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For an Ad Hoc Hearing on Drones

Civilian Harm from Drone Strikes
Assessing Limitations & Responding to Harm

Submitted to the Congressional Progressive Caucus

May 8, 2013
CIVILIAN HARM FROM DRONE STRIKES
ASSESSING LIMITATIONS & RESPONDING TO HARM

U.S. intelligence officials tout the drone platform as enabling the most precise and humane targeting program in the history of warfare. While drone technology is a significant advance, claims about minimal civilian harm from drone strikes in Pakistan and Yemen elide many of the operational realities of using drones outside of full-scale military operations.

In this testimony, I set forward limitations of drone technology in minimizing civilian harm. I then discuss critical steps the U.S. government should take to investigate and respond to civilian harm that results from drone strikes. I conclude with a brief set of recommendations. My testimony pertains to the use of armed drones outside of traditional armed conflict zones, sometimes referred to as the “hot battlefield,” with particular relevance to U.S. drone strikes in Pakistan and Yemen. This testimony is adapted from the report The Civilian Impact of Drone Strikes, published in September 2012 by the Columbia Law School Human Rights Clinic and Center for Civilians in Conflict.¹

I. Limitations of Drone Technology Outside of Full-Scale Military Operations

The “precision” of drone strikes depends in part on factors independent of the quality or sophistication of the weapons platform itself. While drones can collect extensive video footage before and after strikes, there may be systematic flaws in the intelligence upon which targeting decisions are made. Policymakers should be skeptical of claims that there are few or no civilian casualties from drone strikes, or that drone operations ought to be excused from the procedures and policies that ordinarily govern U.S. use of force due to the strength of the technology. Potential limitations of drone technology include the following:

- **Drone Video:** Drone sensors can survey potential targets consistently over long periods of time, gathering huge amounts of information. However, drones sometimes collect video footage in situations where civilians and targeted individuals co-mingle, in villages and urban areas, where they may not provide a clear enough picture to distinguish individuals in these circumstances.

- **Soda Straw Effect:** During the later stages of targeting, drone operators may be hampered by what is known as the “soda straw” effect. As a weaponized drone zooms in to pinpoint the target, it loses a wider picture of the area—like viewing a small amount of liquid through a soda straw, instead of the entire glass. The soda straw effect creates a risk that civilians may move into the vicinity of the strike without being noticed by drone operators, thereby overlooked in targeting.

analysis. (Some experts said this problem might be mitigated by new technology, by simultaneous use of surveillance drones with weaponized drones, or by pairing drones with manned vehicles.)

➢ **Human Intelligence:** The U.S. also relies on human intelligence from direct sources in the communities and foreign governments. There are serious questions about the quality, motivation, and vetting of such sources. In regions racked by poverty, the reliability of local informants may be undermined by cash payments for information. There are reports of informants being paid between $300 - $1000 or more. Stories abound in northwest Pakistan of families and rival groups using locator chips to have their enemies targeted and to settle personal vendettas. Use of local informants puts at risk entire civilian communities; suspicion of informants has led local armed militant groups to retaliate by torturing and killing local villagers. Moreover, intelligence provided by foreign government intelligence and military officials may also, in certain circumstances, be unreliable as they seek to divert the U.S. to target their own enemies.

➢ **“Data crush” and skills lag:** Even where intelligence sources provide reliable material, targeting mistakes can result if analysis is flawed. Surveillance and weaponized drone development has far outpaced analysis and personnel capabilities, risking mistakes in targeting and, ultimately, civilian casualties. Drone sensors capture far more data than operators can process and analyze, a problem that is only increasing as drone technology’s capability advances and its use proliferates. “Data crush” may result in mistaken targeting of civilians, if analysts and decision-makers miss an important detail that is obscured by the flood of information.

