



COMPILATION OF MILITARY POLICY AND PRACTICE

Reducing the humanitarian impact of the use of explosive weapons in populated areas



OCHA POLICY AND STUDIES SERIES



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Cover Photo

The destroyed neighbourhood of Khalidiya in the Old City of Homs, Syria. Homs has been witness to some of the worst fighting of the Syrian conflict and the Old City district now lies in ruins. The area is largely uninhabitable however a few people are attempting to return and rebuild. Credit: UNHCR/Andrew McConnell

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Table of contents

Foreword	2
List of acronyms	3
Executive summary	5
Introduction	9
A. Explosive weapons, populated areas, wide-area effects	9
B. Humanitarian impact of using explosive weapons in populated areas	9
C. Avoiding or limiting the use of explosive weapons in populated areas	11
D. Compilation of military policy and practice	12
E. Structure	13
Part One: International humanitarian law rules governing the use of explosive weapons in populated areas	14
A. Prohibition of directing attacks against civilians and civilian objects	14
B. Prohibition of indiscriminate attacks	14
C. Prohibition of disproportionate attacks	15
D. Obligation to take all feasible precautions in attack and against the effects of attack	16
Part Two: Military policy and practice in avoiding or limiting the use of explosive weapons in populated areas	18
A. ISAF tactical directives and civilian casualty mitigation	20
B. Incorporation of lessons learned into US military policy	21
C. AMISOM indirect fire policy	25
D. San Remo Handbook on Rules of Engagement	26
Part Three: Other salient military policy and practice	27
A. Civilian casualty tracking	27
B. No strike policy and collateral damage estimation	29
C. Battle damage assessment	31
D. Minimum safe distances and risk estimate distances	31
Part Four: Observations	32
Annex One: Military policy and practice in avoiding or limiting the use of explosive weapons in populated areas (elaborated)	34
Annex Two: Other salient military policy and practice (elaborated)	48
Annex Three: Civilian Casualty Data Collection	65

Foreword

The use of explosive weapons in populated areas, particularly those with wide-area effects, can have a serious humanitarian impact that needs to be addressed urgently.

Most immediately, civilians are killed and injured. Research suggests that civilians make up 92 per cent of those killed and injured when explosive weapons are used in populated areas.

But the problem is about more than civilian deaths and injuries. When explosive weapons are used in populated areas we see a predictable, widespread and, importantly, long-term pattern of harm.

We see civilians of all ages suffer life-changing injuries that also impact their families and communities for years to come. They may require specialist healthcare and psycho-social services that frequently do not exist, often as a result of the destruction of hospitals and the killing of healthcare workers.

We see widespread damage to, or destruction of, essential services such as water and electricity supplies. The negative consequences of this are felt by a far broader proportion of the population than those within the vicinity of an attack and can result in serious public health concerns.

We see civilians displaced as they flee attacks that damage their homes, their livelihoods or that cut off essential services. Yet becoming displaced often leads to further challenges to survival. In many cases, the damage caused by explosive weapons makes it difficult or impossible for the displaced to return to their homes.

We see the partial or complete destruction of schools that interrupts or halts access to education. The devastation of livelihoods as shops, offices, markets, factories, and workshops are damaged or destroyed, only compounds the loss of opportunity and hope for the future.

We see the deadly legacy of explosive remnants of war. And as the use of explosive weapons becomes more widespread and protracted, we see the escalation of post-conflict reconstruction requirements and costs – and the undermining, if not outright reversal, of progress in implementing the Sustainable Development Goals.

What we need to see – and soon – is a change in practice. We need to see a concerted movement away from the widespread use in populated areas of explosive weapons with wide-area effects.

At the Security Council, the World Humanitarian Summit and in other settings, the United Nations Secretary-General has repeatedly called on parties to conflict to refrain from the use in populated areas of explosive weapons with wide-area effects.

There are important examples of policy and practice where military forces have deliberately avoided or limited the use of certain explosive weapons in certain contexts in order to ensure greater protection for civilians. Some militaries have also adopted collateral damage estimation techniques or established casualty tracking mechanisms that allow them to better understand the effects their operations have on civilians and take corrective measures.

The present document is a first edition of a compilation of examples of such policy and practice and will be updated as new policy and practice becomes available. It has been prepared to inform the thinking of States, militaries and other actors on this critically important humanitarian issue; and to help them identify measures that they can take to ensure more effective protection of civilians.



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List of acronyms

AAR	After Action Review
AMISOM	African Union Mission in Somalia
ATTP	Army Tactics, Techniques and Procedures
AIHRC	Afghan Independent Human Rights Commission
ANSF	Afghan National Security Forces
AOR	Area of Responsibility
ASUGM	air-to-surface unguided munition
AU	African Union
BDA	Battle Damage Assessment
BDAREP	Battle Damage Assessment Report
CAS	close air support
CBR	Chemical, biological, radiological
CCA	close combat attack
CCDR	Combatant Commander
CCMD	Combatant Command
CCMT	Civilian Casualty Mitigation Team
CCTC	Civilian Casualty Tracking Cell
CDE	collateral damage estimation
CDM	collateral damage methodology
CE	casualty estimate
CER	collateral effects radius
CHA	collateral hazard area
CIVCAS	civilian casualties
CJOC	Combined Joint Operations Centre
COMISAF	Commander of ISAF
EO	Executive Order
ERW	explosive remnants of war
EU	European Union
FHQ	Force Headquarters
Force FDC	Force Fire Direct Control Centre
FRAGO	Fragmentary Order
HQ	headquarters
IAT	Incident Assessment Team (AMISOM)
ICM	improved conventional munition
ICRC	International Committee of the Red Cross
IED	improvised explosive device
IHL	International humanitarian law
ISAF	International Security Assistance Force

List of acronyms

JIAT	Joint Incident Assessment Team (ISAF)
MSD	minimum safe distance
NATO	North Atlantic Treaty Organization
NFZ	no-fire zone
NGO	non-governmental organization
NSE	no-strike entity
NSF	no-strike facility
NSL	no-strike list
OA	observer adjusted
OCHA	Office for the Coordination of Humanitarian Affairs
OEF	Operation Enduring Freedom
OPREP	Operational Report
PGM	precision guided munition
PID	positive identification
PIO	Public Information Office
RAP	rocket assisted projectile
RED	risk estimate distance
ROE	rules of engagement
SITREP	Commanders Situation Report
SOP	Standard Operating Procedure
SSBM	surface-to-surface ballistic munition
TCC	troop contributing country
TEA	Target Engagement Authority
TFG	Transitional Federal Government
UK	United Kingdom
UN	United Nations
UAV	unmanned aerial vehicle
UNAMA	United Nations Assistance Mission in Afghanistan
UNITSITREP	Unit Situation Report
US	United States
WLR	weapon locating radar

Executive Summary

Reducing the humanitarian impact of the use of explosive weapons in populated areas is a key priority for the United Nations, the International Committee of the Red Cross (ICRC), civil society and an increasing number of Member States. The United Nations Secretary-General has expressly called on parties to conflict to avoid the use in populated areas of explosive weapons with wide-area effects.

While the use of explosive weapons in populated areas may in some circumstances be lawful under international humanitarian law (IHL), empirical evidence reveals a foreseeable and often widespread pattern of harm to civilians, particularly from explosive weapons with wide-area effects.

Many types of explosive weapons exist and are currently in use. These include air-delivered bombs, artillery projectiles, missiles and rockets, mortar bombs, and improvised explosive devices (IEDs). Some are launched from the air and others are surface launched. Whilst different technical features dictate their accuracy of delivery and explosive effect, these weapons generally create a zone of blast and fragmentation with the potential to kill, injure or damage anyone or anything within that zone. This makes their use in populated areas – such as towns, cities, markets and camps for refugees and displaced persons or other concentrations of civilians – particularly problematic. The problems increase further if the effects of the weapon extend across a wide-area either because of the scale of blast that they produce; their inaccuracy; the use of multiple munitions across an area; or a combination thereof.

A. Humanitarian impact of the use of explosive weapons in populated areas

Civilians pay a very heavy toll when explosive weapons are used in populated areas. They are killed or suffer complex injuries which may prove fatal or otherwise life-changing. Populations are displaced, both within and across international borders, as people are forced to flee due to fear of, or as a result of, attacks that damage or destroy their homes or livelihoods. Explosive weapons frequently damage or destroy water, sanitation and electricity services with sometimes drastic consequences for the broader civilian population.

The use of explosive weapons in populated areas can impede access by humanitarian organizations to civilians in need of protection and assistance. Access to education is denied when the use of explosive weapons leads to the partial or complete destruction of facilities or direct harm to teaching personnel and students. Livelihoods are also impacted as commercial property and enterprises (factories, workshops, fishing boats, livestock, etc.) are damaged or destroyed in attacks involving explosive weapons.

Explosive remnants of war (ERW) inevitably result from the use of explosive weapons. ERW can kill and injure civilians long after hostilities in an area have ceased and prevent the return of refugees and internally displaced persons and reconstruction efforts. The use of explosive weapons in populated areas can have a dramatic impact on post-conflict reconstruction requirements and costs and can impede, if not reverse, progress towards the achievement of the Sustainable Development Goals.

B. International humanitarian law rules governing the use of explosive weapons in populated areas

International humanitarian law (IHL), or the law of armed conflict, contains important rules for the protection of civilians and civilian objects, including from the effects of explosive weapons. IHL requires that the use of such weapons comply with:

- » the prohibition of direct attacks against civilians and civilian objects;
- » the prohibition of disproportionate and other indiscriminate attacks; and
- » the obligation to take all feasible precautions in attack and against the effects of attack in order to avoid, and in any event to minimize, incidental civilian harm.

Full compliance with IHL by parties to conflict would significantly enhance the protection of civilians from the effects of explosive weapons. However, based on the immediate and long-term effects of explosive weapons in populated areas being witnessed today, there are significant concerns regarding how parties to conflict are interpreting and applying the relevant IHL rules.

There are concerns also as to the extent to which the IHL rules provide sufficient guidance to parties to conflict on how the risk of civilian harm from the effects of explosive weapons, including in the long-term, is to be assessed and reduced. The development and implementation of policy standards that avoid or limit the use in populated areas of explosive weapons, particularly those with wide-area effects, would help reduce the humanitarian impact in both the short- and long-term.

C. Compilation of military policy and practice

Important precedents exist in this regard. The humanitarian impact of the use of explosive weapons in populated areas has been reduced in some situations, such as Afghanistan and Somalia, by the adoption of policies and practices that limit such use. Following consultations with Member States, military actors and civil society, the United Nations Office for the Coordination of Humanitarian Affairs (OCHA) concluded that it would be beneficial to compile these and other salient examples of military policy and practice and make this available to States, armed forces and other relevant actors to show how changes in practice away from the widespread use of explosive weapons in populated areas are possible.

The compilation is a living document and will be updated to reflect new policy and practice as these become available as well as other relevant developments.

D. Military policy and practice in avoiding or limiting the use of explosive weapons in populated areas

The International Security Assistance Force (ISAF) in Afghanistan and the African Union Mission in Somalia (AMISOM) instituted policies that placed limits on the use of certain explosive weapons in certain locations where civilians are likely to be present in order to minimize the impact of military operations, including the use of explosive weapons, on civilians. This included the issuance of tactical directives to ISAF commanders to use the least destructive force to obtain a military purpose; and the development and adoption by AMISOM of an indirect fire policy that limited the use of mortars and other indirect fire weapons in populated areas.

In both cases, the policy changes were driven by the recognition that civilian casualties resulting from even the lawful use of force can lead to the loss of support for the mission, and undermine longer-term political objectives and the successful conclusion of the mission. The lessons-learned by the United States (US) military in Afghanistan have subsequently been reflected in revised US military policy. They have also been taken on board by other actors, including the European Union's (EU) Military Committee in its concept for "avoiding and minimizing collateral damage in EU-led military operations" of February 2016.

E. Other salient military policy and practice

Though not specific to the use of explosive weapons in populated areas, there are other policies and practices that have been shown to help reduce the humanitarian impact of the use of explosive weapons. In particular, civilian casualty tracking mechanisms have allowed parties to conflict to better understand the impact of their operations on the civilian population and to identify the necessary steps to reduce that impact and strengthen the protection of civilians.

Some armed forces also use collateral damage estimation (CDE) tools and battle damage assessments (BDAs) in an effort to reduce the impact of hostilities on civilians. Reference should be made also to the possible analogous use of the concepts of “minimum safe distances” and “risk estimate distances” that are applied by armed forces to mitigate the risk of fratricide based on an assessment of the area effects of certain explosive weapons.

F. Observations

The development of operational policy and procedures to avoid or, at a minimum, limit the use of explosive weapons with wide-area effects in populated areas would significantly contribute to reducing the humanitarian impact of such use, in both the short- and long-term, and support the effective application of international humanitarian law. Such policy could include identifying certain explosive weapon types that should not be used against targets in populated areas, weapons for which higher command authority is required, and practical steps that can be taken to reduce the likely harm from attacks using these and other explosive weapons.

Drawing on the policies and practices outlined in this compilation, a future operational policy could, at a minimum, reflect the following considerations:

Explosive weapons create effects across a more or less wide-area and this determines the level of risk presented to the civilian population

A clear understanding of the area effects of different explosive weapon types is required in order to ensure that the choice of weapons is based, inter alia, on an understanding of these effects and the resultant civilian risk. On this basis, policies can be put in place to avoid the use of explosive weapons with wide-area effects in locations where civilians are concentrated. This would support the effective implementation of IHL which necessarily requires an effective understanding of the likely area effects of different weapon types.

A thorough understanding of the likely area effects of different explosive weapon types should not be based solely on technical data relating to the expected performance of the weapon. It should also be based on:

- » Analysis of the practical procedures through which the weapons are applied to targets in operational use, such as the practice of registration fires, walking fires onto targets, bracketing etc.
- » An understanding that urban terrain and infrastructure impact weapons employment and munitions effectiveness.

Raise the command authority for the use of explosive weapons in populated areas

Proposed use of explosive weapons in populated areas should be subject to higher command authority, particularly where those weapons have wide-area effects, to reflect the increased risk to the civilian population inherent in such use. This would provide both additional scrutiny and potential access to additional intelligence, surveillance and reconnaissance resources, and would ensure that the elevated risk to the civilian population is subject to sufficient consideration – both humanitarian and political.

Civilian presence and status should be presumed

Civilian status should be presumed until otherwise apparent. In every location where there is evidence of human habitation, it must be presumed that civilians are present until otherwise apparent. If unable to assess the risk of civilian presence, the use of fires should not be allowed.

F. Observations (continued)

Identify “no-strike” entities in advance

The protection of civilians can be enhanced through the advanced identification of “no-strike entities” upon which kinetic or non-kinetic operations are prohibited. The “no-strike list” should routinely identify civilian objects and be regularly reviewed and updated.

Allow time for the consideration of alternatives to using explosive weapons

Creating stand-offs and exercising tactical patience can avoid the need for split second decisions. Tactical patience allows for more accurate information to be gained and the possibility to consider alternative courses of action that are less extreme than the use of explosive weapons. This can reduce the potential for civilian casualties and longer-term harm. For example, use soldiers and weapons that are precise, locally controlled, and limited. During actions on contact, use fire and maneuver rather than indirect fires and airstrikes as the default response.

Undertake collateral damage estimation

The routine use of collateral damage estimation tools and methodology allows parties to mitigate unintended or incidental damage or injury to civilian or non-combatant persons or property or the environment. This is particularly the case with regard to the use of explosive weapons in populated areas.

Conduct battle damage assessments (BDAs)

BDAs should be conducted in all situations where there is a potential loss of life or injury to civilians. Detailed BDA of effects on the civilian population is essential for effective consequence management and lessons-learned.

Implement civilian casualty tracking

The establishment and implementation of civilian casualty tracking mechanisms allow parties to conflict to more fully understand the impact they are having on the civilian population, including through the use of explosive weapons, and the steps that are necessary to reduce that impact and strengthen the protection of civilians.

In many contexts, civilian harm jeopardizes the mission

Taking constant care to spare the civilian population, individual civilians and civilian objects from the effects of hostilities, including the use of explosive weapons in populated areas, is more than a legal requirement. It also makes operational sense in many contexts. The population’s support is often critical for operational success and civilian harm can undermine such support if civilians conclude that armed forces and their partners are their greatest threats or cannot provide security. Civilian casualties also create local, national and international political pressure that can limit the freedom of action of armed forces.

Leadership is critical in protecting civilians from harm

Leadership is key for preventing and minimising civilian casualties. Leaders must understand the significance of preventing civilian casualties for the longer-term success of the mission. They must convince their subordinates of its importance; and they must ensure that the proper climate regarding the prevention of civilian casualties exists in their organizations.

Introduction

Reducing the humanitarian impact of the use of explosive weapons in populated areas has emerged as a key priority for the United Nations, the International Committee of the Red Cross (ICRC), civil society and an increasing number of United Nations Member States. The United Nations Secretary-General has expressly called on parties to conflict to avoid the use of explosive weapons with wide-area effects in populated areas.¹

While the use of explosive weapons in populated areas may be lawful under international humanitarian law (IHL) in some circumstances, empirical evidence reveals a predictable and often widespread pattern of unacceptable harm to civilians, particularly from explosive weapons with “wide-area effects”. This consistently includes death and injury, psychological trauma, population displacement, and damage to, or destruction of, essential infrastructure on which civilians depend.

A. Explosive weapons, populated areas, wide-area effects

Many types of explosive weapons exist and are currently in use. These include air-delivered bombs, artillery projectiles, missiles and rockets, mortar bombs, and improvised explosive devices (IEDs). Some are launched from the air and others are surface launched. Whilst different technical features dictate their accuracy of delivery and explosive effect, these weapons generally create a zone of blast and fragmentation with the potential to kill, injure or damage anyone or anything within that zone.

It is the blast and fragmentation effect of explosive weapons that makes their use in populated areas particularly problematic. For the purposes of this compilation, “populated areas” are considered areas likely to contain concentrations of civilians. The term “concentrations of civilians” is defined in Protocol III to the Convention on Certain Conventional Weapons as any concentration of civilians, be it permanent or temporary, such as in inhabited parts of cities, or inhabited towns or villages, or as in camps or columns of refugees or evacuees, or groups of nomads.²

The problems resulting from the use of explosive weapons in populated areas are particularly pronounced and severe if the weapon has “wide-area effects”. Wide-area effects can result from three characteristics, either individually or in combination:

- » A substantial blast and fragmentation radius, resulting from a large explosive content.
- » Inaccuracy of delivery, meaning that the weapon may land anywhere in a wide-area.
- » The use of multiple firings, sometimes designed to spread, affecting a wide-area.³

B. Humanitarian impact of using explosive weapons in populated areas

Experience from a broad range of conflicts shows that the use of explosive weapons in populated areas is a major cause of civilian deaths, injury, psychological trauma and displacement. It also has severe long-term humanitarian impacts resulting from the destruction of housing and other essential infrastructure on which civilians depend.⁴

¹ See Report of the Secretary-General on the protection of civilians in armed conflict, S/2017/414 (May 2017), para.20

² See Article 1(2), Protocol on Prohibitions and Restrictions on the Use of Incendiary Weapons (1980).

³ Article 36/PAX, Areas of Harm – Understanding Explosive Weapons with Wide Area Effects (2016), available at: <http://www.article36.org/explosive-weapons/areas-of-harm-report/> See also Armament Research Services (K. Cross, O. Dullum, N.R. Jenzen-Jones and M. Garlasco), Explosive Weapons in Populated Areas: Technical Considerations Relevant to Their Use and Effects (May 2016), available at: <http://armamentresearch.com/ares-special-report-explosive-weapons-in-populated-areas/>.

⁴ See further, for example, International Committee of the Red Cross (ICRC), Explosive Weapons in Populated Areas: Humanitarian, Legal, Technical and Military Aspects – Report of the ICRC Expert Meeting, Chavannes-de-Bogis, Switzerland, 24-25 February 2015, available at: <https://www.icrc.org/en/document/explosive-weapons-populated-areas-humanitarian-legal-technical-and-military-aspects>. Country and thematic reports relating to the use of explosive weapons in populated areas can be found at: <http://www.inew.org/learn-more-about-inew#inew-member-material>

Civilian deaths, injury and psychological harm

Civilians pay a heavy toll when explosive weapons are used in populated areas. They are killed or suffer complex injuries which may prove fatal or otherwise life-changing and that also impact the families and communities of victims. The use of explosive weapons in populated areas results in physical harm, in the form of blast and fragmentation injuries, crush injuries, and burns. It also leads to trauma and post-traumatic stress disorders (including amongst those not physically affected). In children, this psychological trauma can seriously undermine healthy child development.

Limited or no access to healthcare and humanitarian assistance

Such physical and psychological harm requires emergency and specialist medical treatment, rehabilitation and psycho-social support services that are often unavailable during conflict and even after hostilities have ended. In many situations there is a lack of personnel trained to deal with these and other conflict-related injuries. This may mean that those affected need to seek treatment abroad which is often impossible. Moreover, conflict-affected States often have limited capacity to provide or continue to support specialized aftercare for the victims of explosive weapons.

Access to healthcare is often constrained also because hospitals and clinics have been damaged or destroyed, including through the use of explosive weapons, or because healthcare personnel have been killed or medical supplies cut off. This can have severe repercussions for the broader civilian population and not just those injured by explosive weapons.

Population displacement

The use of explosive weapons in populated areas is a major driver of population displacement, both within and across international borders, as people are forced to flee due to fear of, or as a result of, attacks that damage or destroy their homes or livelihoods. Becoming displaced is a traumatic and life-threatening experience. It can result in family separation, loss of livelihoods and support structures, and expose those affected to a heightened risk of sexual and other forms of violence, exploitation, abuse and neglect. In addition, children are exposed to specific risks such as recruitment into armed forces and groups and abduction. Displaced persons often lack access to adequate shelter and sufficient food and water. For many displaced persons, this situation can persist for months, years or even decades.

