerous collection methods and modalities, however civil actors and civilian information sources may be particularly useful to develop population-centric understanding. This can include traditional sources of intelligence gathering, increased attention to open-source intelligence, and continued efforts to advance development and employment of population-density tables. It can also include engagement with local and international NGOs, United Nations agencies, or similar actors. It can also include civilian experts in the specific history, culture and politics of a population, as well as experts in engineering, urban planning, farming, land use, water and sanitation, and other specialties that cross the boundaries between economic and social life and the built and natural world.

¹¹ See Joint Publication 2-01.3, Joint Intelligence Preparation of the Operational Environment.

¹² See NATO, POC Handbook.

¹³ For further discussion, see NATO, POC Handbook.

Key Takeaways:

- Effective CHMR entails an intentional focus on understanding the operational environment from the civilian perspective and incorporating this understanding in mission planning and execution.
- Existing analysis tools can be usefully applied to quickly build an understanding of the challenges and threats that civilians face.
- Cultivating all sources, including civil society organizations, the at-risk community, and specialist expertise, facilitates multi-dimensional situational awareness.



Staff Sgt. Robin J. Reyes, a civil affairs Marine currently attached to Fox Company, 2nd Battalion, 2nd Marine Regiment, speaks to an Afghan about damage done to his compound in a village near Lakari bazaar, in Garmsir District, Helmand province, Afghanistan, March 8. Marines with Fox Company patrolled to different villages surrounding the Lakari bazaar to pay and assess battle damage claims. Photo by Cpl. Dwight Henderson

Source: <https://www.dvidshub.net/image/260514/marines-pay-afghans-back-battle-damage>

Learning from Civilian Harm

“Civilian casualty mitigation directly affects the success of the overall mission. Even tactical actions can have strategic and second-order effects. Minimizing and addressing civilian casualty incidents supports strategic imperatives and are also at the heart of the profession of arms.”

- JP-03, Joint Operations, III-46

The U.S. military is committed to continuous learning and adaptation to improve operations. Mitigating and responding to civilian harm is no different. Experience from past operations has shown that mitigating civilian harm is not simply the ancillary result of achieving a desired effect but a goal that requires dedicated learning processes. The Joint Staff’s Joint Coalition Operational Analysis (JCOA) Enduring Lessons study notes that the “[t]racking of [civilian harm] was a key

enabler for senior leaders in understanding the root causes of [civilian harm], reducing casualties, and mitigating the effects of [civilian harm] incidents in Afghanistan... The ability to track [civilian harm] is analogous to monitoring other operational data such as friendly force casualties and the number of enemy forces captured or killed: a headquarters should be able to track these critical operational data.”¹⁴ This section highlights approaches to track and analyze civilian harm data and incorporating that data into operational planning.

“Tracking of [civilian harm] was a key enabler for senior leaders in understanding the root causes of [civilian harm], reducing casualties, and mitigating the effects of [civilian harm] incidents in Afghanistan... The ability to track [civilian harm] is analogous to monitoring other operational data such as friendly force casualties and the number of enemy forces captured or killed: a headquarters should be able to track these critical operational data.” [JCOA Enduring Lessons]

U.S. and partnered operations have utilized civilian harm tracking and mitigation cells—commonly referred to as Civilian Casualty or CIVCAS cells—to improve their performance.¹⁵ Joint doctrine empowers commanders to create CIVCAS cells, “to systematically monitor a civilian casualty mitigation cycle: prepare, plan, employ, assess, respond, and learn.”¹⁶

NATO’s ISAF and U.S. Operation Inherent Resolve have employed CIVCAS cells as tools to understand the impact of U.S. operations on the civilian population, analyze that data to develop lessons, and support the commander in developing guidance. The structure and command of a CIVCAS cell can vary with context. The ISAF cell began with only two junior officers but as the need for civilian harm mitigation work increased, the team expanded to twelve, commanded by a colonel (NATO OF-5, equivalent to U.S. O-6). The Multinational Force in Iraq dedicated personnel to civilian harm tracking, particularly on specific issues of concern, such as escalation-of-force incidents.¹⁷

CIVCAS Cell Functions

CIVCAS cells, or similar dedicated capacity, can contribute to mission preparation, planning, assessment, learning and response through a set of key functions. These are drawn primarily from the experience of ISAF in Afghanistan and may be complemented by the forthcoming DOD instruction on civilian harm mitigation and response.¹⁸ Key functions or tasks include:

- **Collecting data on civilian harm incidents.** This includes drawing on a variety of sources, including combat assessments, media or NGO reports, and liaison with local communities or civil society. This data should include basic elements such as time, date and place, as well as the nature of the harm, the circumstances surrounding the incident, whether the harm is verified or alleged, the nature of the operation and tactics or procedures used, and key

¹⁴ JCOA Civilian Harm Mitigation, p. 6.

¹⁵ U.S. operations have used the terms “civilian casualty tracking cells” and “civilian casualty mitigation teams” but this Handbook will use the common general term “civilian casualty cell” (CIVCAS cell). It should be emphasized that CIVCAS cells address a range of civilian harm, not just casualties, and that they perform a range of activities, from tracking and analyzing harm to supporting guidance development and mitigation measures.

¹⁶ JP 3-31, Joint Land Operations, V-A-1-c.

¹⁷ JCOA Civilian Harm Mitigation, p. 2, n. 3.

¹⁸ See, for example, Center for Civilians in Conflict, *The Sum of All Parts: Reducing Civilian Harm in Multinational Coalition Operations* (2019); Center for Civilians in Conflict, *Civilian Harm Tracking: Analysis of ISAF Efforts in Afghanistan* (2014).

metadata of the civilians affected, such as number of persons and whether they are women or children.

