

Questions for the Record from Senator Charles E. Grassley
Hearing on “‘Targeted Killing’ and the Rule of Law: The Legal and Human Costs of 20
Years of U.S. Drone Strikes”
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John P. Jumper
General (Retired) and Chief of Staff
U.S. Air Force
Spotsylvania, VA

1. As the Chief of Staff of the Air Force during the first four years of the Global War on Terror, you led as drones became a vital tool in the precision targeting of terrorist combatants. How do drones compare to other tools when it comes to minimizing civilian and servicemember casualties?

Response: The introduction of modern drones, or Remotely Piloted Vehicles (RPV), in particular, the Predator and Reaper RPVs, allowed real-time streaming video images of potential enemy activity. These RPVs can remain airborne for 20 – 30 hours with sensors that provide magnified video, imaging infrared, and synthetic aperture radar images transmitted back to operations centers for commanders to study and analyze before making decisions to employ weapons. Prior to the introduction of this technology, pilots of weapons-carrying aircraft had to rely on still photography from satellites or reconnaissance aircraft. These images were often hours or days old and rarely represented the current configuration of a target; or, the presence if civilians. Targets were also identified by forward air, ground controllers or special operations personnel, who were taking fire from enemy positions including structures where innocents could have been mixed with enemy shooters. In nearly all cases prior to introduction of modern RPVs, decisions to employ weapons were made without the benefit of close target examination and analysis; recent activity around the target; assessment of collateral damage based on available munitions; and positive assessment of danger to non-combatants.

2. How does the military use drones to advance its goal of protecting civilians? Has the use of drone strikes saved more civilians or caused the death of more civilians over the last twenty years?

Response: I served two tours in Vietnam. Official numbers of Vietnamese civilian casualties from that war range from 30,000 to 65,000. The Air Force strived to avoid civilian casualties by use of restrictive Rules of Engagement (ROE), and extensive use of forward air controllers who did their best to keep up with enemy activity and friendly troop positions in their designated area of operation. In missions over North Vietnam, bombing was restricted to bridges, surface to air missile sites and other strictly military

targets. We depended on satellite and historical photographs that were at best hours old, and mostly days or months old.

Specifically, to the question, in the past 20 years, modern RPVs allow real-time risk assessment right up until the decision to engage, or not to engage. Targets in the most sensitive area often require approval at levels above military unit commanders. During the Kosovo war, certain categories of targets had to be approved by the President himself using a pre-arranged analytical process that showed what weapon was being used, a chart predicting potential damage surrounding the target area, an assessment of non-combatant casualties, etc., all based on near real-time assessment from RPV streaming video. While any civilian casualty is tragic, the decrease in civilian casualties attributable to RPV technology has been remarkably significant.

3. Are there any tools that could effectively replace drones without causing civilian casualties? Based on your experience, can you provide examples of what other strike options are available if drones are not used, and how civilian casualties are estimated with those strike options?

Response: RPVs represent the best technology available to assess the presence of civilians in an area. Other options include ground observers in close proximity to a potential target, but ground observation locations are often limited, especially when fortified, and overhead RPVs are the only means of observing activity within a compound. Airborne manned aircraft with forward air controllers can also be used when the danger of enemy surface to air, or anti-aircraft fire is not present. RPVs offer better sensors, with magnification that allows observation from higher altitudes and small-warhead munitions that limit explosive damage to a confined area. Future technology will allow smaller drones to enter buildings, employ features like face recognition and artificial intelligence, and allow more discrete targeting with much smaller explosive munitions. All options, other than RPVs, do not allow commanders to estimate civilian presence by comprehensive surveillance over long period of time.

4. In your thirty-nine years in the armed forces, is it your expert opinion that the use of drones has been an effective deterrent of terrorist attacks across the globe?

Response: Yes. Drone use in general, and specifically armed drones, have caused terrorist leaders to consider their own vulnerability when deciding to pursue terrorist tactics. The stealth, standoff, precision and persistence of today's RPVs have changed warfare by providing more precise identification and location of terrorist activity.

5. What measures are taken by military commanders to estimate and mitigate civilian casualties in drone strikes?

Response: Rules of Engagement specify the levels of decision authority up the chain of command. Where civilian casualties are possibility senior commanders are usually involved in evaluating damage potential, the likelihood of civilian presence and the decision to engage. Modern technology allows near real-time assessment of weapon impact zones, the vulnerability of nearby structures, the activity around these

structures and how far from the impact area people are susceptible to injury. In some cases weapons must be authorized by senior commanders after they are assured that all factors comply with Rules of Engagement.

6. Do terrorist organizations hide within civilian populations or utilize civilians as a shield from drone strikes?

Response: Yes. Use of civilian “human shields” is common. In those situations, where civilians are known to be used as protective cover, in my experience, armed strikes of any kind from the air have not been allowed.

7. Would requiring certainty that no civilians are present in order to target a terrorist combatant incentivize terrorists to employ human shields?

Response: Yes. With current technology there can be no complete certainty that civilians are not present in a particular target area. Persistent surveillance provides the best information of civilian activity in a target area, and can suggest which part of a structure is being used by civilians. Indeed, as we have seen as part of this testimony, mistakes have been made by people doing their best to avoid civilian casualties. Requiring complete certainty would severely harm our ability to deter terrorist activities.

8. Are ISIS and Al Qaeda still targeting Americans at home and abroad?

Response: I am not current on specific targeting being pursued by ISIS or Al Qaeda. We know that the goals of those organizations included destruction of western values and specifically the American way of life. Having witnessed the hatred embraced by the people in these organizations, I am convinced that we must pursue all actions to deter their activities and severely limit their ability to operate.

9. Would ISIS and Al Qaeda members kill Americans if they could?

Response: Yes. These organizations have issued clear orders in the past to attack Americans any way they can. They have demonstrated that they place no value on the lives of their enemies, or even themselves or their own families. To let down our guard against these threats would be irresponsible.

10. It has been estimated that Afghanistan will become a terrorist safe haven from which attacks can be launched against Americans in a matter of months. Do you agree with this assessment?

Response: Yes. This is a fair assessment. We know that U.S. withdrawal has eroded the base of intelligence we had in that region, and it will become increasingly more difficult to know the degree to which Afghanistan returns to its former role as safe haven for terrorists. There is little doubt that they will capitalize on this opportunity to rebuild capability against the west and the United States.

11. How can we protect ourselves from the threat of a resurgent ISIS and reconstituted Al Qaeda? Do drones have a role to play?

Response: Drones, and the advancement of drone technology, will likely provide a primary source of intelligence as we take steps to deter increasing terrorist activities. We must develop more stealth, precision and persistence, improved target recognition technology, and more integrated use of space and cyber to remain alert to these threats.

12. The president targeted the leader of ISIS, Abu Ibrahim al-Hashimi al-Qurayshi, using ground forces. Does the use of ground forces lessen civilian casualties? Servicemember casualties? Is the use of ground forces appropriate in every case in which a terrorist combatant is targeted?

Response: Certainly the use of ground forces is appropriate when identification of a particular person among many who are non-combatants requires closer proximity than drone technology can provide. Use of ground forces also requires reasonable means for these forces to enter and exit the target area and a good probability of survival. When technology allows drones to provide the same certainty of mission success, they should become the weapons of choice, with best assurance of avoiding US casualties.