Partial or complete destruction of essential infrastructure

The use of explosive weapons in populated areas results in damage to, or the destruction of, essential services such as water and electricity supplies – the negative consequences of which are experienced by a far broader proportion of the population than those within the vicinity of an attack. The interdependencies between these services mean that the destruction of a single electrical transformer, for example, can compromise safe drinking water supplies and the treatment and disposal of sewage increasing the risk of disease. Power shortages also affect hospitals and the provision of life-saving healthcare, as well as food production and storage. These impacts are accentuated when the use of explosive weapons is protracted, with a consequent decline in essential services over time giving rise to serious risks for public health.

Impeding the provision of life-saving humanitarian assistance

The use of explosive weapons in populated areas impedes access by humanitarian organizations to civilians in need of protection and assistance which can, in turn, further compound the humanitarian situation. For example, safety concerns may prevent the deployment of humanitarian staff to implement activities in areas in which explosive weapons have been, or are being, used. In addition, the destruction of roads and bridges can prevent the delivery of food, water, medical and other emergency supplies to populations in need.

Loss of education and livelihoods

The use of explosive weapons in populated areas can deny children access to education – either through damage to facilities, harm to teaching personnel or the fear of harm. In some places, because of the fear of attacks involving explosive weapons, families do not send their children to school. Livelihoods are also devastated as commercial property and enterprises (markets, factories, workshops, fishing boats, livestock, etc.) are damaged or destroyed in attacks involving explosive weapons.

Ongoing threat of explosive remnants of war

The use of explosive weapons inevitably results in contamination with explosive remnants of war (ERW) which continue to pose a threat to civilians until they are identified and removed. ERW can kill and injure civilians even years after hostilities in an area have ceased. They can also deprive the civilian population of access to land, schools, water points, religious sites, and other locations necessary for their well-being. ERW hamper peace initiatives and relief and development activities; prevent the return of internally displaced persons and refugees; and delay the reconstruction of infrastructure and resumption of normal life.

Impact on post-conflict reconstruction requirements and costs

The use of explosive weapons in populated areas can have a dramatic impact on post-conflict reconstruction requirements and costs. They can also escalate dramatically with protracted use of explosive weapons in populated areas while also delaying if not reversing progress in the achievement of the Sustainable Development Goals.

C. Avoiding or limiting the use of explosive weapons in populated areas

The humanitarian impact of the use of explosive weapons in populated areas has been reduced in some situations by the adoption of policy and practice that places limits on such use. In Afghanistan, for example, the International Security Assistance Force (ISAF) issued tactical directives to its commanders to use the least destructive force necessary to obtain a military purpose in defensive operations. Elsewhere, the African Union Mission in Somalia (AMISOM) developed and adopted an indirect fire policy limiting the use of mortars and other indirect fire weapons in populated areas. In both situations, it was recognized that the implementation of these policies helped to reduce the humanitarian impact of military operations by avoiding the use of certain weapons in certain situations or locations.

D. Compilation of military policy and practice

Following consultations with Member States, military actors and civil society, including in the context of expert meetings in September 2013⁵ and June 2014⁶, the UN Office for the Coordination of Humanitarian Affairs (OCHA) concluded that it would be beneficial to compile these and other examples of military policy and practice and make them available to States, armed forces and other relevant actors with a view to promoting the development of similar operational policies and procedures and a change in practice away from the widespread use of explosive weapons in populated areas.

On 1 October 2014, the UN Secretary-General addressed a note verbale to all UN Member States requesting that they make available relevant information pertaining to practice and policy that either expressly governs, or otherwise places limits on, the use by armed forces of explosive weapons with wide-area effects in populated areas. The request elicited responses from only seven Member States and none of these referred to policy and practice expressly relating to the use of explosive weapons in populated areas. Rather, the Member State responses generally considered the use of explosive weapons in populated areas to be governed by the rules of IHL which are promoted, instilled, applied and enforced through training, military doctrine, rules of engagement (ROE), operational orders and accountability mechanisms.

This perspective of States was confirmed on different occasions, including in the context of an ICRC expert meeting on explosive weapons in populated areas in February 2015.⁷ This reinforced the importance of the steps taken by ISAF and AMISOM and need to document this, to the extent possible, and make it available to other military actors.

Consultations with Member States and other actors with relevant expertise also revealed the existence of other salient policy and practice that should usefully be included in the compilation. These are not necessarily specific to the use of explosive weapons in populated areas but still have an important role to play in reducing the impact of hostilities on civilians. Specifically, civilian casualty tracking mechanisms have been shown to be useful in allowing the parties concerned to better understand the impact of their operations on the civilian population and assisting in the identification of the steps necessary to reduce that impact and strengthen the protection of civilians. In addition, collateral damage estimation tools and methodologies, and battle damage assessments aim to mitigate unintended or incidental damage or injury to civilians and civilian objects. Consultations further drew attention to the techniques that military forces use to mitigate the risk to their own troops when using explosive weapons in close proximity. These include concepts such as “minimum safe distances” and “risk estimate distances” which are examined below.

The development of the compilation relied upon consultations with actors with relevant expertise, authority and experience in military policy and practice, IHL and the protection of civilians. Consultations were carried out with serving and retired national and regional military personnel; humanitarian and disarmament advisors from Member States; relevant UN actors; the ICRC; and civil society organizations represented by the International Network on Explosive Weapons (INEW).

The compilation is a living document and will be updated to reflect new policy and practice as these become available as well as other relevant developments.

⁵ OCHA, Chatham House, *Summary Report: Expert Meeting on Reducing the Humanitarian Impact of the Use of Explosive Weapons in Populated Areas*, London, 23-24 September 2013, available at: <https://docs.unocha.org/sites/dms/Documents/Expert%20Meeting%20on%20EWIPA%20-%20Summary%20Report.pdf>

⁶ OCHA, Norwegian Ministry of Foreign Affairs, *Summary Report: Informal Expert Meeting on Strengthening the Protection of Civilians from the Use of Explosive Weapons in Populated Areas*, Oslo, 17-18 June 2014, available at: <http://www.inew.org/site/wp-content/uploads/2014/09/Oslo-Expert-Meeting-Summary-Report.pdf>

⁷ See note 4 above.

E. Structure

Part one provides an overview of the relevant provisions of IHL governing the use of explosive weapons in populated areas.

Part two provides examples of military policy and practice that expressly relate to the use of explosive weapons in populated areas. These are elaborated more fully in **Annex one**.

Part three discusses other salient military policy and practice that can effectively be used to strengthen the protection of civilians in military operations, including from the effects of explosive weapons, such as civilian casualty tracking, collateral damage estimation and battle damage assessments. These are elaborated more fully in **Annex two**.

Part four contains a number of observations relating to the possible development of policy standards on the use of explosive weapons in populated areas.

Part One: International humanitarian law rules governing the use of explosive weapons in populated areas⁸

International humanitarian law (IHL), or the law of armed conflict, contains important rules for the protection of civilians and civilian objects in the conduct of hostilities, including from the effects of explosive weapons. IHL requires that the use of such weapons comply with:

- » The prohibition of directing attacks against civilians and civilian objects.
- » The prohibition of disproportionate and other indiscriminate attacks.
- » The obligation to take all feasible precautions in attack and against the effects of attacks in order to avoid, and in any event to minimize, incidental civilian harm.

IHL does not generally prohibit the use of explosive weapons in populated areas, although some specific types of weapons, including some explosive weapons, are subject to prohibitions or restrictions.⁹

A. Prohibition of directing attacks against civilians and civilian objects

The prohibition of directing attacks against civilians, whether through the use of explosive weapons or any other means or methods of warfare, flows from the IHL rule of distinction which is widely recognized as a rule of customary international law applicable in both international and non-international armed conflicts.¹⁰ The rule requires that parties to conflict distinguish at all times between civilians and civilian objects on the one hand, and combatants and military objectives on the other and that the civilian population as such, individual civilians, and civilian objects shall not be the object of attack.¹¹

B. Prohibition of indiscriminate attacks

International humanitarian law also prohibits indiscriminate attacks. These are attacks that are of a nature to strike military objectives and civilians or civilian objects without distinction. Unlike an attack deliberately directed against civilians or civilian objects, an indiscriminate attack does not require intent to cause civilian harm, but rather a lack of concern for such consequences. The prohibition of indiscriminate attacks is also widely recognized as a rule of customary international law applicable in both international and non-international armed conflicts.¹²

⁸ See further, ICRC, note 4 above, and Laurent Gisel, *The Use of Explosive Weapons in Densely Populated Areas and the Prohibition of Indiscriminate Attacks*. Paper presented at the International Institute for Humanitarian Law's 37th Roundtable on Current Issues in International Humanitarian Law: Conduct of Hostilities: The Practice, the Law and the Future, San Remo, 4-6 September 2014, available at: http://www.ihl.org/Media/Default/Round%20Tables/XXXVII%20Round%20Table/Speakers%20contributions/Gisel_REV.pdf

⁹ Early IHL treaties prohibited the use of exploding projectiles weighing less than 400 grams (in 1868) and bullets that flatten upon entering the human body (in 1899). In 1925, governments adopted the Geneva Protocol, which outlaws the use of poison gas and bacteriological methods of warfare. This treaty was updated with the adoption of the Biological Weapons Convention in 1972 and the Chemical Weapons Convention in 1993, both of which strengthened the 1925 Protocol by extending prohibitions to the development, production, acquisition, stockpiling, retention and transfer of biological and chemical weapons, and requiring their destruction. The Convention on Certain Conventional Weapons (1980) prohibits the use of munitions that use fragments not detectable by X-ray and blinding laser weapons. It also limits the use of incendiary weapons as well as mines, booby traps and "other devices". Anti-personnel landmines are prohibited under the 1997 Convention on the Prohibition of the Use, Stockpiling, Production and Transfer of Anti-Personnel Mines and on their Destruction; and the use, stockpiling, production and transfer of cluster munitions are prohibited by the Convention on Cluster Munitions (2008). See further, ICRC, "Weapons", at <https://www.icrc.org/eng/war-and-law/weapons/overview-weapons.htm>

¹⁰ See Rules 1 and 7, ICRC Customary IHL Database, available at: <https://www.icrc.org/customary-ihl/eng/docs/home>

¹¹ See Articles 51(2) and 52(1) of Additional Protocol I to the Geneva Conventions of 1949 and Article 13(2) of Additional Protocol II.

¹² See Rules 11 and 12, ICRC Customary IHL Database, note 10 above.

IHL specifies five types of indiscriminate attacks¹³:

- » First, an attack which is not directed at a specific military objective.
- » Second, an attack which employ a method or means of warfare which cannot be directed against a specific military objective. This prohibits the use of inherently indiscriminate weapons, i.e., those that strike blindly, as well as weapons that are not accurate enough to strike a specific military objective, due to the circumstances and manner in which they are used and their technical characteristics.
- » Third, an attack which employs a method or means of warfare, the effects of which cannot be limited as required by IHL. This covers the use of weapons whose effects cannot be limited in time and space.
- » Fourth, an “area bombardment” attack that treats as a single military objective a number of clearly separated and distinct military objectives located in a city, town, village or other area containing a similar concentration of civilians or civilian objects.
- » Fifth, an attack which may be expected to cause incidental loss of civilian life, injury to civilians or damage to civilian objects, or a combination thereof, which would be excessive in relation to the concrete and direct military advantage anticipated. This is explored further in part C below.

In respect of explosive weapons, the ICRC has noted that a “circumstance that could make the use of a certain weapon indiscriminate is certainly its use in a densely populated area”.¹⁴

C. Prohibition of disproportionate attacks

The rule of proportionality prohibits attacks which may be expected to cause incidental loss of civilian life, injury to civilians, damage to civilian objects, or a combination thereof, which would be excessive in relation to the concrete and direct military advantage anticipated. It is based on information reasonably available at the time of the attack. The rule of proportionality is widely recognized as a rule of customary international law applicable in both international and non-international armed conflicts.¹⁵

Three points should be emphasized:

- » First, it is not only excessive civilian casualties and injuries that are prohibited, but also excessive damage to civilian objects.
- » Second, the rule of proportionality does not limit the incidental harm to the immediate or “direct” effects of the attack. Hence, the foreseeable indirect or “reverberating” and longer-term effects of an attack must also be taken into account, even if they are not a direct or immediate consequence of the attack.¹⁶
- » Third, “the concrete and direct military advantage anticipated” should be “substantial and relatively close ... [A]dvantages which are hardly perceptible and those which would only appear in the long-term should be disregarded.”¹⁷

¹³ See Article 51(4) and 51(5) of Additional Protocol I.

¹⁴ ICRC, *International Humanitarian Law and the Challenges of Contemporary Armed Conflicts – Report submitted to the 31st International Conference of the Red Cross and Red Crescent, Geneva, Switzerland, 28 November – 1 December 2011 (2011)*, at 41.

¹⁵ See Rule 14, ICRC Customary IHL Database, note 10 above.

¹⁶ See ICRC, note 4 above, at 21.

¹⁷ See ICRC, *Commentary on the Additional Protocols of 8 June 1977 to the Geneva Conventions of 12 August 1949 (1987)*, at para. 2209

A number of factors can influence incidental harm:

- » The location of the civilians or civilian objects (possibly within or in the vicinity of the military objective).
- » The terrain (vegetation, risk of causing landslides or floods).
- » The accuracy of the weapons used.
- » Weather conditions.
- » The nature of the military objectives concerned (ammunition depots, fuel reservoirs, main roads of military importance within the vicinity of populated areas etc.).
- » The level of training and technical skill of the combatants in the use of the weapons.

D. Obligation to take all feasible precautions in attack and against the effects of attack¹⁸

IHL is concerned with avoiding and limiting the incidental effects of hostilities on civilians or civilian objects. Even where the rules of distinction and proportionality are respected, IHL also requires that in the conduct of hostilities, constant care be taken to spare the civilian population, individual civilians and civilian objects. This means that the party carrying out the attack must take feasible precautions to protect civilians and civilian objects. In addition, parties to conflict who may be the object of attack must, to the maximum extent feasible, take precautions against the effects of attack.

Precautions in attack

A party planning or deciding upon an attack is obliged to do everything feasible to choose means and methods of warfare with a view to avoiding and in any event minimizing incidental civilian casualties and damage to civilian objects, including any foreseeable reverberating effects. Even if some fighters deliberately intermingle with civilians, the party planning or deciding upon an attack is still bound by its obligation to take all feasible precautions¹⁹ and to comply with the rule of proportionality.

The obligation to take all feasible precautions in the choice of means and methods of warfare can also entail restrictions on the location of the attack, by requiring, where circumstances permit, that the parties avoid attacking a target located in a populated area if this is likely to result in excessive civilian casualties in relation to the concrete military advantage anticipated. The obligation can also entail restrictions on the timing, angle and axis of attack with a view to avoiding or minimizing such incidental harm. Precautions in the choice of means and methods of warfare would also extend to the choice of fuse of the munition, or of the most accurate weapon available when targets are intermingled with civilians and civilian objects in populated areas.

When attacks are likely to affect the civilian population, effective advance warning must be given unless circumstances do not permit. When attacks are carried out in populated areas, effective advance warning is, therefore, an important precaution to take. The effectiveness of the warning should be evaluated from the point of view of the population that receives the warning. An effective advance warning is one that allows civilians to adequately protect themselves and gives them sufficient time to evacuate or otherwise seek shelter. Advance warnings do not relieve a party from the obligation to take the other precautionary measures discussed above, nor does it relieve it from the obligation to refrain from launching attacks that are indiscriminate or disproportionate. Moreover, it is not permissible to consider civilians who remain in an area after advance warnings as legitimate targets.

¹⁸ This section draws in part on an unpublished "background paper" prepared by the ICRC for its February 2015 expert meeting on explosive weapons in populated areas. See also, ICRC, note 4 above.

¹⁹ Article 57, Additional Protocol I.

Precautions against the effects of attack

All parties to conflict are obliged, to the maximum extent feasible, to take the necessary precautions to protect the civilian population, civilians and civilian objects under their control, against the effects of military operations. Such precautions include avoiding locating military objectives within or near populated areas and removing civilians and civilian objects from the vicinity of military objectives.²⁰

With regard to the last measure, IHL allows the forced displacement of civilians when necessary for the security of the civilians involved or imperative military reasons so demand.²¹ In such cases, all possible measures must be taken in order that the civilian population may be received under satisfactory conditions of shelter, hygiene, health, safety and nutrition, and that family members are not separated. Displaced persons have a right to voluntary return in safety to their homes or places of habitual residence as soon as the reasons for their displacement cease to exist. The property rights of displaced persons must be respected.

²⁰ Article 58, Additional Protocol I. In addition, practice has shown that the construction of shelters, digging of trenches, distribution of information and warnings, withdrawal of the civilian population to safe places, direction of traffic, guarding of civilian property and the mobilization of civil defence organizations are measures that can be taken to spare the civilian population and civilian objects under the control of a party to the conflict. See Rule 22, ICRC Customary IHL Database, note 10 above.

²¹ See Article 17(1), Additional Protocol II; and Article 49, Fourth Geneva Convention.

Part Two: Military policy and practice in avoiding or limiting the use of explosive weapons in populated areas

Full compliance with IHL by parties to conflict would significantly enhance the protection of civilians from the effects of explosive weapons. However, based on the immediate and long-term effects of explosive weapons in populated areas being witnessed today, there are significant concerns regarding how parties to armed conflict are interpreting and applying the relevant rules of IHL. There are concerns also as to the extent to which those rules alone provide sufficient guidance to parties to conflict on how the risk of civilian harm from the effects of explosive weapons, including in the long-term, is to be assessed and reduced.²² The development and implementation of operational policies and procedures to avoid or, at a minimum, limit the use of explosive weapons with wide-area effects in populated areas would significantly contribute to reducing the humanitarian impact of such use, in both the short- and long-term, and support the effective application of international humanitarian law.

Important precedents exist in this regard and may prove instructive for other military actors. Of particular note, ISAF in Afghanistan and AMISOM in Somalia instituted policies which placed limits on the use of certain explosive weapons in certain locations where civilians are likely to be present in order to minimize the impact of military operations on civilians. This included the issuance of tactical directives to ISAF commanders to use the least destructive force to obtain a military purpose; and the development and adoption of an indirect fire policy by AMISOM limiting the use of mortars and other indirect fire weapons in populated areas.

In both cases, the policy changes were driven by the recognition that civilian casualties resulting from even the lawful use of force can lead to the loss of support for the mission and undermine longer-term political objectives and the successful conclusion of the mission. The lessons learned by the United States (US) military in Afghanistan have subsequently been reflected in revised US military policy and practice which is also discussed below.

They are evident too in the United States Joint Chiefs of Staff Joint Publication 3-0 - Joint Operations of January 2017.²³ The publication elaborates 12 "Principles of Joint Operations" which are formed around the nine "traditional principles of war" and three additional principles – restraint, perseverance and legitimacy – which are relevant to how US Armed Forces "use combat power across the range of military operations".²⁴ The purpose of restraint is to prevent the unnecessary use of force on the grounds that "a single act could cause significant military and political consequences."²⁵ Restraint requires the "careful and disciplined balancing of the need for security, the conduct of military operations, and national objectives." The use of excessive force "antagonizes those parties involved, thereby damaging the legitimacy of the organization that uses it while potentially enhancing the legitimacy of the opposing party."²⁶

The principle of legitimacy seeks to maintain legal and moral authority in the conduct of operations as perceived by the national leadership and domestic population, governments, and civilian populations in the operational area, and nations and organizations around the world.²⁷ It is noted that security actions must be balanced with legitimacy concerns and that legitimacy "may depend on adherence to objectives agreed to by the international community, ensuring the action is appropriate to the situation and to perceptions of fairness in dealing with various factions. Restricting the use of force, restructuring the type of forces employed, [and] protecting civilians ... may reinforce

²² See ICRC, note 4 above, at 5. See also, ICRC, *International Humanitarian Law and the Challenges of Contemporary Armed Conflicts*, report prepared for the 32nd International Conference of the Red Cross and Red Crescent (October 2015), at 47-53; Maya Brehm, *Protecting Civilians from the Effects of Explosive Weapons: An Analysis of International Legal and Policy Standards*, UNIDIR (2012); Nathalie Durhin, "Protecting Civilians in Urban Areas: A Military Perspective on the Application of International Humanitarian Law", *International Review of the Red Cross* (2016) 98 (1), 177-199 at 191; and Isabel Robinson and Ellen Nohle, "Proportionality and Precautions in Attack: The Reverberating Effects of Using Explosive Weapons in Populated Areas", *International Review of the Red Cross* (2016) 98(1) 107-145.

²³ US Joint Chiefs of Staff, *Joint Publication 3-0 – Joint Operations (January 2017)*. Available at: http://www.dtic.mil/doctrine/new_pubs/jp3_0.pdf

²⁴ *Ibid.*, at A-1.

²⁵ *Ibid.*, at A-3.

²⁶ *Ibid.*

²⁷ *Ibid.*, at A-4.

legitimacy.”²⁸

The importance of maintaining the legitimacy of military operations through, among other actions, mitigating civilian casualties, has been taken on board by other military actors. The European Union (EU) Military Committee’s concept for “avoiding and minimizing collateral damage in EU-led military operations” of February 2016 notes in the introduction that the “[f]ailure to avoid/minimize civilian casualties caused by lethal action such as direct and indirect fires during attacks will generate resentment and undermine popular support and it will undermine EU policy objectives as well as EU-led military operations, while assisting opposing parties.” It continues: “EU-led military forces will face particular challenges when civilians are involved in or otherwise affected by hostilities. Specific actions may have to be postponed or modified if collateral damage would undercut mission goals or political support.”²⁹

In July 2016, the North Atlantic Treaty Organization (NATO) endorsed the NATO Policy for the Protection of Civilians which includes a section on “civilian harm mitigation from [NATO’s] own actions”. According to the policy: “In the planning and conduct of military operations and missions, NATO will continue to take measures, including institutionalizing civilian harm mitigation measures, based on lessons learned and best practice... Civilian harm mitigation measures should be developed and incorporated in NATO Command Structure and NATO Force Structure processes.”³⁰

²⁸ *Ibid.*

²⁹ European Union Military Committee, *Avoiding and Minimizing Collateral Damage in EU-Led Military Operations*, EEAS (2015) 772 REV 8 (3 February 2016), paras.8 and 9. Available at: <http://data.consilium.europa.eu/doc/document/ST-5785-2016-INIT/en/pdf>

³⁰ NATO Policy on the Protection of Civilians, adopted by the Heads of State and Government participating in the meeting of the North Atlantic Council in Warsaw, 8-9 July 2016. Available at: http://www.nato.int/cps/en/natohq/official_texts_133945.htm?selectedLocale=en

Full citations for the documents listed below can be found in Annex One

A. ISAF tactical directives and civilian casualty mitigation

[See further, Annex One, pp.34-36]

In response to increasing civilian casualties resulting from operations conducted by ISAF and Operation Enduring Freedom, from May 2007 to November 2011 successive ISAF Commanders introduced tactical directives to ensure more effective protection of civilians. The tactical directives ordered that, inter alia:

- » Troops should presume every Afghan is a civilian until otherwise apparent; that all compounds are civilian structures until otherwise apparent; and that in every location where there is evidence of human habitation, civilians are present until otherwise apparent.
- » Pre-assault or preparatory fires are to be treated as deliberate targeting operations which require pre-approval and formal collateral damage estimates.
- » When tactically feasible, small arms are to be used instead of air-to-ground or indirect fire.
- » Air-to-ground and indirect fire could only be used when there is no other option to protect the force.
- » Prior to the use of fires, the commander approving the strike must determine that no civilians are present.
- » If unable to assess the risk of civilian presence, fires are prohibited, except under certain conditions relating to the risk to ISAF and Afghan forces.
- » Battle damage assessments (BDAs) should be conducted in all situations where there is a potential loss of life or injury to insurgents or Afghan civilians, except when an assessment would put ISAF personnel at greater risk.
- » Every allegation of civilian casualties should be investigated.