- **Conducting assessments**, where combat assessments or other initial assessments do not provide sufficient information. This can include dedicated civilian casualty assessments or supporting other investigation processes.
- **Analyzing data**, including searching for patterns or trends to inform mission learning and adaptation.
- **Supporting guidance development and mitigation strategies**, applying the lessons from data analysis to inform future operations. In Afghanistan, the Civilian Casualty Mitigation Team led working groups established to develop guidance and training based on lessons learned. Escalation of Force protocols at checkpoints, for example, were revised when civilian casualty incidents occurred at these locations.
- **Supporting public engagement**, including supporting Congressionally-mandated public reporting of civilian harm, as well as outreach to civil society and NGOs.
- **Supporting post-harm action, such as condolences.** U.S. operations may express condolence, such as an ex gratia payments, to civilians harmed by U.S. military operations.¹⁹

Regardless of form, best practice highlights four key elements of effective CIVCAS cells:

- **Dedicated resources and expertise:** The JCOA Enduring Lessons study stresses the importance of providing senior operations leaders with subject-matter experts and analytical capacity dedicated to civilian harm tracking and mitigation.²⁰
- **Unbiased assessment:** Joint Doctrine highlight the importance of avoiding bias generally in operational assessment, and this principle applies to assessing civilian harm as well.²¹ The U.S. Army Mosul Study Group, for example, recommended that the Operational Law attorney who advised on a strike should not also support a civilian harm assessment for that strike, as his involvement in the former decision could bias his judgment in the latter activity.²²
- **Incorporation into plans before missions begin:** The JCOA study also recommends that “operational and procedural best practices for tracking CIVCAS should be maintained ‘on the shelf,’ so that in future operations, this data can be captured from the start.”²³
- **Support from leadership:** Experience from Yemen highlights the importance of leadership support for effective CIVCAS cells. In February 2016, the Saudi-led coalition in Yemen established a Joint Integrated Assessment Team (JIAT) with U.S. advice. The JIAT was modeled after similar teams used by ISAF in Afghanistan to investigate incidents of civilian harm and

¹⁹ See Office of the Under Secretary of Defense, “Memorandum for Secretaries of the Military Departments, Joint Chiefs of Staff, Commanders of the Combatant Commands, Subject: Interim Regulations for Condolence or Sympathy Payments to Friendly Civilians for Injury or Loss That is Incident to Military Operations” (June 22, 2020).

²⁰ JCOA Civilian Harm Mitigation, p. 5.

²¹ Joint Doctrine Note 1-15, Operational Assessment, I-2.

²² Mosul Study Group, p. 90.

²³ JCOA Civilian Harm, p. 6.

develop lessons.²⁴ The JIAT produced nuanced reports but the Saudi command appeared to react defensively, resulting in lessons identified rather than learned and continued patterns of civilian harm.²⁵

The data gathered and lessons developed by CIVCAS cells feed the mission's learning and adaptation during its operations. This includes refining guidance on a host of issues, from training and intelligence requirements, to the use of force and refinement of targeting procedures.

Operations engaged in counterinsurgency, such as ISAF, developed and refined best practices around CIVCAS cells, but the lessons of these cells go beyond COIN and remain relevant to the future of U.S. warfare. As the JCOA study notes, "These lessons [on civilian harm mitigation] are not limited to COIN operations; rather, they apply to a wide range of potential combat activities, including major combat operations."²⁶

Key Takeaways

- Where civilian harm occurs, the military can learn from it and adapt its operations to mitigate future harm in a manner that enhances mission effectiveness.
- Tracking civilian harm is part of critical operational data and a key enabler for continuous learning and adaptation of operations.
- Creation of Civilian Casualty (CIVCAS) cells is now widely recognized as best practice for civilian harm mitigation and response. Effective CIVCAS cells require dedicated resources and expertise, an ability to maintain unbiased assessments, incorporation into plans before missions begin, and support from command leadership.
- CHMR lessons from past missions should be incorporated into new operational plans.

Urban Operations

"Cities are built to sustain human life. Of all facts about cities, this one is the most significant and forms the foundation of all the other precepts."

- JP 3-06, Joint Urban Operations, II-1

Operations in urban environments represent an inherently important area of CHMR concern and of increased concern as great power competition shifts the potential for conflict to highly populated regions of the globe.²⁷ "Urban environments" do not have a specific population threshold but rather are characterized by a complex, human-made terrain, upon which large numbers of people are dependent.²⁸ This section will address the CHMR aspects of urban operations. Due to the scale and scope of risk that they may pose to civilian populations, this section underscores

²⁴ Lewis, *Security Assistance in Yemen*, p. 9.

²⁵ Lewis, *Security Assistance in Yemen*, p. 10, 17.

²⁶ JCOA Civilian Harm, p. 4.

²⁷ Raphael S. Cohen, Nathan Chandler, Shira Efron, Bryan Frederick, Eugeniu Han, Kurt Klein, Forrest E. Morgan, Ashley L. Rhoades, Howard J. Schatz, and Yulia Shokh, *The Future of Warfare in 2030: Project Overview and Conclusions* (RAND, 2020), p. 33.

²⁸ JP 3-06, I-2



A destroyed vehicle sits outside of a mosque in Mosul, Iraq, May 25, 2017.
Photo by Cpl. Rachel Diehm
<https://www.dvidshub.net/image/3429714/coalition-forces-support-patrol-base-mosul>

the importance of preparing for operations in urban environments. Notably, urban operations illuminate and bring together multiple elements of CHMR best practice.

Understanding the urban environment from a population-centric perspective is crucial for effective operations, as made clear in joint doctrine:

The population in an urban environment must be considered as a distinct and critical aspect of the commander’s assessment. The human dimension is the very essence of the urban environment. Understanding local cultural, political, social, economic, and religious factors is crucial to successful [joint urban operations] and becomes central to mission success.²⁹

Such understanding is central because the civilian population will be a fundamental factor for any urban operation. The ability to anticipate how civilians will react to fighting, whether from U.S. forces and partners or their adversaries, is essential. Engaging with local actors, civilian experts and NGOs is often crucial for developing an understanding of the civilian population.

The civilian population is similarly central from a planning perspective. As noted in JP 03-6, “the impact of operations on the civilian populace will likely influence both the commander’s ability to conduct operations and the determination of the military end state. Therefore, civilian considerations should form a discrete overall planning area.”³⁰ Adversaries may utilize the civilian populations as human shields in urban areas and seek to use their own understanding of the civilian

²⁹ JP 3-06, II-5.

³⁰ JP 3-06, III-6.

environment to create strategic dilemmas for U.S. and partner forces.³¹ Countering such tactics begins with developing a comprehensive understanding of the civilian environment and updating that understanding as operations progress.

