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THESIS

**USING DOD ISR CAPABILITIES IN SUPPORT OF
HOMELAND SECURITY AND DEFENSE; POLICY
CHALLENGES AND CONSIDERATIONS FOR
EFFECTIVE INCIDENT AWARENESS AND ASSESSMENT**

by

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March 2011

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AND DEFENSE; POLICY CHALLENGES AND CONSIDERATIONS FOR
EFFECTIVE INCIDENT AWARENESS AND ASSESSMENT**

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ABSTRACT

United States Northern Command (USNORTHCOM) is the geographic combatant command responsible for homeland defense and security. USNORTHCOM conducts Defense Support of Civil Authorities (DSCA) by providing Department of Defense (DoD) capabilities from its land, sea and air component in support of lead federal agencies in response to homeland security threats. DoD intelligence, surveillance and reconnaissance capabilities have the potential to improve situational and informational awareness to the homeland security arena. Since Hurricane Katrina, these capabilities have seen an increase in demand. Termed Incident Awareness and Assessment (IAA), these capabilities have been leveraged in response to wildfires in California, hurricanes in Texas, and most recently, during the Deepwater Horizon oil spill. There are, however, significant doctrinal, policy, legal and ethical barriers that impinge on USNORTHCOM's ability to employ these capabilities effectively in the homeland. This thesis examines these barriers, as well as the doctrine and policy disconnects between DoD and the emergency management communities. The author proposes recommendations for incorporating IAA into DoD's *Joint Doctrine* and the Department of Homeland Security's *National Response Framework*. These recommendations address policy barriers, and if implemented, have the potential to turn IAA into an important force multiplier for homeland security and emergency management.

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LIST OF ACRONYMS AND ABBREVIATIONS

AFNORTH	Air Forces Northern
BAC	Broad Area Coverage
CI	Counterintelligence
CONEMP	Concept of Employment
CONOPS	Concepts of Operations
CONUS	Continental United States
DA	Damage Assessment
DoD	Department of Defense
DSCA	Defense Support of Civil Authorities
EO	Electro-Optical
EO	Executive Order
ESF	Emergency Support Functions
FBI	Federal Bureau of Investigation
FI	Foreign Intelligence
FISA	Foreign Intelligence Surveillance Act
FMV	Full Motion Video
IAA	Incident Awareness and Assessment
ICS	Incident Command System
IR	Infrared
IRSCC	Interagency Remote Sensing Coordination Cell
ISR	Intelligence, Surveillance, and Reconnaissance
JCMB	Joint Collection Management Board
MSI/HSI	Multispectral/Hyperspectral
NIMS	National Incident Management System
NRF	National Response Framework
PUM	Proper Use Memorandum
SA	Situational Awareness
SAR	Synthetic Aperture Radar
USCENTCOM	United States Central Command
USNORTHCOM	United States Northern Command

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I. INTRODUCTION

A. PROBLEM STATEMENT

United States Northern Command (USNORTHCOM) is the geographic combatant command responsible for homeland defense and security. USNORTHCOM conducts Defense Support of Civil Authorities (DSCA) by providing Department of Defense (DoD) capabilities from its land, sea and air component in support of lead federal agencies in response to homeland security threats (U.S. Northern Command, 2010).

One unique capability that resides within DoD is the ability to conduct theater-level intelligence, surveillance, and reconnaissance (ISR) (USAF, 2007, p. 7). This capability can provide invaluable situational awareness from multiple intelligence disciplines including imagery and signals intelligence for military commanders (USAF, 2007, p. 19). Improved situational awareness gives commanders the big picture, provides a better understanding of problems and allows commanders to apply resources efficiently. Although theater ISR capabilities were designed to support kinetic effects on battlefields, ISR imaging capabilities have been used to support humanitarian operations and civil authorities during natural disasters. USNORTHCOM employed limited theater ISR capabilities to provide imagery and full-motion video of hurricanes Katrina (Haulman, 2006) and Ike (USNORTHCOM Public Affairs, 2008). United States Southern Command used imagery and full-motion-video to support initial relief efforts in Haiti (AF ISR Agency Public Affairs, 2010). Theater ISR platforms employing electro-optical and synthetic aperture imaging systems have the potential to increase the effectiveness of response significantly in homeland security incidents by providing incident commanders and first responders the same level of situational awareness enjoyed by battlefield commanders. There are, however, significant obstacles to realizing theater ISR's full potential for homeland security. Currently, doctrine, policy, statutory and ethical impediments exist that prevent theater ISR from reaching its full potential for homeland security.