Afghanistan Civilian Casualty Prevention Handbook (June 2012)

[See further, Annex One, pp.37-38]

In June 2012, the US Army's Center for Army Lessons Learned published the Afghanistan Civilian Casualty Prevention Handbook for use by US, coalition and allied personnel. The handbook includes overarching principles for reducing and mitigating civilian casualties, including:

- » Consider tactical alternatives. In decisions regarding the use of force, consider the best means of achieving the desired effects with minimum civilian casualties. This can include exercising tactical patience when feasible.
- » Conduct BDAs whenever possible. Detailed BDA of effects on the civilian population is essential for effective consequence management.

Ground-to-ground operations

The Handbook addresses "ground-to-ground operations" and provides practical guidance on minimising civilian casualties in the context of indirect-fire engagements, including:

- » Increase the training of forces on indirect fires to increase proficiency and avoid mistakes that lead to rounds failing to impact the intended target.
- » When feasible, use precision or low collateral damage munitions.
- » Avoid use of indirect fire when more accurate weapons (e.g., snipers, air-to-ground fires) are available.
- » Increase the safety zone and the time that assets monitor the area prior to fires during registration. In addition, keep surveillance assets on station during registration fires to watch for the possibility of civilians wandering into the area.

- » Increase the use of fire control measures for indirect fire, especially in populated areas. This can include involving higher headquarters in the registration process for fires, providing both scrutiny and access to additional intelligence, surveillance and reconnaissance resources.
- » Avoid firing for effect without adjusting fire first. Using a single round in the initial salvo will reduce the impact if rounds land off-target.
- » Walk fires onto targets from a starting point away from civilian structures.
- » When positive identification (PID) comes from hostile intent, take every opportunity to confirm PID and consider the behavior could be that of non-combatants.
- » Avoid pre-emptive counter battery without knowledge of the absence of civilians at the suspected point of origin upon which you are about to fire.
- » Avoid using indirect fires on moving targets.

Air-to-ground operations

The Handbook lists a number of changes of operational practice regarding air-to-ground operations aimed at reducing civilian casualties, including:

- » Increasing employment of non-lethal effects in terms of show-of-presence and show-of-force missions.
- » Aircrews operating with increased knowledge of collateral damage considerations and appropriate weaponeering options, including equipping aircraft with weapon loads that include low collateral damage weapons.
- » Use of optimized angle and direction of attack on vehicles to best observe and react to civilians in the area.
- » Tailoring fusing of weapons to minimize collateral damage concerns.
- » Dragging laser-guided bombs off their target into a previously cleared area in case collateral damage concerns are observed after weapons' release.

B. Incorporation of lessons learned into US military policy

Army Techniques Publication No. 3-07.6 on Protection of Civilians (October 2015)

[See further, Annex One, pp.39-42]

Many of the lessons learned from Afghanistan have been incorporated into US military policy and practice. In July 2012, the US Army published ATTP (Army Tactics, Techniques and Procedures) No. 3-37.31 on Civilian Casualty Mitigation to provide doctrinal guidance for minimizing civilian casualty incidents. This was superseded in October 2015 by ATP (Army Techniques Publication) No. 3-07.6 on Protection of Civilians. This contains several important provisions, including:

Civilian harm jeopardizes the operation

The population's support is critical during many operations, and civilian harm can undermine such support if civilians conclude that army units and their partners are their greatest threats or cannot provide security. In addition to need to comply with IHL, excessive civilian casualties create political pressure that limits freedom of action of army units. Civilian casualties undermine political support for the mission in the host nation, internationally and among the general public and policy makers at home.

Damage to infrastructure disrupts the provision of essential services to civilians

Beyond civilian casualties, damage to infrastructure, such as bridges and power plants, disrupts the provision of essential services necessary for civilian well-being could cause suffering and casualties among the local population. In contemplating combat operations, the military benefit of doing so should be balanced against the

COMPILATION OF MILITARY POLICY AND PRACTICE

Reducing the humanitarian impact of the use of explosive weapons in populated areas

possibility that the targets are close to civilians, the potential that destroying such targets will unduly harm civilians, or that their destruction will have undesired long-term effects after the operation.

Leadership is key

Leaders must understand the significance of civilian casualty mitigation, convince their subordinates of its importance, and ensure that the proper climate regarding civilian casualty mitigation exists in their organizations. Commanders should understand the larger context in which civilian casualty mitigation relates to mission goals. They must skilfully balance short-term military needs with long-term mission objectives and consider the effect of civilian casualties on the mission, risks to units when exercising restraint, and expectations of the population regarding the actions of army units.

Protection of civilians in pre-deployment preparations

The protection of civilians must be incorporated into the pre-deployment preparations. Commanders should incorporate protection and civilian casualty response scenarios into training and exercises. Preparations should also include the selection of soldiers for training as marksmen so that small units have an improved capability to engage targets with discrimination and precision.

Not all permissible force is necessary

Not all permissible force is necessary in every case, and leaders must consider second-order effects as well. In other words, even if soldiers or units are permitted to use lethal action, they should not necessarily do so.

Create stand-offs/exercise tactical patience to avoid split second decisions

The potential for civilian casualties can be reduced by creating stand-offs in time or space that avoid the need for split second decisions. When decisions are made quickly, there is greater likelihood of acting upon incorrect information, causing incidental harm to civilians, or engaging a target that in fact was not a threat. In some cases, tactical patience is possible and allows for more accurate information to be gained and the possibility to consider alternative courses of action that can reduce the potential for civilian casualties.

Employ tactical options that are more limited than extreme measures

For example:

- » Use soldiers and weapons that are precise, locally controlled, and limited. For example, designated marksmen in some situations are preferable to indirect fires, airstrikes, or giving all soldiers in a unit permission to engage at their discretion.
- » During actions on contact, use fire and maneuver rather than indirect fires and airstrikes as the default response, and raise the authority for fires clearance to higher levels.
- » Develop small unit standard operating procedures that facilitate quick distinction between civilians and actual threats.
- » Change vantage points to gain better observation of a suspected target, or contact other soldiers and units that may have a better view. Observation may be improved by using binoculars and magnified individual and vehicle weapon sights. Helicopters and unmanned aircraft systems can change vantage points quickly.
- » Proactively share information between units. For example, with prior coordination aviation forces can provide digital communication and digital video feed sharing from the aircraft's day video system through a one system remote viewing terminal to the ground force commander, thereby increasing situational awareness.

Peacekeeping and Stability Operations Institute, US Army War College, Protection of Civilians – Military Reference Guide (January 2013)

[See further, Annex One, p.42]

Reference can also be made to the Protection of Civilians – Military Reference Guide produced by the US Army War College. The guide notes that causing civilian casualties is unlawful unless it occurs under circumstances permitted by IHL. However, it further observes that civilian casualties undermine the military force's legitimacy and can jeopardise the mission. Even if a military action is otherwise permissible, it may be prudent not to conduct the action because of the possibility of civilian casualties.

US Joint Chiefs of Staff, Joint Publication 3-06 – Joint Urban Operations (20 November 2013)

[See further Annex One, pp.42-43]

The US Joint Chiefs of Staff, Joint Publication 3-06 – Joint Urban Operations (November 2013), examines the special considerations required when conducting operations in the complex modern urban environment. Among the characteristics of joint operations in urban environments, the publication notes that:

- » Combat operations in urban areas may result in large ratios of civilian to military casualties and may have more restrictive operational limitations than operations elsewhere.
- » Urban terrain and infrastructure impact weapons employment and munitions effectiveness.
- » The requirements to protect and aid civilians and to preserve and restore infrastructure create competing demands with tasks requiring the defeat of the adversary. These issues must be continually assessed in order to capitalize on opportunities, limit risk, comply with the law of war, and adjust operations accordingly.

The “special social and cultural considerations for urban areas” note that the commander should keep in mind the overall objectives regarding the civilian populace:

- » Minimize civilian interference with military operations.
- » Minimize mission impact on the population.
- » Observe the necessary legal, moral and humanitarian obligations towards civilians.

Chapter IV on Joint Functions lists a number of pertinent points relating to fires:

- » Precision munitions make attacks on specific urban targets much more feasible and effective while also stressing that their precision “does not reduce or mitigate all risk”.
- » Even when the joint force employs precision weapons, fires can still adversely affect the achievement of objectives by causing displacement of the civilian population, destruction of critical infrastructure, alienation of local inhabitants and the international community, and increased determination on the part of the adversary.
- » The presence of large numbers of civilians can severely inhibit the use of fires. Since most joint urban operations will include constraints designed to minimize civilian casualties, the joint force will be required to use fires accordingly. These constraints can include:
 - » Prohibiting attacks on targets located in heavily populated areas.
 - » Restricting munitions used in attacks.
 - » Restricting attacks to certain times of the day.
 - » Giving warning prior to attacks so that civilians can evacuate the area.
 - » Aborting attacks unless accuracy can be guaranteed.

Office of General Counsel, US Department of Defense, Law of War Manual (June 2015)

[See further, Annex One, pp.43-44]

The US Department of Defense's Law of War Manual stresses the importance of taking steps that may go beyond the requirements of the law in order to minimize civilian casualties, including:

Heightened Identification Requirements in Conducting Attacks

Although doing so would exceed the requirements of the law of war, applying heightened standards of identification may be a policy choice to reduce the risk of incidental harm in conducting an attack.

Adjusting the timing of the attack

Adjusting the timing of an attack may reduce the risk of incidental harm. For example, attacking a military objective when civilians are less likely to be present may be appropriate. Similarly, it may be appropriate to wait until enemy forces have departed from populated areas before attacking such forces in order to reduce the risk of civilian casualties.

Weapons selection (weaponizing)

Depending on the circumstances, the use of certain weapons rather than others may lower the risk of incidental harm, while offering the same or superior military advantage in neutralizing or destroying a military objective.

President of the United States of America, Executive Order – United States Policy on Pre- and Post-Strike Measures to Address Civilian Casualties in US Operations Involving the Use of Force (1 July 2016)

[See further, Annex One, p.44]

Reference should be made to the Executive Order (EO) issued by the President of the US on 1 July 2016 concerning US policy on pre- and post-strike measures to address civilian casualties in US operations involving the use of force. Section 1 of the EO notes the importance of minimizing civilian casualties in order to further mission objectives; and maintain the support of partner governments and populations. As a matter of policy, the US therefore routinely imposes certain heightened policy standards that are more protective than the requirements of the law of armed conflict, including:

- » Train personnel on compliance with legal obligations and policy guidance that address the protection of civilians and on implementation of best practices that reduce the likelihood of civilian casualties, including through exercises, pre-deployment training, and simulations.
- » Develop, acquire, and field intelligence, surveillance, and reconnaissance systems that contribute to the protection of civilians.
- » Develop, acquire, and field weapon systems and other technological capabilities that further enable the discriminate use of force in different operational contexts.
- » Take feasible precautions in conducting attacks to reduce the likelihood of civilian casualties, such as providing warnings to the civilian population, adjusting the timing of attacks, etc.
- » Conduct assessments that assist in the reduction of civilian casualties by identifying risks to civilians and evaluating efforts to reduce risks to civilians.

C. AMISOM indirect fire policy

[See further, Annex One, pp.45-46]

The African Union Mission in Somalia (AMISOM) was deployed to Mogadishu in March 2007. In 2010, mounting concerns at civilian casualties resulting from its use of indirect fire, and a recognition that this was undermining AMISOM and its operational success, led AMISOM to implement a number of remedial actions, including the development of a new indirect fire policy. While this was intended to better meet its obligations under IHL, it also reflected a similar appreciation to that of ISAF that civilian casualties serve to undermine the mission and longer-term political objectives.

The indirect fire policy articulates a three-step process: avoid, attribute and amend:

- » Where possible, AMISOM will avoid the use of indirect fire, which can cause CIVCAS, unless the purpose of observed indirect fire is to achieve a military objective for extreme self-defense measures. Indirect fire will only be used to protect the civilian population where a clear military objective is identified and where the military advantage gained is overwhelmingly superior to the potential risk of harm to the civil population.
- » When indirect fire is reported, AMISOM must attribute responsibility – detect the origin of indirect fire, correlate this with AMISOM's own indirect fire firing records and apologize quickly if it is responsible; refute the allegation by accounting for the use of its weapons accurately; or apportion responsibility to opposing forces, based on intelligence, sighting reports and other evidence.
- » Make amends for civilian harm caused unintentionally by AMISOM by recognizing losses and providing immediate assistance to those who have been injured, distressed or otherwise affected by AMISOM operations, including indirect fire.

As concerns the "avoid" step, the policy outlines a number of implementation measures, including:

- » Improve intelligence capacity to allow for more predictive analysis of previous incidents so that hot-spots and techniques are identified to trigger operations that disrupt the assembly of insurgent forces prior to an attack.
- » Ensure that mapping products are kept up-to-date, and that the following are defined on maps as No Fire Zones (NFZ): hospitals, schools, residential areas, markets, religious places of worship and internally displaced persons' camps.
- » Provide advance warning of planned offensives, whenever possible.
- » Disrupt and deny indirect fire firing positions by insurgents against AMISOM's front lines by tactical operations that clear and hold ground and dominate by observation and fire. Direct fire weapons, such as long-range, large caliber rifles can provide a rapid and accurate response, with less potential for civilian casualties than indirect fire.
- » Avoid indirect fire against public gatherings. Public gatherings that do not represent a threat to AMISOM operations are to be treated as temporary NFZ.
- » Introduce new targeting procedures, specifying target sets and proposed effects, as well as a model-targeting checklist to ensure that IHL tests are satisfied before engagement.
- » Restrict the use of the 107mm rocket launcher (RL). The 107mm RL may be used to disperse groups of insurgents en route to a forming-up position where single shots may be fired, and the effects recorded before subsequent shots are fired. Under no circumstances are 107mm to be fired in salvos.
- » Employ a collateral damage estimation (CDE) support tool to assess the potential risk to civilians.
- » Conduct After-Action Reviews (AAR) after an incident, in order to learn lessons and improve training.

D. San Remo Handbook on Rules of Engagement

[See further, Annex One, p.47]

Published by the International Institute of Humanitarian Law in 2009, the San Remo Handbook on Rules of Engagement was drafted by a team of serving and retired military personnel from the armed forces of Australia, Canada, the United Kingdom and United States. The Handbook is intended to provide guidance on the “intricacies of the generally accepted and widespread concept of [ROE]” and “assist in the drafting of [ROE] and related legal and operational guidance for use in training, exercises, war games and operations.”

The Handbook proposes restricting the use of indirect fire weapons, defined as “fire directed at a target that cannot be seen by the aimer and that is not itself used as a point of aim for the weapons or the director”, in populated areas. The Handbook distinguishes between “observed indirect fire”, for which the point of impact or burst can be seen by an observer, and “unobserved indirect fire”, for which the point of impact or burst is not observed. Direct fire and observed indirect fire are “permitted unless restricted by a rule” of a nation’s military. It is noteworthy that the proposed ROE identify “populated areas” as situations where unobserved fire, observed indirect fire or direct fire can be restricted by a rule.

Part Three: Other salient military policy and practice

Though not specific to the use of explosive weapons in populated areas, there are other practices that have been shown to reduce the humanitarian impact of the use of explosive weapons. In particular, civilian casualty tracking mechanisms have proved useful for allowing parties to better understand the impact they are having on the civilian population and to identify the necessary steps to reduce that impact and strengthen the protection of civilians.

Some armed forces also use collateral damage estimation tools and battle damage assessments in an effort to reduce the impact of hostilities on civilians. Reference should be made also to the possible analogous use of the concepts of “minimum safe distances” and “risk estimate distances” that are applied by armed forces to mitigate the risk of fratricide.

Full citations for the documents and practices listed below can be found in Annex Two

A. Civilian casualty tracking

The establishment of civilian casualty tracking mechanisms was a critical component of the broader efforts of ISAF and AMISOM to protect civilians from the effects of military operations.

ISAF and civilian casualty tracking

[See further, Annex Two, pp.48-51]

ISAF created the Civilian Casualty Tracking Cell (CCTC) in 2008 to respond to allegations of ISAF-caused civilian casualties. Prior to this, ISAF did not record allegations of civilian casualties, as this was not standard practice for militaries. Because collection of data was not standardized, ISAF often lacked complete information in the face of civilian casualty allegations.

In July 2008, ISAF ordered units to treat all allegations of civilian casualties, regardless of source, as items for investigation. This was followed by the establishment of the CCTC that began collecting reported information from units as well as allegations of civilian casualties brought to ISAF headquarters. The CCTC initially served to strengthen ISAF's internal situational awareness of civilian casualties and to respond quickly and accurately to allegations of civilian casualties.

In July 2009, ISAF amplified reporting requirements, requiring BDAs for all incidents of air strikes and indirect fire. That same year, ISAF also created Joint Incident Assessment Teams (JIATs), composed of Afghan government-appointed representatives and ISAF personnel, to investigate incidents. The teams were disbanded once investigations were complete. Reports produced by JIATs were intended to:

- » Determine the facts.
- » Recommend actions to be taken to avoid casualties in future.
- » Recommend changes in techniques/procedures that may be relevant across ISAF.

By the end of 2009, the CCTC had amassed enough information on suspected or actual civilian casualties to begin to examine the data for trends. The aggregated data was used for reports and recommendations to ISAF leaders on civilian casualty mitigation.

COMPILATION OF MILITARY POLICY AND PRACTICE

Reducing the humanitarian impact of the use of explosive weapons in populated areas

In mid-2011, the CCTC expanded into the Civilian Casualty Mitigation Team (CCMT). The CCMT created internal working groups to provide guidance on civilian casualty avoidance and mitigation. Its mandate included:

- » Coordinating subject-specific studies and providing recommendations to ISAF leadership.
- » Leading the working groups and decision-making bodies that addressed modification or establishment of guidelines, tactical directives, etc.
- » Collecting and archiving lessons and best practices regarding civilian casualties.

US Army, ATP 3-07.6 on Protection of Civilians (October 2015)

[See further, Annex Two, pp.51-53]

Civilian casualty tracking features in US Army manual ATP 3-07.6 on Protection of Civilians. The manual stresses the importance of learning from civilian casualty incidents, including near misses. Collection, analysis, and dissemination of civilian casualty information horizontally and vertically are critical for civilian casualty mitigation. Commanders may elect to establish a permanent civilian casualty tracking, assessment, and response element.

Army units should maintain an accessible, historical civilian casualty database that includes the “who/what/when/where/why” of incidents. Such information should be used for lessons learned, as an archive for actions such as amends and as a resource for future units that rotate into the area of operations. The database should be established early at a high echelon and have subordinate units conform to it.

Despite the inevitable challenge of incomplete and conflicting information, the manual notes that army leaders and staff must analyze data and significant insights from both involved soldiers and civilians. Pattern analysis can help identify locations where civilian casualty incidents have greater likelihood of occurring as well as the procedures or units that may be prone to cause such incidents. Conversely, analysis might identify useful methods that could be emulated more widely.

President of the United States of America, Executive Order – United States Policy on Pre- and Post-Strike Measures to Address Civilian Casualties in US Operations Involving the Use of Force (1 July 2016)

[See further, Annex Two, p.53]

Civilian casualty tracking and other relevant measures are also included in the EO of the US President concerning US policy on pre- and post-strike measures to address civilian casualties in US operations involving the use of force of 1 July 2016. The EO notes that in addition to taking specific measures to better protect civilians in US operations involving the use of force, relevant agencies shall also:

- » Review or investigate incidents involving civilian casualties.
- » Acknowledge US Government responsibility for civilian casualties and offer condolences, including ex gratia payments, to civilians who are injured or to the families of civilians who are killed.
- » Engage with foreign partners to share and learn best practices for reducing the likelihood of and responding to civilian casualties, including through appropriate training and assistance.
- » Maintain channels for engagement with the ICRC and NGOs and encourage such organizations to assist in efforts to distinguish between military objectives and civilians, including by appropriately marking protected facilities, vehicles, and personnel, and by providing updated information on the locations of such facilities and personnel.

AMISOM and civilian casualty tracking

[See further, Annex Two, pp.53-54]

Civilian casualty tracking is a component of AMISOM's indirect fire policy and the "attribute" step. Following any allegation of civilian harm or unwarranted indirect fire, AMISOM will take immediate action to assess and investigate. It will:

- » Record all potential incidents of civilian casualties, regardless of their source.
- » Respond promptly to any incident of civilian casualties, even if only to announce an immediate investigation and give a clear timeline for findings.
- » Where feasible, deploy an Incident Assessment Team (IAT) to record evidence of any allegation and to conduct a full, transparent investigation.

