Improving Protection of Humanitarian Organizations in Armed Conflict

Larry Lewis

Abstract

Humanitarian organizations continue to be the subject of tragic attacks, causing them harm and limiting vital services from aiding the civilian population. In this report, we leverage CNA's body of work on civilian harm, including attacks on humanitarian organizations, to identify four broad steps militaries can take to minimize these tragic incidents and improve protection of humanitarian organizations. These steps are: improve communication channels between militaries and humanitarian organizations; strengthen deconfliction in military targeting processes; develop stronger tools for recognizing humanitarian organizations on the battlefield; and reinforce learning and accountability measures to help reduce the risk of attacks and other disruptions to humanitarian organizations and their activities. This paper discusses possible approaches to bolstering each of these four steps. We conclude with how some of these solutions can be leveraged to better strengthen the protection of civilians overall, including the creation of a general information architecture for civilians.

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Executive Summary

Despite one hundred and fifty years of international law seeking to promote humanity and reduce suffering in armed conflict, civilians continue to suffer in war. One particular tragedy is that humanitarian organizations continue to be the subject of tragic attacks, and too many times they are obstructed or harassed by security forces, causing them harm and limiting vital services from aiding the civilian population. In this report, we discuss steps militaries can take to help reduce these tragic incidents and improve protection of humanitarian organizations—and of civilians overall.

Communication is vital to the act of protection. In particular, two types of communication can collectively strengthen the practical protection of humanitarian organizations in armed conflict: humanitarian notification and civil-military (CIV-MIL) coordination. We discuss the use of a prototype humanitarian notification system (HNS) and how such a system can improve the overall quality and consistency of information over current ad hoc processes, simplifying the work of militaries to integrate it into military systems and processes and creating a stronger foundation for effective deconfliction. This system can also be used to strengthen CIV-MIL coordination more broadly.

Military deconfliction is intended to leverage communication with and information regarding humanitarian organizations in order to avoid tragic attacks. Deconfliction processes help ensure that engagement decisions are informed by knowledge regarding humanitarian and civilian entities in targeted areas. We discuss both of these deconfliction processes generally and how improved information—obtained, for example, through the discussed prototype HNS—could be used to further strengthen deconfliction processes beyond the historically narrow approach of the no-strike list (NSL).

When deconfliction processes fail, identification of humanitarian organizations can serve as a safety net, averting inadvertent attacks. Yet history shows that such identification can be challenging, especially in the light of recent technological advances in military sensors. We suggest some ways to improve identification, including through multi-signature markings, additional tools for identification leveraging artificial intelligence (AI), and deeper integration of information regarding civilian objects and humanitarian organizations in military data links and operator displays.

An essential element of reducing the patterns of attacks on humanitarian organizations is strengthening learning and accountability processes. We have discussed three approaches to achieving this approach: where countries can take steps themselves, where partners and providers of military assistance can act, and where all countries can work for the improved

protection of humanitarian entities and of civilians overall. To be effective, this approach should go beyond the largely reactive and declarative international mode and seek to become more proactive. Such an approach should also include a stronger commitment to bilateral cooperation and conditionality from countries that provide military assistance in order to seek improved conduct and operational outcomes.

We conclude with how some of these solutions can be leveraged to better strengthen the protection of civilians overall, including the creation of a general information architecture for civilians. These proposed solutions point to an underlying truth: there is much more than can be done to strengthen the protection of civilians, including protecting humanitarian organizations. Civilians may always suffer in war, but such suffering can be reduced. This report serves as a starting point for developing more ambitious and comprehensive solutions toward that goal.

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Introduction

Warfare can vary greatly in different contexts: urban operations versus rural, high-tech airborne warfare or ground warfare with small arms fire, international conflicts or internal conflicts. One constant in all these contexts is that civilians suffer. In the United Nations' 2021 *Protection of Civilians in Armed Conflict* report, the UN Secretary-General summarized the results of armed conflict in 2020 on civilians:

> Armed conflict continued to be characterized by high levels of civilian death, injury and psychological trauma, sexual violence, torture and disappearance, as well as damaged and destroyed homes, schools, markets, hospitals, and essential civilian infrastructure, such as electrical and water systems. The threat of famine resurfaced, with the worst hunger and highest risks of famine clustered in conflict-affected areas. Conflict, environmental degradation, and climate risks converged, with vast humanitarian consequences. More people were forcibly displaced in mid-2020 than the year before.[1]

Humanitarian action during armed conflict is intended to help ease the suffering of civilians. When a government or another party to the conflict has effective control of territory, it is obligated either to meet the needs of civilians or to give consent to impartial humanitarian organizations. Such consent includes the provision of services (such as medical care or food), the unimpeded passage of supplies, and the movement of supporting aid workers and staff.[2] Likewise, these humanitarian organizations are guided by an overall imperative to prevent or ease human suffering, as well as humanitarian principles such as impartiality, neutrality, and independence. Humanitarian groups are impartial: they are guided solely by needs and urgency, without regard to affiliation, allegiance, or other factors. They are also neutral and independent: they commit not to take sides or to contribute to military objectives as part of their humanitarian work. They receive legal protection from attack or interference in part because of this commitment.[3] Recognizing the importance of humanitarian action, in 1947 all

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[1] United Nations Security Council, *Protection of Civilians in Armed Conflict*, Report of the Secretary-General, UN doc. S/2021/423, May 3, 2021, https://www.securitycouncilreport.org/atf/cf/%7B65BFCF9B-6D27-4E9C-8CD3-CF6E4FF96FF9%7D/_s_2021_423.pdf.

[2] Bosko Jakovljevic, "The Right to Humanitarian Assistance—Legal Aspects," *International Review of the Red Cross,* no. 260 (October 1987), https://international-review.icrc.org/articles/right-humanitarian-assistance-legal-aspects.

[3] Dapo Akande and Emanuela-Chiara Gillard, *Oxford Guidance on the Law Relating to Humanitarian Relief Operations in Situations of Armed Conflict,* United Nations Office for the Coordination of Humanitarian Affairs, 2016, p. 11, https://reliefweb.int/sites/reliefweb.int/files/resources/Oxford%20Guidance%20pdf.pdf.

nations built in protections for these organizations into the international community's Law of Armed Conflict (also known universally as international humanitarian law, or IHL).

Despite their vital importance to civilians and their protected status, humanitarian organizations—including hospitals, medical care workers, and organizations providing food and other essential supplies—are regularly attacked and harassed in armed conflicts. Some cases of attacks on humanitarian organizations appear to be either deliberate or reckless, which can amount to war crimes under IHL. For example, dozens of airstrikes on medical facilities in Syria by the Syrian regime and by Russia appear to fall into this category.[4]

But recent operations show that these tragic attacks can also happen with the US and other countries that state their commitment to complying with IHL—for example, in a US strike on a Médecins Sans Frontières (MSF, or Doctors Without Borders) hospital in Afghanistan as well as numerous airstrikes on medical facilities by the Saudi-led coalition in Yemen. In one example, in December 2015, the following was observed:

> In at least the twentieth airstrike on a health facility, the Saudi-led coalition bombed an MSF mobile clinic in Taiz, right after MSF had urgently called on the coalition to avoid its clinic during an ongoing air attack against targets in the city. The hospital was on the no-strike list, had a logo on the roof, and MSF had shared its coordinates with the Saudis. When airstrikes hit the neighborhood of the hospital, MSF contacted its Saudi military liaison to seek to prevent an attack on the clinic, without success.[5]

This example shows how effective communication between humanitarian organizations and militaries is vital to ensuring protection of these organizations during armed conflict. While the military in this case had information internally about the location of the humanitarian organization—on the no-strike list, a list of civilian entities that cannot (normally) be attacked—the military did not effectively deconflict its attacks using this information. The military force also failed to observe key details that could have alerted it to the nature of the location as a humanitarian entity protected by IHL. The incident shows that mistakes can tend to be repeated again and again—this incident was the twentieth such in the first year of the Saudi-coalition's operations in Yemen.