The first impediment is doctrine. USNORTHCOM provides DoD capabilities to a lead federal agency by marrying the *Joint Doctrine* to the *National Response Framework* (NRF). In other words, the same doctrine that DoD uses to fight wars is used to support civil authorities. While DoD is indisputably the most effective military force in the world, its doctrine is geared toward employing military force to destroy an enemy. Given enough time, this same doctrine can provide considerable resources to a homeland security incident. Unfortunately, the process for generating and apportioning forces is cumbersome and relatively slow. The doctrine is sound, but it is not responsive enough to be useful for some of the immediate consequence management needs in homeland security.

Domestic intelligence activities came under intense scrutiny and were severely restricted after the Vietnam conflict and Watergate scandal (Senate, 1976, pp. 8–11). *Executive Order (EO) 12333* (The President U. S., 1981) and the subsequent amendments found in *EO 13470* (The President U. S., 2008) define permissible activities by members of the intelligence community when conducting intelligence activities in the United States. They also prohibit DoD from collecting information on U.S. citizens. Although *EO 13470* revised *EO 12333* for the post-9/11 environment, it did not address the use of intelligence resources for domestic homeland security responses, which continues to restrict the employment of theater-ISR significantly in the United States (The President U. S., 2008). In addition, legal restrictions, such as the *Posse Comitatus Act* (U.S. Congress, 1878) and the *Insurrection Act* (U.S. Congress, 1807), restrict DoD's authority to act within the United States and often increases the time it takes to deliver military capability to an incident.

Finally, legal and ethical issues can impede the use of theater ISR in homeland security. Domestic intelligence collection and privacy concerns go hand in hand. Prior to the 2008 presidential inauguration, the *Los Angeles Times* reported that Navy reconnaissance aircraft would fly above the Mall to collect information on crowds (Meyer, 2009). The ensuing backlash of negative press put General Victor Renuart, then commander of USNORTHCOM, on the defensive and demonstrated the public's distrust.

B. RESEARCH QUESTIONS

The primary aim of this research is to determine how DoD, theater-level intelligence, surveillance and reconnaissance assets can be effectively used for homeland security and defense. To support the author's research, the following secondary questions are explored.

- What are the doctrinal, institutional and organizational barriers that must be overcome for DoD ISR assets to be used effectively for homeland security?
- What are the policy barriers that must be overcome for DoD ISR assets to be used effectively for homeland security?
- What are the legal barriers that must be overcome for DoD ISR assets to be used effectively for homeland security?
- What are the ethical barriers that must be overcome for DoD ISR assets to be used effectively for homeland security?

C. SIGNIFICANCE OF RESEARCH

This thesis contributes to DSCA by identifying shortcomings in current policy and offering proposed improvements. The desired outcome of the research is to propose and incorporate changes to the *Joint Doctrine* that enables USNORTHCOM to provide timely and flexible IAA in support of homeland security. Improved doctrine will improve DoD's ability to deliver IAA capabilities to federal, state, local, and tribal entities, and in some cases, private sector entities engage in homeland security responses. Consumers across the spectrum from key decision makers in the White House to first responders on scene will benefit from improved delivery of IAA capabilities. The author is employed as an intelligence officer in the air component of USNORTHCOM and will be able to submit the proposals for consideration during the joint doctrine revision cycle. Acceptance of this research in operational doctrine should allow DoD to streamline its ability to deliver IAA to the emergency management community and increase the effectiveness of DoD's support to civil authorities in the homeland security arena.