To facilitate this, the policy provides for the creation of a civilian casualty tracking cell to:

- » Track progress on the management of incidents.
- » Analyze the proportion of civilian deaths caused by insurgents, AMISOM and Government troops to provide insights into the extent of indiscriminate fire, weapon effects, etc., and help AMISOM's strategic messaging.
- » Investigate all incidents to enable accurate attribution of responsibility and AMISOM's follow up.
- » Contribute to the AAR and lessons-learned process.

B. No strike policy and collateral damage estimation

Some armed forces have adopted "no strike" policies and collateral damage estimation (CDE) tools and methodologies to reduce the impact of hostilities on civilians, including from the effects of explosive weapons.

Chairman of the Joint Chiefs of Staff Instruction on No Strike Policy and Collateral Damage Estimation (12 October 2012)

[See further, Annex Two, pp.55-56]

The Chairman of the US Joint Chiefs of Staff instruction provides that no-strike entities (NSEs) are those upon which kinetic or non-kinetic operations are prohibited. The source and method for defining a NSE is derived primarily from the law of armed conflict, other international and domestic laws, and significant policy concerns. NSEs are categorized based on their sensitivity: CAT I (most sensitive) and CAT II (less sensitive).

CAT I includes:

- » Religious, cultural, historical institutions, cemeteries, and structures.
- » Intergovernmental organizations and NGO property, equipment, and personnel.
- » Medical facilities (both civilian and military).
- » Public education facilities (schools, colleges, universities, daycare centers etc.).
- » Civilian refugee camps and concentrations.

CAT II includes:

- » Non-military accommodation, including private civilian housing.
- » Civilian meeting places including stadiums, parks, markets, etc.
- » Public utilities/facilities, including those that generate, distribute, or transport electricity, petroleum or water intended for civilian consumption; commercial fuel service stations; civilian mass transit facilities; water supply facilities; waste facilities; urban gas supply; fire stations; postal facilities; police stations; civil defense facilities; and financial institutions.

The instruction notes that NSEs typically consist of facilities and locations important to planners in follow-on stability operations, such as hospitals, food distribution points, and refugee camps. Consequently, the no strike process remains a priority even after the cessation of major combat operations. By mitigating human suffering and property damage, the no-strike process will accelerate recovery in post-conflict operations and minimize operational limitations routinely imposed as a result of international sensitivities over the humanitarian impacts of military operations.

Collateral damage estimation

[See further, Annex Two, pp.56-61]

The instruction outlines the methodology for CDE which aims to mitigate unintended or incidental damage or injury to civilian or non-combatant persons or property or the environment. It assists commanders in weighing risk against military necessity and in evaluating proportionality.

In its most basic form, the CDM centers on five questions that must be answered before engaging any target:

- » Can I PID the object I want to affect?
- » Are there protected or collateral objects, civilian or non-combatant personnel, involuntary or unwitting human shields, or significant environmental concerns within the effects range of the weapon I would like to use to attack the target?
- » Can I mitigate damage to those collateral concerns by striking the target with a different weapon or with a different method of engagement, yet still accomplish the mission?
- » If not, how many civilians and non-combatants do I think will be injured or killed by the attack?
- » Are the collateral effects of my attack excessive in relation to the expected military advantage gained and do I need to elevate this decision to the next level of command to attack the target based on the ROE in effect?

The CDM produces a conservative characterization of the risk of collateral damage for commanders and decision-makers. It uses a mix of empirical data, probability, historical observations, and complex modeling for CDE analysis. However, it is inherently limited by the quantity and reliability of collected and analyzed weapons effects data, weapon delivery uncertainties, and target information. Furthermore, the CDM cannot always account for the dynamics of the operational environment. Ultimately CDE is an estimative process to help inform a commander's decision-making.

EU Military Committee, Avoiding and Minimizing Collateral Damage in EU-Led Military Operations Concept, EEAS (2015) 772 REV 8 (3 February 2016)

[See further, Annex Two, p.61]

The importance of employing CDM is emphasized in the EU Military Committee's concept for avoiding and minimizing collateral damage in EU-led military operations. The concept states at the outset that concerns about causing collateral damage can potentially reduce military operational effectiveness. In addition, collateral damage distracts public and media opinion from the substance and intent of the EU-led military operation and may increase the risk of strategic defeat. Failure to avoid/minimize civilian casualties will generate resentment and undermine popular support, EU policy objectives as well as the EU-led military operations.

Guidance on avoiding and minimizing collateral damage should be given to the Operational Commander of a given EU-led military operation. Such guidance may impose limitations not required under the law of armed conflict but which are derived from political policy or strategic considerations. The concept notes that policy considerations may lead to ROE that are more restrictive than what is legally required.

C. Battle damage assessments

Battle damage assessments (BDAs) estimate target damage or effect and can be also be used to assess collateral damage.

US Army, ATP 3-07.6 on Protection of Civilians (October 2015)

[See further, Annex Two, pp.62-63]

The US Army's ATP No. 3-07.6 on Protection of Civilians notes that accurate information on civilian casualties may be obtained through a civilian casualty BDA, in which army units inspect the site where the incident took place to understand the effects of an operation on the civilian population.

D. Minimum safe distances and risk estimate distances

US Army, ATP No. 3-07.6 on Protection of Civilians (October 2015)

[See further, Annex Two, pp.63-64]

The US Army's ATP No. 3-07.6 on Protection of Civilians notes that civilian casualty mitigation is similar to fratricide avoidance in many respects, in that both are intended to avoid inflicting casualties upon an unintended target.

The publications notes that civilian casualties are more challenging in that there may be more civilians throughout the area, in unexpected locations, outside of a common command chain with army units, and they may be virtually indistinguishable from the enemy. However, it notes that in the same way that army units continually consider the possibility of fratricide and take measures to mitigate its risk, they should adopt a similar mindset regarding civilian casualty avoidance.

Key among measures used to mitigate the risk of fratricide is the application of such concepts as "minimum safe distance" (MSD) and "risk estimate distance" (RED) which are calculated according to the area effects of specific explosive weapons. Such measures could usefully be applied by analogy to strengthening the protection of civilians from the effects of explosive weapons.

Part Four: Observations

The development of operational policy and procedures to avoid or, at a minimum, limit the use of explosive weapons with wide-area effects in populated areas would significantly contribute to reducing the humanitarian impact of such use, in both the short- and long-term, and support the effective application of international humanitarian law. Such policy could include identifying certain explosive weapon types that should not be used against targets in populated areas, weapons for which higher command authority is required, and practical steps that can be taken to reduce the likely harm from attacks using these and other explosive weapons.

Drawing on the policies and practices outlined in this compilation, a future operational policy could, at a minimum, reflect the following considerations:

Explosive weapons create effects across a more or less wide-area and this determines the level of risk presented to the civilian population

A clear understanding of the area effects of different explosive weapon types is required in order to ensure that the choice of weapons is based, inter alia, on an understanding of these effects and the resultant civilian risk. On this basis, policies can be put in place to avoid the use of explosive weapons with wide-area effects in locations where civilians are concentrated. This would support the effective implementation of IHL which necessarily requires an effective understanding of the likely area effects of different weapon types.

A thorough understanding of the likely area effects of different explosive weapon types should not be based solely on technical data relating to the expected performance of the weapon. It should also be based on:

- » Analysis of the practical procedures through which the weapons are applied to targets in operational use, such as the practice of registration fires, walking fires onto targets, bracketing etc.
- » An understanding that urban terrain and infrastructure impact weapons employment and munitions effectiveness.

Raise the command authority for the use of explosive weapons in populated areas

Proposed use of explosive weapons in populated areas should be subject to higher command authority, particularly where those weapons have wide-area effects, to reflect the increased risk to the civilian population inherent in such use. This would provide both additional scrutiny and potential access to additional intelligence, surveillance and reconnaissance resources, and would ensure that the elevated risk to the civilian population is subject to sufficient consideration – both humanitarian and political.

Civilian presence and status should be presumed

Civilian status should be presumed until otherwise apparent. In every location where there is evidence of human habitation, it must be presumed that civilians are present until otherwise apparent. If unable to assess the risk of civilian presence, the use of fires should not be allowed.

Identify “no-strike” entities in advance

The protection of civilians can be enhanced through the advanced identification of “no-strike entities” upon which kinetic or non-kinetic operations are prohibited. The “no-strike list” should routinely identify civilian objects and be regularly reviewed and updated.

Allow time for the consideration of alternatives to using explosive weapons

Creating stand-offs and exercising tactical patience can avoid the need for split second decisions. Tactical patience allows for more accurate information to be gained and the possibility to consider alternative courses of action that are less extreme than the use of explosive weapons. This can reduce the potential for civilian casualties and longer-term harm. For example, use soldiers and weapons that are precise, locally controlled, and limited. During actions on contact, use fire and maneuver rather than indirect fires and airstrikes as the default response.

Undertake collateral damage estimation

The routine use of collateral damage estimation tools and methodology allows parties to mitigate unintended or incidental damage or injury to civilian or non-combatant persons or property or the environment. This is particularly the case with regard to the use of explosive weapons in populated areas.

Conduct Battle Damage Assessments (BDAs)

BDAs should be conducted in all situations where there is a potential loss of life or injury to civilians. Detailed BDA of effects on the civilian population is essential for effective consequence management and lessons-learned.

Implement civilian casualty tracking

The establishment and implementation of civilian casualty tracking mechanisms allow parties to conflict to more fully understand the impact they are having on the civilian population, including through the use of explosive weapons, and the steps that are necessary to reduce that impact and strengthen the protection of civilians.

In many contexts, civilian harm jeopardizes the mission

Taking constant care to spare the civilian population, individual civilians and civilian objects from the effects of hostilities, including the use of explosive weapons in populated areas, is more than a legal requirement. It also makes operational sense in many contexts. The population's support is often critical for operational success and civilian harm can undermine such support if civilians conclude that armed forces and their partners are their greatest threats or cannot provide security. Civilian casualties also create local, national and international political pressure that can limit the freedom of action of armed forces.

Leadership is critical in protecting civilians from harm

Leadership is key for preventing and minimising civilian casualties. Leaders must understand the significance of preventing civilian casualties for the longer-term success of the mission. They must convince their subordinates of its importance; and they must ensure that the proper climate regarding the prevention of civilian casualties exists in their organizations.

Annex One: Military policy and practice in avoiding or limiting the use of explosive weapons in populated areas (elaborated)

A. ISAF tactical directives and civilian casualty mitigation

The US launched Operation Enduring Freedom (OEF) in Afghanistan in October 2001 after the September 11 attacks in the US. Following the UN-initiated Bonn Conference to develop a roadmap for Afghanistan's reconstruction, the UN Security Council in December 2001 authorized ISAF to assist the Afghan Transitional Authority. ISAF was initially led by six-month rotations of Troop Contributing Countries (TCC). When the North Atlantic Treaty Organization (NATO) assumed leadership of ISAF operations in August 2003, the international imperative was to provide reconstruction and training assistance to the Afghan government and the Afghan National Security Forces. OEF maintained a concurrent mission in Afghanistan with the bulk of kinetic action carried out by US troops.

In October 2003, ISAF began to expand beyond Kabul to the Afghan provinces. By 2006, ISAF commanded all international military forces across Afghanistan, although OEF remained in operation concurrently. At the same time, anti-Government groups stepped up attacks, dramatically increasing the combat operations tempo. As ISAF and OEF combat operations increased, so too did civilian casualties.

McNeill tactical directive³¹ (2007)

In May 2007, ISAF leadership ordered an internal report into civilian casualties caused by a US air strike in Shindand, Herat province in April 2007. The report prompted then-ISAF Commander (COMISAF) General Dan McNeill to issue ISAF's first tactical directive regarding civilian casualties in June 2007.³²

The directive states that: "Whenever our actions in battle cause injury or death to civilians or property damage or destruction, we diminish our effectiveness." In an effort to reduce and prevent civilian casualties, the directive ordered that:

- » pre-assault or preparatory fires are to be treated as deliberate targeting operations which require pre-approval and formal collateral damage estimates (discussed further in part three).
- » air-to-ground or indirect fires are to be used only when forces are taking fire from the compound or there is an imminent threat from the compound, and when there are no other options available to the ground force commander to protect the force and accomplish the mission.
- » when tactically feasible, small arms are to be used instead of air-to-ground or indirect fire.

McKiernan tactical directive³³ (2008)

In 2008, a significant number of civilian casualties resulting from an air strike in Azizabad prompted the issuance of a second tactical directive by then COMISAF, General David McKiernan. Its content was similar to the 2007 Directive, focusing inter alia on air-to-ground and indirect fire which could only be used when there is no other option to protect the force. This removed the option of using air-to-ground and indirect fire in order to accomplish the mission.

McChrystal tactical directive³⁴ (2009)

31 The contents of the directive are described in Sarah Sewall and Larry Lewis, *Joint Civilian Casualty Study (August 2010) prepared for the US Army and quoted in Robert Dreyfuss, "Mass Casualty Attacks in the Afghan War", The Nation (19 September 2013), available at: http://www.theinvestigativefund.org/investigations/international/1846/mass_casualty_attacks_in_the_afghan_war?page=5*

32 Center for Civilians in Conflict, *Civilian Harm Tracking: Analysis of ISAF Efforts on Afghanistan (2014)*, at 3. Available at: http://civiliansinconflict.org/uploads/files/publications/ISAF_Civilian_Harm_Tracking.pdf

33 The contents of the directive are described by Sewall and Lewis and quoted in Dreyfuss, note 31 above.

34 Releasable portions of the directive are available at: http://www.nato.int/isaf/docu/official_texts/Tactical_Directive_090706.pdf

In July 2009, continuing civilian casualties and “a growing belief that US forces in Afghanistan were harming civilians at such a rate that it imperilled the mission”³⁵ led the new COMISAF, General Stanley McChrystal, to issue a tactical directive which sought to renew ISAF’s focus on preventing civilian casualties.

In July 2009, continuing civilian casualties and “a growing belief that US forces in Afghanistan were harming civilians at such a rate that it imperilled the mission” led the new COMISAF, General Stanley McChrystal, to issue a tactical directive which sought to renew ISAF’s focus on preventing civilian casualties.

The directive refers to the use of all the tools at the disposal of ISAF to defeat the enemy and protect ISAF forces. However, it also recognizes that ISAF “will not win based on the number of Taliban we kill, but instead on our ability to separate insurgents from the center of gravity - the people. That means we must respect and protect the population from coercion and violence - and operate in a manner which will win their support.” The directive acknowledges that this is different from conventional combat, and that how ISAF operates will determine the outcome more than traditional measures, like capture of terrain or attrition of enemy forces. In particular, the directive states that: “We must avoid the trap of winning tactical victories - but suffering strategic defeats - by causing civilian casualties or excessive damage and thus alienating the people.” To this end, the Directive emphasized:

- » Leaders at all levels are to scrutinize and limit the use of force like close air support (CAS) against residential compounds and other locations likely to produce civilian casualties.
- » Commanders must weigh the gain of using CAS against the cost of civilian casualties that, in the long run, make mission success more difficult and turn the Afghan people against ISAF.
- » The use of air-to-ground munitions and indirect fires against residential compounds is only authorized under very limited conditions.³⁶

Petraeus tactical directive³⁷ (2010)

In August 2010, then COMISAF, General David Petraeus, issued a tactical directive that again underlined the importance of the protection of civilians for the successful completion of the mission and also reinforced the concept of “disciplined use of force”.

The directive notes that ISAF “must continue – indeed, redouble – our efforts to reduce the loss of innocent civilian life to an absolute minimum. Every Afghan civilian death diminishes our cause. If we use excessive force or operate contrary to our counterinsurgency principles, tactical victories may prove to be strategic setbacks.” In operational terms the directive states that:

- » Prior to the use of fires, the commander approving the strike must determine that no civilians are present.
- » If unable to assess the risk of civilian presence, fires are prohibited, except under certain conditions relating to the risk to ISAF and Afghan forces.³⁸
- » Every soldier and commander will use force judiciously, especially in situations where civilians may be present.

The directive also stresses the importance of training ISAF forces to know and understand the rules of engagement and the intent of the tactical directive so that soldiers have “the confidence to take all necessary actions when it matters most, while understanding the strategic consequences of civilian casualties.”

³⁵ Sarah Sewall and Larry Lewis, *Joint Civilian Casualty Study – Executive Summary (31 August 2010)*, at 8.

³⁶ *The conditions are classified for operational reasons.*

³⁷ *Releasable portions available at: <http://www.rs.nato.int/article/isaf-releases/general-petraeus-issues-updated-tactical-directive-emphasizes-disciplined-use-of-force.html>*

³⁸ *The conditions are classified for operational reasons.*

Allen tactical directive³⁹ (2011)

In November 2011, then COMISAF, General John Allen, issued a tactical directive which reiterated the need to “balance our pursuit of the enemy with our efforts to minimize the loss of innocent civilian life and our obligation to protect our troops.” It notes that “[e]very civilian casualty is a detriment to our interests and those of the Afghan government, even if insurgents are responsible. We must redouble our efforts to eliminate the loss of innocent civilian life”. The directive notes the need to consider all use of force carefully, to ensure that it is necessary and proportionate to the threat faced, and when applied it is precisely delivered.

The Directive refers to the “Commander’s Intent” to: “eliminate ISAF-caused civilian casualties across Afghanistan, and minimize civilian casualties throughout the area of operations by reducing their exposure to insurgent operations.” To achieve this, the Directive states the following:

- » Presume every Afghan is a civilian until otherwise apparent.
- » Presume all compounds are civilian structures until otherwise apparent
- » Presume that in every location where there is evidence of human habitation, civilians are present until otherwise apparent.
- » Conduct ground battle damage assessments (BDAs – discussed further in part three) in all situations where there is a potential loss of life or injury to insurgents or Afghan civilians, except when an assessment would put ISAF personnel at greater risk.
- » Investigate every allegation of civilian casualties.
- » Apply the law of armed conflict principles: military necessity, distinction, proportionality, and humanity in all operations:
 - » Value every Afghan civilian life.
 - » Manage the consequences of any mistake expeditiously, honestly and openly, properly expressing condolences.

The directive notes the expectation that commanders at all levels will place as high a priority as COMISAF on eliminating civilian casualties. It continues: “It is a command responsibility to reinforce, refresh and review training of and for subordinates on a regular basis, identify failings and take corrective action. Where engagements appear to have breached any aspect of this Directive, whether or not they resulted in civilian casualties, I expect commanders to investigate. We are in a better position tactically, operationally and strategically when we are first with the truth.”

US Army, Afghanistan Civilian Casualty Prevention Handbook (June 2012)

In June 2012, the US Army's Center for Army Lessons Learned published the Afghanistan Civilian Casualty Prevention Handbook for use by US, coalition and allied personnel. The foreword to the handbook by the Commander of the US Army, Lieutenant General Curtis M. Scaparrotti, notes: "At the centre of our counter-insurgency strategy in Afghanistan is protecting the civilian population from harm and unnecessary damage to property. Any civilian loss of life is detrimental to the coalition's cause. Avoiding civilian casualties must be a top priority and it must be at the forefront of all mission planning and execution."⁴⁰

The handbook refers to a set of overarching principles for reducing and mitigating civilian casualties (CIVCAS), including:

- » Consider tactical alternatives. In decisions regarding the use of force, consider the best means of achieving the desired effects with minimum CIVCAS. This can include exercising tactical patience when feasible.
- » Conduct BDAs whenever possible. Detailed BDA of effects on the civilian population is essential for effective consequence management.⁴¹

It also notes that the effort to avoid CIVCAS and mitigate their effects span the range of activities from pre-deployment training to planning and the consideration of potential collateral damage, execution, consequence management and, ultimately, learning from past incidents.⁴²

Ground-to-ground operations

Chapter 4 of the handbook addresses "ground-to-ground operations" and provides practical guidance on minimising CIVCAS in the context of indirect-fire engagements, including:

- » Increase the training that forces receive on indirect fires to increase proficiency and to avoid mistakes that lead to rounds failing to impact the intended target. Include forces that will call for the fire to elements in the fire direction center and the forces laying and firing the guns.
- » When feasible, use precision or low collateral damage munitions.
- » To reduce CIVCAS, avoid use of indirect fire when more accurate weapons (e.g., snipers, air-to-ground fires) are available.
- » Increase the safety zone and the time that assets monitor the area prior to fires during registration. In addition, the force can keep surveillance assets on station during registration fires to watch for the possibility of civilians wandering into the area.
- » If necessary, increase the use of fire control measures for indirect fire, especially in populated areas. This can include involving higher headquarters in the registration process for fires, providing both scrutiny and access to additional intelligence, surveillance and reconnaissance resources.
- » Avoid firing for effect without adjusting fire first. Using a single round in the initial salvo will reduce the impact if rounds land off target.
- » Walk fires onto targets from a starting point away from civilian structures.
- » When positive identification (PID) comes from hostile intent, take every opportunity to confirm PID and consider the behavior could be that of non-combatants.
- » Avoid pre-emptive counter battery without knowledge of the absence of civilians at the suspected point of origin upon which you are about to fire.
- » Avoid using indirect fires on moving targets.⁴³

⁴⁰ Center for Army Lessons Learned, *Afghanistan Civilians Casualty Prevention Handbook No. 12-16: Observations, Insights and Lessons (June 2012)*, at iii. Available at: <https://info.publicintelligence.net/CALL-AfghanCIVCAS.pdf>

⁴¹ *Ibid.*, at 1-2

⁴² *Ibid.*, at 15

⁴³ *Ibid.*, at 25-26

The handbook notes that due to the elevated risk of collateral damage when using indirect fires, it is especially important to conduct a detailed BDA after an indirect fire engagement. It notes that unfortunately, forces often use indirect fire when they are firing on an area that is not easily accessible by ground forces. This increases the challenge for BDA but does not alleviate the responsibility of the unit to assess the impact of the fires: “Many cases have been recorded where civilians come [forward] a day or two after an engagement with CIVCAS. The unit did not know about the CIVCAS because they did not conduct a BDA after the engagement.”⁴⁴ When a unit determines the rounds landed off target, BDA is especially important, because the rounds most likely landed in an area where the unit had not confirmed the lack of civilian presence and, therefore, the risk of CIVCAS is increased.