This case illustrates four broad steps militaries can take to minimize these tragic incidents and improve protection of humanitarian organizations:

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[4] Christiaan Triebert, Evan Hill, Malachy Browne, Whitney Hurst, and Dmitriy Khavin, "How Times Reporters Proved Russia Bombed Syrian Hospitals," *New York Times,* October 13, 2019, https://www.nytimes.com/2019/10/13/reader-center/russia-syria-hospitals-investigation.html.

[5] Leonard Rubenstein, *Perilous Medicine: The Struggle to Protect Health Care from the Violence of War,* New York: Columbia University Press, 2021, 163.

- Improve communication channels between militaries and humanitarian organizations

- Strengthen deconfliction in military targeting processes

- Develop stronger tools for recognizing humanitarian organizations on the battlefield

- Reinforce learning and accountability measures to help reduce the risk of attacks and other disruptions to humanitarian organizations and their activities.

This paper discusses possible approaches to bolstering each of these four steps. It is intended to serve as a starting point in developing comprehensive solutions for the chronic challenge of protecting humanitarian organizations in armed conflict. The paper concludes with how some of these solutions can be leveraged to better strengthen the protection of civilians in the midst of armed conflict overall.

Why this paper?

Over the past two decades, CNA has spearheaded an analytical approach to the problem of civilian harm in armed conflicts. Our body of work on the topic includes analysis of several thousand real-world incidents of civilian harm from military operations. Based on this analysis, we have developed frameworks to guide practical civilian protection measures. These frameworks include the root causes of civilian harm, a civilian protection life cycle demonstrating a comprehensive approach to mitigating harm, and an approach for promoting the minimization of civilian harm with partner nations in security cooperation programs. These all help illustrate the kinds of practical actions that are possible for meeting the goal of mitigating civilian harm.

Our analysis has included examination of real-world incidents involving health care and humanitarian organizations. In 2020, the US Agency for International Development (USAID) began a project with MIT–Lincoln Laboratory (MIT-LL) to develop a new tool—a humanitarian notification system (HNS)—to help strengthen the protection of humanitarian organizations in armed conflict. MIT-LL asked CNA to support this effort by providing perspectives based on our body of work. This paper is a result of that project. Here we include how the USAID-sponsored HNS can be used to better protect humanitarian organizations. We also address other components of protection that further that overall goal based on analysis of real-world operations and the kinds of factors that lead to attacks on them and on civilians caught in the midst of armed conflicts.

Improve Communication Channels Between Militaries and Humanitarian Organizations

Communication is vital to the act of protection. In this section we discuss two types of communication that collectively strengthen the practical protection of humanitarian organizations in armed conflict: humanitarian notification systems (HNS) and civil-military (CIV-MIL) coordination.

Humanitarian notification

According to IHL, parties to a conflict must ensure the free movement of humanitarian activities and take all feasible precautions to avert or minimize loss to humanitarian personnel, facilities, equipment, and supplies.[6] The fog of war makes tracking and identification of entities on the battlefield challenging, but formal humanitarian notification processes have emerged over the past two decades to help maximize the opportunity for parties to the conflict to identify entities entitled to protection in order to reduce possible attacks on humanitarian actors or impede their activities. These humanitarian notification processes involve voluntary reporting by humanitarian organizations to parties to the conflict that are intended to inform military forces of locations and activities.

These processes are still largely ad hoc in nature and vary from country to country. This situation has resulted in a number of challenges for militaries and humanitarian organizations, including the following:

- Different processes and expectations from theater to theater
- Incompatible notification systems among different humanitarian organizations
- Different submission formats and requirements
- Data accuracy and duplication challenges
- Latency in reporting and processing

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[6] According to various sources on international humanitarian law (IHL), "parties to a conflict" can include national militaries, state-organized paramilitary groups, or non-state armed groups. In this report, we focus on national militaries, but we note that any organized armed group is subject to IHL obligations (and, relevant to this section, can be involved in humanitarian notification). See, for example, Médecins Sans Frontières, *The Practical Guide to Humanitarian Law,* "Parties to the Conflict," https://guide-humanitarian-law.org/content/article/3/parties-to-the-conflict/, accessed March 13, 2022.

- Little transparency in the security and distribution of reporting submissions.

Hence it is not surprising that there is often a lack of trust between humanitarian groups and militaries regarding the humanitarian notification process in general. Humanitarian organizations regularly voice their concerns about the effectiveness of humanitarian notification, including questions about whether militaries have received, or find credible, their self-submitted reports. Even more concerning is the fact that humanitarian organizations continue to be the subjects of attacks in armed conflict or suffer harassment or disruption of their travel at the hands of security forces—despite (or, worse, because of) the military notification processes. These actions not only run contrary to international law, but they also hinder care and services vital to vulnerable civilian populations caught in the middle of conflict zones and bolster the mistrust among humanitarian organizations that their information is being used against them.

To this end, USAID is leading the R&D effort on a new humanitarian notification system (HNS) that can help address these types of challenges to humanitarian notification processes. Spearheaded by MIT–LL and supported by CNA and Stanford University, the new HNS uses blockchain technology to provide security and incorruptible records, thereby promoting trust in the notification system by creating an audit trail that can be leveraged for learning and accountability. The prototype system makes it easier for organizations to update their information individually to increase timeliness of individual submissions in formats that promote accuracy. Humanitarian organizations have control over what organizations receive their reports and can request confirmation of receipt by militaries.

Collectively, this prototype HNS improves the overall quality and consistency of information over current ad hoc processes, simplifying the work of militaries to integrate it into military systems and processes and creating a stronger foundation for effective deconfliction. In the following sections of this paper, we discuss specific applications where the features of this prototype HNS can be leveraged—specifically, in deconfliction and in learning and accountability. The HNS can also be used to strengthen the overall quality of CIV-MIL coordination through the use of metrics calculated with data available in the HNS, and we begin our discussion of this application directly below.

CIV-MIL coordination and metrics

Periodic meetings between humanitarian organizations (or an intermediary organization that is collectively managing humanitarian inputs) and militaries (or parties to the conflict in general) are essential for managing effective communication in the CIV-MIL relationship and promoting the exchange and effective use of such information. One advantage of the prototype HNS is that the standardized exchange of secured and validated information allows these civil-military exchanges to more easily include metrics for helping to focus them on key issues

regarding notification, deconfliction, learning, and accountability. These metrics can be generated for a particular participating humanitarian organization (with its consent) or aggregated for the total or a subset of participants to be used by an intermediary organization (where data on specific organizations is kept anonymous). These data can then be exchanged with parties to the conflict to help discuss specific issues, acknowledge areas of concern, and respond to systemic challenges and risks.

For example, we suggest the following metrics that can be calculated directly from information in the HNS:

- **Overall messages sent: the total number of HNS messages transmitted to a party to the conflict.** The number of messages should be over a set period of time, which can be mutually agreed upon. Ideally, this number can be compared with the number of messages received by a particular party to the conflict in order to verify that messages are being received as expected.