D. REVIEW OF RELEVANT LITERATURE

The idea of utilizing DoD airborne ISR platforms to provide domestic imagery and full-motion video in support of natural disasters and homeland security events is relatively new. Hurricane Katrina and subsequent lessons learned provided the impetus for the military to find ways to support civil authorities in every way possible when asked to do so. Since this discipline is less than five years old, the available literature is limited and narrowly focused. It can be divided into four categories: national strategy and doctrine, law and regulatory guidance, concepts of operation and employment, and scholarly articles.

1. National Strategy and Doctrine

Extensive work has been done at all levels of government to establish protocols for disaster and emergency response within the United States. The Department of Homeland Security created the NRF and the *National Incident Management System* (NIMS) that delineates responsibilities and defines processes for state and local governments, as well as non-government organizations to integrate federal assistance to all-hazard responses (Department of Homeland Security, 2008, p. i).

In addition, a robust set of military doctrine exists that covers nearly every aspect of military operations. *Joint Publication 3-0; Joint Operations* provides the foundation for conducting the full-spectrum of military operations while *Joint Publication 2-0; Joint Intelligence* provides guidance for employing intelligence in support of these operations. While documents stress the importance of unity of command and the concept of centralized command and control with decentralized execution through the full spectrum of military operations (CJCS, 2006, pp. II-11), neither specifically addresses domestic operations in support of civil authorities. *Joint Publication 3-2; Civil Support* provides authoritative guidance for integrating the *Joint Doctrine* with the NRF and the NIMS (CJCS, 2007, p. viii). This 153-page document dedicates one paragraph in acknowledgement that ISR assets may be used in the civil support mission but should only be used as a last resort when state and local capabilities are exhausted and may be subject to legal and regulatory restrictions (CJCS, 2007, pp. III-9). Like *Joint Publication*

2-0; Joint Intelligence, the Air Force Doctrine Document 2-9: *Intelligence Surveillance and Reconnaissance Operations* focuses on full-spectrum warfare and kinetic effects. The focus of the document can be summed up by the quote on the cover, “intelligence is targeting and targeting is intelligence” (USAF, 2007, p. Title Page).

2. Laws and Regulatory Guidance

Extensive legal and regulatory guidance exists with regard to the use of the military and the conduct of intelligence activities for domestic purposes. Much of this guidance, like the *Posse Comitatus Act*, which prohibits the use of the military as a domestic police force (U.S. Congress, 1878), and *EO 12333*, which limits domestic intelligence activities by the national intelligence community (The President U.S., 1981), serve to protect civil liberties and restrict the power of the federal government. The *Intelligence Community Legal Reference Book* provides an authoritative compilation of legal and regulatory guidance to assist intelligence professionals in executing their duties. None of this guidance specifically addresses the use of intelligence assets to support domestic operations in support of civil authorities. The preponderance of the body of laws and regulations were written prior to the two watershed events that define current homeland security issues: 9/11 and Hurricane Katrina.

3. Concepts of Operation and Employment

The bulk of the literature that exists on the topic of utilizing ISR for homeland defense exists in this category. United States Northern Command’s air component, Air Forces Northern (AFNORTH) and the National Guard Bureau jointly developed an *Incident Awareness and Assessment Concepts of Operations* (CONOPS) that gives a brief overview of active duty and National Guard capabilities and processes for responding to homeland security contingencies with unity of effort in mind (Air Forces Northern, 2009). The IAA CONPOS recently evolved into the *AFNORTH IAA Playbook*, which attempts to characterize concisely the ISR capabilities that DoD brings to DSCA, their method of employment and the estimated cost of their use (Air Forces Northern, 2010).

AFNORTH also developed the *DSCA Air Support Handbook*, which identifies full-spectrum air component capabilities (including ISR assets) that can be requested through the NRF to support civil authorities.