Air-to-ground operations

Chapter 5 of the handbook addresses “air-to-ground operations” and refers to a number of changes of operational practice aimed at reducing CIVCAS from such operations, including:

- » Increasing employment of non-lethal effects in terms of show-of-presence and show-of-force missions.
- » Aircrews operating with increased knowledge of collateral damage considerations and appropriate weaponeering options, including equipping aircraft with weapon loads that include low collateral damage weapons.
- » Use of optimized angle and direction of attack on vehicles to best observe and react to civilians in the area.
- » Tailoring fusing of weapons to minimize collateral damage concerns.
- » Dragging laser-guided bombs off their target into a previously cleared area in case collateral damage concerns are observed after weapons’ release.⁴⁵

Chapter 5 also refers to a number of common factors relating to CIVCAS resulting from CAS and close combat attack (CCA), including:

- » Leading language – the use of selective facts that can suggest hostile intent, such as when a person who is described as placing an IED might in fact be engaged in other activities such as farming; or an inaccurate description of the current level of threat.
- » Not sharing important details – where important details are known in one part of the air-ground team but are not shared with the rest of the team, such as that vehicles that were perceived as a threat are in fact moving away from the area. All elements of the air-ground team should not assume that important details are commonly known and should be aggressively communicated to ensure that all elements have a common and complete understanding of the situation.
- » Assuming that no civilians are present, instead of working to determine whether or not this is the case.
- » Lack of reliable PID of the target.⁴⁶

⁴⁴ *Ibid.*, at 25

⁴⁵ *Ibid.*, at 30

⁴⁶ *Ibid.*, at 30-32

B. Incorporation of lessons-learned into US military policy

Many of the lessons-learned from Afghanistan and elsewhere have been incorporated into US military policy and practice. One month after the publication of the Afghanistan Civilian Casualty Prevention Handbook, the US Army published ATTP (Army Tactics, Techniques and Procedures) No. 3-37.31 on Civilian Casualty Mitigation⁴⁷ to provide doctrinal guidance for minimizing CIVCAS incidents and managing their consequences. This document was superseded in October 2015 with the issuance of ATP (Army Techniques Publication) No. 3-07.6 on Protection of Civilians.⁴⁸

Army Techniques Publication (ATP) No. 3-07.6 on Protection of Civilians (October 2015)

The document stresses the importance of protecting civilians for moral, political, legal, and military reasons and states that that this must be addressed during unified land operations regardless of the primary mission.⁴⁹

Civilian harm jeopardizes the operation

It elaborates further noting that harming civilians undermines military efforts and becomes a divisive issue between multinational partners: "Civilian harm jeopardizes any operation. The population's support is critical during many operations, and civilian harm can undermine such support if civilians conclude that Army units and their partners (such as host nation security forces or security contractors) are their greatest threats or cannot provide security."⁵⁰ In addition to humanitarian reasons and the need to comply with the law of war, excessive civilian casualties create political pressure that limits freedom of action of army units. Civilian harm creates ill-will among the population, with lasting repercussions that impair post-conflict reconstruction and reconciliation.⁵¹

The document further notes that civilian casualty incidents undermine political support for the mission in the host nation, internationally, and among the American public and policy-makers and that these audiences have high expectations that army units will use their training, discipline, and technology to avoid civilian casualties and to create a secure environment where civilians are protected from violence. Civilian casualties undermine the political objectives of the operation by generating hostility and active resistance in the population and by creating friction between the US and host-nation political leadership. Coalition States and the host-nation may experience domestic pressure if civilian casualties are not addressed sufficiently. In short, civilian casualties undermine the political objectives of the operation and, if perceived as a chronic problem, become political issues. The document notes that in some cases, an action may be militarily sound and legally permitted, but should not be taken because of political considerations. It further observes that civilian casualties that occurred during conflict is a serious issue during post-conflict periods. Future instability will most often occur when the citizens or societal groups demand justice or retribution, and long-term stability may not be possible until these grievances are addressed.⁵²

Damage to infrastructure disrupts the provision of essential services to civilians

In addition to problems stemming directly from inflicting civilian casualties, the document acknowledges that damage to infrastructure, such as bridges and power plants, disrupts the provision of essential services necessary for civilian well-being that could cause suffering and casualties among the local population. It therefore cautions that in contemplating combat operations, the military benefit of doing so should be balanced against the possibility that the targets are close to civilians, the potential that destroying such targets will unduly harm civilians, or that their destruction will have undesired long-term effects after the operation.⁵³

⁴⁷ Department of the Army, *Civilian Casualty Mitigation, ATTP 3-37.31 (July 2012)*. Available at: http://armypubs.army.mil/doctrine/DR_pubs/dr_a/pdf/attp3_37x31.pdf

⁴⁸ Department of the Army, *Protection of Civilians, ATP 3-07.6 (October 2015)*. Available at: <http://fas.org/irp/doddir/army/atp3-07-6.pdf>

⁴⁹ *Ibid.*, at 1-1.

⁵⁰ *Ibid.*, at 1-3.

⁵¹ *Ibid.*

⁵² *Ibid.*, at 2-6.

⁵³ *Ibid.*, at 2-10.

Leadership is key

Particular emphasis is placed on the critical importance of leadership: Leaders must understand the significance of civilian casualty mitigation, convince their subordinates of its importance, and ensure that the proper climate regarding civilian casualty mitigation exists in their organizations. As decision-makers, leaders are responsible for balancing military necessity against the risk of harm to both forces and civilians. As trainers, they must prepare their units to mitigate civilian casualties with foresight and agility. In directing their subordinates, commanders must phrase their intent and guidance to best influence those making decisions while in harm's way.⁵⁴

It further notes that commanders should understand the larger context in which civilian casualty mitigation relates to mission goals. They must skilfully balance short-term military needs with long-term mission objectives and consider the effect of civilian casualties on the mission, risks to units when exercising restraint, and expectations of the population regarding the actions of army units. It further states that commanders should include civilian casualty issues as appropriate when engaging with host-nation leaders and unified action partners.⁵⁵

Civilian casualty mitigation is most effective when leaders at all levels emphasize the importance of the issue at appropriate opportunities. This may require particular emphasis in units that have recently suffered casualties. The non-commissioned officer support chain is vital for emphasizing that civilian casualty mitigation is a duty, not an option, and non-commissioned officers must foster the proper climate regarding the protection of civilians. Small unit leaders are key, as they are the soldiers most challenged when balancing imperatives to preserve the force, defeat the enemy, and protect civilians.⁵⁶

Protection of civilians in pre-deployment preparations

The document emphasizes the importance of incorporating the protection of civilians into the pre-deployment preparations. In addition to ensuring that soldiers receive training on the law of war, commanders should incorporate civilian protection and civilian casualty response scenarios into training and exercises. Effective pre-deployment preparation includes:

- » Commander and leader emphasis on protection of civilians, including the importance of minimizing and addressing civilian harm.
- » Training on civilian casualties and other civilian protection issues. This includes establishing systems in advance to respond to civilian casualty incidents. These include reporting, tracking, investigation, public response, and making amends to families and communities through the recognition of harm, appropriate compensation, and apologies and dignifying gestures if necessary (see below).⁵⁷
- » Selection of soldiers for training as designated marksmen so that small units have an improved capability to engage targets with discrimination and precision.⁵⁸

Not all permissible force is necessary

The document notes that Army units must balance the necessity of using force with the likely effects of using that force. The ROE indicate when the use of force is authorized. However, not all permissible force is necessary in every case, and leaders must consider second-order effects as well. In other words, even if soldiers or units are permitted to use lethal action, they should not necessarily do so.⁵⁹

Create stand-offs/exercise tactical patience to avoid split second decisions

Particular emphasis is placed on the timing of attacks and the importance of reducing the potential for civilian casualties by creating standoffs in time or space to avoid the need for split second decisions. According to the

⁵⁴ *Ibid.*, at 5-2.

⁵⁵ *Ibid.*

⁵⁶ *Ibid.*

⁵⁷ *Ibid.*, at 3-1.

⁵⁸ *Ibid.*, at 3-4.

⁵⁹ *Ibid.*, at 5-1.

document, a commander's decision to attack an objective or a soldier's decision to engage a target often must be made rapidly, to maintain the initiative, exploit a fleeting opportunity, or protect against a potential threat. However, when decisions are made quickly, there is greater likelihood of acting upon incorrect information, causing incidental harm to civilians, or engaging a target that in fact was not a threat. In some cases, tactical patience is possible to develop the situation and gain more accurate information that can reduce the potential for civilian casualties.⁶⁰

The document outlines a series of questions that units can proactively consider when preparing for their operations:

- » Is action necessary for self-defense, defense of other soldiers, defense of partners, or defense of civilians?
- » Can action be taken without endangering civilians or by minimizing the danger to civilians?
- » Is immediate action required, or can it be delayed until better conditions are obtained (such as removing vulnerable civilians from the area)?
- » Are other options readily available?
- » What are the ROE and standard operating procedures for this situation?
- » What action will best support the mission over the long term?⁶¹

Incorporation of civilian casualty mitigation into military decision-making

Under the heading "Preventing Civilian Casualties", the document notes that civilian casualty mitigation should be routinely incorporated into the military decision-making process, troop leading procedures, staff battle rhythms, the operations process, the decide-detect-deliver-assess methodology that supports targeting processes, and the find-fix-finish-exploit-analyze-disseminate methodology used by maneuver commanders and their staffs to conduct operations. Planning processes should provide an accurate picture of the operational environment including civilian concentrations, their vulnerabilities, and implications for army units in terms of their operations and potential responses to civilian casualty incidents.⁶²

Courses of action should account for possible civilian casualties, and its minimization may be one of the decision criteria used to analyze the different options. Depending upon the situation, actions against legitimate targets may even be deferred if the likelihood of civilian casualties is too great. Commanders at higher levels may want to reserve for themselves the approval authority for operations that have an excessively high risk of civilian casualties. In any case, distinction, proportionality, and precautions should be incorporated into mission planning.⁶³

The document notes that direct fire can result in civilian casualties either through collateral damage and incidental harm during an engagement of the enemy, or misidentification when forces target civilians mistakenly believed to be hostile. Civilian casualties can be mitigated by consideration of the local environment and where locals are likely to be located, as well as surface danger zones and beaten zones to avoid situations in which direct fire projectiles go through populated areas. When possible, unit maneuvers should attempt to minimize civilian exposure to these fires. Misidentification can be reduced with tactical patience.⁶⁴

Self-defense engagements can be particularly prone to civilian casualties. There are two components to the decision to engage: whether there is a threat, and whether the nature of a threat is immediate, requiring prompt action. Discerning whether there is a threat means deciding if there is a hostile act or hostile intent present. The first is usually relatively straightforward to determine. The second can be more difficult to discern, as this involves interpreting the behaviour of a potential threat, when no hostile act has been committed.⁶⁵

Employ tactical options that are more limited than extreme measures

The document notes that civilian casualties can often be avoided if an army unit can employ tactical options that are more limited than extreme measures. This requires considering both alternative tools – lethal and non-lethal –

⁶⁰ *Ibid.*, at 2-11.

⁶¹ *Ibid.*, at 5-6.

⁶² *Ibid.*, at 5-3.

⁶³ *Ibid.*, at 5-4.

⁶⁴ *Ibid.*, at 5-6.

⁶⁵ *Ibid.*

and the timing of the response. According to the document, civilian casualty mitigation requires the adoption of a thought process that, when feasible, incorporates tactical patience and the consideration of alternatives. Examples of this thought process include the following:

- » Use soldiers and weapons that are precise, locally controlled, and limited. For example, snipers or designated marksmen in some situations are preferable to indirect fires, airstrikes, or giving all soldiers in a unit the permission to engage at their discretion.
- » During actions on contact, use fire and maneuver rather than indirect fires and airstrikes as the default response, and raise the authority for fires clearance to higher levels.
- » Develop small unit standard operating procedures that facilitate quick distinction between civilians and actual threats.
- » Change vantage points to gain better observation of a suspected target, or contact other Soldiers and units that may have a better view. Observation can often be improved by using binoculars and magnified individual and vehicle weapon sights. Helicopters and tactical unmanned aircraft systems (UAS) can change vantage points quickly.
- » Proactively share information between units. For example, with prior coordination Army aviation forces can provide digital communication and digital video feed sharing from the aircraft's day video system through a one system remote viewing terminal to the ground force commander, thereby increasing situational awareness.⁶⁶

Peacekeeping and Stability Operations Institute, US Army War College, Protection of Civilians – Military Reference Guide (January 2013)

Reference can also be made to the Protection of Civilians – Military Reference Guide produced by the US Army War College. The guide notes that causing civilian casualties is unlawful unless it occurs under circumstances permitted by IHL. It observes that civilian casualties undermine the military force's legitimacy and can jeopardise the mission. Even if a military action is otherwise permissible, it may be prudent not to conduct the action because of the possibility of civilian casualties.⁶⁷

US Joint Chiefs of Staff, Joint Publication 3-06 – Joint Urban Operations (20 November 2013)

The US Joint Chiefs of Staff, Joint Publication 3-06 – Joint Urban Operations of November 2013⁶⁸, examines the special considerations required when conducting operations in the complex modern urban environment. Among the characteristics of joint operations in urban environments, the publication notes that:

- » Combat operations in urban areas may result in large ratios of civilian to military casualties and may have more restrictive operational limitations than operations elsewhere: "The presence of civilians and the need to preserve infrastructure greatly influence operations and help shape the rules of engagement and rules for the use of force."⁶⁹ In this regard, it goes on to note that "[t]he majority of urban battles since 1967 have had one or more of the following constraints or restraints imposed on the forces engaged: limiting friendly casualties; minimizing civilian casualties and/or collateral damage; or restrictions in the use of ground or air weapons".⁷⁰
- » Urban terrain and infrastructure impact weapons employment and munitions effectiveness.⁷¹

⁶⁶ *Ibid.*, at 5-7.

⁶⁷ US Army War College, *Peacekeeping and Stability Operations Institute, Protection of Civilians – Military Reference Guide (January 2013)* at 112. Available at: <http://www.isn.ethz.ch/Digital-Library/Publications/Detail/?lang=en&id=176009>

⁶⁸ US Joint Chiefs of Staff, *Joint Publication 3-06 – Joint Urban Operations (November 2013)*, available at: http://www.dtic.mil/doctrine/new_pubs/jp3_06.pdf

⁶⁹ *Ibid.*, at I-6.

⁷⁰ *Ibid.*

⁷¹ *Ibid.*

- » The requirements to protect and aid civilians and to preserve and restore infrastructure create competing demands with tasks requiring the defeat of the adversary: “Increased use of fires may kill more of the foe and preserve friendly force lives, but it may also be counterproductive because of the extent of collateral damage and civilian casualties caused. These issues must be continually assessed in order to capitalize on opportunities, limit risk, comply with the law of war, and adjust operations accordingly.”⁷²

Among the “special social and cultural considerations for urban areas”, it is noted that the commander “should keep in mind the overall objectives regarding the civilian populace: to minimize civilian interference with military operations, minimize mission impact on the population, and observe the necessary legal, moral and humanitarian obligations towards civilians.”⁷³

Chapter IV on Joint Functions lists a number of pertinent points relating to fires:

- » Precision munitions make attacks on specific urban targets much more feasible and effective while also stressing that “their precision does not reduce or mitigate all risk.”⁷⁴
- » Even when the joint force employs precision weapons, “fires can still adversely affect the achievement of objectives. Fires can cause displacement of the civilian population, destruction of critical infrastructure, alienation of local inhabitants and the international community, and increased determination on the part of the adversary.”⁷⁵
- » The presence of large numbers of civilians can also severely inhibit the use of fires. There is a real potential for tactical events to have operational- or strategic-level implications – particularly events such as civilian casualties or damaged infrastructure. Since most joint urban operations will include constraints designed to minimize civilian casualties, the joint force will be required to use fires accordingly. These measures can take several forms:
 - » Prohibiting attacks on targets located in heavily populated areas.
 - » Restricting munitions used in attacks.
 - » Restricting attacks to certain times of the day.
 - » Giving warning prior to attacks so that civilians can evacuate the area.
 - » Aborting attacks unless accuracy can be guaranteed.⁷⁶

Office of General Counsel, US Department of Defense, Law of War Manual (June 2015)

The US Department of Defense’s Law of War Manual also stresses the importance of taking steps that go beyond the requirements of the law in order to minimize CIVCAS, including:

Heightened identification requirements in conducting attacks

Although doing so would exceed the requirements of the law of war, applying heightened standards of identification may be a policy choice to reduce the risk of incidental harm in conducting an attack.⁷⁷

Adjusting the timing of the attack

Adjusting the timing of an attack may reduce the risk of incidental harm. For example, attacking a military objective when civilians are less likely to be present may be appropriate. Similarly, it may be appropriate to wait until enemy forces have departed from populated areas before attacking such forces in order to reduce the risk of civilian casualties.⁷⁸

⁷² *Ibid.*, at I-8.

⁷³ *Ibid.*, at II-4

⁷⁴ *Ibid.*, at IV-15

⁷⁵ *Ibid.*, IV-16

⁷⁶ *Ibid.*

⁷⁷ Office of General Counsel, Department of Defense, *Law of War Manual (June 2015)*, at 196.

⁷⁸ *Ibid.*, at 239.

Weapons selection (weaponneering)

Depending on the circumstances, the use of certain weapons rather than others may lower the risk of incidental harm, while offering the same or superior military advantage in neutralizing or destroying a military objective.⁷⁹

President of the United States of America, Executive Order – United States Policy on Pre- and Post-Strike Measures to Address Civilian Casualties in US Operations Involving the Use of Force (1 July 2016)⁸⁰

Finally, reference should be made to the Executive Order (EO) issued by the President of the US on 1 July 2016 concerning US policy on pre- and post-strike measures to address civilian casualties in US operations involving the use of force. Section 1 of the EO states that: “Minimizing civilian casualties can further mission objectives; help maintain the support of partner governments and vulnerable populations, especially in the conduct of counterterrorism and counter-insurgency operations; and enhance the legitimacy and sustainability of US operations critical to [the US] national security.” It continues that: “[a]s a matter of policy, [the US] therefore routinely imposes certain heightened policy standards that are more protective than the requirements of the law of armed conflict that relate to the protection of civilians.”

The EO proceeds to list a number of measures that relevant departments and agencies will continue to take in present and future operations, including:

- » Train personnel, commensurate with their responsibilities, on compliance with legal obligations and policy guidance that address the protection of civilians and on implementation of best practices that reduce the likelihood of civilian casualties, including through exercises, pre-deployment training, and simulations of complex operational environments that include civilians.
- » Develop, acquire, and field intelligence, surveillance, and reconnaissance systems that, by enabling more accurate battlespace awareness, contribute to the protection of civilians.
- » Develop, acquire, and field weapon systems and other technological capabilities that further enable the discriminate use of force in different operational contexts.
- » Take feasible precautions in conducting attacks to reduce the likelihood of civilian casualties, such as providing warnings to the civilian population (unless the circumstances do not permit), adjusting the timing of attacks, taking steps to ensure military objectives and civilians are clearly distinguished, and taking other measures appropriate to the circumstances.
- » Conduct assessments that assist in the reduction of civilian casualties by identifying risks to civilians and evaluating efforts to reduce risks to civilians.

⁷⁹ *Ibid.*

⁸⁰ See *The White House, Office of the Press Secretary, Executive Order – United States Policy on Pre- and Post-Strike Measures to Address Civilian Casualties in US Operations Involving the Use of Force (1 July 2016)*. Available at: <https://www.whitehouse.gov/the-press-office/2016/07/01/executive-order-united-states-policy-pre-and-post-strike-measures>

C. AMISOM indirect fire policy

AMISOM was mandated by the African Union (AU) Peace and Security Council on 19 January 2007 and subsequently endorsed by the UN Security Council in February 2007. AMISOM was given a wide variety of tasks, including conducting an enforcement campaign against al-Shabaab and other actors determined to destroy the Somali Transitional Federal Government (TFG).

AMISOM was deployed to Mogadishu in March 2007. In 2010, after mounting concerns at civilian casualties resulting from its use of indirect fire and a recognition that this was strategically undermining AMISOM and its operational success, AMISOM implemented a number of remedial actions including the development of an indirect fire policy.⁸¹ The actions were designed to better meet its obligations under IHL but also reflected a similar appreciation to that of ISAF in Afghanistan: that civilian casualties serve only to undermine AMISOM's mission and longer-term political objectives.

The introduction to the indirect fire policy⁸² states very clearly that: "Winning the support of the people is the guiding principle for the planning and conduct of all our operations. Minimizing civilian harm must be a guiding principle for the planning and conduct of all our operations, and further is a humanitarian imperative on which we all agree."⁸³ It later refers to the need to "continuously nurture a mind-set that recognizes that we are judged not by the number of insurgents killed, but on our ability to minimize civilian casualties as we fulfill our mandate."⁸⁴

The policy articulates a three-step process: avoid, attribute and amend:

- » Where possible, AMISOM will avoid the use of indirect fire, which can cause CIVCAS, unless the purpose of observed indirect fire is to achieve a military objective for extreme self-defence measures. Indirect fire will only be used to protect the civilian population where a clear military objective is identified and where the military advantage gained is overwhelmingly superior to the potential risk of harm to the civil population.
- » When indirect fire is reported, AMISOM must attribute responsibility to the originator – detect the origin of indirect fire, correlate this with AMISOM's own indirect fire firing records and apologize quickly if it is responsible; refute the allegation by accounting for the use of its weapons accurately; or apportion responsibility to opposing forces, based on intelligence, sighting reports and other evidence.
- » Make amends for civilian harm caused unintentionally by AMISOM by recognizing losses and providing immediate assistance to those who have been injured, distressed or otherwise affected by AMISOM operations, including indirect fire.⁸⁵

As concerns the "avoid" step, the objective is to reduce civilian casualties that may occur through unwarranted indirect fire and to prevent violations of IHL. The policy outlines a number of implementation measures, as follows:

- » Improve intelligence capacity to allow for more predictive analysis of previous incidents so that hot-spots and techniques are identified to trigger operations that disrupt the assembly of insurgent forces prior to an attack.
- » Improve the use of mapping products. Ensure that they are kept up-to-date, and that the following are defined on maps as No Fire Zones (NFZ): hospitals, schools, residential areas, markets, religious places of worship and camps for internally displaced persons.
- » Provide advance warning of planned offensives, whenever possible.
- » Disrupt and deny indirect fire firing positions by the insurgents against AMISOM's front lines by tactical operations that clear and hold ground and dominate by observation and fire. Direct fire weapons, such as long-range, large caliber rifles can provide a rapid and accurate response, with less potential for civilian casualties than indirect fire.
- » Avoid indirect fire against public gatherings. Public gatherings that do not represent a threat to AMISOM operations are to be treated as temporary NFZ. Sector commanders must take responsibility for nominating these. The Force Headquarters (FHQ) is responsible for disseminating and cancelling these.