One of the distinguishing aspects of urban environments are the interdependent networks that underlie them. Critical infrastructure analysis can include examination of the built environment (such as a water treatment plant), the human element of a system (such as technicians to maintain and repair water plants) and consumable stocks (such as chlorine for water treatment). Such analysis is “a combination of intelligence preparation, the targeting process, and staff planning.”³² For CHMR, it is important to understand these complex systems and how changing, damaging or destroying them will impact the civilian population.

The impact of operations on the civilian populace will likely influence both the commander’s ability to conduct operations and the determination of the military end state. Therefore, civilian considerations should form a discrete overall planning area.
[JP 3-06]

Analysis of the urban environment must encompass not only the direct impact of a military action, such as the destruction of a building, but also their second- and third-order effects, including the potential reverberating effects of a particular attack.³³ These impacts can be considered from the perspective of time, such as immediate versus near-, medium- and long-term impacts, but also from cumulative effect. Analysis of cumulative effect recognizes the continually changing nature of the urban environment. Just as this constant change requires frequent updating of joint intelligence preparation of the urban environment,³⁴ the understanding of the civilian population’s vulnerabilities and resilience also needs constant re-analysis.

Below are two ways of understanding reverberating effects, drawn from NATO and the ICRC. NATO provides a non-exhaustive list of second- and third-order effects, while the ICRC provides examples of how to understand reverberating effects as direct, indirect and cumulative.

³¹ See, for example, Mosul Study Group, *What the Battle for Mosul Teaches the Force*, No 17-24 U (2017), p. 5, 8, 87-88 (Mosul Study Group).

³² JP 3-06, III-9.

³³ JP 3-06, III-12, IV-17, IV-42; for a discussion of reverberating effects, see ICRC, *Urban Services During Armed Conflict: A Call for Better Approach to Assisting Conflict-Affected People* (2015), p. 22.

³⁴ See Mosul Study Group, p. 10.
CFCRM Handbook on Best Practices For Civilian Harm Mitigation And Response In U.S. Military Operations

NATO primary, secondary and tertiary effects³⁵

Primary	Secondary	Tertiary
<ul style="list-style-type: none"> • Death and injury to civilians • Sexual Violence • Destruction of civilian objects (i.e. houses) and critical infrastructure (i.e. water treatment plant) 	<ul style="list-style-type: none"> • Forced displacement • Family separation • Inadequate access to food and water • Damaged infrastructure, affecting transportation routes, electricity, water and telecommunications access • Decreased mobility, lack of freedom of movement • Lack of access to medical attention • Damages to schools, disruptions to education • Disruption in financial services, access to banking and cash 	<ul style="list-style-type: none"> • Weakened government and judicial services • Traumatized population • Sluggish and dysfunctional infrastructure • Lack of medical services • Market disruption, reduced economic activity • Cycles of violence • Increase in criminality • Spread of infectious diseases

ICRC examples of direct, indirect and cumulative impacts³⁶

Type of impact	Impact on critical people	Impact on critical hardware	Impact on critical consumables	Impact experienced by the general public
Direct	Casualties, restricted access due to security situation; drafting into armed forces displacement	Destruction of or damage to infrastructure and/or equipment	Destruction of fuel reservoirs; destruction of stocks of chlorine; shortages due to looting	Brief interruptions in access to, reliability or quality of service; considerable public health risks
Indirect	“Brain drain”; retirement without replacement; no salary payments	Drops in pressure in water networks; disrepair of unused or misused equipment; negative coping mechanisms	Shortages (due to looting and/or lack of replacement); price increases on the black market	Continuous or persistent deterioration of access to reliability or quality of service; considerable public health risks
Cumulative	Little to no long-term planning; loss of knowledge of system	Sitting of reservoirs; leaks and increase in “non-revenue” water (unlicensed connections); mismatch of replaced items	Depletion of contingency stocks	Adaptation to poor reliability of service delivery, primary through development of coping mechanisms; public health risks as a function of many other issues

³⁵ NATO, POC Handbook.

³⁶ ICRC, *Urban Services*, p. 22.

Case study: Mosul³⁷

From October 2016 to July 2017, Iraqi Security Forces and a U.S.-led coalition fought to liberate Mosul from the Islamic State. It was the largest conventional land battle involving U.S. forces since Baghdad in 2003. Engaging an adversary like the Islamic State, which used human shields in clear violation of the laws of war, in a densely populated urban environment created enormous risks for civilians. There is no comprehensive accounting of civilian casualties caused by both sides during the conflict, but the Associated Press indicates a conservative figure of 9,000 civilians killed.³⁸ Mosul remains a source of critical lessons and some examples of best practice.

The Iraqi Security Forces (ISF) included the protection of civilians as a specific objective in their concept of operations. The Iraqi goal was to liberate Mosul for their own people and their own families, they understood the civilian harm would fuel Islamic State propaganda, and that the Iraqi government was ill-equipped to handle large-scale aid operations. The highest levels of the Iraqi government, including the Prime Minister, reinforced the importance of civilian protection in public messages. These government messages were echoed by key religious leaders in Iraq, who also opposed the Islamic State. At the same time, this strategic intent was not always effectively translated into doctrine, rules of engagement, or tactics on the ground. The military had a general prohibition on the use of “heavy weapons,” though this term was not well defined. Many Iraqi soldiers were well aware of their general orders to mitigate harm to civilians but often lacked specific instructions as to how to carry out this intent. The Coalition tracked civilian harm caused by its own fires but did not train Iraqi forces in similar techniques, limiting the Iraqi forces’ ability to learn and adapt their operations.

The Iraqi and Coalition forces also made substantial investments in coordinating with humanitarian organizations. In the case of medical care, the World Health Organization set up a novel system to provide medical care near the frontlines of the conflict.³⁹ This was an important step because the Iraqi government was not equipped to provide this assistance and the U.S.-led Coalition had a limited ground presence that constrained its ability to invest in medical care for the civilian population or Iraqi forces.

Throughout its operations against the Islamic State, the Iraqi forces took important steps to increase and update their understanding of the civilian population, a key part of the operational environment. Iraqi forces maintained contact with civilians trapped in Islamic State-controlled areas through text messages, phone calls, and social media. They also spoke with civilians fleeing Mosul, gaining important intelligence about the Islamic State’s location and operations. The Iraqi forces also sent messages through leaflet-drops, loudspeakers, radio broadcasts, and mobile phones. At the same time, the Coalition and the Iraqi forces faced challenges in sharing

³⁷ This section is drawn from: U.S. Army Mosul Study Group, *What the Battle for Mosul Teaches the Force* (No 17-24, September 2017); Center for Civilians in Conflict, “Policies and Practices to Protect Civilians: Lessons from ISF Operations Against ISIS in Urban Areas” (October 1, 2019); and Center for Civilians in Conflict and InterAction, *Protection of Civilians in Mosul: Identifying Lessons for Contingency Planning* (October 17, 2017).