The Department of Homeland Security has also developed a CONOPS and a concept of employment (CONEMP) for its Interagency Remote Sensing Coordination Cell (IRSICC). These documents outline DHS's plans to posture the IRSICC as the focal point for imagery and full-motion video support to the NRF during all-hazard homeland defense contingencies.

These conceptual plans were developed in the post-Katrina environment and have not been fully tested or operationalized.

4. Scholarly Articles

Few scholarly articles exist on this particular subject. In fact, only two articles can be readily found. The first is a scholarly paper, “ISR Support to Humanitarian Relief Operations within the United States: Where Everyone is in Charge,” which was written for the Naval War College specifically to address identified shortfalls in the response to Hurricane Katrina. The author, Lieutenant Colonel Jennifer Sovada, United States Air Force, was detailed to AFNORTH as a collection manager in support of DoD efforts to assist civil authorities with ISR support in response to Hurricane Katrina. Sovada identified the lack unity of command and synchronization of effort within USNORTHCOM and its interagency partners as a factor that prevented the effective delivery of ISR support to humanitarian operations within the United States (Sovada, 2008, p. iii).

The other scholarly article, “The U.S. Air Force Response to Hurricane Katrina,” is a statistical recapitulation of the United States Air Force’s efforts to support civil authorities in response to Hurricane Katrina (Haulman, 2006).

5. General Analysis

The concept of using ISR assets to provide imagery and full-motion video to support decision makers and first responders during homeland security events is fewer than five years old. As a result, very little literature on the subject exists.

The preponderance of the literature found in national strategy and doctrine, as well as legal and regulatory guidance, does not specifically address this topic. Literature in the national strategy and doctrine category addresses defense support to civil authorities, and recognizes the usefulness of intelligence capabilities, but a significant gap exists in doctrine and strategy when it comes to employing intelligence assets to support civil authorities.

Legal and regulatory guidelines establish domestic constraints on the use of federal forces and the national intelligence community and serve to protect civil liberties. While the body of literature does not envision the use of intelligence assets in a homeland security role in support authorities, it does place significant restrictions on the use of these assets.

Most of the literature directly pertaining to the subject exists as CONOPS and CONEMPS produced by DoD and DHS. AFNORTH, the National Guard Bureau and DHS, have shouldered most of the burden of developing operational strategies for employing ISR assets in support of homeland security events. However, these are conceptual plans that have not been fully tested, operationalized or recognized in national strategy and doctrine.

The area most lacking is scholarly articles. Only two scholarly articles are readily found on this subject. The first is extremely salient and identifies unity of command and effort as the keys to employing ISR assets successfully in support of domestic humanitarian operations. The other article is a historical document that captures the United States Air Force's quantitative ISR efforts in support of Hurricane Katrina relief.

As a whole, the body of literature on this subject shows a deficiency in formalized doctrine, legal policy and scholarly analysis.

E. HYPOTHESES

Using DoD ISR assets for IAA to support homeland security faces significant barriers, which manifest themselves in the form of legal, policy, institutional and organizational issues that stand in the way of realizing the full potential of ISR support for domestic operations.

Law and policy places limits on the use of the military and the intelligence community in domestic matters. The *Posse Comitatus Act* and the *Insurrection Act* prohibit the military from acting in a law enforcement capacity in the United States (U.S. Congress, 1878) unless civil authority has broken down and is unable to function (U.S. Congress, 1807). Using DoD intelligence assets to support law enforcement, even in with the best of intentions, presents ample opportunity to run afoul of the law. Intelligence oversight policy for the executive branch is addressed in *EO 12333*. This order places limits on the domestic activities of the national intelligence community (U.S. The President, 1981) and makes senior leaders hesitant to traverse this legal minefield without an army of lawyers and legal safeguards, which hampers timely response.