⁸¹ Paul Williams, "The African Union Mission in Somalia and Civilian Protection Challenges", 2 *Stability: International Journal of Security and Development* (2013), at 10.

⁸² AMISOM, *Commander Africa Union Mission in Somalia – Indirect Fire Weapon Policy*, undated, copy on file with OCHA.

⁸³ *Ibid.*, at 1.

⁸⁴ *Ibid.*, at 2.

⁸⁵ *Ibid.*, at 4-5.

COMPILATION OF MILITARY POLICY AND PRACTICE

Reducing the humanitarian impact of the use of explosive weapons in populated areas

- » Introduce new targeting procedures, specifying target sets and proposed effects, as well as a model-targeting checklist to ensure that IHL tests are satisfied before engagement. The Target Engagement Authority (TEA) is responsible for signing off the checklist before a fire mission involving 82mm mortars and larger weapons.
- » Restrict the use of the 107mm rocket launcher (RL). The 107mm RL may be used to disperse groups of insurgent fighters en route to a forming-up position where single shots may be fired, and the effects recorded before subsequent shots are fired. Under no circumstances are 107mm to be fired in salvos.
- » Employ a collateral damage estimation (CDE) support tool to assess the potential risk to civilians.
- » Mandatory in-theatre refresher training every two months for all military personnel involved in authorizing the use of indirect fire weapons, including rehearsals in decision-making using contemporary scenarios. All troops involved in calling for fire require training in IHL and particular attention is to be paid to “judgmental” training to improve AMISOM’s capacity to make sound moral decisions. The Deputy Force Commander is to assume responsibility for oversight of this training.
- » Conduct After-Action Reviews (AAR) after an incident, in order to learn lessons and improve training.⁸⁶

The policy also identifies a number of measures requiring external support, including:

- » The deployment of unmanned aerial vehicles (UAVs) to help with “FIND” and “FIX” functions, due to the shortage of other intelligence assets, the unreliability of human intelligence in Somalia, and to provide a deterrent against insurgent attacks. UAVs can also provide “pattern of life” information to inform CDE; they also provide the Commander with near-real time information.
- » Amend the ROE to clarify the circumstances when indirect fire may be used for mission accomplishment, the inclusion of a section on the engagement of military objectives and the introduction of the PID concept. Pending amendments, AMISOM forces are to confirm PID visually, or to have two independent sources before employing indirect fire.
- » Create a Force Fire Direction Centre (Force FDC) to provide improved command and control over heavy mortars and artillery by the Force Commander as the primary TEA. It will also provide a means by which to improve coordination and control of TFG indirect fire. The Force FDC would maintain target engagement records of all indirect fire fire missions and contribute information to a CIVCAS tracking cell (see below). It will provide trend analyses of incidents over time, as well as kinetic analyses that monitor the proportion of people killed or injured by different weapon systems.
- » Request the deployment of Weapon Locating Radars (WLR) to enable accurate adjustment of indirect fire and provide early warning of incoming rounds for force protection. This could also be extended to the civilian population near AMISOM bases by the deployment of audible alarms to warn them to take cover. WLR also provide evidential quality information of firing point locations, thus pinpointing responsibility for civilian casualties, whilst providing the Commander with an independent source of verification.
- » Support TFG forces to raise their capacity in understanding their responsibilities under IHL and setting up parallel mechanisms to minimize civilian harm. All sector commanders and battle group commanders are to liaise with their TFG counter-parts and encourage them to clear all fire missions with AMISOM before execution. The Force FDC will help to enhance coordination and control.⁸⁷

⁸⁶ *Ibid.*, at 5-7.

⁸⁷ *Ibid.*, at 7-8.

D. San Remo Handbook on Rules of Engagement

Published by the International Institute of Humanitarian Law in 2009, the San Remo Handbook on Rules of Engagement⁸⁸ was drafted by a team of serving and retired military personnel from the armed forces of Australia, Canada, the United Kingdom and United States. The Handbook is intended to provide guidance on the “intricacies of the generally accepted and widespread concept of [ROE]” and “assist in the drafting of [ROE] and related legal and operational guidance for use in training, exercises, war games and operations.”⁸⁹

The Handbook proposes restricting the use of indirect fire weapons, defined as “fire directed at a target that cannot be seen by the aimer and that is not itself used as a point of aim for the weapons or the director”, in populated areas. The Handbook distinguishes between “observed indirect fire”, for which the point of impact or burst can be seen by an observer, and “unobserved indirect fire”, for which the point of impact or burst is not observed. Direct fire and observed indirect fire are “permitted unless restricted by a rule” of a nation’s military. It is noteworthy that the proposed ROE identify “populated areas” as situations where unobserved fire, observed indirect fire or direct fire can be restricted by a rule.⁹⁰

⁸⁸ International Institute of Humanitarian Law, *San Remo Handbook on Rules of Engagement* (2009). Available at: <http://www.iihl.org/wp-content/uploads/2015/12/ROE-HANDBOOK-ENGLISH.pdf>

⁸⁹ *Ibid.*, at ii and 1.

⁹⁰ *Ibid.*, at 37.

Annex Two: Other salient military policy and practice (elaborated)

Though not specific to the use of explosive weapons in populated areas, there are other examples of policy and practice that can help to protect civilians from the use of explosive weapons. In particular:

- » Civilian casualty tracking mechanisms have been shown to be useful for allowing the parties concerned to better understand the impact they are having on the civilian population and to identify the steps that are necessary to reduce that impact and strengthen the protection of civilians.
- » Some armed forces also use collateral damage estimation tools and BDAs in an effort to reduce the impact of hostilities on civilians.
- » Reference should be made also to the possible analogous use of the concepts of “minimum safe distances” and “risk estimate distances” that are applied by military forces to mitigate the risk of fratricide.

A. Civilian casualty tracking

The establishment of civilian casualty tracking mechanisms was a critical component of the broader efforts of ISAF and AMISOM to protect civilians from the effects of military operations. Civilian casualty tracking also features in recent US military policy on the protection of civilians.

ISAF and civilian casualty tracking

ISAF’s efforts to institutionalise civilian casualty tracking began in 2008 in response to a need to respond to allegations of ISAF-caused civilian casualties.⁹¹ Prior to this, ISAF did not record allegations of civilian casualties, as this was not standard practice for militaries. NATO itself “did not have procedures or a coherent system to address civilian casualties.”⁹² Rather, notification of suspected civilian casualties was passed up the chain of command, varying in detail from when, where, and who was involved to what type of tactic may have caused the event. Follow-up was conducted primarily at the tactical level, with responses such as providing condolence or ex-gratia payments at the discretion of the tactical commander and legal investigations where warranted.

Because collection of data was not standardized, ISAF often lacked complete information in the face of civilian casualty allegations. Likewise, discrepancies in ISAF data in comparison with other organizations, such as the United Nations Assistance Mission in Afghanistan (UNAMA), suggested to ISAF personnel and the humanitarian and human rights communities that ISAF’s reporting mechanisms were weak.⁹³

In May 2007, ISAF leadership ordered an internal report discussing the effect of civilian casualties caused by an April 2007 US air strike in Shindand, Herat province. The report prompted then COMISAF, General McNeill, to issue ISAF’s first tactical directive regarding civilian casualties in June 2007 (see part two, above). The tactical directive recommended changes in tactics that directly affected civilians, such as limiting the use of aerial and indirect fire. In June 2008, shortly after General McKiernan assumed command, ISAF was involved in two high profile incidents resulting in numerous civilian casualties. Information on these events from local non-governmental organizations (NGOs), the Taliban, and international organizations differed so dramatically from ISAF’s data that ISAF recognized the need for action.⁹⁴

ISAF recognized that it could not correlate data on allegations collected and forwarded by the UN Human Rights office because the latter did not track data that would allow ISAF to triangulate specific location, time, type of munitions used or indications of units involved. ISAF therefore decided to capture every allegation from locals, from media, from Afghan authorities, and from other organizations to understand what was occurring.

⁹¹ Center for Civilians in Conflict, note 32 above, at 2.

⁹² *Ibid.*, at 3.

⁹³ *Ibid.*

⁹⁴ *Ibid.*

Unit reporting

Since ISAF's inception, Standard Operating Procedure 302 (SOP 302) outlined the procedures and the information to be reported by the unit that witnessed or inflicted civilian casualties. On 24 July 2008, ISAF leadership issued Fragmentary Order 221 (FRAGO 221) that, for the first time, required units to treat all allegations, regardless of source, as items for investigation. Reporting included the issuance of:

- » A First Impression Report, to be submitted by units within two hours of an actual or suspected civilian casualty incident;
- » A Second Impression Report, to be submitted within eight hours of the First Impression Report, including the context of the specific operation and information such as whether local officials were contacted or medical care was provided; and
- » An Investigation Recommendation Report, to be submitted within 72 hours of the incident if a civilian was killed or there was potential ISAF misconduct.⁹⁵

Civilian Casualty Tracking Cell

A third CIVCAS incident in August 2008 in Azizabad, Herat Province, further underscored for ISAF leadership that the command was not able to control the scene of the incident in order to determine facts and prevent disinformation by insurgents. In late August 2008, COMISAF General McKiernan ordered the creation of the Civilian Casualty Tracking Cell (CCTC). By October 2008, the CCTC began collecting the reported information from units as well as reporting allegations of civilian casualties brought to ISAF headquarters.⁹⁶

The CCTC initially served to strengthen ISAF's internal situational awareness of civilian casualties and to respond quickly and accurately to allegations of civilian casualties. Every instance of suspected or confirmed civilian casualties in ISAF field operations continued to be recorded at the troop level and reported up the ISAF chain of command. The CCTC's small staff, housed within the Combined Joint Operations Center (CJOC) in Kabul, entered the data into a spreadsheet with basic data fields such as:

- » Date and time of the incident.
- » Place and type of operation.
- » Numbers of civilians killed or injured.⁹⁷

CCTC staff then used the data to attempt to verify civilian casualty allegations and keep COMISAF, other ISAF leadership, and US Strategic Command informed. Sharing data with outside actors, including NGOs, required commanding officers' approval. The CCTC's official dedicated staff was civilian-only, overseen by colonels within the CJOC. Civilian personnel were hired for their understanding of Afghan culture, their ability to liaise with organizations external to ISAF, and their experience with data.

Separately from the CCTC, significant events or allegations of civilian casualties continued to be investigated for legal violations by the TCC whose forces were involved.

In July 2009, then COMISAF General McChrystal issued a tactical directive that amplified reporting requirements, requiring BDAs for all incidents of air strikes and indirect fire. The same month, ISAF also released SOP 307, putting guidance on civilian casualties under a unified "Battle Drill" or procedural checklist. SOP 307 also institutionalized the CCTC as the "authoritative repository of civilian casualties taking place in the Afghanistan Theater of Operations."

⁹⁵ *Ibid.*, at 4.

⁹⁶ *Ibid.*

⁹⁷ *Ibid.*, at 5.

Joint Incident Assessment Teams

ISAF also created Joint Incident Assessment Teams (JIATs) in 2009, composed of Afghan government-appointed representatives and ISAF personnel, including an ISAF general officer, to investigate incidents. The teams were disbanded once investigations were complete. Reports produced by JIATs were intended to:

- » Determine the facts.
- » Recommend actions to be taken to avoid casualties in future.
- » Recommend changes in techniques or procedures that might be relevant across the force.

While the JIATs were not formally linked to the CCTC, information from JIAT investigations would flow to the CCTC.

By the end of 2009, the CCTC had amassed enough information on suspected or actual civilian casualties to begin to examine the data for trends. The aggregated data was then used for reports and recommendations addressing civilian casualty mitigation and given to ISAF leadership.⁹⁸

By 2010, officers within the CJOC at ISAF HQ, CCTC personnel, the office of the Senior Civilian Representative and NATO Headquarters staff pressed for expansion of the mechanism and greater resources so CCTC could provide more guidance on addressing civilian casualties and better outreach to civil society. The effort was underscored by General McChrystal's emphasis on creating a single ISAF/OEF focal point on civilian casualties.⁹⁹

Civilian Casualty Mitigation Team

In mid-2011, the CCTC expanded into the Civilian Casualty Mitigation Team (CCMT) of which the CCTC's data-gathering capabilities were one part. Military personnel joined the mechanism led by a Colonel whose role was dedicated to addressing civilian casualties.

The CCMT created internal working groups, whose membership included representatives from ISAF HQ and subordinate commands, to provide guidance on civilian casualty avoidance and mitigation. Internally, while maintaining the CCTC's responsibilities for collecting and maintaining data, the CCMT's mandate included:

- » Coordinating subject-specific studies and providing recommendations to ISAF leadership.
- » Leading the working groups and decision-making bodies that addressed modification or establishment of guidelines, tactical directives, standard operating procedures, or fragmentary orders.
- » Collecting and archiving lessons and best practices regarding civilian casualties within ISAF.¹⁰⁰

Externally, expansion of the CCMT sought to strengthen ISAF's relationship with its Afghan counterparts, international organizations, and NGOs. This included:

- » Monitoring implementation of civilian casualty mitigation measures that included ensuring joint Afghan government and ISAF assessment of contentious civilian casualty incidents.
- » Organizing civil-military working groups and conferences.
- » Conducting outreach and interfacing with international organizations and NGOs through bilateral meetings, including with ICRC, UNAMA, the Afghan Independent Human Rights Commission (AIHRC), and others.
- » Pursuing opportunities to strengthen the capacity of the Afghan Government and security forces' civilian casualty avoidance and mitigation capacities.¹⁰¹

The CCMT also documented and followed-up on responses to civilians harmed within the rules of engagement of the forces such as making amends including condolence or ex-gratia payments.

⁹⁸ *Ibid.*, at 6.

⁹⁹ *Ibid.*

¹⁰⁰ *Ibid.*, at 7.

¹⁰¹ *Ibid.*

As the size and responsibilities of the CCMT expanded, so too did the detail of data. By 2011, the data collected by the CCMT included:

- » Date
- » Location
- » Cause
- » Number of casualties.
- » Description of circumstances surrounding the event.
- » Numbers of women and children harmed.
- » Confirmed versus alleged or pending casualties.
- » Whether a TCC investigation was initiated.

New events were entered through a database created to facilitate data entry and standardize information recording. This information was broken down in monthly, weekly, and regional command worksheets for reporting, indicating:

- » Number of civilian casualties.
- » Events or incidents caused by ISAF, ANSF, anti-government groups, or of unknown attribution.
- » Event type.

The tracking data then went to the internal working groups, which used it to formulate recommendations to the chain of command. Data from the mechanisms was used also to influence recommendations for pre-deployment training provided to the TCCs.

US Army, ATP 3-07.6 on Protection of Civilians (October 2015)

Civilian casualty tracking features prominently in US Army ATP 3-07.6 on Protection of Civilians. The document stresses the importance of learning from civilian casualty incidents, including near misses.

Collection, analysis and dissemination of civilian casualty data

Collection, analysis, and dissemination of civilian casualty information horizontally and vertically are critical for civilian casualty mitigation. Insights on civilian casualties can be obtained from a variety of sources, including:

- » Mission after action reviews and debriefs. Assessments of unit experiences.
- » Cross-talk with other units.
- » Data management and analysis.
- » Investigation results.
- » Focused effort to gather lessons from host-nation individuals and organizations, other US government agencies, NGOs, and other actors.
- » Professional literature, social networking websites, and new doctrine.¹⁰²

The document notes that investigations for civilian casualty incidents often contain valuable lessons but are often too restricted to disseminate widely. However, the investigation team can overcome this by producing a summary of key lessons that can be distributed separately from the investigation itself. Since investigations of civilian casualty incidents can vary widely, there is also benefit from the investigation team having a standard list of issues and facts to include in their investigation (see example in **Annex Three**).¹⁰³

¹⁰² US Army, note 48 above, at 5-8.

¹⁰³ *Ibid.*, at 5-8.

Civilian casualty database

Units should maintain an accessible, historical civilian casualty database that includes the “who/what/when/where/why” of incidents. It can also include information regarding the area of operations such as local customs and key points of contact. Such information should be used for lessons learned, as an archive for actions such as amends and as a resource for future units that rotate into the area of operations. This database should be updated as a case progresses and should also include information on the response to the case, including any amends made. It is preferable for such a database to be established early at a high echelon and have subordinate units conform to it, rather than to have subordinate units independently develop their own systems.¹⁰⁴

It notes that despite the inevitable challenge of incomplete and conflicting information, army leaders and staffs must analyze data and significant insights from both involved soldiers and civilians. Pattern analysis can help identify locations where civilian casualty incidents have greater likelihood of occurring as well as the procedures or units that may be prone to cause such incidents. Conversely, analysis might identify useful methods that could be emulated more widely.

Analysis may also provide other relevant insights. For example, the local population may perceive that civilian casualties are a significant problem while army units might believe that a problem does not exist. These dissimilar viewpoints should then be reconciled. Further analysis may reveal that while army units may not be involved in civilian casualty incidents, the population may blame them for not preventing civilian casualties by other actors such as host-nation security forces, security contractors, armed militias, criminal gangs, or the enemy. Additionally, the population may blame army units for hardships and decreased human security resulting from a lack of infrastructure or diminished essential services.¹⁰⁵

Civilian casualty lessons do not come solely from actual civilian casualty incidents, but also from incidents that posed a high risk of civilian casualties which did not actually happen. Such near misses can offer valuable lessons and best practices.¹⁰⁶

Permanent civilian casualty tracking and response element

The document notes that commanders may elect to establish a permanent civilian casualty tracking, assessment, and response element to assist in effective civilian casualty mitigation, collect and analyze data, track progress, incorporate lessons learned, monitor any monetary payments made, and respond promptly to allegations of harm with accurate information. Such an element should be established before deployment and its responsibilities may include:

- » Monitor all movements and engagements, possible civilian casualty incidents, reports, investigations, the synchronization of information-related capabilities, and making of amends.
- » Collect, maintain, analyze, and disseminate civilian casualty data, including lessons learned.
- » Ensure other staff members and subordinate units understand the importance of civilian casualty mitigation as well as their responsibilities for reporting, investigating, and making amends.
- » Provide frequent and accurate assessments to the commander and other key unit personnel.
- » Coordinate effectively with higher, lower, and adjacent units as well as host-nation, US Government, international, and non-governmental organizations.¹⁰⁷

Incident handling

The document notes that officers should be designated to be in charge of incident handling. They should be reasonably senior in the unit but still have the capacity to spend sufficient time on the task. They should also have sufficient operational awareness and ready access to relevant soldiers and information. SOPs should be developed

¹⁰⁴ *Ibid.*

¹⁰⁵ *Ibid.*

¹⁰⁶ *Ibid.*

¹⁰⁷ *Ibid.*, at 5-3.

to address established timelines for investigations and response.

Civilian casualty incidents should be systematically tracked and included in the commander's critical information requirements. Every soldier should be trained on what to do in the case of a known or suspected civilian casualty incident. They should know who to report to and what information to have on hand, as well as how to advise host-nation personnel to bring forward claims or grievances to ensure that all alleged incidents of civilian casualties are treated in the same manner.¹⁰⁸

President of the United States of America, Executive Order – United States Policy on Pre- and Post-Strike Measures to Address Civilian Casualties in US Operations Involving the Use of Force (1 July 2016)

Civilian casualty tracking and other relevant measures are also included in the above-mentioned EO of the US President concerning US policy on pre- and post-strike measures to address civilian casualties in US operations involving the use of force of 1 July 2016.¹⁰⁹ The EO notes that in addition to taking specific measures to better protect civilians in US operations involving the use of force, relevant agencies shall also:

- » Review or investigate incidents involving civilian casualties, including by considering relevant and credible information from all available sources, such as other agencies, partner governments, and NGOs, and take measures to mitigate the likelihood of future incidents of civilian casualties.
- » Acknowledge US Government responsibility for civilian casualties and offer condolences, including ex gratia payments, to civilians who are injured or to the families of civilians who are killed.
- » Engage with foreign partners to share and learn best practices for reducing the likelihood of and responding to civilian casualties, including through appropriate training and assistance.
- » Maintain channels for engagement with the ICRC and NGOs that operate in conflict zones and encourage such organizations to assist in efforts to distinguish between military objectives and civilians, including by appropriately marking protected facilities, vehicles, and personnel, and by providing updated information on the locations of such facilities and personnel.