- **Percentage of messages with receipt indicated: the percent of messages sent to a party to the conflict that was indicated as received by a subsequent message from the party to the conflict.** Since humanitarian organizations tend to prefer receiving a formal indication that their information was received by parties to the conflict, this metric measures the relative frequency that these receipt indicators have in fact been sent.

- **Average delay in receipt: the average period of time between a message being transmitted to a party to the conflict and its subsequent sending of a receipt message.** This metric provides an indicator of the relative amount of time humanitarian organizations have waited before receiving an indication that their information was received by a party to the conflict.

There are also vital pieces of information that are not directly captured in the HNS but can be verified in part by HNS information: incidents where humanitarian organizations were attacked, interfered with, or harassed:

- Number of cases where humanitarian organization participants in the HNS were attacked over the period of interest (e.g., in the last three months, if CIV-MIL coordination meetings are scheduled every three months)

- Number of cases where humanitarian organization participants in the HNS were interfered with or harassed over the period of interest.

These metrics can then be discussed with a party to the conflict, including the status of their investigations and/or assessments, accountability measures, and corrective actions that have been put in place to mitigate the risk of future incidents. Importantly, these metrics should be tracked over time, so that concerning trends (e.g., a drop in the percent of messages receiving

receipt messages, or an increase in attacks on or harassment of HNS participants) can be identified and resolved. Leveraging data from the prototype HNS, this CIV-MIL coordination process can help improve humanitarian notification overall and prompt more effective learning and accountability by militaries and other parties to the conflict.

Strengthen Deconfliction in Military Targeting Processes

The US military never intended to strike an MSF hospital during an operation in Kunduz, Afghanistan, but that is what happened in an incident during Operation Enduring Freedom in October 2015. A US AC-130 gunship was responding to a call for air support from US and Afghan forces under attack, and the US aircraft attacked the location where it believed enemy forces to be. But the AC-130's aircrew had misunderstood what US forces on the ground were relaying about the enemy's coordinates and also failed to recognize that the nearby building they attacked was a hospital. Unfortunately, higher headquarters knew that building was a hospital, but that information did not reach the aircrew in time. The tragic incident destroyed the MSF hospital, which the local population relied on for medical care, killing 30 doctors and patients and wounding more than 30 others.[7]

Military deconfliction processes

Military deconfliction is intended to avoid such tragic mistakes: it helps to ensure that engagement decisions are informed by up-to-date knowledge regarding humanitarian and civilian entities in the target area. This process has evolved over the last two decades, with militaries increasingly using two distinct processes to help with deconfliction:

- **No-strike list (NSL).** This is a list of civilian/noncombatant entities that may not (normally) be attacked. For example, IHL gives special protection to medical facilities, combatants who are wounded or sick, and medical transports such as ambulances, all of which should not be the subject of an attack.

- **Restricted target list (RTL).** This list contains valid military targets, but these targets require that the manner or timing of engagements must be considered carefully (e.g., a weapons cache where secondary explosives are expected to be present or a structure with collateral concerns located nearby).

Both of these deconfliction processes involve three parts. The first is building the list: What targets should be on each of these lists? And what information should we include? The second

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[7] Matthew Rosenberg, "Pentagon Details Chain of Errors in Strike on Afghan Hospital," *New York Times,* April 29, 2016, https://www.nytimes.com/2016/04/30/world/asia/afghanistan-doctors-without-borders-hospital-strike.html.

part is maintaining the list: What do we do to make sure the list is current? And what do we do when things change? The third part is how we use the list: How do we make sure the information on the list is factored into engagement decisions?

We consider each of these three steps in turn.

Building the lists

The NSL is generally compiled by intelligence analysts in coordination with others, such as government agencies and humanitarian organizations that may have additional knowledge about civilian objects, humanitarian organizations, or cultural sites in a potential target area. The entities on the NSL tend to include hospitals, cultural heritage sites, schools, religious sites, dams and other essential infrastructure, and humanitarian actors operating in the region. Besides critical information such as location and function, the list should also include a point of contact for the humanitarian organization. Having this information and being able to contact the organization is critical—for not only validating potential changes but also being able to fulfill the IHL responsibility of delivering warnings prior to attacks.

The RTL contains a different set of objects. While all the targets on this list should be valid military targets that support the attainment of military objectives, they are included on the RTL because they are subject to restricted means of engagement. Such restrictions may apply because the list contains politically sensitive targets, the targets are located close to NSL entities, or the targets could have negative effects if attacked without caution (e.g., a weapons cache with secondary explosives in a populated area). The list should include the nature and location of those objects, the nature of the targets' sensitivity, and special considerations that need to be included in weaponeering and targeting.

Maintaining the lists

While these lists should represent the best available information at the time, battlefields are rarely static, and civilian objects and humanitarian organizations can change and shift to better meet the needs of civilians over time. Thus, these lists must be curated to manage such changes. To support this type of information management, militaries should have a centralized point of contact for groups to reach out to and submit any new information that is needed, as well as to update their critical information such as the organizations' best point of contact, their activities, and their current location. It is best to have redundant means of contacting militaries; one such method could be through the prototype HNS system discussed earlier.

Two practices are valuable for maintaining the NSL in particular. The first is for the military to have a reliable, externally facing contact that can be reached by outside organizations at all times. The lack of such a reliable contact can lead to greater tragedy when mistakes are made. For example, in the US attack on the MSF hospital in Afghanistan, MSF immediately reached

out to the US using several phone numbers they were given, but they were not the right contacts. As a result, the attack went on far longer than it should have. Militaries must ensure that they are able to be reached by external organizations in the event something starts to go wrong.

Another practice is the acknowledgement by militaries that the information submitted by humanitarian organizations was received. These groups know of the risk of being attacked while they are operating in a conflict zone. Not hearing back from a military when they submit information through humanitarian notification cell can cause them to wonder if that information was received at all. An answering email or phone call stating that the information was received can make a big difference in strengthening trust between militaries and humanitarian organizations.

Using the lists

These lists are built and maintained at military forces' higher headquarters, but the lists cannot be retained only there, as engagement decisions are made at various command echelons. Since the lists must inform deconfliction for all engagement decisions, militaries require a process to share the information from these lists to operating forces at all levels so that they can be consulted prior to an engagement.

Such consultation then drives a decision process. For example, what if the intended target is found to be on the NSL? If it is on the NSL and the military believes it is still a salient military target, the military should have a process to first provide a warning and, if warranted, remove the target from the NSL. Only then should an attack be approved. Another possibility is that the NSL entity was misidentified as a valid military target. In this case, this decision process is an opportunity to identify a mistake before engaging a civilian entity in error.

In another case, what if the intended target is on the RTL or in proximity to an entity on the NSL? An engagement may still make sense, but the military force will need to pay close attention to the targeting method and any collateral damage risks. For example, the attack may need to use a low–collateral damage weapon, or the target may need to be attacked from a specific direction that would limit collateral damage and avoid negative effects on civilians or civilian objects. Another option is to consider attacking at a different time of the day or to use tactical patience to wait for a more optimal time to attack.

We note that the NSL in particular will not be complete with regard to humanitarian activities that must be protected. For example, humanitarian movements, being dynamic in nature, are not included in static NSLs. However, militaries are still obligated to uphold the protections afforded to humanitarian movements. Therefore, militaries must develop processes to capture

this more dynamic information and ensure that their decision-making processes—including targeting decisions—take such information into account.