➢ **Limited situational awareness and cultural intelligence:** Analysis based on incorrect assumptions or limited understanding of local dynamics may lead to mistakes—including the mistaken targeting of civilians. This is especially a problem in signature strikes, where the U.S. targets individuals based on behavior, i.e. a tall man driving a blue car. The risk of erroneous signature-creation and analysis is higher when, as in the covert drone warfare context, U.S. personnel cannot consistently engage with the population, and thus have little organic understanding of the context in which said tall man is driving said blue car. Drone operators may identify what appears to be suspicious behavior, but may lack the contextual and cultural understanding necessary to properly analyze that behavior, or recognize evidence of innocence. Video footage cannot capture the power dynamics responsible for behavior of civilians which might appear suspicious and result in targeting.

### II. Investigating & Assessing Civilian Harm

When the United States uses force, there are legal obligations to investigate civilian harm that potentially violates international law. There are also moral and strategic imperatives to assess and investigate civilian harm that may not violate international law—in an armed conflict framework, the so-called “collateral damage.”

Investigations, particularly where they are conducted with a degree of transparency, send a meaningful signal to people who live in countries where drone strikes occur that the
U.S. is committed to human dignity and human life. They offer the U.S. government opportunities to address allegations that it has intentionally targeted civilians and civilian objects such as mosques and schools—allegations that gravely undermine relations with partner governments and drive anti-U.S. public sentiment. Moreover, post-strike analysis and investigations can be used to learn lessons and prevent future harm to civilians.

**A. Precedent for Timely Investigations**

In conventional U.S. military operations, an analysis called a battle damage assessment is conducted following any lethal operation to assess the outcome of the engagement and any civilian harm that may have occurred. If civilian harm is either known or alleged, an investigation will be conducted to verify losses, learn lessons to prevent future harm, and, in many cases, dignify losses with monetary payments or other assistance. In Afghanistan, where drones are operated in concert with boots on the ground and with access to the civilian population, these steps have become standard.²

In Iraq and Afghanistan, the U.S. found that immediately denying civilian harm before a proper investigation further incited local anger—public discontent insurgent groups took advantage of, including by making false accusations of civilian casualties. As a result, the U.S. adopted a policy of immediately investigating any potential incident of civilian harm.³

**B. Duty to Investigate under International Humanitarian Law**

International humanitarian law, applicable in the narrow and exceptional circumstances of armed conflict, imposes an obligation on governments to investigate credible reports of war crimes and serious law of war violations.⁴ (The sources and scope of the duty are a matter of debate).⁵

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² Battle damage assessments are often mandated as a matter of policy or regulation, but are not a legal obligation. US military manuals indicate that assessment is an integral part of the targeting cycle; “Joint Targeting,” Joint Publication 3-60, (April 13, 2007); “COMISAF’s Tactical Directive,” International Security Assistance Force (ISAF), November 30, 2011.


⁵ The duty to investigate derives from the obligations to suppress violations of the Conventions, to search for any person accused of violating the Conventions and to impose effective penal sanctions. International Committee of the Red Cross, 6 UST. 3114, 75 UNT.S. 31, “Geneva Convention for the Amelioration of the Condition of the Wounded and Sick in Armed Forces in the Field,” art. 49, August 12, 1949; International Committee for the Red Cross, 6 UST. 3217, 75 UNT.S. 85, “Convention for the Amelioration of the Condition of the Wounded, Sick and Shipwrecked Members of Armed Forces at Sea,” art. 50, August 12, 1949; International Committee of the Red Cross, 6 UST. 3316, 75 UNT.S. 135, “Geneva Convention Relative to the Treatment of Prisoners of War,” art. 129, August 12, 1949; International Committee of the Red Cross, 6 UST. 3516, 75 UNT.S. 287, “Geneva Convention Relative to the Protection of Civilian Persons in Time of War,” art. 146, August 12, 1949. These treaty provisions apply to international armed conflict, rather than non-international armed conflict; the US government claims that its operations against al-Qaeda and associated forces take place in the latter. Scholars disagree about whether the customary norm regarding investigation applies to non-international armed conflict. They also disagree about whether the norm requires investigation of war crimes alone, or of other serious violations of the laws of war in
International humanitarian law does not spell out specific requirements for investigations, but there are basic standards for effectiveness that ought to guide U.S. policymakers. The International Committee of the Red Cross regularly advises warring parties that investigations should be:

(a) timely or conducted with reasonable speed
(b) designed to bring about an elucidation the facts by, for example, collecting relevant witness statements and forensic evidence
(c) conducted with impartiality and independence, which precludes, for example, investigations conducted solely by paid informants.  