AMISOM and civilian casualty tracking

Civilian casualty tracking is a key component of the AMISOM indirect fire policy, and the “attribute” step. This is based on the recognition that when AMISOM is responsible for losses, civilians may interpret silence or denial as a sign of intent to cause harm. Even when AMISOM is not responsible, silence and denials give instant credence to any alternative account, no matter how wrong. AMISOM must, therefore, be ready to deal with any allegation or complaint effectively and efficiently, regardless of its origin. It must work to establish responsibility for civilian casualties. How it then responds depends on where the responsibility lies.¹¹⁰

Pursuant to the policy, following any allegation of civilian harm or unwarranted indirect fire, AMISOM will immediately take action to assess and investigate. It will:

- » Record all potential incidents of CIVCAS, regardless of their source.
- » Respond promptly to any incident of CIVCAS, even if only to announce an immediate investigation and give a clear timeline for findings.
- » Where feasible, deploy an Incident Assessment Team (IAT) to the site to record evidence of any allegation and to conduct a full, transparent investigation into harm, dignifying the victims and building trust.¹¹¹

To manage rumours, AMISOM will establish regular liaison structures with the local community, the media and civil society and will regularly cross-check rumours of harm against the casualty tracking cell data (see below).¹¹²

¹⁰⁸ *Ibid.*

¹⁰⁹ *President of the US, note 80 above.*

¹¹⁰ *AMISOM, note 82 above, at 8.*

¹¹¹ *Ibid.*

¹¹² *Ibid.*

The policy then lays out two possible responses to indirect fire incidents:

- » Acknowledge and Apologize. When an AMISOM soldier is accused of causing harm in violation of the ROE, the case should be immediately referred to their Contingent Commander and the Force Commander notified. It should be stated that the matter is under investigation. An apology should be given when an AMISOM soldier causes unintentional harm. AMISOM will explain to the public what happened and make appropriate amends.¹¹³
- » Refute, Rebut and Attribute. If AMISOM is wrongfully accused of using indirect fire, it will refute or rebut the allegations robustly and quickly but only when it is clear AMISOM is not responsible. When AMISOM can confirm that insurgents caused civilian harm through indirect fire, it will report facts as quickly as possible, as part of a wider campaign to isolate the insurgents from the local population and shift the attention of the international community to their violations.¹¹⁴

To enable these responses, the policy provides that AMISOM will:

- » Enhance measures to improve transparency and accountability. AMISOM will ensure that a Force FDC records the use of all indirect fire weapons by contingents, including through “spot” reports filed by soldiers in each potential incident of CIVCAS. The Force Artillery Commander is responsible for setting the technical standards for investigating indirect fire CIVCAS incidents in Boards of Inquiry. Whenever a weapon is involved in a CIVCAS incident, all records are to be held in safe custody, the weapon crews stood back from the weapon itself and all firing data recorded. Technical examinations of the weapon and ammunition are to be conducted. The weapon is not to be used in operations until it has been cleared for use, and no ammunition of the same production lot is to be used until declared safe.¹¹⁵
- » Create a civilian casualty tracking cell, which collates all information from Operations, Intelligence, Legal staff, Force FDC and contingents to brief the Force Commander on the incidents. It will track progress on their subsequent management. This cell will also analyze the proportion of civilian deaths caused by insurgents, AMISOM and TFG troops. This will provide insights into the extent of indiscriminate fire, weapon effects, etc., and help AMISOM’s strategic messaging. This cell will investigate all incidents to enable accurate attribution of responsibility and AMISOM’s follow up. The cell will also contribute to the AAR and lessons-learned process. It must have high-level backing and be resourced properly by TCCs and be empowered to report incidents.¹¹⁶
- » Request that TCCs investigate incidents, to ensure that they are fully investigated and offenders prosecuted. Results should be made available to the public.¹¹⁷
- » Disseminate an AMISOM response on an indirect fire incident through the Public Information Office (PIO). The first imperative is to acknowledge an incident has occurred and to confirm whether AMISOM was involved. This requires a rapid flow of information to the CIVCAS tracking cell, and an initial line to take by the PIO, which should avoid denial of AMISOM’s involvement unless that intelligence is well-established. The target timelines for disseminating an initial report from time of incident should be 30 minutes. This may be as little as acknowledging that AMISOM is aware of the incident and will provide a fuller statement within three hours that explains the incident and AMISOM’s actions. Providing timely, accurate information to the public remains the goal, so this time-line is to be maintained.¹¹⁸

113 *Ibid.*, at 9

114 *Ibid.*

115 *Ibid.*

116 *Ibid.*, at 10.

117 *Ibid.*

118 *Ibid.*

B. No strike policy and collateral damage estimation

Some armed forces have adopted “no strike” policies and collateral damage estimation in order to reduce the impact of hostilities on civilians, including from the effects of explosive weapons.

Chairman of the Joint Chiefs of Staff Instruction, No Strike Policy and Collateral Damage Estimation (12 October 2012)

One such example is the Chairman of the United States Joint Chiefs of Staff Instruction on No Strike Policy and Collateral Damage Estimation of October 2012.¹¹⁹ The no-strike policy provides that no-strike entities (NSEs) are those designated by the appropriate authority upon which kinetic or non-kinetic operations are prohibited to avoid violating international law, conventions, or agreements, or damaging relations with coalition partners and indigenous populations. NSEs are protected from the effects of military operations (i.e., they have a “protected status”).¹²⁰

The source and method for defining a person, place, or thing as an NSE is derived primarily from the law of armed conflict, as well as other international and domestic laws, and significant policy concerns. NSEs are categorized based on their sensitivity: CAT I (most sensitive) and CAT II (less sensitive).

CAT I comprises:

- » Diplomatic offices, foreign missions, and sovereign non-military property of other nations within the AORs.
- » Religious, cultural, historical institutions, cemeteries, and structures.
- » Intergovernmental organizations (e.g., UN, NATO) and NGO property, equipment, and personnel.
- » Medical facilities (both civilian and military).
- » Public education facilities including non-military schools, colleges, universities, child/day care centers, and institutes.
- » Civilian refugee camps and concentrations.
- » Prisoner of war camps and concentrations and government detention facilities/prisons.
- » Facilities whose engagement may result in pollution that cannot be contained to include contamination of standing water, streams, and rivers.
- » Dams or dikes whose engagement may result in the flooding of civilian areas.¹²¹

CAT II includes:

- » Non-military billeting and accommodations including private civilian housing and family housing on military or government property.
- » Civilian meeting places including athletic fields, stadiums, racetracks, parks, civic and convention centers, theaters, amusement parks, markets, and recreational facilities.
- » Public utilities and facilities including those that generate, distribute, or transport electricity, petroleum or water intended for civilian consumption; commercial fuel service stations, civilian mass transit facilities, water supply facilities, waste facilities, urban gas supply, fire stations, postal facilities, police stations, civil defense facilities, and financial institutions.
- » Agricultural processing and storage facilities that produce, market or distribute foodstuffs for civilian consumption.
- » Public utilities, industrial facilities, and storage depots that have the potential to release toxic chemicals that may contaminate air, food, soil or water resources.

¹¹⁹ *Chairman of the US Joint Chiefs of Staff, Instruction – No Strike Policy and Collateral Damage Estimation (12 October 2012)*, available at: <https://publicintelligence.net/cjcs-collateral-damage/>

¹²⁰ *Ibid.*, at B-1

¹²¹ *Ibid.*, at B-1 – B-2.

» Facilities and/or structures for which the functionality/purpose is unknown.¹²²

In addition to NSEs, the policy refers to “collateral objects” that have a geospatial relationship to a target and may be affected or potentially affected by target engagement. Knowledge of the location and function of collateral objects is essential to target development, the no-strike process, and the collateral damage methodology (see below).¹²³

The identification, characterization, and nomination of NSEs are the first steps in the no-strike process. The instruction stresses that the functionality of NSEs must be identified and characterized as accurately as possible. Moreover, NSEs require the same accuracy in location and geospatial definition as that of lawful military targets. Accurate positioning and geospatial development of NSEs and identification of collateral damage/effects concerns is part of both the deliberate and dynamic targeting processes and is a continuous process that does not end when military operations commence. The continuous identification and development of NSEs, well in advance of and throughout military operations, is critical to campaign success.¹²⁴

The instruction provides that no-strike list (NSL) generation and maintenance must be an assigned task with frequent and routine reviews by the Combatant Command (CCMD) No-Strike Coordinator. Active maintenance will ensure the most up-to-date information is available to planners and battle management systems supporting target planning and CDE.¹²⁵

After approval, the geographic combatant commander (CCDR) will ensure routine and timely dissemination of NSLs to all subordinate and supporting commands and supported functional commands with a periodicity appropriate for the tempo of operations. Subordinate and supporting commanders must then ensure the NSL is disseminated down to every level of their commands. Deliberate and dynamic targets must be verified against the latest NSL prior to attack.¹²⁶

The instruction notes that traditional no-strike entities typically consist of facilities and locations important to planners in follow-on stability operations, such as hospitals, food distribution points, and refugee camps. Consequently, the no-strike process remains a priority even after the cessation of major combat operations. By mitigating human suffering and property damage, the no-strike process will accelerate recovery in post-conflict operations and minimize operational limitations routinely imposed as a result of international sensitivities over the humanitarian impacts of military operations.¹²⁷

Collateral damage estimation

The instruction also outlines the methodology for collateral damage estimation (CDE) which aims to mitigate unintended or incidental damage or injury to civilian or non-combatant persons or property or the environment. It assists commanders in weighing risk against military necessity and in evaluating proportionality. In short, the collateral damage methodology (CDM) is a means for a commander to adhere to the law of war.¹²⁸

The instruction defines collateral damage as the unintentional or incidental injury or damage to persons or objects that would not be lawful military targets in the circumstances ruling at the time.¹²⁹ The CDM produces a conservative characterization of the risk of collateral damage for commanders and decision makers. It uses a mix of empirical data, probability, historical observations, and complex modeling for CDE analysis. However, it is inherently limited by the quantity and reliability of collected and analyzed weapons effects data, weapon delivery uncertainties, and target information. Furthermore, the CDM cannot always account for the dynamics of the operational environment.¹³⁰

The CDM supports employment of conventional munitions across the spectrum of conflict. It provides commanders with an understanding of weapon effects, incidental consequences, and mitigation techniques enabling more

¹²² *Ibid.*, at B-4.

¹²³ *Ibid.*, at B-7.

¹²⁴ *Ibid.*, at C-3.

¹²⁵ *Ibid.*

¹²⁶ *Ibid.*

¹²⁷ *Ibid.*, at C-4.

¹²⁸ *Ibid.*, at D-1.

¹²⁹ *Ibid.*, at D-2.

¹³⁰ *Ibid.*, at D-1 - D-2.

balanced, comprehensive judgments. However, CDM is not an exact science. The supporting technical data and processes of the methodology are derived from physics-based computer models which generate statistical results, weapons test data, and operational combat observations. All of these sources contain some degree of inherent variability.¹³¹

The CDM does not predict the actual outcome of weapon employment. The operational environment, weapon reliability, and fidelity of intelligence data are contributing factors that may account for a collateral damage estimate that differs from actual results. Though the CDM follows a rigid process and generates estimated values, neither analysts nor commanders should be under the impression that these values in any way constitute ground truth. Ultimately CDE is an estimative process to help inform a commander's decision-making.¹³²

The CDM and the products derived from CDE are not the only input into a commander's decision making. Operational objectives, end-state considerations, the law of war, ROE, target characteristics, risk to friendly forces, and strategic risk are examples of the many factors that contribute to a commander's decision making. These factors, either alone or in combination, may outweigh the value of the CDM input. This is not to say that collateral damage may not be an overriding issue depending on the operational environment at the time. Therefore, it is important that commanders, at all levels, who may be responsible for performing CDE, focus appropriate command attention and emphasis on the CDM.¹³³

Collateral damage estimates are perishable. Therefore, the CDM must remain responsive to changes in the operational environment, scalable for tactical through strategic application, and common enough for most geographic areas or regions of conflict.¹³⁴

The CDM is not intended to deny a commander the ability to respond to time-sensitive targeting events and should not be used as the sole justification to impede or delay fires for time-sensitive targeting. When the use of force in self-defence is necessary, including in situations with troops in contact, the nature, duration, and scope of force should not exceed that which is required to respond decisively to hostile acts or demonstrated hostile intent. The concept of proportionality in self-defence is consistent with attempts to minimize collateral damage and the other tenets of the law of war during military operations.¹³⁵

Additional caveats relating to the use of the CDM include:

- » The CDM does not account for unknown transient civilian or non-combatant personnel and/or equipment in the vicinity of a target area. This includes cars passing on roads, people walking down the street, or other civilian entities whose presence in the target area cannot be predicted to reasonable certainty within the capabilities and limitations of intelligence collection means. The instruction notes that it is an inherent responsibility for commanders, at all levels, to employ due diligence to identify assemblies of civilian or non-combatant personnel and/or property in the target area and de-conflict target engagements when possible.¹³⁶
- » The CDM does not account for individual marking or adjusting rounds when employing surface-to-surface ballistic munitions in the Observer Adjusted (OA) method of engagement. Commanders should remain cognizant of this and only employ the minimum number of marking or adjusting rounds required to achieve the desired effects on the target.¹³⁷
- » The CDM does not account for the use of cluster or improved conventional munitions (ICM) beyond CDE Level 3 (see below) because of the greater risk of unexploded ordnance and the limited weaponing options available to mitigate the risk of collateral damage with these munitions.¹³⁸
- » Rocket Assisted Projectiles (RAPs) or enhanced/extended range artillery, mortar, and naval gun munitions are not addressed beyond CDE Level 3 due to the considerable increase in ballistic errors associated with these munitions and the significant increase in risk associated with their use in urban areas.¹³⁹

¹³¹ *Ibid.*, at D-2.

¹³² *Ibid.*

¹³³ *Ibid.*, at D-3.

¹³⁴ *Ibid.*

¹³⁵ *Ibid.*, at D-4.

¹³⁶ *Ibid.*, at D-5.

¹³⁷ *Ibid.*

¹³⁸ *Ibid.*, at D-5 – D-6.

¹³⁹ *Ibid.*, at D-6.

COMPILATION OF MILITARY POLICY AND PRACTICE

Reducing the humanitarian impact of the use of explosive weapons in populated areas

- » The CDM does not account for secondary explosions. Collateral damage due to secondary explosions (i.e., weapons cache or fuel tanks for military equipment) cannot be consistently measured or predicted. Commanders should remain cognizant of any additional risk due to secondary explosions.¹⁴⁰
- » While the CDM can be applied to any geographic region, weapons effects may vary in different environments. In general, the CDM and supporting weapon effectiveness data use a combination of flat terrain, rolling hills, and soft soil as the base environment and terrain. Desert and jungle environments, as well as those with hard soil, for instance, may present conditions that change weapon effects. Commanders should consider unique environmental conditions and terrain features along with any analysis from the CDM.

In its most basic form, the CDM centers on five simple questions that must be answered before engaging any target:

- » Can I PID the object I want to affect? For purposes of the instruction, “PID” is defined as “the reasonable certainty that a functionally and geospatially defined object of attack is a legitimate military target in accordance with the law of war and applicable ROE. The instruction notes that recent operational feedback indicates that most collateral damage incidents result from target misidentification.¹⁴¹
- » Are there protected or collateral objects, civilian or non-combatant personnel, involuntary or unwitting human shields, or significant environmental concerns within the effects range of the weapon I would like to use to attack the target?
- » Can I mitigate damage to those collateral concerns by striking the target with a different weapon or with a different method of engagement, yet still accomplish the mission?
- » If not, how many civilians and non-combatants do I think will be injured or killed by the attack?
- » Are the collateral effects of my attack excessive in relation to the expected military advantage gained and do I need to elevate this decision to the next level of command to attack the target based on the ROE in effect?¹⁴²

The collateral damage methodology consists of five levels.¹⁴³ CDE Level 1 is the most important and complex step in the CDM. The information gained during CDE Level 1 is required to accomplish the remaining steps of the methodology.

CDE Level 1

CDE Level 1 analysis answers the first two questions: “Can I PID the object”; and “Are there protected or collateral objects, civilian or non-combatant personnel, involuntary or unwitting human shields, or significant environmental concerns within the effects range of the weapon I would like to use to attack the target.” CDE Level 1:

- » Evaluates the target’s functionality for dual-use concerns
- » Identifies potential chemical, biological or radiological (CBR) plume and environmental hazards
- » Identifies all collateral concerns within the CDE Level 1 collateral effects radius (CER).¹⁴⁴

If the target is PID, is not characterized as a dual-use facility, and does not present either a CBR plume or environmental hazard and there are no collateral objects and/or involuntary or unwitting human shields within the CDE Level 1 collateral hazard area (CHA),¹⁴⁵ the target is estimated as CDE Level 1 Low and may be cleared for engagement. If any of these conditions are not satisfied, the target is estimated as CDE Level 1 High and requires continued analysis.

CDE Level 2

CDE Level 2 begins the process of defining weaponeering options that both achieve the desired target effect and

¹⁴⁰ *Ibid.*

¹⁴¹ *Ibid.*

¹⁴² *Ibid.*, D-A-6 – D-A-7.

¹⁴³ *The five levels are described at D-A-7 – D-A-36.*

¹⁴⁴ *A CER is a radius representing the largest collateral hazard distance for a given warhead, weapon, or weapon class. Ibid., at D-A-3.*

¹⁴⁵ *A CHA is formed by measuring a CER from either the edge of a target facility outline, the aimpoint for a point target, the edge of an engagement zone or artillery sheaf, or target area outline for an area target. Ibid.*

mitigate the potential for collateral damage. This step addresses the third question of the CDM, “Can I mitigate damage to those collateral concerns by striking the target with a different weapon or with a different method of engagement, yet still accomplish the mission?”

Two distinct analyses are employed within CDE Level 2 to guide weapon class selection: Minimum Target Size Analysis and Precision Guided Munitions General Analysis:

- » The Minimum Target Size Analysis evaluates the target engagement with air-to-surface unguided munitions (ASUGM) or surface-to-surface ballistic munitions (SSBM) based comparing the target’s size with the weapon system’s or delivery platform’s delivery error. This analysis provides a simple means to determine the feasibility of engaging a target with unguided or ballistic weapons. The policy notes that since ASUGMs and SSBMs incur a significantly greater delivery error than precision guided munitions (PGMs), target size is a major consideration. Additionally, the increased delivery errors associated with ASUGMs and SSBMs present higher risks of collateral damage than PGMs. The CDM does not support a CDE Level 2 Low estimate for these weapons and requires at least CDE Level 3 analysis.¹⁴⁶
- » PGM General Analysis estimates the risk of collateral damage by employing either a unitary or cluster PGM. The policy notes that point targets and targets that present close-in collateral concerns are best serviced by PGMs.¹⁴⁷

If no collateral objects are located within the CHA, a CDE Level 2 Low estimate is made for the aimpoint or target facility. Targets estimated to be CDE Level 2 Low may be engaged with specific PGMs. If collateral objects are identified within the CHA, a CDE Level 2 High estimate is made for the aimpoint or target facility (depending on the method used). CDE Level 3 analysis is then required.

CDE Level 3

CDE Level 3 begins the process of refining weaponeering options that both achieve the desired effect on the target and mitigate collateral damage, thereby addressing the third question in the CDM process, “Can I mitigate damage to those collateral concerns by striking the target with a different weapon or with a different method of engagement, yet still accomplish the mission?”

The goal of CDE Level 3 is to achieve a low collateral damage estimate while limiting the number of tactical weaponeering restrictions. CDE Level 3 determines appropriate delivery systems, warhead, and fuse combinations that mitigate the risk of collateral damage while still achieving the desired effect on the target.

If the CER value for the selected weapon system, shell, fuse, and engagement method is less than or equal to the distance to the nearest collateral concern, then the target is estimated as CDE Level 3 Low.

If the CER value from the table for the selected weapon system, shell, fuse, and method of engagement is greater than the distance to the nearest collateral concern, the target is estimated as CDE Level 3 High and requires CDE Level 4 analysis. The instruction further notes that for CDE Level 3 High estimates, serious consideration should be given to only engaging the target with PGMs.¹⁴⁸

CDE Level 4

CDE Level 4 completes the process of defining weaponeering solutions that achieve the desired effect on the target and mitigate the potential for collateral damage. This refines the answer to question three of the CDM, “Can I mitigate damage to those collateral concerns by striking the target with a different weapon or with a different method of engagement, yet still accomplish the mission?”

CDE Level 4 is typically the point where mitigation techniques besides fusing are applied. The CDM considers five mitigation techniques. Some of these are built into the methodology as required restrictions; however, other mitigation techniques may be employed given the physical orientation of the target and collateral concerns.¹⁴⁹

¹⁴⁶ *Ibid.*, at D-A-14.

¹⁴⁷ *Ibid.*, at D-A-17.

¹⁴⁸ *Ibid.*, at D-A-22.

¹⁴⁹ In this connection, the United Kingdom’s (UK) Supplement to the NATO Allied Joint Doctrine for Joint Targeting (May 2008) lists a number of measures that can be taken to mitigate and, where possible, eliminate the potential for civilian casualties, including: use of ground forces where possible; use of PGMs; using alternative aiming points; varying the direction from which attacks are mounted; timing an attack to coincide with

COMPILATION OF MILITARY POLICY AND PRACTICE

Reducing the humanitarian impact of the use of explosive weapons in populated areas

- » Delay Fuse/Warhead Burial. Delay fusing for complete warhead burial prior to detonation is a very effective technique for mitigating warhead fragmentation and thus reducing the risk of collateral damage. However, the instruction notes that warhead burial prior to detonation produces a significant secondary debris hazard from the material ejected from the resulting crater.¹⁵⁰
- » Variable Time (VT)/Proximity Fuse. Fusing for an air detonation is an effective technique for mitigating the blast effects of warheads and reducing collateral risk to structures. However, the instruction also notes that the technique presents increased risk to unprotected civilian or non-combatant personnel as the fragmentation pattern is optimized. According to the instruction, this mitigation technique is highly recommended in CDE Level 4 for SSBMs for two reasons. First, the assumption in CDE Level 4 is that the civilian and non-combatant population will seek cover in structures, thus protecting them from the fragmentation effects of warheads.¹⁵¹ Second, SSBMs are area fire weapons that present a significant delivery error problem. In fusing for an air detonation, an SSBM will not impact a collateral structure near the target. As a result, there is a reduced risk of penetrating the structure and violating the protection afforded to the civilians and non-combatants inside.¹⁵²
- » Delivery Heading Restrictions. Restricting the delivery heading of warheads is an effective technique for mitigating the risk of range delivery error. According to the instruction, regardless of delivery method, warheads generally have a tendency to impact long of the intended aimpoint. Additionally, weapon testing has revealed the majority of lethal effects occur in the forward quadrants of warhead detonation along the delivery heading. The lethal effects include both fragmentation and secondary debris from the target.¹⁵³ Therefore, delivery heading restrictions are built into CDE Level 4 process for both PGMs and ASUGMs to reduce the risk of warheads impacting nearby collateral concerns and to mitigate the fragmentation and secondary debris effects to collateral objects in the target area. PGMs and ASUGMs capable of terminal delivery heading designations are restricted in CDE Level 4 estimates to those headings that cause the warhead to impact away from and parallel to nearby collateral concerns.
- » Shielding. Intervening structures, significant vegetation, and, in some very rare cases, terrain may shield collateral concerns from weapon effects. Shielding has proven a very effective technique for mitigating warhead fragmentation, blast, and debris. However, the instruction notes that shielding can only be employed when an entity capable of shielding a warhead's effects is located between the intended aimpoint and a collateral concern.¹⁵⁴
- » Aimpoint Offset. In some instances, depending on the target's composition, size, and the desired effect, the aimpoint may be altered or moved to a location whereby the associated CER and resulting CHA no longer affect a collateral concern.