Improving deconfliction information through an HNS

The prototype HNS is a way to provide humanitarian information more efficiently to militaries to improve their decision-making.[8] Yet it is crucial to remember that while this process can help improve a military's ability to deconflict its actions, *these functions are always a military responsibility, and the failure of humanitarian organizations to report, or errors in their reporting, does not reduce a military's responsibilities*. These ongoing responsibilities include avoiding attacks that target or impact protected entities and unduly interfering with humanitarian activities. Better information provided through the prototype HNS can help militaries to make better decisions in several crucial ways: improving the NSL process, improving pattern of life (POL) determinations, and integrating the information into the operational picture.

Improving the NSL process

Information from the prototype HNS should be invaluable in each of the steps for curating the NSL. Both the building and the curating of the NSL can be simplified because of the higher fidelity and standardized nature of information obtained through the HNS, validated through other means as appropriate. The security and traceability of information from the HNS can also help reduce the steps needed by militaries for validation, hopefully streamlining this process.

Improving pattern of life (POL) determinations

HNS information can also be leveraged to improve determinations of POL—that is, surveillance over time used to better understand context and to help determine the identify of particular individuals or groups. One consideration in POL is observing associations: What other individuals do they interact with? What locations do they regularly visit? Historically, these potential associations in conflict zones tend to be threat-based. However, HNS information can be used just as effectively to inform positive identification decisions: the determination that entities are or are not a valid military target.

POL determinations seek to integrate many information sources to improve the quality of decisions. Yet because this process includes primarily threat-based intelligence, it can result in

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[8] We discuss this prototype HNS in more detail previously, in the section on "Humanitarian notification."

cognitive bias that can contribute to the misidentification of civilians as valid military targets. The inclusion of civilian information shared through the prototype HNS could help address such bias and provide a way to protect against such misidentification that results in attacks on both humanitarian organizations and civilians whose interactions with protected humanitarian organizations may have been overlooked or ignored.

Integration into the operational picture

Increasingly, militaries are developing tactical data links and displays/dashboards of the operational picture in order to increase situational awareness. The secure, structured nature of the information provided by the prototype HNS can facilitate its integration into these networks and displays to improve deconfliction and decision-making overall. While many current military networks focus on combatants (both threats and friendly forces), inclusion of civilian and humanitarian information—especially given the higher-quality data that could be available in the prototype HNS—would help to provide a more complete picture of the operating environment.

Develop Stronger Tools for Recognizing Humanitarian Organizations on the Battlefield

In the previous section, we discussed various tools for conducting deconfliction of humanitarian entities, such as compiling an NSL, conducting POL determinations, and having a more complete operational picture with robust information regarding civilian objects. But even if all of these steps fail, military forces should look at the intended target for identifying features that suggest it could have a protected status. For example, a structure or vehicle with a Red Cross or Red Crescent logo can have a protected status as a medical or humanitarian entity. Similarly, something with a Blue Cross is designated as a cultural heritage site and is similarly protected. Regardless of whether that object is on the NSL or not, seeing that symbol should stop the engagement process and prompt a reexamination of the target. Such a reexamination may reveal that a misidentification has occurred (where a civilian entity is mistaken as a valid military target) and/or that the entity is protected by IHL.

While this is a crucial step, it can be difficult for tactical units to identify humanitarian organizations on the battlefield. In conflict zones, humanitarian organizations are not always in clearly distinguishable structures such as established hospitals. And while IHL is clear about their protected status, the only practical identification measure it provides is contained in the original Geneva Conventions of 1949 statement that humanitarian organizations may display a Red Cross or Red Crescent emblem to show they are protected.[9]

Unfortunately, recent advances in military technology for sensors can make this measure less effective. For example, a colored marking will not necessarily be a discriminating feature for a pilot in an aircraft conducting an air strike using an infrared (IR) sensor. This was seen to be a contributing factor in a number of air-to-ground friendly-fire incidents in the 2003 war in Iraq, where ground forces or vehicles marked with orange panels were attacked: the pilots were using infrared sensors for targeting and did not observe the orange markings intended to

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[9] The International Committee of the Red Cross (ICRC) has commented on these markings: "Failure to wear or display the distinctive emblems does not of itself justify an attack on medical or religious personnel and objects when they are recognized as such. This is an application of the general principle that the distinctive emblems are intended to facilitate identification and do not, of themselves, confer protected status. In other words, medical and religious personnel and objects are protected because of their function. The display of the emblems is merely the visible manifestation of that function but does not confer protection as such," https://ihl-databases.icrc.org/customary-ihl/eng/docs/v1_rul_rule30.

identify friendly forces. In other cases, friendly forces were equipped with IR markers, but they were attacked because pilots lacked IR sensors. The conclusion was that markers having both visual and IR signatures would be best for reducing risk of inadvertent attacks. Humanitarian organizations could employ similar solutions, with markings compatible with various kinds of sensors, in order to reduce such risk (e.g., a low-cost combination of color and IR beacon, or a combination of color and IR reflective materials in physical markings on vehicles or structures).

Emerging technologies also offer an opportunity for strengthening the protection of humanitarian organizations by improving identification during attacks—for example, recognizing protected symbols by using artificial intelligence (AI)/machine learning (ML) methods to identify accepted symbols for designating protected objects (e.g., red cross or red crescent) and alerting the operator or the chain of command accordingly. The presence of protected symbols does not mean that the location is, in fact, protected from attack: the location may have lost its protection, or an unscrupulous party may be using the symbol to deter attacks, in violation of IHL. But this capability would provide a safety net in cases where the protected symbol is present but was overlooked by operating forces.[10]

The increased use of networks and distributed targeting underscores the importance of information being at various locations and military command echelons. Reflecting the increasing use of data links and systems for situational awareness, a requirement that militaries display and exchange information in tactical systems (e.g., in an aircraft cockpit or in the exchange of NSL information over secure tactical data links, or TDLs) regarding humanitarian organizations such as hospitals could improve situational awareness and avert unintended attacks, even when the broader deconfliction process fails.

Overall, military forces could benefit from additional practical measures for improving the identification and awareness regarding the location of humanitarian organizations. A broad range of technologies and capabilities are currently in use for the protection of friendly forces and for identifying threats; yet the corresponding level of investment has not been made for the identification and protection of humanitarian and civilian entities. While militaries can invest in a broad set of capabilities to this end, there is also an opportunity for countries to collaborate with organizations like the UN and humanitarian organizations to identify creative and effective solutions.

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[10] The Australian Defence Force has recognized this application as promising and has already conducted field experiments showing its utility.

Reinforce Learning and Accountability Measures

In this paper, we have discussed both legal obligations and best practices for protecting humanitarian organizations and civilian objects more broadly. What can be done when those standards and goals are not met? This usually falls into two categories:

- **Deliberate or reckless behavior.** Some cases of attacks on medical facilities appear to be either deliberate or reckless, which can amount to war crimes. For example, dozens of air strikes on medical facilities in Syria by the Syrian regime and by Russia appear to fall into this category.[11] How do we confront regimes that repeatedly engage in this unlawful practice?

- **Seeking to comply, but concerns exist.** Recent operations show that tragic attacks can also happen with the US and other countries committed to compliance with IHL. This was most recently seen, for example, in multiple airstrikes on medical facilities by the Saudi-led coalition in Yemen as well as recent US strikes, including the 2015 attack on an MSF hospital in Afghanistan. In such cases, while there are indicators that these countries are seeking to comply with legal obligations, concerns about the operational outcomes still ensue.

There is a solution to both of these challenges—for both countries that eschew their legal obligations and those that seek to comply with IHL but make mistakes.[12] That solution is *a deliberate approach to promoting learning and accountability*. Here we use the term *accountability* in an institutional sense: a country's "willingness to accept responsibility or to account for one's actions."[13] This means not only seeking the accountability of individuals who may hold responsibility or culpability for a particular action (such as an attack), but an overarching responsibility to address the consequences of that country's actions and to learn from and address the factors that led to those actions.