The U.S. military and other militaries have established rules and mechanisms that reflect these elements, at times going beyond what might strictly be required by humanitarian law. The Department of Defense requires that “all reportable incidents committed by or against U.S. personnel, enemy persons, or any other individual are reported promptly, investigated thoroughly, and, where appropriate, remedied by corrective action.” Although these requirements apply only to law of war violations, multiple military lawyers told the Columbia Human Rights Clinic that the ethos of the requirement remains regardless of the categorization of civilian harm—lawful or unlawful.

**C. The Need to Establish an Effective and Publicly Acknowledged Investigation Mechanism**

U.S. officials have not discussed the existence of investigation mechanisms in depth, and I have been unable to learn whether either the CIA or Joint Special Operations Command have established any particular mechanisms to investigate reports of civilian deaths from drone strikes. Generally, U.S. officials have suggested that U.S. “intelligence capabilities” provide information on the identity of individuals killed in drone strikes. There are also reports that the U.S. government presumes that all “military-aged males” in an area where a drone strike occurred are combatants, rather than civilians.

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To meet basic standards for effectiveness, a system of post-strike investigations of drone strikes would need to go beyond an analysis of drone video footage or intercepted phone calls; trained U.S. personnel should be enabled to conduct ground investigations, involving collection of forensic evidence and interviews with witnesses.

**Inadequacy of Imagery and Video for Investigations:** The CIA reportedly collects “extensive data on each strike in Pakistan.”\(^{10}\) While it is true that drone imagery and video can aid an investigation into civilian harm, it can be insufficient. Former CIA officer Brue Riedel notes that drone video does not always offer a clear picture of casualties—as suggested by the few al-Qaeda members believed killed in drone attacks who have later turned up alive—and argues that with a limited ability to interview witnesses, “casualty reports are incredibly dubious.”\(^{11}\)

**Need for U.S. Personnel to Conduct Investigations:** Media reports suggest U.S. personnel sometimes attempt to confirm the identity of individuals killed by drone strikes with physical evidence, but more often rely on intercepts of phone calls and emails discussing who was killed.\(^{12}\) However, there are no reports that the U.S. collects physical evidence to determine the identity of individuals killed in *routine* operations. Comprehensive battle damage assessments and investigations, as occur in combat theaters, require skilled personnel working on the ground to analyze the results of an operation and note any possible civilian harm.

Furthermore, relying solely on local informants for post-strike investigations may expose such individuals to the risk of retaliation by local armed groups. Motivated by U.S. payments, informants might not be independent. The same is true of private contractors who conduct investigations. Likewise, foreign militaries that conduct investigations might have incentive to cover up the identities of individuals killed, especially if they are enemies of the foreign military but not of the United States.

**Need to Establish Investigation Mechanisms:** Even if the government believes that drone strikes are unlikely to result in war crimes or serious violations of the laws of war, it should ensure that effective investigation mechanisms are in place. In particular, the

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government should clarify that DoD directives and rules regarding reporting and investigating violations apply to Joint Special Operations Command operations and that operations under CIA authority are subject to the same rules and procedures.

Failure to establish mechanisms puts military commanders in a dangerous position of potential criminal liability. U.S. military manuals specify that a U.S. commander is criminally responsible if “he failed to exercise properly his command authority or failed otherwise to take responsible measures to discover and correct [law of war] violations that may occur.”\(^\text{13}\) If mechanisms are not in place, commanders may be precluded from conducting investigations and may run afoul of their legal obligations.