³⁸ See Susannah George, Qasim Abdul-Zahr, Maggie Michael and Lori Hinnant, “Mosul is a Graveyard: Final IS Battle Kills 9,000 Civilians” (Associated Press, December 21, 2017).

³⁹ See Garber, et al., “Applying Trauma Systems Concepts to Humanitarian Battlefield Care: A Qualitative Analysis of the Mosul Trauma Pathway” *Conflict and Health* 14, 5 (2020).

a common operational picture throughout the Mosul operation. The dynamic nature of urban operations, in which combat frequently changes the very landscape, made an updated and shared understanding difficult. This created challenges, in particular, for identifying specific locations in the targeting process.

In many cases, the Iraqi and Coalition forces followed best practice in targeting and weaponizing. Building on the practices of considering second- and third-order effects outlined above, for instance, Iraqi and Coalition forces used multiple, low ordinance strikes to disable a bridge that had water pipes running under it. This denied the Islamic State a route for vehicle-borne improvised explosive devices (VBEIDs) but did not disable the water supply. Engaged in close combat in the densely populated terrain, Iraqi forces also opted for hand grenades over artillery, which undoubtedly saved civilian lives.

Mosul's urban terrain and the Islamic State's tactics still created numerous challenges, however. The Islamic State frequently booby-trapped buildings with explosive munitions. This not only created hazards for fighters on the ground, it also made collateral damage estimates and precautions to avoid civilian harm more difficult. This made the Iraqi and Coalition use of indirect fire and other explosive munitions unpredictable in their effects, in some cases increasing civilian harm. This led to widespread destruction in Mosul's Old City.

The Iraqi forces also initially dropped leaflets telling Mosul's residents to stay in the city, anticipating that the residents would organize a popular uprising that could hinder the Islamic State's defensive efforts. But the Iraqis underestimated the depravity of Islamic State fighters and their willingness to brutally repress the population and use them as human shields. When the Coalition shifted its messaging and told civilians to flee, the population was often confused and unprepared. Fleeing civilians often found that routes out of the city were blocked by Islamic State landmines and targeted by snipers.

Key Takeaways:

- The civilian population is an essential element of urban environments and needs to be treated as a Center of Gravity (COG) on par with other COGs, considered in planning, analysis, and execution of urban operations.
- Understanding the reverberating effects of operations in the urban environment is crucial. This includes physical damage beyond the intended target as well as second- and third-order effects that may be cumulative.



U.S. Army Maj. Gen. Gary J. Volesky, left, commander, Combined Joint Forces Land Component Command – Operation Inherent Resolve, visits with an Iraqi soldier at a tactical assembly area in northern Iraq, Iraq, prior to the start of the Mosul offensive, Oct. 10, 2016.

Photo by Sgt. 1st Class R.W. Lemmons IV

<https://www.dvidshub.net/image/2924642/coalition-supports-isf-mosul-offensive>

Planning and Preparation

“Commanders should be aware that civilian casualties can be mitigated through efforts that begin long before a particular incident—indeed, long before deployment—and the impacts of civilian casualties continue after the incident has occurred.”

- Joint Publication 3-31, Joint Land Operations

One of the key lessons of military CHMR efforts to date is the importance of preparation for effective CHMR execution. This includes considering CHMR at all levels of planning and integrating CHMR into training exercises for military forces.

U.S. military studies emphasize the importance of incorporating CHMR considerations into planning. As the JCOA Enduring Lessons study found, “During operational planning, leaders should identify [civilian harm mitigation and response] as a critical vulnerability.”⁴⁰ Similarly, U.S. Army doctrine on the protection of civilians also makes clear that “Planning and decision-making processes should routinely account for civilian casualty considerations.”⁴¹ These planning elements

⁴⁰ JCOA Civilian Harm, p. 5.

⁴¹ U.S. Army, ATP 3-07.6, 5-98.

extend to rules of engagement that “prioritize and account for the protection of civilians.”⁴²

Effectively integrating CHMR into planning and preparation includes consolidating and incorporating lessons learned at all levels. The JCOA study recommended codifying lessons, in Afghanistan as well as other contexts, and consolidating joint lessons for incorporation into multi-Service TTP and Service Professional Military Education (PME).

Preparing U.S. service-members for the future fight will also require investments in training and education. The Joint Civilian Casualty Study and the JCOA study both found that such training should go beyond briefings on the law of war and rules of engagement.⁴³ In Afghanistan, “U.S. military training adjusted to in-theater requests and improved the thoroughness of this pre-deployment training, including training lanes that exercised [escalation of force] procedures, the use of real-world vignettes for dilemma training and sharing of lessons learned, an emphasis on exercising tactical patience when feasible, and the inclusion of [civilian harm mitigation] during headquarters (HQ) mission rehearsal exercises.”⁴⁴

The JCOA study went on to recommend that this approach, utilizing vignettes and ethical and operational elements, be incorporated into training and PME more broadly.⁴⁵ Training on CHMR should not be confined to the tactical but tailored to all levels of command, similar to qualities such as leadership and management.⁴⁶ In theaters where large-scale training exercises are common, ensuring that CHMR issues are integrated into training scenarios also represents an important opportunity to improve performance.

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Key Takeaways:

- Existing plans should be reviewed for effective incorporation of CHMR issues, and new or revised planning should incorporate CHMR measures.
- CHMR should be integrated into training and education at all levels, and into military exercises.

⁴² JP-03, Joint Operations, III-46.

⁴³ Joint Civilian Casualty Study, p. 15; JCOA Civilian Harm, p. 6-7.

⁴⁴ JCOA Civilian Harm, p. 6-7.

⁴⁵ JCOA Civilian Harm, p. 7.

⁴⁶ JCOA Civilian Harm, p. 10.