Yet sometimes countries do not seem to be committed to or proficient in this goal. In these cases, it is possible for other countries to take actions to promote accountability and learning

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[11] Triebert, Hill, Browne, Hurst, and Khavin, "How Times Reporters Proved Russia Bombed Syrian Hospitals."

[12] These mistakes are often the result of larger patterns of deficiencies that collectively increase the risk to humanitarian organizations and civilians overall.

[13] "Accountability," Merriam-Webster.com Dictionary, https://www.merriam-webster.com/dictionary/accountability/, accessed February 27, 2022.

by countries that seem to lack this commitment or proficiency. We discuss three cases generally: self-learning and accountability; partners promoting learning and accountability; and countries generally working to promote learning and accountability. The distinction between the last two cases is the ability to have a supported-supporting relationship with partners and provide concrete assistance to help solve challenges, versus those where no supporting relationship exists and other methods of influence must be used. We contend that there is a preferred sequence: that it is preferable for a country to exercise self-learning and accountability first as a way to meet its own legal obligations and interests and, if needed, with other countries with relationships and existing assistance efforts that include this area in tailored support. And if those two options fail to prove effective, then individual countries and the international community collectively can act to promote learning and accountability to work toward needed change. These three approaches are shown in the figure below.

Figure 1.   Three options for promoting learning and accountability

Source: CNA.

Self-accountability and learning

Both governments in general and militaries in particular should commit to their own learning and accountability regarding the protection of humanitarian organizations—and civilians and civilian objects more broadly—in armed conflict, consistent with legal obligations. Such a commitment includes four steps:

- Tracking: recording and tracking external allegations or internal reporting suggesting a possible incident and seeking to confirm them or rule them out
- Assessment: assessment of confirmed incidents that help determine what happened and how such incidents can be avoided in the future
- Response: providing amends and assistance, communicating the results of assessments, and investigating to determine whether individuals should be held to account
- Dialogue: regular discussions between humanitarian actors, the government, and security forces regarding challenges, concerns, and developments.

Such steps toward accountability and learning are key to responsible conduct and maintaining trust in the long term.[14] Such accountability and learning will require policy and resources, as well as established processes for reporting and assessments, options for response, and a process for identifying lessons and implementing solutions.

Tracking. The first step in accountability and learning is to track potential incidents where humanitarian organizations, along with civilians and civilian objects, are affected by military personnel or actions. This can include inadvertent attacks, accidents (such as a vehicle collisions), disruption (such as not allowing passage of a humanitarian movement), or deliberate actions (such as an intentional attack or actions to exploit humanitarian groups).

In practice, tracking begins with getting reports and other associated information regarding incidents, both those reported internally by the military force and those reported externally, by humanitarian groups and from other sources (e.g., media reporting, international observers). These reports are tracked collectively in a database or spreadsheet. Each report is

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[14] This approach is consistent with two of the UN Secretary-General's recommendations for strengthening the protection of medical facilities; adopting, reviewing, revising, and implementing operational precautionary measures; and contributing to regular data collection, analysis, and reporting on potential and actual attacks on protected entities. See UN Secretary-General, "Letter dated 18 August 2016 from the Secretary-General addressed to the President of the Security Council," UN doc. S/2016/722, August 18, 2016 on recommendations of the UN Secretary-General, submitted pursuant to para 13 of UN Security Council Resolution 2286 (2016) on measures to prevent acts of violence, attacks and threats against the wounded and sick, medical personnel, and humanitarian personnel, https://www.securitycouncilreport.org/atf/cf/%7B65BFCF9B-6D27-4E9C-8CD3-CF6E4FF96FF9%7D/s_2016_722.pdf.

assessed to determine whether it is credible. The results of the assessments inform a list of confirmed incidents where civilians and civilian objects, including humanitarian entities, were attacked or otherwise adversely affected.

Assessment. The list of confirmed incidents can be used to conduct *longitudinal analysis:* determining trends, identifying patterns, and figuring out why these incidents occur in general. These things are critical for informing how military forces can better learn and improve. The list also enables more effective public affairs and response efforts such as providing amends to victims. The assessment process can also reveal cases where further review and investigation would be valuable, both for a legal review and for improved operational learning.

The longitudinal analysis can include consideration of incidents by type of operation (e.g., fixed wing, rotary wing, artillery/indirect fire, small arms fire/direct fire, escalation of force, maritime attacks, road incidents) and type of entity affected (e.g., building, vehicle, individual). The analysis can also include the operational context (e.g., deliberate targeting, dynamic targeting, or self-defense). A better determination of the context enables militaries to reduce risk to civilians and humanitarian entities.

The analysis can answer another important question: why does harm happen? It looks for patterns that emerge in the set of incidents and identifies common contributing factors. After that, given the trends and patterns observed, military forces can develop specific ways to reduce the risk to humanitarian entities in the current operation. There may also be patterns that show better ways to mitigate risk as a military institution in the long term—for example, revising current doctrine, adjusting training, or identifying a new requirement for equipment or capabilities.

Response. If civilians or humanitarian entities are found to have been adversely affected, another important step is to respond as appropriate. This includes three aspects: the first is the provision of amends or assistance to mitigate harmed caused by military forces. This can be providing immediate or long-term medical care, making financial provisions for individuals harmed or killed, or replacing resources or facilities for those that were damaged. The second is to respond with information: communicating what happened to affected organizations and communities. And the third is to see if an investigation is needed to determine whether individuals involved in the incident should be held personally accountable for their actions.

Dialogue. The process of accountability and learning through tracking, assessment, and response represents a kind of CIV-MIL coordination that is achieved through communication regarding a series of individual incidents. It is also useful to have communication between the military and humanitarian organizations that is broader, addressing the overall effectiveness

of humanitarian notification and deconfliction processes in general and whether overall goals are being met.[15]

Promoting accountability with partners

Partnerships, including alliances and military assistance relationships, can serve to help manage common threats and strategic competition. Yet history shows that the problematic conduct of partners can deeply affect the nature and success of the partnership. For example, harm to civilians and humanitarian organizations caused by recipients of military assistance from the US and UK has undermined the strategic success of partners by creating grievances that can prolong conflict and undercut perceived legitimacy. At the same time, such harm can damage the reputation of the providers of assistance, create resistance to continued support, and weaken norms and expectations for the protection of civilians in armed conflict. In short, countries have a vested interest to work with partners to promote learning and accountability.

So what can countries do to work with partners to this end? An existing military assistance relationship creates the opportunity take a variety of steps, and we briefly expound on each of these steps below.[16] We refer here to general efforts to promote the protection of civilians, including civilian harm mitigation (CHM), noting that this rubric encompasses the protection of humanitarian organizations.

1. Foundation: Clearly establish and resource the protection of civilians as a goal of military assistance

A. Include the protection of civilians, including humanitarian entities, as an explicit—and resourced—goal in policy and guidance for military assistance

To begin with, the goal of protecting civilians, including the protection of humanitarian entities and not unduly impeding their mission, should be an explicit goal of military assistance, in overall policy and in guidance to institutions contributing to military assistance efforts. This goal should be resourced, including the additional steps discussed in this section.

B. Integrate civilian protection elements into advising and engagements

Relevant principles and best practices on civilian protection should also be integrated into existing advisory topics with partners, especially those that involve armed conflict or the use

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[15] We discuss this communication in more depth previously in the section on "CIV-MIL coordination and metrics."