Moreover, established systems to investigate war crimes and serious violations of the laws of war would build legitimacy into the Administration’s position that drone strikes are conducted in compliance with international humanitarian law. Adequate investigation systems would address some of the concerns of cooperating governments and help allay the international community’s concerns.

Secret or unacknowledged investigations would likely be insufficient to address the moral dimensions I have identified. Secret investigations cannot provide dignity and a sense of justice to communities impacted by drone strikes. Secret investigations do not provide answer to widely publicized reports of particular cases of civilian casualties from drone strikes, which cause the United States to lose credibility on the world stage and appear deaf to criticism. Whereas the results of investigations can ordinarily be aggregated and systematically analyzed to determine the validity of pre-strike estimates and intelligence, secret investigations may not serve this function.\(^\text{14}\)

### III. Providing Assistance to Civilian Victims of Drone Strikes

The U.S. government should adopt or publicly acknowledge the existence of mechanisms to recognize and provide assistance to civilian victims of drone strikes, including for harm caused that does not amount to a war crime or violation of the laws of war. To date, I am not aware of any cases in Pakistan or Yemen where drone strike civilians have received apologies, explanations or monetary payments as amends from the U.S. government.

More than money, many victims often want to know why they were harmed and whether it was accidental or intentional. In relation to payments to bereaved families, it goes without saying that nothing can bring back or adequately compensate the death of a loved one. However, acknowledging their losses and suffering helps provide victims, their families and communities with recognition for harm. U.S. policymakers consistently note that offering such amends draws from national principles of human dignity.


Properly responding to civilian harm caused by its combat operations overseas reflects the U.S.’ stated commitment to humanity even in times of war. In recent years in Afghanistan, the U.S. military and its allies have maintained a policy of promptly responding to known civilian losses through the media, in consultation with village elders, and by making amends to civilians themselves through apologies, explanations and sometimes monetary payments. In fact, in armed conflicts from Korea, Grenada and Vietnam to Iraq and Afghanistan, the United States military has offered, on an ex-gratia and ad hoc basis, amends to civilians for lawfully caused harm. Additional U.S.-financed programs in Iraq and Afghanistan have assisted families and communities that have suffered losses from U.S. military activity since 2003.\(^{15}\)

The lack of an overt ground presence in countries like Pakistan and Yemen should not prevent the United States from establishing mechanisms to investigate and, where appropriate, recognize and assist civilian victims of drone strikes. Options include initiating a liaison and claims process through civilian staff on the ground. In NATO’s 2011 air campaign in Libya, though the United States had limited “boots on the ground,” it nevertheless had sufficient ground presence that it was able to begin building small embassies immediately after Muammar Qaddafi’s regime fell. The United States could ensure assistance to civilians through USAID, where it is possible to operate, or through cooperating local governments.

IV. Recommendations

- The Department of Defense and CIA should publicly describe and report to Congress their civilian protection mechanisms, including civilian casualty mitigation processes and post-strike investigatory mechanisms, in relation to drone strikes outside of traditional armed conflict zones;
  - The Department of Defense and CIA should publicly address reports that post-strike assessments and investigations of drone strikes presumptively characterize military-aged males as combatants;
  - The Department of Defense and CIA should publicly describe and report to Congress on the existence and sufficiency of processes for recognizing harm and making amends to civilian victims of drone strikes, their families and communities;

- The Department of Defense should publicly clarify and report to Congress that operations conducted by Joint Special Operations Command (JSOC) are subject to the same kinds of investigation and reporting requirements as other military operations, including Department of Defense Directive 2311.01E;\(^{16}\)

- The Department of Defense and CIA should report to Congress on the sufficiency of civilian protection standards for the identification of targets, including the reliability of “signatures,” and the sufficiency of intelligence sources and analysis where there is limited U.S. ground presence.

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\(^{15}\) “Legal Foundations for “Making Amends” to Civilians Harmed by Armed Conflict,” Human Rights Program at Harvard Law School, February 2012.