If the CER for the selected weaponizing decision is less than or equal to the distance to the nearest collateral concern, the target is estimated as CDE Level 4 Low. If the CER for the selected weaponizing decision is greater than the distance to the nearest collateral concern the target is estimated as CDE Level 4 High and referred to CDE Level 5.

CDE Level 5

CDE Level 5 is used when all reasonable and known mitigation techniques have been exhausted and some level of collateral damage appears unavoidable. In addition, CDE Level 5 is performed when CDE Level 1 analysis determines the presence of involuntary or unwitting human shields; CBR or environmental hazards, and where dual-use targets are factors.

The CDE Level 5 casualty estimate answers the fourth and fifth questions of the CDM, "How many civilians and non-combatants do I think will be injured/killed by the attack?" and "Do I need to elevate this decision to the next

periods of low or no civilian occupancy; issuing warnings when appropriate; attacking alternative elements of a system to achieve a similar effect; and selecting alternative influence activity solutions. See NATO, Allied Joint Doctrine for Joint Targeting, AJP-3.9 (May 2008), UK Supplement, para. S7.

150 Chairman of the US Joint Chiefs of Staff, note 119 above, at D-A-27.

151 It should be noted that this is an assumption and may not always be the case, depending on the context.

152 Chairman of the US Joint Chiefs of Staff, note 119 above, at D-A-27.

153 *Ibid.*, at D-A-27 – D-A-28.

154 *Ibid.*, at D-A-28.

level of command to attack the target based on the ROE currently in effect?" The instruction notes that similar to the rest of the CDM, the casualty analysis is not an exact science. No precise means exists to predict non-combatant demographics, and this effort is limited to the knowledge of the unique characteristics and cultural behaviours of the region and country as well as the population distributions, customs, and cultural practices, as well as particular habits unique to a region. As noted, the CDM does not take into account transient civilian or non-combatant personnel or equipment (unless precise data are known).¹⁵⁵

European Union Military Committee, Avoiding and Minimizing Collateral Damage in EU-Led Military Operations Concept, EEAS (2015) 772 REV 8 (3 February 2016)

The importance of using CDM as a means of avoiding and minimizing collateral damage is emphasized also in the EU Military Committee's concept for avoiding and minimizing collateral damage in EU-led military operations of February 2016.¹⁵⁶ The concept states at the outset that concerns about causing collateral damage can potentially reduce military operational effectiveness. In addition, collateral damage issues distract public and media opinion from the substance and intent of the EU-led military operation and may even increase the risk of strategic defeat.¹⁵⁷

The concept notes that collateral damage avoidance/minimization is a legal obligation in particular as regards civilian casualties and it is an important investment to maintain legitimacy and ensure eventual success. Failure to avoid/minimize civilian casualties caused by lethal action such as direct and indirect fires during attacks will generate resentment and undermine popular support and it will undermine EU policy objectives as well as the EU-led military operations, while assisting opposing parties. Opposing parties may exploit civilian casualties' incidents and civilian casualties are likely to incite increased opposition to EU-led military operations¹⁵⁸ EU-led military forces will face particular challenges when civilians are involved in or otherwise affected by hostilities. Specific actions may have to be postponed or modified if collateral damage would undercut mission goals or political support.¹⁵⁹

The concept states that guidance on avoiding and minimizing collateral damage should be given to the Operational Commander by the EU's Political and Security Committee /Council, for the specific EU-led military operation. It further states that such guidance may impose limitations not required under the law of armed conflict, but which are instead derived from other considerations, such as political policy or strategic considerations.¹⁶⁰ It later notes that policy considerations may lead to ROE that are more restrictive than what is legally required.¹⁶¹

In all situations in which there has been a possible case of collateral damage, the concept notes that there is an absolute requirement for a complete assessment to be undertaken in order to determine whether genuine mistakes may have been made, and to quickly establish the facts surrounding the incident.¹⁶²

In terms of implementation, it is noted that a standard collateral damage estimation methodology should be adopted for each operation,¹⁶³ the contents of which are described in an annex and closely resemble that described in the above-mentioned Chairman of the United States Joint Chiefs of Staff Instruction on No Strike Policy and Collateral Damage Estimation of October 2012.¹⁶⁴

¹⁵⁵ *Ibid.*, at D-A-31.

¹⁵⁶ *European Union Military Committee, note 29 above.*

¹⁵⁷ *Ibid.*, para.7.

¹⁵⁸ *Ibid.*, para.8.

¹⁵⁹ *Ibid.*, para.9.

¹⁶⁰ *Ibid.*, para.37.

¹⁶¹ *Ibid.*, para.38d.

¹⁶² *Ibid.*, para.38g.

¹⁶³ *Ibid.*, para.41.

¹⁶⁴ *The concept notes that the annex was developed on parts of the existing NATO collateral damage estimation methodology of 26 January 2011. See *ibid.*, footnote 11, at 9.*

C. Battle damage assessment

Reference has been made to BDAs which estimate target damage or effect and can be also be used to assess collateral damage.

US Chairman of the Joint Chiefs of Staff, Joint Targeting - Joint Publication 3-60, Appendix D (31 January 2013)

BDAs are explained in the Joint Targeting Joint Publication of the Chairman of the US Joint Chiefs of Staff of January 2013.¹⁶⁵ According to this document, BDA is the estimate of target damage or effect which is based on physical damage assessment, change assessment, and functional damage assessment, as well as target system assessment, resulting from the application of lethal and nonlethal capabilities.¹⁶⁶

The document states that BDA must be treated as an integral component of the joint targeting process and must not be conducted as a separate, post-attack activity: BDA planning should occur early in the joint targeting cycle to improve effectiveness and timeliness of BDA. Effective BDA requires a coordinated and integrated effort between joint force intelligence and operations functions.¹⁶⁷

BDA is composed of physical damage/change assessment, functional damage/change assessment, and target system assessment, typically taking a three-phased approach to proceed from a micro-level examination of the damage or effect inflicted on a specific target element, to ultimately arriving at macro-level conclusions regarding the functional outcomes created in the target system:

- » A physical damage assessment is an estimate of the quantitative extent of physical damage (through munitions blast, fragmentation, or fire damage) to a target element based on observed or interpreted damage.
- » Functional damage assessment is an estimate of the degradation or destruction of the functional/operational capability of a target to perform its intended mission. Functional assessments are inferred from the assessed physical damage and all source intelligence information.
- » Functional assessment of the higher-level target system is a broad assessment of the overall impact on an adversary target system relative to the targeting objectives established.¹⁶⁸

The document notes that: "Collateral damage is also assessed and reported during BDA. Collateral damage is unintentional or incidental injury or damage to persons or objects that would not be lawful military targets in the circumstances ruling at the time."¹⁶⁹

US Army, ATP 3-07.6 on Protection of Civilians (October 2015)

The joint targeting document does not expand on how collateral damage is to be assessed and reported during a BDA. However, further information is provided in the US Army's ATP No. 3-07.6 on Protection of Civilians.

This notes that accurate information on civilian casualties may be obtained through a civilian casualty BDA in which army units inspect the site where the incident took place to understand what effects an operation had on the civilian population. The document notes that units must be prepared to support basic site exploitation activities including evidence preservation, biometric enrolment, and forensic collection. Site exploitation may require specialty teams with capabilities typically not found in Brigade and below conventional force maneuver units. Host-nation security forces, which can be more culturally attuned to the population, may be better able to find key evidence at the site. Storyboards based on BDA results can be provided through the chain of command and to inform host-nation civilian and military leaders. It can also be helpful for local or provincial leaders to visit the site and help with investigations, thus adding legitimacy to the findings.¹⁷⁰

¹⁶⁵ US Joint Chiefs of Staff, *Joint Targeting – Joint Publication 3-60 (31 January 2013), Appendix D*. At: http://cfr.org/content/publications/attachments/Joint_Chiefs_of_Staff-Joint_Targeting_31_January_2013.pdf

¹⁶⁶ *Ibid.*, at D-4.

¹⁶⁷ *Ibid.*

¹⁶⁸ *Ibid.*, at D-4-D-6.

¹⁶⁹ *Ibid.*, at D-5.

¹⁷⁰ Department of the Army, note 48 above, at 5-8.

The document notes that on-site BDA is not feasible in all circumstances, due to the locations of army units and threat considerations. When air platforms are involved, full motion video (if available) can be used as a surrogate for on-site BDA. Recorded video can be declassified, if necessary, and used as evidence in an investigation. Recognizing the value of this capability for providing a record of events, aviators may adopt the practice of “talking to the tape”, and provide a narrative of their decisions and the operational context to provide a complete account of a potential civilian casualty incident.¹⁷¹

D. Minimum safe distances and risk estimate distances

The US Army, in its above-mentioned protection of civilians manual, notes that civilian casualty mitigation is similar to fratricide avoidance in many respects, in that both are intended to avoid inflicting casualties upon an unintended target. Civilian casualties are more challenging in that there may be more civilians throughout the area, in unexpected locations, outside of a common command chain with Army units, and in many cases are virtually indistinguishable from the enemy. However, it notes that in the same way that Army units continually consider the possibility of fratricide and take measures to mitigate its risk, they should adopt a similar mindset regarding civilian casualty avoidance.¹⁷²

Key among measures used to mitigate the risk of fratricide is the application of such concepts as “minimum safe distance” (MSD) and “risk estimate distance” (RED). These could usefully be applied by analogy to strengthen the protection of civilians from the effects of explosive weapons.

Department of the Army, The Infantry Rifle Platoon and Squad, FM 3-21.8 (March 2007)

According to the Department of the Army’s Field Manual 3-21.8 on The Infantry Rifle Platoon and Squad (March 2007), when determining risk with indirect fires, leaders use a combination of MSD and RED. The MSD risk is designed for training and ensures that friendly soldiers are far enough away from the effects of munitions so the risk to them is negligible.¹⁷³ RED refers to a safe distance away from a given type of friendly munition and is only used in combat.

Although not defined in field manual 3-21.8, RED is defined elsewhere as the distance in meters from the intended center of impact at which a specific degree of risk and vulnerability will not be exceeded.¹⁷⁴ REDs are divided into two categories based on the percent of incapacitation (PI) to friendly soldiers, expressed as 0.1 PI and 10 PI.

The former (.1 PI) means that one in one thousand Soldiers will not be able to fight because of potential weapon effects. The latter (10 PI) means that one in ten Soldiers will not be able to fight because of weapon effects.

When MSDs and REDs are put together, the leader is able to manage his risk from negligible to 10 PI based on his/her distance from the impact of friendly supporting indirect fire.¹⁷⁵ General policy is that the ground commander must accept responsibility for risk when targets are inside 0.1 PI.¹⁷⁶

¹⁷¹ *Ibid.*

¹⁷² *Ibid.*, at 5-4.

¹⁷³ Department of the Army, *The Infantry Rifle and Platoon Squad, FM 3-21.8 (March 2007)* at 2.10. Available at: http://armypubs.army.mil/doctrine/DR_pubs/DR_a/pdf/fm3_21x8.pdf

¹⁷⁴ Department of the Army, *Tactics, Techniques and Procedures for the Field Artillery Battalion, FM 3-09.21 (March 2001)*, at para.5-99. Available at: <http://www.globalsecurity.org/military/library/policy/army/fm/3-09-21/index.html>

¹⁷⁵ Department of the Army, note 173 above, at 2.10-2.11.

¹⁷⁶ Air Land Sea Application (ALSA) Center, *JFIRE - Multiservice Tactics, Techniques and Procedures for the Joint Application of Firepower (December 2007)*, at 105. Available at: <https://info.publicintelligence.net/MTTP-JFIRE.pdf> ALSA was established by the US Army Training and Doctrine Command, US Marine Corps Combat Development Command, Navy Warfare Development Command and the Curtis E LeMay Center for Doctrine Development and Education to respond to service interoperability issues.

COMPILATION OF MILITARY POLICY AND PRACTICE

Reducing the humanitarian impact of the use of explosive weapons in populated areas

The field manual contains a table¹⁷⁷ of MSDs and REDs for common fire support assets, as follows:

Weapon System	(MSD Training)	RED (Combat)	
		0.1PI	10PI
60mm Mortar (M224)	250m	175m	65m
81mm Mortar (M252)	350m	230m	80m
120mm Mortar (M120/M121)	600m	400m	100m
105mm Artillery (M102/M119)	550m	275m	90m
155mm Artillery (M109/M198)	725m	450m	125m
155mm Artillery (DPICM)	725m	475m	200m

More extensive tables covering mortar, cannon, naval gunfire, Tomahawk land attack cruise missile, fixed- and rotary winged risk estimate distances can be found in Air Land Sea Application Center, JFIRE – Multi-service Tactics, Techniques, and Procedures for the Joint Application of Firepower (December 2007).¹⁷⁸

¹⁷⁷ Department of the Army, note 173 above, at 2.11.

¹⁷⁸ ALSA, note 176 above, at 105 et seq.

Annex Three: Civilian Casualty Data Collection¹⁷⁹

Section 1 of this appendix includes civilian casualty data elements that can be incorporated into standard unit incident reports. Section 2 contains data elements and issues of inquiry that civilian casualty investigations should consider. They should also be provided to replacement units to facilitate their deployment preparation and preserve institutional knowledge.

CASUALTY INCIDENT REPORTS

SECTION 1: DATA ELEMENTS FOR UNIT SUBMITTED CIVILIAN CASUALTY INCIDENT REPORTS

A-1. Reports and investigations should be disseminated horizontally and vertically to increase situational understanding.

GENERAL INCIDENT INFORMATION

A-2. General incident information includes—

- » Date and time of the incident.
- » Location of the incident (include grid reference as well as village, province, address, or other identifying information).

UNIT INFORMATION

A-3. Unit information includes the unit name (including parent organizations up to brigade level). This should be standard numerical identification, not nicknames of units.

MISSION SPECIFIC INFORMATION

A-4. Mission specific information discusses—

- » Type of mission (such as convoy, checkpoint, raid, operational area security, of reconnaissance patrol).
- » Time and duration of operation.
- » Weather conditions.
- » Facts and circumstances that led to the engagement.
- » Involvement and role of host-nation security units.

¹⁷⁹ From Department of the Army, note 48 above, at A-1.

ENGAGEMENT INFORMATION

A-5. Engagement information answers each engagement that results in civilian casualties.

Shooter Information

A-6. Shooter information identifies—

- » Unit or nationality.
- » Time in the theater of operations during this deployment.
- » Number of previous deployments.
- » Shooter location (grid reference and description).

Target Information

A-7. Target information answers—

- » Intended target (with grid reference and description).
- » Range from the shooter to the intended target.
- » How unit acquired target identification (hostile act, hostile intent, or deliberate targeting).
- » What rules of engagement (ROE) unit used for the engagement.
- » If unit maintained target identification throughout the entire engagement.
- » What weapon system was used.
- » What ammunition was used.
- » From what platform the unit fired the weapon.
- » If shooter was under effective enemy fire.
- » If rounds impacted their intended target. If no, explain.
- » If weapon malfunctions were a factor in the engagement. If so, how?
- » If obscuration impacted the shooter's ability to engage the target. If so, how?
- » Number of confirmed and suspected civilians wounded and/or killed during this engagement.
- » If civilian casualties were caused as a primary effect (primary munitions hit civilians) or a secondary effect (falling debris hit civilians).
- » Whether the rounds (during an escalation-of-force incident) that caused civilian casualties were intended to be warning, disabling, or killing shots.

BATTLE HANDOVER AND BATTLE DAMAGE ASSESSMENT INFORMATION

A-8. Battle handover and battle damage assessment information answers—

- » If a battle handover occurred after the mission. If so, to which unit.
- » Whether a battle damage assessment (BDA) focusing on identifying civilian casualties was conducted after the operation.
- » How soon after the operation was complete that the civilian casualties battle damage assessment was conducted.
- » If there were factors limiting the civilian casualty battle damage assessment. If so, explain.

MITIGATION INFORMATION

A-9. Mitigation information answers—

- » If medical care was provided to any civilian casualties.
- » If key leader engagements were conducted. If so, what was the effect?
- » If ex gratia payments were made. If so, to whom and in what amount.
- » How soon after the mission payments were made.
- » If any information efforts conducted. If so, explain.
- » If any additional mitigation measures were taken. If so, explain.

SECTION 2: DATA ELEMENTS AND ISSUES OF INQUIRY FOR INVESTIGATION REPORTS

A-10. The following required set of data elements are recommended for every civilian casualty investigation to capture the lessons and identify trends in order to facilitate operational learning. Investigations should be distributed throughout the chain of command, shared with adjacent units, and provided to replacement units.

GENERAL INCIDENT INFORMATION

A-11. General incident information answers—

- » Date and time of the incident.
- » Location of the incident (grid reference as well as village, province, address, or other identifying information).
- » Number of civilians confirmed killed.
- » Number of civilians confirmed wounded.
- » Number of civilians suspected killed.
- » Number of civilians suspected wounded.
- » List of names, ages, genders, and type of injury for all casualties.
- » Previous incidents at or near this location.

UNIT INFORMATION

A-12. Unit information answers—

- » Unit name (including parent organizations up to brigade level). This should be standard numerical identification, not nicknames of units.
- » Time this unit or individual has been in theater on current deployment.
- » Unit's authorized, assigned, and available strength.
- » If the unit was trained on ROE. If so, the date of the last training.
- » If the unit was trained on escalation-of-force (if this is an escalation-of-force incident). If so, date of the last training.
- » If unit has experienced any casualties in the previous 30 days. If so, explain.

MISSION SPECIFIC INFORMATION

A-13. Mission specific information answers—

- » Type of mission unit was conducting (convoy, checkpoint, raid, operational area security, or reconnaissance patrol).
- » If this a deliberate operation or if this was an operation with a condensed planning timeline.
- » How much time the unit had for mission planning.
- » If this unit had conducted this type of mission before. If so, how many times.
- » What time the operation began or ended.
- » If this was a day or night operation?
- » What the enemy situation was before the operation.
- » What the civilian situation was before the operation.
- » What the weather conditions were during this operation.
- » If troops were in contact with the enemy and the circumstances of the engagement.
- » If HN security forces were involved in the mission. If so, explain.
- » If any civilian leaders were involved in the planning process for the mission. If so, explain.

ENGAGEMENT INFORMATION

A-14. Engagement information answers for each engagement that results in civilian casualties.

Shooter Information

A-15. Shooter information identifies—

- » Unit.
- » Nationality.
- » Time in theater for this deployment.
- » Number of previous deployments.
- » Amount of rest before the start of the operation.
- » Shooter location (grid reference and description).
- » ROE used for the engagement.
- » Weapon system used.
- » Type of ammunition used.
- » From what platform was the weapon fired (truck, tank, aircraft).
- » If the shooter was under enemy fire.
- » If shooter was qualified on the weapon system used.
- » If rounds impacted their intended target. If no, explain.
- » If weapon malfunctions were a factor in the engagement. If so, how?

Target Information

A-16. Target information answers—

- » Intended target.
- » Target location (grid reference and description).
- » Range of the shooter to the intended target.
- » How target identification was acquired (hostile act, hostile intent, or deliberate targeting).
- » If target identification was maintained throughout the entire engagement.
- » If obscuration impacted the shooter's ability to engage the target. If so, how?
- » Number of confirmed and suspected civilians wounded and/or killed for this engagement.
- » If civilian casualties were caused as a primary effect (primary munitions hit civilians) or a secondary effect (falling debris hitting civilians).
- » If this was an escalation-of-force incident, whether the rounds that caused civilian casualties were intended to be warning, disabling, or killing shots.

CLOSE AIR SUPPORT (CAS) OR CLOSE COMBAT ATTACK (CCA) INFORMATION

A-17. Close Air Support or Close Combat Attack information answers—

- » If a 9-line CAS call or 5-line CCA brief was provided.
- » If the aircraft was under enemy fire.
- » If the controller or CCA requester was under enemy fire.
- » Supported commander's desired effect.
- » Who made the weaponeering decision.
- » If friendly locations were exchanged between the controller/requester and aircrew.
- » If civilian locations were exchanged between the controller/requester and aircrew.
- » If the target location was agreed upon between the controller/requester and aircrew?
- » If a joint fires observer was involved.
- » If target was visible to the controller or requester.
- » What the range was from the controller or requester to the target.
- » How positive identification of the target was established.
- » How and by whom a collateral damage estimation was performed.
- » The altitude of the aircraft.
- » What CAS/CCA control type was used (1, 2, or 3).

BATTLE HANDOVER AND BATTLE DAMAGE ASSESSMENT INFORMATION

A-18. Battle handover and battle damage assessment information answers—

- » If a battle handover occurred after the mission. If so, to which unit.
- » If the battle handover was preplanned or impromptu.
- » If BDA was focused on identifying civilian casualties conducted after the operation.
- » How soon after the operation was complete that the civilian casualty BDA was conducted.
- » Explain how the civilian casualty BDA was conducted.
- » If the initial civilian casualty BDA identified all of the civilian casualties. If not, how were additional civilian casualties identified?
- » If there were limiting factors with the civilian casualty BTM. If so, explain.

MITIGATION INFORMATION

A-19. Mitigation information answers—

- » Whether medical care was provided to any civilian casualties.
- » How soon medical care was provided.
- » If any civilian casualties were evacuated for additional medical care. If so, explain.
- » If medical assistance was coordinated with family, and tribal leaders, if necessary.
- » If any key leader engagements were conducted. If so, at what level, with whom, and how soon after the mission?
- » If ex gratia payments were made. If so, to whom, in what amount, and how soon after the mission were payments made?
- » If any information measures were taken. If so, explain.
- » If military information support operations and public affairs efforts were conducted to rebut enemy propaganda.
- » If there were any additional mitigation measures taken. If so, explain.
- » If these measures were successful, and why.

DISSEMINATION

A-20. Dissemination information answers—

- » When and to whom were reports and any updates disseminated.



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