[16] This section has been adapted from Samantha Hay, Diane Vavrichek, and Larry Lewis, *Civilian Harm Mitigation in Security Cooperation: Steps for a Comprehensive Approach,* DRM-2021-U-030807-Final, CNA, September 2021.

of force. This is far broader than training on IHL. For example, civilian protection topics can be included in advising and training at the tactical level, the operational level (e.g., mission planning, targeting, and collection management), and the strategic level (e.g., how overall strategy should include civilian protection considerations and how command guidance should address monitoring and reducing civilian harm).

These considerations should also be incorporated into current advising on institutional capabilities where appropriate. For example, when encouraging the development of doctrine or the reorganization of headquarters, advising can include help with developing the necessary partner-nation institutional infrastructure for the protection of civilians and humanitarian organizations. Key leader engagements (KLEs) and other consultations with partner-nation senior leaders are additional opportunities of influence that can be better leveraged for advancing civilian protection principles and best practices.

2. Develop capacity for promoting civilian protection with partners

A. Develop advisory materials

Some topics are so foundational to civilian protection that they require dedicated training and advising modules and directed messaging. New modules may be needed in order to include functions that are not normally part of the force structure, such as civilian harm tracking and longitudinal analysis. Other modules may need to be tailored for special emphasis (e.g., training/certification of new personnel, the start of new operations, or a unit rotation). Accordingly, training curricula can focus on planning and shaping a mission, including CHM considerations and protecting critical infrastructure, commander's guidance and mitigating/responding to civilian harm, and mission-specific best practices. The protection of humanitarian entities, including humanitarian notification and deconfliction, should be one of those areas that receives deliberate attention with partners.

B. Develop capacity for CHM operational advising

There have been a few instances where operational advising has been effective in reducing the level of civilian harm from operations, with both internal forces and partners. Yet it has always been an ad hoc process. Because there is a particular urgency to address civilian protection challenges when a partner nation is conducting combat operations, countries providing military assistance that involves the use of force should develop a capacity for operational advising to promote CHM. Specific approaches are needed to influence a military's conduct of operations positively to reduce harm to civilians at the strategic level down to tactical level of warfare. This should include attention to humanitarian notification and deconfliction—for example, an effective and expansive use of information on the NSL.

C. Develop and leverage assessments

Both steady-state institutional assistance and operational advising should be informed by assessments in order to better understand the partner's specific civilian protection challenges as well as the operational and cultural context within which interventions will be staged. This assessment process helps prioritize the most pressing challenges the partner nation faces and can inform the design of an effective theory of change to help promote overall improvement in civilian protection. The assessment should address historical data and trends regarding civilian harm and an evaluation of the institutional capacity and willingness to adopt practices to help mitigate risk to civilians. Over time, this assessment process can seek to include more partner contributions, including operational data; institutional steps the partner is making to adapt and strengthen CHM; and analysis of trends, patterns, and operational adaptations.[17]

3. Work with others to promote civilian protection

A. Seek regional leaders

After the US worked extensively with Colombia under Plan Colombia, US Southern Command noted that this investment of effort had a long-term benefit: Colombia was able to take on more of a leadership role with regard to building security-force capacity in the region. Not only did Colombia's efforts help reduce necessary US resources, but the Colombian forces also found greater receptiveness from neighboring partners.[18] The same can be done in other regions, choosing a few countries and intentionally building capacity and national will over time with the long-term goal of fostering regional leadership specifically on civilian protection. Diplomatic and military bilateral discussions can help identify willing prospective regional leaders, and military assistance can then support the development of partner-nation capabilities and leadership.

B. Work with other nations and organizations

Countries providing military assistance can also work with other nations, especially allies, which have a significant interest in promoting civilian protection and/or have a major role in security cooperation and arms sales. These countries can look for ways to promote civilian protection more systematically and to find synergy and efficiencies. Such cooperation on civilian protection initiatives can take many forms, including coordinating or cooperating on advisory efforts, developing advisory materials, sharing assessments, sharing and

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[17] This should also be done in partner-nation operations. Currently, the US military does not attempt to track partner civilian harm or even follow up on specific incidents that the US forwards to the partner.

[18] Joint Staff J7/Joint and Coalition Operational Analysis, *Learning from Colombia: Principles for Internal Security and Building Partner Capacity,* Sept. 18, 2013.

synchronizing country-specific or regional strategies, creating consistent policies, and finding ways to bundle national capabilities and training.

Opportunities also exist to work with other organizations, such as the United Nations—for example, the UN Secretary-General's Protection of Civilians initiative—and the International Committee of the Red Cross (ICRC). There can also be opportunities to work on specific initiatives with other nongovernment organizations (NGOs), civil society groups, think tanks, and academia.

C. Promote basic standards for civilian protection with major providers of military assistance

Considering the major exporters of military equipment—the US, France, Germany, Russia, and China—it may be a challenge to get these five countries to work cooperatively to mitigate risks to civilians with recipients of their military assistance. That said, a collective discussion regarding such risks in the context of military assistance would be worthwhile. Even the addition of some basic common measures would be of value, considering the volume of arms sales and transfers from these countries.

D. Cultivate and leverage international agreements

All countries are signatories to the Geneva Conventions, which set a baseline for conduct in armed conflict. Additional agreements can help expand on those commitments and provide practical ways to reduce the risk to civilians. We discuss this more fully in the following section, but there is an opportunity to collaborate with partners to help develop and better implement international agreements that serve to strengthen the practical protection of civilians.

4. Strengthen building blocks for bolstering partner capacity and will

A. Develop tools to offer to partners

As noted in past lessons learned regarding civilian casualties, available weapons, equipment, and capabilities in military inventories are often ill suited for avoiding or detecting civilian harm. This creates a gap in available tools that can be provided to partners to help them to better protect civilians. Much more can be done to develop tailored tools to better equip partners for strengthening civilian protection. For example, technology can be used to reduce the risk to civilians in conflict zones by addressing specific risk factors (e.g., screening for transient civilians in the target area). The prototype HNS discussed in this report can also be developed and provided to partners, along with advisory support to aid implementation and integration into their deconfliction processes. Other tools could also be developed to strengthen deconfliction of hospitals and humanitarian workers, as we discussed in the

previous section (e.g., multi-signature markings, automated recognition of protected symbols). Such an expanded set of options could be developed and made available to partners.

B. Exploring approaches to promote partner willingness

Ultimately, promoting civilian harm mitigation with partners is about *change:* how to influence a security force to behave differently. As part of being responsible in providing military assistance, countries providing such assistance should consider and identify a larger theory of change. What is the best way to improve the behavior of partners?

Whatever the answer is, it is likely not a training program. A study of security forces committing war crimes reveals that training to build awareness of legal obligations is not sufficient. Instead, serious violations of IHL are often committed by forces that know their legal requirements but decide it is more effective operationally to violate the law.[19] Other factors can also deter forces from complying with international laws they know and understand, such as dehumanization of specific segments of the population and the desire to comply with authority, which can influence individuals to do things they otherwise would find unacceptable.[20] Failing to take these factors into account will make education-based approaches less effective.

Examples of militaries changing their behavior for the better can also be instructive. For example, we observed that in Colombia, strong leadership can help change the behavior of security forces in dramatic ways over a period of just a few years. We also see that in both Colombia and the Philippines, the observation that "protecting the population is operationally expedient" led to fundamental changes in strategy and increased attention on the protection of civilians, including the accountability of security forces that intentionally targeted civilians.