Public Engagement

Effective public engagement is important for ensuring morale and readiness, fostering public trust and support, enhancing global public understanding, deterrence, and institutional credibility.⁴⁷ Considerations not only include well known objectives around the battle for the narrative of a particular operation, but also include broader impacts on U.S. credibility and legitimacy, which can open or close avenues for U.S. action. Public engagement has a particularly important role in CHMR, where a failure to acknowledge harm to civilians and to effectively communicate U.S. efforts to mitigate and respond to harm, can undermine the perceived legitimacy of U.S. operations and the credibility of U.S. objectives.

The JCOA Enduring Lessons study recommended that future operations “aggressively share information with host nations, NGOs, and others to increase transparency and understanding of U.S. positions.”⁴⁸ A RAND report on the future of warfare similarly found that there is a “risk that false accusations of misconduct or atrocities could affect U.S. domestic support for ongoing or future military operations,”⁴⁹ and recommends enhancing the role of Public Affairs Officers to promote “transparency, reliability, and accuracy in public engagement regarding operations that put civilians at risk.”⁵⁰ This recommendation could be extended to include the work of Civil Affairs Officers as well.

Public engagement also becomes important for cultivating credibility and legitimacy through civilian harm reporting. For instance, during some recent operations in the Middle East, where the U.S. has a limited ground presence, there have been stark differences between U.S. figures on civilian casualties and those reported by mass media, NGOs, and other civilian groups. The U.S.-led coalition that defeated the Islamic State in Mosul, for instance, reported 326 civilian deaths caused by their operations while the Associated Press, cross-referencing a series of NGO reports, found that more than 3,000 civilian deaths had been caused by Coalition operations.⁵¹ While some discrepancy is inevitable in warfare, a difference of orders of magnitude in these good faith estimates posed public relations challenges for U.S. forces, creating the impression that the U.S. is more concerned with negative publicity than avoiding civilian harm.⁵²

This offers a critical lesson for public engagement in support of accurate documentation of civilian harm. A 2018 DOD study on civilian casualties in Operation Inherent Resolve found that 58% of civilian casualties attributable to U.S. operations resulted from incidents that were only reported by external channels.⁵³ Without engagement with affected communities and civil society organizations, the U.S. military would have been blind to more than half of the total harm resulting

47 Joint Publication 3-61, Public Affairs, I-6.

48 JCOA Enduring Lessons, p. 13.

49 Bryan Frederick and Nathan Chandler, *Restraint and the Future of Warfare: The Changing Global Environment and its Implications for the U.S. Air Force* (RAND, 2020), p. 48.

50 Frederick and Chandler, p. 58.

51 Susannah George, Qassim Abdul-Zahra, Maggie Michael, and Lori Hinnat, “Mosul is a Graveyard: Final Battle Kills 9,000 Civilians,” *Associated Press* (December 21, 2017). Note that the figure of 326 is drawn from the Associated Press article in 2017. U.S. operations regularly revised their civilian casualty date based on new information and it is possible that the current figure has been revised somewhat.

52 This included U.S. upward revision of casualty estimates after media reports brought new information to light. See Voice of America, “US: Anti-IS Coalition Airstrikes Killed Over 1,000 Civilians” *Voice of America* (Washington, D.C., December 30, 2018). See also, Azmat Khan and Anand Gopal, “The Uncounted” *The New York Times Magazine* (New York, November 16, 2017).

53 Department of Defense, *Civilian Casualty Review* (April 17, 2018) (executive summary, redacted, unclassified), p. 11.

from its operations and vulnerable to accusations of covering up incidents of civilian harm due to inaction resulting from being unaware.

Key Takeaways:

- Public engagement is critical to realize the benefits to credibility and legitimacy that result from CHMR.
- External actors are key sources of civilian harm incident reports.
- Transparency in civilian harm reporting is paramount for maintaining credibility.

Security Cooperation and Security Force Assistance

“Constraint is a weapons system”

- U.S. advisor with Joint Special Operations Task Force Philippines, describing advice provided to Philippines’s counterterrorism units.⁵⁴

Security Cooperation with U.S. partners and allies is increasingly important in an era of peer/near-peer competition. Recent lessons from the Philippines and Yemen highlight the importance of integrating CHMR into these activities. Security Cooperation is a powerful tool to support U.S. interests but working with partner nations untrained in or otherwise not capable of mitigating harm to civilians creates significant reputational risk for the U.S. When conducting Security Force Assistance, it is imperative to support effective outcomes, including the legitimacy of the partner nation and its “[compliance with] international laws, respect [for] human rights, and... support [for] wide-ranging efforts to enforce and promote the rule of law, thus supporting legitimacy and transparency.”⁵⁵ This section outlines some key lessons in Security Cooperation and Security Force Assistance.⁵⁶ It should be emphasized at the outset that Security Cooperation is a broad topic and this section only addresses areas where good CHMR practice has been publicly documented.

The United States has a variety of mechanisms to support civilian harm mitigation in its Security Cooperation and Security Assistance architecture. The U.S. “Leahy Law” requires that recipients of U.S. funding are not gross violators of human rights, with individual and unit-level vetting to ensure enforcement.⁵⁷ All capacity building of foreign security forces undertaken pursuant to Section 333 (Title 10 U.S.C., Ch. 16, § 333) also requires observance of the law of war (also

⁵⁴ Quoted in Maj. Gen. (ret.) Geoffrey Lambert, Larry Lewis and Sarah Sewall, “Operation Enduring Freedom – Philippines: Civilian Harm and the Indirect Approach” PRISM 3:4 (2012), p. 123.

⁵⁵ Joint Publication 3-20, Security Cooperation, Appendix B. Note that “Security Cooperation” is a broad term encompassing all DOD efforts to build relationships and develop partner capabilities, including educational programs, training exercises, and personnel exchanges. “Security Force Assistance” is a part of Security Cooperation but focused on organizing, training, equipping, building/re-building and advising partner nation security capacity.

⁵⁶ “Security cooperation encompasses all Department of Defense interactions, programs, and activities with foreign security forces (FSF) and their institutions to build relationships that help promote US interests; enable partner nations to provide the US access...; and/or to build and apply their capacity and capabilities consistent with US defense objectives.... DOD policy describes [Security Force Assistance (SFA)] as a subset of [Security Cooperation] initiatives designed to build capacity and capability... SFA activities are often used to shape the [operational environment] or assist a [partner nation] in defending against internal and transnational threats to security or stability.” Joint Publication 3-20, Security Cooperation, v, II-7, Annex B.