While the *Joint Doctrine* recognized the importance of intelligence and situational awareness to operations, it failed to recognize IAA as a doctrinal mission set (Chairman Joint Chiefs of Staff, 2007). As a term of art, IAA has been in use since Hurricane Katrina. It is widely accepted in USNORTHCOM and DHS but it has yet to make it into the *DoD Dictionary of Military and Associated Terms*, the lexicon of Joint Doctrine (Chairman Joint Chiefs of Staff). Without recognition in *Joint Doctrine*, IAA will not receive the resources and effort required from the Joint Staff and force providers required for USNORTHCOM to perform its DSCA mission.

Organizational and institutional barriers stand in the way of unity of effort. There are multiple jurisdictions with competing priorities and missions in every major homeland security event. *Joint Publication 3-0* describes unity of effort as the key to successful operations involving interagency partners (Chairman Joint Chiefs of Staff, 2006, p. ix). In joint military operations, a Joint Collection Management Board (JCMB) would meet to prioritize collection requirements and apportion ISR assets to the

requirements (Chairman Joint Chiefs of Staff, 2007, p. I-11). The JCMB derives its authority from the Joint Force Commander under the concept of unity of command. In the multi-jurisdictional federalist system, it is unlikely that unity of command will ever be achieved. Thus, the Department of Homeland Security stood up the IRSCC as a JCMB-like interagency body to provide unity of effort for imagery collection in support of homeland security (Department of Homeland Security, 2009, p. 52). Unfortunately, the IRSCC is an ad hoc organization that stands up only when needed, is unproven and lacks clout.

This thesis examines the impact that these obstacles have on DoD's ability to provide IAA capabilities for homeland security. It analyzes current emergency management policy, relevant DoD doctrine, as well as the policies, laws and ethical issues surrounding the employment of IAA for domestic operations.

F. METHODOLOGY

DoD has a robust ISR capability and a demonstrated ability to employ it overseas. Effective employment of IAA in the United States is not a matter of *if* it can be done; instead, it is a matter of overcoming policy, legal and ethical barriers. This research is conducted in three parts. The first part employs a policy analysis of existing doctrine combined with case studies of recent historical events to identify ways in which IAA can be used to support homeland security. The second part of the research uses policy analysis to identify shortfalls in current doctrine that prevent the effective employment IAA in the homeland security arena. The final part of the research utilizes policy analysis to identify legal and regulatory barriers. This methodology is also used to identify recommendations to improve current policies.

By conducting a policy analysis of the NRF, areas where IAA can be effectively used in support of homeland security Emergency Support Functions (ESFs) are identified. Additionally, case studies of historical lessons learned are reviewed to determine under what additional circumstances IAA can be used to increase the effectiveness of homeland security response. Specifically, the research examines Hurricane Katrina, the California Wildfires of 2007, Operation UNIFIED RESPONSE

(recent DoD earthquake relief efforts in Haiti) and Deepwater Horizon response efforts in the Gulf of Mexico. These cases were selected because they represent diverse homeland security problem sets. Each case demonstrates a need for IAA, and as a whole, they represent progressive attempts to integrate IAA into the response.

Once the areas where IAA can be used are identified, the second part of the research involves a policy analysis to review the *Joint Doctrine*; specifically, the relevant portions of *Joint Publications 2-0 Joint Intelligence, 3-0, Joint Operations, and 3-28 Civil Support*. This review identifies gaps in existing policies that prevent or impede DoD from effectively providing IAA support to the needs identified during the first part of the research. In addition, legal and regulatory guidance is reviewed to determine if impediments to current policy exist that may prevent meeting the needs identified during the first step of the research. Specifically, the *Posse Comitatus Act*, and *EO 12333* (as amended) are examined.

After defining existing policy shortfalls, recommendations for policy changes are offered that address the shortfalls identified during the initial part of the research. Although current policy is not optimized for the homeland security environment, it is based on sound theories and principles for use in theaters of operations outside the continental United States. As such, it is expected that current policy will serve as a foundation from which more effective policies can be derived.