Given these examples, which show both barriers to change and factors that led to dramatic change in military behavior, we recommend that such factors and barriers be studied and characterized in general and then incorporated into partner assessments and advisory programs to maximize the opportunity for positive impact.

C. Develop and exercise a policy of tailored conditionality to help promote partner efforts

Conditionality can also be a tool for promoting desired partner behavior as well as guarding against irresponsible behavior. Such conditionality can be applied in a tailored way to help focus the partner nation on the actions needed to improve efforts to protect civilians. Currently,

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[19] Daniel Muñoz-Rojas and Jean-Jacques Frésard, *The Roots of Behavior in War: Understanding and Preventing IHL Violations,* International Committee of the Red Cross, 2004, https://www.icrc.org/en/publication/0853-roots-behaviour-war-understanding-and-preventing-ihl-violations.

[20] Stanley Milgram, *Obedience to Authority: An Experimental View,* New York: Harper & Row, 1974.

conditionality is typically used in a reactive and punitive way when specific concerns arise with a partner. Assistance that is tied to operational support is curtailed or paused until the partner addresses specific concerns. This is seen, for example, in the structure of the US "Leahy Laws" regarding gross violations of human rights. The intent of this conditionality is remediation and restoring the military assistance relationship while promoting responsible and effective human rights practices among partner forces. Such conditionality should be extended to general concerns regarding civilian protection, including the protection of humanitarian organizations.

However, conditionality could also be used in a proactive and positive way. This can begin at the start of the military assistance relationship or with the negotiation of the transfer of a specific weapon system or capability that carries risk of harm to civilians or to humanitarian organizations. In these cases, the country providing assistance can mandate training and/or advising assistance, the acceptance and adoption of specific systems, or tools for protecting civilians as a condition of the partner's accepting the overall assistance program. Another option is to work with the partner to develop and implement a broader action plan for strengthening its overall mitigation of civilian harm. In this way, countries can work to help mitigate challenges to civilian protection before they arise.

General promotion of accountability and learning

Even in the absence of partnerships, there are actions countries can take in order to promote accountability and learning. There are two types of situations that need to be dealt with: clear noncompliance with international law and cases that are less clear-cut but still warrant better practices for protecting humanitarian entities in armed conflict.

One source of international law violations against civilians is the conduct of some parties to an armed conflict, which can include attacks by parties that flout considerations of proportionality, intentionally positioning themselves in proximity to civilians or using human shields, and deliberate attacks on civilians or protected entities such as hospitals. For example, Syria's chemical weapon attacks on its population, Russia's purported deliberate attacks on health-care facilities, and the indiscriminate attacks by nonstate armed groups using improvised explosive devices are all examples of such noncompliance with international law. This can also include the recruitment of "child soldiers" in violation of international law.

The best thing would be for those parties to see the many benefits of compliance—both in legitimacy and in mission effectiveness—and move unilaterally to better comply with their legal obligations. Alternately, countries that have partnerships or alliances with noncomplying

parties could work to improve their conduct. But what else can be done if these two options are not working?

A few approaches for moderating the behavior of states internationally include the following:

- **Name and shame.**[21] This option includes highlighting problematic and/or unlawful conduct of militaries and governments in public forums. This can include issuing public statements and including specific countries and incidents in UN reports (e.g., the UN Secretary-General's annual report on *Children and Armed Conflict*). Although this approach can sometimes create a level of restraint in some states as they seek international legitimacy, other states do not seem to be deterred from problematic actions by this approach.

- **Economic sanctions.** Another option is to use economic sanctions to modify behavior. Sanctions can take the form of arms embargoes, foreign assistance reductions and cut-offs, export and import limitations, asset freezes, tariff increases, revocation of most favored nation (MFN) trade status, negative votes in international financial institutions, withdrawal of diplomatic relations, visa denials, cancellation of air links, and prohibitions on credit, financing, and investment.[22] Sanctions offer an option for signaling disapproval that is more substantive than a "name-and-shame" approach, attempting to moderate behavior by impacting national or personal interests versus perceived legitimacy.

- **Conditionality.** Earlier we discussed focused conditionality as an option for countries working with partners. The option of conditionality can also be used more broadly to try and influence incentives and change behavior. As mentioned before, conditionality tends to be exercised after the fact in response to incidents of concern and is largely punitive in nature. But conditionality could be expanded to also include proactive and positive steps to promote a country's ability to better protect civilians, civilian objects, and humanitarian organizations.

- **International criminal jurisdiction.** When the conduct of a country rises to the level of pervasive war crimes or genocide, the crimes can be pursued through international criminal proceedings. Such proceedings can provide "justice for victims and may also

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[21] "The term 'naming and shaming' is rarely explicitly used in the context of transitional justice…. Nonetheless… the mechanisms of naming and shaming are present in many transitional justice processes"; Eric Wiebelhaus-Brahm, "Promoting Accountability, Undermining Peace? Naming and Shaming in Transitional Justice Processes," in *The Politics of Leverage in International Relations: Name, Shame, and Sanction,* ed. H. Richard Friman, New York: Palgrave Macmillan, 2015.

[22] Richard Haass, "Sanctions: too much of a bad thing?" Brookings Institution, June 1, 1998, https://www.brookings.edu/research/economic-sanctions-too-much-of-a-bad-thing/.

act as a deterrent in future armed conflicts and, by establishing the truth of what happened during a conflict, contribute to reconciliation and reconstruction." This course can be pursued through international organizations, for example, when the UN established an international tribunal in The Hague to prosecute former Serbian president Slobodan Milosevic and others for war crimes, genocide, and crimes against humanity. Another UN-established tribunal was established in Tanzania to prosecute those involved in atrocities in Rwanda in the early 1990s. In addition to these UN-created tribunals, the international community established the International Criminal Court in 1998 to create an international institutional capacity where countries fail to investigate and prosecute serious international crimes committed by their own sovereign nationals. Another development has been the creation of special courts that address both domestic and international crimes, attempting to bolster domestic responsibility and capability.[23]

- **Military force.** At times, the abovementioned options will not effectively sway countries from behavior that is so severe that other countries can decide that it requires a military response. These responses can range from major military actions (e.g., Bosnia in Operation Joint Endeavor) to limited military actions (e.g., airstrikes on Syria in response to the Assad regime's violating the Chemical Weapons Convention).[24]

All of these options tend to be exercised in response to concerning behavior and are reactive in nature.[25] It also does not appear that these options are exercised in a way that is informed by past history and a track record of their overall effectiveness: for example, the abovementioned strikes on the Syrian regime for the use of chemical weapons is an approach with a mixed record at best.[26]

Given these reactive options generally being the rule, it is worthwhile to consider other, proactive measures can be taken for countries that engage in concerning or problematic behavior. For countries that claim they have harmed civilians or humanitarian entities inadvertently, several options can be taken. For example, countries can be encouraged to

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[23] International Committee of the Red Cross, "International criminal jurisdiction," October 29, 2010, https://www.icrc.org/en/document/international-criminal-jurisdiction.

[24] Robin Wright, "Trump Strikes Syria Over Chemical Weapons," *The New Yorker,* April 13, 2018, https://www.newyorker.com/news/news-desk/trump-strikes-syriaand-russia-and-irannot-only-over-chemical-weapons.

[25] Except for the option of conditionality, which is not reactive by nature but is primarily exercised as a reactive option in practice.