⁵⁷ See “About the Leahy Law,” U.S. Department of State (January 20, 2021) available at www.state.gov.



Philippine Air Force Airman Junnevee Cuenca points out a terrain feature to U.S. Marine Lance Cpl. Tatyana Saldana during KAMANDAG 3 at Colonel Ernesto P. Ravina Air Base, Philippines, Oct. 9, 2019. Photo by Cpl. Harrison Rakhshani <https://www.dvidshub.net/image/5821586/afp-us-marines-kickoff-kamandag-3-cerab>

known as the law of armed conflict, or international humanitarian law) and human rights.⁵⁸ The 2018 Conventional Arms Transfer policy requires the U.S. to consider the risks that arms transfers will contribute to human rights abuses, and prohibits transfers if the U.S. knows that those arms will be used in violation of international laws protecting civilians.⁵⁹ In 2018, Congress also required DOD and the Department of State to develop a plan to strengthen security partners' capacity in protection of civilians.⁶⁰ The Defense Security Cooperation Agency supports training for foreign militaries to promote understanding of the law of war, an awareness of the strategic importance of preventing civilian casualties, and technical training to improve CHMR, including training and equipment to implement key CHMR procedures around targeting, such as collateral damage estimates and weaponing.⁶¹ As a Center for Naval Analyses study on Security Cooperation described, these "steady state" training and education activities provide an important foundation when partner nations become engaged in hostilities.⁶² These higher echelon initiatives on CHMR issues can be strengthened through activities of Geographic Combatant Commands.

Studies of U.S. Security Cooperation in the Philippines, Nigeria, and with the Saudi-led coalition in Yemen find that assessing a partner nation's capacities and capabilities with regard to mitigating civilian harm is a key factor for mission success.

⁵⁸ See Title 10 United States Code, Chapter 16: Security Cooperation, Section 333.

⁵⁹ See U.S. Department of State, "Conventional Arms Transfer Policy" (17 December 2018, policy issued 19 April 2018) <https://www.state.gov/conventional-arms-transfer-cat-policy>.

⁶⁰ National Defense Authorization Act for Fiscal Year 2018 (Public Law 115-91, Dec. 12, 2017), Section 1209; see also U.S. Department of Defense and U.S. Department of State, *Congressional Report on the Plan to Improve U.S. Capacity Building Programs to Protect Civilians* (January 25, 2019) (UNCLASSIFIED//FOUO).

⁶¹ See, for example, Defense Security Cooperation Agency, "U.S. Works with Allies, Partners to Minimize Civilian Casualties," (Sept. 23, 2020), www.dsca.mil/news-media/news-archive/us-works-with-allies-partners-to-minimize-civilian-casualties; www.dsca.mil/news-media/news-archive/us-works-with-allies-partners-to-minimize-civilian-casualties; Defense Security Cooperation Agency, "Targeting Infrastructure Policy" (November 27, 2019).

⁶² Larry Lewis, *Promoting Civilian Protection during Security Assistance: Learning from Yemen*, CNA (2019), p. ii.

Studies on Security Cooperation emphasize the importance of sharing U.S. experience and best practices on issues of CHMR.⁶³ Partner nation militaries may not sufficiently consider the negative strategic impact of civilian casualties to their mission objectives or may lack experience in kinetic operations, leading to an overemphasis on lethal force. In the Philippines in the early 2000s, for instance, the Philippine military engaged in a counter-terrorism campaign and initially employed indiscriminate tactics against terrorist groups, with the metric of success measured through body count.⁶⁴ As part of its Security Force Assistance efforts, “the United States employed an intentional, holistic strategy from the outset which integrated security assistance with civilian protection and nonmilitary engagement. This strategy improved the Philippine Armed Forces’ relations with its civilian population, enabling it to execute a more effective counterinsurgency campaign.”⁶⁵ Importantly, leadership from the Philippine government on CHMR was critical to the success of this initiative. U.S. personnel should also fully internalize the importance of minimizing harm to civilians and understand steps that can be taken in this regard. This understanding was clear to U.S. military advisers in the Philippines, who recognized that “constraint is a weapons system.”⁶⁶

Studies of U.S. Security Cooperation in the Philippines, Nigeria, and with the Saudi-led coalition in Yemen find that assessing a partner nation’s capacities and capabilities with regard to mitigating civilian harm is a key factor for mission success.⁶⁷ This includes not only conventional measures of military capacity, such as organization, discipline, and general skill-at-arms, but also the partner nation’s appreciation for the strategic risks of civilian harm, their familiarity with good CHMR practice, and their understanding of the civilian population and its relation to the adversary and to the government.

Once the partner nation’s capacities are understood, U.S. mentoring and training efforts should be tailored to the context of the fight and the partner’s specific capability requirements. For instance, during the Saudi-led coalition’s campaign in Yemen, much of which was conducted through airstrikes, the U.S. made investments to improve Saudi Arabia’s practices for targeting, weaponeering, collateral damage assessments, and the development of data-gathering teams on civilian harm incidents modeled on efforts from Afghanistan. The result of this investment was the Joint Integrated Assessment Teams (JIAT).⁶⁸ In the Philippines, U.S. efforts included inculcating concepts of tactical patience and civil-military relations with the Philippine forces, as well as providing intelligence on the civilian population and terrorist targets.⁶⁹ In Afghanistan, Operation Resolute Support has supported the Afghan military to establish its own CIVCAS cell, enabling continued gathering of data on civilian harm after the U.S. military leaves.

Tailoring Security Cooperation efforts is often an iterative process, requiring the partner nation and U.S. advisers to understand how operations impact the civilian population. This generally calls for some mechanism, such as the CIVCAS cell used in Afghanistan or the Saudi JIAT, to provide data on civilian harm that can be incorporated into further guidance or training.

63 See, for example, Dalton, et al., *The Protection of Civilians in U.S. Partnered Operations*, CSIS et al. (2018), p. 13; Lewis and Holewinski, p. 64; Lewis, *Yemen*, p. iv.

64 Lambert, et al., p. 122.

65 Martha Lee, Alexandra Schmitt and Gabrielle Tarini, *Partnering to Protect: Reforming U.S. Security Assistance to Reduce Civilian Harm* (Harvard University, 2019), Annex E.