As the DoD geographic combatant command for North America, USNORTHCOM is charged with both homeland security and homeland defense missions. It has the ability to bring significant capabilities and resources from the military services to any homeland security problem to support civil authorities. One of these capabilities is the ability to use airborne intelligence systems capable of surveying broad areas or providing near-real time full-motion video of an area from the platform to the consumer. These capabilities can potentially answer time-critical information requirements for incident commanders and responders alike. High levels of situational awareness can assist in directing precious resources and capabilities quickly and effectively to mitigate loss of life, human suffering and property damage. While DoD has a proven track record of using these capabilities in fighting wars, there have been

significant obstacles to achieving equal success in the homeland security arena. DoD operates using the fundamental principles that guide U.S. forces in coordinated action toward a common goal (Chariman Joint Chiefs of Staff, 2009, p. 193), while all levels of civilian government operates on the NIMS and the NRF when conducting emergency management. As a result, serious disconnects exist between DoD and the interagency when DoD attempts to support civil authorities. Also, legal and ethical issues restrict DoD's ability to use these intelligence capabilities domestically, even when used for benign purposes.

As mentioned earlier, the NIMS and the NRF are the keystone documents used by all levels of government in the United States for emergency management. The policy analysis begins by examining these two key documents to determine what types of situational awareness information are needed for homeland security and determine where IAA can help to satisfy these requirements.

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II. ANALYSIS OF HOMELAND SECURITY REQUIREMENTS FOR INCIDENT AWARENESS AND ASSESSMENT

A. THE NIMS AND THE NRF

The NIMS and the NRF are complementary strategies that represent the national doctrine of emergency management. The NIMS repeatedly emphasizes the importance of intelligence and information as situational awareness tools for managing emergencies. In fact, the NIMS specifically mentions geospatial data as a form of intelligence that can satisfy these intelligence and information requirements within the Incident Command System (ICS) (Department of Homeland Security, December 2008, p. 28).

The analysis and sharing of information and intelligence are important elements of ICS. In this context, intelligence includes not only national security or other types of classified information but also other operational information, such as risk assessments, medical intelligence (i.e., surveillance), weather information, geospatial data, structural designs, toxic contaminant levels, and utilities and public works data that may come from a variety of different sources. (Department of Homeland Security, December 2008, p. 59)

The NIMS also discusses the importance of interoperable communications for emergency management. While the NIMS recognizes that each agency has unique communications requirements specific to its discipline or specialty, it underscores the importance of being able to communicate in plain language or common terms during emergencies when working within the ICS structure. Although the plain language issue is usually examined in the frame of tactical radio communications, it should be noted that interagency partners and stakeholders should easily understand operational plans as well (Department of Homeland Security, 2008, pp. 26–30). DoD has a well-earned reputation for using acronyms and complex terminology unique to the military. The *Joint Doctrine* is no exception and this may be an impediment for the successful employment of IAA for homeland security.

The NRF contains five key principles.

- Engaged partnership
- Tiered response
- Scalable, flexible and adaptable operational capabilities
- Unity of effort through unified command
- Readiness to act (Department of Homeland Security, January 2008, p. 14)

The NRF builds upon the NIMS by defining emergency management tasks into 15 ESFs and breaking down the associated tasks by enumerating the scope of each function. All of the ESFs have inherent information requirements, many of which can be satisfied by IAA. These requirements are detailed in the scope of the ESF. After a disaster, it is imperative for emergency managers and first responders to understand the impacts on the respective support functions in order of plan and execute recovery operations ESF #1, Transportation is a good example. In the ESF #1 example, transportation information requirements include the status of transportation infrastructure, damage assessment and associated movement restrictions (Department of Homeland Security, January 2008, pp. 57–59). DoD IAA capabilities can easily satisfy these information requirements using broad area coverage, the basic ability to survey large areas using optical, infrared or radar imaging techniques, or full-motion video, and a near-real time live video feed that can be transmitted from the mission aircraft to a ground station for immediate consumption. An examination of the scope of each of the 15 ESFs illustrates the areas where IAA capabilities can assist. Table 1 lists each of the 15 ESFs and their associated scope. The information requirements listed in the “scope” column that can potentially be satisfied or aided through IAA are in bold text.