[26] Chris Meserole, "Can a one-off military strike deter Syria's Assad from using chemical weapons again? The data suggests no," Brookings Institution, April 11, 2018, https://www.brookings.edu/blog/order-from-chaos/2018/04/11/can-a-one-off-military-strike-deter-syrias-assad-from-using-chemical-weapons-again-the-data-suggests-no/.

participate in existing forums, including the UN Convention on Certain Conventional Weapons, which entails periodic consultations on how to avoid the development and use of indiscriminate means and methods of war. Another opportunity includes participation in the development and future implementation of Ireland's draft Political Declaration on Explosive Weapons in Populated Areas (EWIPA). Sections 3 and 4 of the declaration include lists of practical steps militaries can take to help reduce—and better detect—civilian harm in urban operations, including harm to civilian objects and humanitarian entities.[27]

Another option specific to the protection of humanitarian organizations is to pursue an international agreement and build international cooperation regarding humanitarian notification and deconfliction. For example, countries could work together to develop a joint declaration that commits them to the improvement of protecting humanitarian organizations in armed conflict. Such a commitment could include best practices for deconfliction, CIV-MIL coordination, and steps for improved reporting and learning. The agreement could also include a periodic exchange of best practices and collective challenges so that the international community can learn and improve overall.

Learning: better than best practices

We contrast this learning and accountability approach to the common practice of developing and employing good practice to better protect civilians in armed conflicts. Indeed, best practices can help guide militaries to better protect civilians when they operate in similar contexts and missions. But while this is valuable, it is also limited in its benefit. How do countries evaluate which best practices are germane to the particular conflict they are involved in? While it is useful to develop a toolkit of best practices, what is truly needed is to create skilled practitioners who can then use the available tools effectively—and develop new ones as needed if the right tool is not already available. Through a deliberate approach to learning and accountability, countries can actively learn and adapt to identify and reduce risks to humanitarian organizations—and indeed, to civilians overall—in armed conflict. For countries wanting to do everything possible to protect civilians, this approach offers a way to meet such a goal.

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[27] Political Declaration on Explosive Weapons in Populated Areas, Revision 1 (Draft), as circulated by Ireland on January 29, 2021, https://www.dfa.ie/media/dfa/ourrolepolicies/internationalpriorities/290126-EWIPA-Political-Declaration-REV-1.pdf.

Building an Infrastructure for the Protection of Civilians

In this paper, we have discussed four steps for strengthening the protection of humanitarian organizations in armed conflict. The importance of these steps is underscored by the many attacks on humanitarian organizations in conflicts around the world, which both undercut efforts to alleviate human suffering and harm those working toward that goal.

We make the point at the beginning of this report: one constant of warfare is that civilians suffer. While better protection of humanitarian organizations can alleviate this suffering, it can also be achieved by reducing attacks on the civilian population at large. The development of the prototype HNS we discuss in this report is also an opportunity to contribute toward this larger goal.

The prototype HNS features standardized reporting protocols and formats that are amenable to militaries rapidly accepting and integrating information on humanitarian entities and their actions and movements. But the HNS system, while intended for humanitarian organizations, could be expanded to also include information on civilian objects in general: in essence, another layer of information that can be populated and shared with militaries. For example, reports could be shared regarding the location and disposition of schools, critical infrastructure, food supplies, hazards to the population if attacked (such as dams or nuclear power plants), and other things that are essential to the welfare of civilians. Similarly, information regarding cultural heritage sites, protected under the Hague Convention of 1954, could be shared through the HNS.[28]

While it can share the same formats, the procedures for this additional layer for reporting of civilian objects in general would be different than that used for humanitarian notifications. For example, for humanitarian notifications in the prototype HNS, reporting is voluntarily done by the organizations according to their preferences. For other classes of civilian objects, responsibilities would need to be laid out. For example, the government (or potentially the party that has effective control) of a territory could have the first opportunity to provide such reporting on the prototype HNS. Other organizations could possibly provide such reporting if the government was unable or unwilling to do so. And some classes of civilian objects could be reported by specific organizations across multiple conflicts: for example, cultural heritage sites

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[28] Convention for the Protection of Cultural Property in the Event of Armed Conflict, The Hague, May 14, 1954.

could be reported by the United Nations Educational, Scientific, and Cultural Organization (UNESCO) per its global mandate.[29]

We noted earlier, when discussing tools for identifying and protecting civilian objects, that there is a gap in such capabilities when compared to those that militaries develop for target identification or mitigation of friendly-fire risks. Militaries may have capabilities that help to mitigate harm to civilians in some contexts, but they have not generally sought—or even recognized the need—to develop comprehensive capabilities to reduce risk to civilians. Reporting civilian objects as a second, distinct layer of the prototype HNS creates an overall architecture that militaries can leverage for promoting their protection efforts. This is an opportunity to leverage technology to make a real advance in mitigating risks to civilians in armed conflict.

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[29] "UNESCO in brief," United Nations Educational, Scientific, and Cultural Organization, https://www.unesco.org/en/brief, accessed February 23, 2022.

Conclusion

It has been said that "civilians, often women and children, who played no part in the conflict—these are the people who suffer first, last, and in the middle."[30] And while humanitarian action serves to alleviate such suffering, these same humanitarian organizations—including hospitals, medical workers, and organizations providing food and other essential supplies—are regularly attacked and harassed in armed conflicts. While these tragedies strike at the heart of international humanitarian law, they persist in armed conflicts around the world.

A commitment to compliance with IHL is the starting point, but even countries that insist they comply with international law inadvertently attack hospitals, other humanitarian entities, and civilians. This paper aims to show that much more can be done to strengthen protection of humanitarian organizations and of civilians in general. This includes deliberate steps to improve communication among humanitarian groups and militaries, leveraging technology and making deliberate commitments to build understanding and trust. However, an improved understanding of humanitarian venues and activities will not improve protection unless such information is integrated into military decision-making through deconfliction, and we discuss specific ways to improve upon current military operational practice. We also note a chronic problem with the identification of humanitarian entities on the battlefield and suggest several solutions that militaries and humanitarian organizations can pursue. Finally, we discuss the importance of learning and accountability in order to strengthen the will and capacity for protection and lay out steps all countries can take to improve the protection of civilians and humanitarian organizations, regardless of whether they are directly involved in armed conflict.

Better protection of civilians, and of the humanitarian organizations that act on their behalf, is an attainable goal. According to an old proverb, "To him that will, ways are not wanting."[31] This report serves to provide *ways:* practical steps that countries, humanitarian organizations, and other stakeholders can take if they have the *will* and the *resolve* to address this chronic problem. Just as the international community acted in unanimity in 1949 to ratify the original Geneva Conventions, there are steps here that all can take in further pursuit of those same goals.

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[30] Cynthia Haven, "Civilians 'suffer first, last, and in the middle' during wartime, Stanford scholar says," Stanford News, January 24, 2011, https://news.stanford.edu/news/2011/january/civilians-war-zones-012411.html.

[31] "Where there's a will, there's a way," Grammarist, https://grammarist.com/proverb/where-theres-a-will-theres-a-way/, accessed February 26, 2022.

Abbreviations

AI	artificial intelligence
CHM	civilian harm mitigation
CIV-MIL	civil-military
CNA	Center for Naval Analyses
EWIPA	explosive weapons in populated areas
HNS	humanitarian notification system
ICRC	International Committee of the Red Cross
IHL	international humanitarian law
IR	infrared
KLE	key leader engagement
MFN	most favored nation
ML	machine learning
MSF	Médecins Sans Frontières (Doctors Without Borders)
NGO	nongovernmental organization
NSL	no-strike list
POL	pattern of life
RTL	restricted target list
TDL	tactical data link
UN	United Nations
UNESCO	United Nations Educational, Scientific and Cultural Organization
USAID	US Agency for International Development

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IOP-2022-U-032020-Final