66 U.S. military adviser, quoted in Maj. Gen. (ret.) Geoffrey Lambert, Larry Lewis and Sarah Sewall, “Operation *Enduring Freedom* – Philippines: Civilian Harm and the Indirect Approach” *PRISM* 3:4 (2012), p. 123.

67 See Dalton, et al.; Lambert, et al.; Lewis, *Yemen*.

68 See Lewis, *Yemen*.

69 See Lambert, et al.

The political will of the partner nation may present an obstacle, however, that requires high-level engagement or an interagency approach. In the Yemen conflict, for instance, the U.S.-supported JIAT was established and produced reports that could have served as the basis for learning lessons and mitigating civilian harm. These reports met resistance from Saudi leadership, however, and the JIAT's work was never built upon; the JIAT produced "lessons identified" that never became "lessons learned."⁷⁰ While the U.S. had diplomatic influence with the highest levels of Saudi government and U.S. service members made progress in mentoring mid-level officers in the Saudi Air Operations Center, the details and importance of these mentoring efforts were never tied to strategic level diplomatic engagements.⁷¹

Key Takeaways:

- CHMR lessons and best practices should be topics of active exchange between the U.S. military and partner forces.
- U.S. Security Cooperation efforts should assess partner nation capacity and capability for CHMR, including political will, skills, and equipment, and tailor CHMR support accordingly.
- Learning from civilian harm incidents is just as important for partner nations and U.S. advisers as for U.S. operations. Partner nations should be encouraged to develop and deploy tools such as CIVCAS cells.

⁷⁰ Lewis, Yemen.

⁷¹ Lewis, Yemen.

Key Gaps and a Forward Agenda

While important insights on CHMR have emerged in recent years, the documentation of lessons and best practices lags behind the cultivation of best practice for other critical aspects of strategy, operations, and tactics employed in U.S. combat operations. This undermines efforts to sustain, transfer, and systematize best practices and hampers the adaptation of CHMR techniques to new types of engagements and battlefields, including potential peer and near-peer conflict.

A purposeful investment in the capture and dissemination of CHMR lessons and best practices is essential to systematically collect, analyze, validate, and share lessons with a view to institutionalizing and continuously cultivating best practice. This is critical as a basis for military education and training as well as practical guidance for planners, exercise designers, and military staff who may take on new functions - such as staffing CIVCAS cells - as well as those who will perform already well-established functions with greater integration of CHMR, such intelligence, surveillance, and reconnaissance.

This review of existing best practices illuminates some areas where closing gaps in knowledge and capturing lessons will be valuable in the near term and where the continual cultivation of best practice will be important to effectively mitigate and respond to civilian harm. The list below is not exhaustive but highlights some areas indispensable for effective CHMR:

- **Strategic guidance and commander's intent:** What is the effect on end-state planning and execution when CHMR is an explicit component of strategic guidance and articulation of commander's intent? Existing studies indicate that expectations from military command and political leadership drove concerted and effective mitigation of civilian harm in Afghanistan and Iraq. However, as yet, there is no comprehensive documentation of how this strategic intent effectively flows down through planning, intelligence, tactical directives, rules of engagement, force mobilization and training, tactical maneuvers, critical information requirements, civilian harm tracking and assessments, and acknowledgement and condolences for harm when it occurs.
- **Factoring risks to civilian populations into planning, intelligence, collateral damage estimates, and targeting:** These are processes for which U.S. doctrine and procedure is comprehensive and consistently applied. However, there is a need to better integrate CHMR considerations into these ongoing processes. In particular, best practice entails moving away from a sole focus on analysis of adversaries to holistic understanding of the civilian population and civilian patterns of life, structures and infrastructure essential to their survival, and anticipating how civilians may react to combat operations, particularly in populated areas. Examination of the indirect and reverberating effects on civilian life resulting from damage to civilian structures and infrastructure – for example, as manifested in public health crises and food insecurity -- particularly in urban settings, highlight the importance of an interdisciplinary approach to such analysis.⁷²
- **Data-driven civilian harm mitigation:** Best practices underscores the importance of the

⁷² See Airwars and PAX, *Building the Evidence Base: Addressing the Reverberating Effects of Military Operations on Civilian Life* (2020); and Airwars and PAX, *Seeing Through the Rubble: The Civilian Impact of the Use of Explosive Weapons in the Fight Against ISIS* (2021).

timeliness of information flow within an operational command to understand the circumstances under which civilians suffer harm and establish an ongoing trend analysis which pushes this information into operational decision-making and supports identification of practical measures to more effectively avoid and minimize civilian harm. A strengthened evidence base, alongside a commitment to use the evidence available, was an essential ingredient for the relative success in reducing civilian casualties from U.S. operations in Afghanistan. While the Chairman of the Joint Chiefs of Staff (CJCS) CIVCAS Study (2018) underscored the important role of external information sources to establish credible determinations of civilian casualties, as yet there is no comprehensive model of real-time analysis that incorporates external sources to support operational decision-making. More comprehensive study of past and current practice would enable the development of this information flow model.

- **Civilian Casualty (CIVCAS) Cells:** The value of CIVCAS cells to assess and analyze civilian harm, and make this information available for targeting and other functions of an operational command, is repeatedly reinforced as best practice in the available literature. There are, however, no comprehensive lessons or guidance on how CIVCAS cells should be set up, where they should be situated within a command structure, and what kind of skillsets are needed. Lessons learned from US CENTCOM and US AFRICOM along these lines will be important for the integration of CIVCAS cells into planning, exercises, training, and the development of Standard Operating Procedures for their timely creation across operational theaters.
- **Displacement:** One of the most debilitating consequences of armed conflict for civilians is displacement. Parties to conflict are obligated to minimize the risk of displacement in their operations, ensure that evacuations of civilian populations are undertaken only as a last resort and in a safe and orderly manner, and that locations of displacement are secure and avoid exposing civilians to further risk. The scale of displacement resulting from contemporary conflict, in combination with the paucity of documented lessons and guidance on appropriate measures for military operations with respect to the risk of displacement, underscore the importance of investing in the capture of lessons and cultivation of best practices.⁷³
- **Engagement with civilian actors:** Approaches and protocols for U.S. military engagement with civilian organizations for the purpose of supporting disaster response is well-developed, but the foundations for such engagement are much less developed for the context of armed conflict where U.S. forces are party to the conflict. The need for this engagement is two-fold: (1) to create arrangements which facilitate and ensure the safety of NGOs' and international organizations' humanitarian operations undertaken to prevent and alleviate human suffering resulting from conflict, including through humanitarian notification systems; and (2) to receive information from local, national, and international NGOs and IOs, the media, and civil society on potential risk to civilians as well as incidents and trends of civilian harm resulting from U.S. military operations in order to integrate this information into tracking, assessments, analysis, and responses to civilian harm. U.S. military forces have demonstrated some good practice to engage with NGOs and IOs in recent conflicts, however, no documented lessons or authoritative guidance exists to support this engagement or the development of tailored protocols, for example, for the design of humanitarian notification mechanisms or to facilitate

⁷³ See Interaction, *Displacement and the Protection of Civilians in U.S. and Partnered Operations* (2019); Norwegian Refugee Council, *Considerations for Planning Mass Evacuations of Civilians in Conflict Settings* (2016).

regular liaison for the receipt of information and analysis of civilian harm.

- **Acknowledgement and condolences:** While there is an increasing emphasis in congressional legislation and DOD practice on acknowledging harm and extending condolences to those who have suffered, there have been no comprehensive studies to inform a more consistent approach and to distill best practices. Such practices include ensuring that approaches to acknowledgement and condolences are culturally appropriate, considering the gender and age of survivors, and designed to support the restoration of the dignity of civilians suffering harm.
- **Supporting and learning from security partners:** The U.S. invests extensively in training, equipping, and advising its security partners. There is little empirical evidence of effective approaches to incorporate CHMR into security partnership, however, particularly to secure necessary changes in policy and practice where security partners demonstrate persistently harmful conduct. Studies of U.S. engagement with Philippine and Saudi forces cited in this Handbook offer important insights but greater investment in lessons learned would be valuable. With Congress' and DOD's heightened attention to improving the capabilities of U.S. security partners to avoid harm and ensure the protection of civilians in armed conflict, opportunities for enhanced learning and best practice are on the horizon and warrant devoted attention. In addition, some U.S. security partners hold unique knowledge and capabilities from which the U.S. can learn to inform its own CHMR practices.
- **Interoperability within U.S. operations and in joint and coalition operations:** A lack of interoperability - whether within U.S. operational commands or in joint and coalition operations - has been highlighted as a critical weakness with consequences for effective mitigation and response to civilian harm. This includes instances where U.S. forces and U.S. partners placed different emphasis on civilian harm mitigation in the context of mission objectives. A lack of shared emphasis on CHMR can lead to a lack of interoperability of mitigation and response measures, particularly in multi-domain operations, leaving civilians to fall through the gap. With a view to closing this gap and ensuring shared plans and processes take CHMR into account, lessons from recent joint and coalition operations in Afghanistan, Iraq, and Syria should serve as the basis for the initial distillation of best practices.
- **Applying CHMR in Peer and Near-Peer Conflict:** The unique characteristics of large scale and multi-domain combat operations in a peer or near-peer conflict will benefit from devoted attention to apply and adapt CHMR best practices in all phases and with a view to internalizing the strategic, operational, and tactical implications of civilian harm well as effective mitigation and response.

The U.S. military has well-developed institutional capacities and methods for lessons learned and establishing best practice. Authoritative post-operation lessons learned reviews and studies by independent researchers, should help deepen institutional knowledge of CHMR in combat operations. In addition, formal and informal AARs in which operators can analyze and problem-solve for CHMR within ongoing operations will be critical for accelerated internalization and application of learning. Informal AARs in particular can enable rapid iteration and real time adaptability in ongoing operations while formal AARs are better suited for more comprehensive

discovery and documentation of lessons learned. In any AAR process, best practice literature⁷⁴ emphasizes the importance of facilitation to enable critical reflection and self-discovery. This requires facilitators who bring CHMR experience and expertise to the process. Making AAR reports available within and across operations and combatant commands will facilitate knowledge transfer and the cultivation of best practice within DOD.

This Handbook has reviewed the many areas in which CHMR is integrated across echelons and functions. It recognizes that foundational aspects of leadership, understanding and analysis, and planning and training are all essential for effective CHMR, often requiring preparation, education, and force development long before the onset of operations. It also highlights the central role that CHMR plays in urban operations and can play in Security Cooperation and Security Force Assistance.

The U.S. military has been a leader in developing best practices to mitigate and respond to civilian harm. This historical commitment is only more important at a time when values are what most distinguish the United States from its adversaries. This Handbook serves as an introduction to what the U.S. has learned while stressing that this education remains incomplete. Many U.S. practices remain undocumented or under-documented. Many of the general lessons underscored here can only be implemented by planners and operators in the context of their specialized work. The bulk of studies drawn upon for this Handbook were developed for counterinsurgency and may require adaptation for the future fight. The need to mitigate and respond to the civilian harm that this practices sought to address, however, will remain.



Philippine and U.S. service members disembark an Armed Forces of the Philippines landing craft unit during a civil military operation from the sea event in support of Balikatan 2017 Sabtang, Batanes, May 12, 2017. Photo by Lance Cpl. Osvaldo L. Ortega III <https://www.dvidshub.net/image/3397680/us-marines-afp-provide-medical-care-sabatang>

⁷⁴ See, for example, "The Leaders Guide to After-Action Reviews" (Combined Arms Center-Training, 2013).

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List of Acronyms

AAR	Degrees Celsius
AFRICOM	U.S. Africa Command
CFE-DMHA	Center for Excellence in Disaster Management and Humanitarian Affairs
CENTCOM	U.S. Central Command
CHMR	Civilian Harm Mitigation and Response
CIVCAS	Civilian Casualty
CJCS	Chairman of the Joint Chiefs of Staff
COIN	Counterinsurgency
DOD	Department of Defense
INDOPACOM	U.S. Indo-Pacific Command
ISF	ASEAN Regional Forum
JCOA	Joint Coalition Operational Analysis
JIAT	Joint Integrated Assessment Team
NATO	North Atlantic Treaty Organization
NGO	Non-governmental organization
PME	Professional Military Education
PMESII	Political, Military, Economic, Social, Information and Infrastructure
POC	Protection of Civilians
TTP	Tactics, Techniques and Procedures



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