Table 1. Emergency Support Functions and Associated Scope (From Department of Homeland Security, January 2008, pp. 57–59)

ESF	Scope
ESF #1—Transportation	Aviation/airspace management and control Transportation safety Restoration/recovery of transportation infrastructure Movement restrictions Damage and impact assessment
ESF #2—Communications	Coordination with telecommunications and information technology industries Restoration and repair of telecommunications infrastructure Protection, restoration, and sustainment of national cyber and information technology resources Oversight of communications within the Federal incident management and response structures
ESF #3—Public Works and Engineering	Infrastructure protection and emergency repair Infrastructure restoration Engineering services and construction management Emergency contracting support for life-saving and life-sustaining services
ESF #4—Firefighting	Coordination of Federal firefighting activities Support to wildland, rural, and urban firefighting operations
ESF #5—Emergency Management	Coordination of incident management and response efforts Issuance of mission assignments Resource and human capital Incident action planning Financial management
ESF #6—Mass Care, Emergency Assistance, Housing, and Human Services	Mass care Emergency assistance Disaster housing Human services

ESF	Scope
ESF #7—Logistics Management and Resource Support	<p>Comprehensive, national incident logistics planning, management, and sustainment capability</p> <p>Resource support (facility space, office equipment and supplies, contracting services, etc.)</p>
ESF #8—Public Health and Medical Services	<p>Public health</p> <p>Medical</p> <p>Mental health services</p> <p>Mass fatality management</p>
ESF #9—Search and Rescue	<p>Life-saving assistance</p> <p>Search and rescue operations</p>
ESF #10—Oil and Hazardous Materials Response	<p>Oil and hazardous materials (chemical, biological, radiological, etc.) response</p> <p>Environmental short- and long-term cleanup</p>
ESF #11—Agriculture and Natural Resources	<p>Nutrition assistance</p> <p>Animal and plant disease and pest response</p> <p>Food safety and security</p> <p>Natural and cultural resources and historic properties protection and restoration</p> <p>Safety and well-being of household pets</p>
ESF #12—Energy	<p>Energy infrastructure assessment, repair, and restoration</p> <p>Energy industry utilities coordination</p> <p>Energy forecast</p>
ESF #13—Public Safety and Security	<p>Facility and resource security</p> <p>Security planning and technical resource assistance</p> <p>Public safety and security support</p> <p>Support to access, traffic, and crowd control</p>
ESF #14—Long-Term Community Recovery	<p>Social and economic community impact assessment</p> <p>Long-term community recovery assistance to States, local governments, and the private sector</p> <p>Analysis and review of mitigation program implementation</p>

ESF	Scope
ESF #15—External Affairs	Emergency public information and protective action guidance Media and community relations Congressional and international affairs Tribal and insular affairs

B. HURRICANE KATRINA

On August 28, 2005, Hurricane Katrina bore down on the Gulf Coast, unleashing the brunt of its devastation on the coastal areas of Louisiana and Mississippi. The levees that protected New Orleans from the waters of Lake Pontchartrain failed and the city quickly found itself under water. The massive devastation inflicted by this storm was a watershed event in emergency management that thrust DoD and USNORTHCOM into assisting civil authorities on an unprecedented scale. Citizens were trapped in their homes by the rising water, roads were blocked and crime skyrocketed. Local authorities were overwhelmed, civil order broke down and chaos ensued. National news networks frequently displayed aerial photos of residents sitting on their rooftops seeking refuge from the rising flood waters and waiting to be rescued by authorities. After a few days, the operation turned from rescue to recovery. The challenges that faced policy makers, emergency managers and first responders alike throughout the spectrum of operations consisted of finding people in need of rescue or recovery, getting to those people and assessing the roads and infrastructure that allowed it. Achieving unity of effort from disparate agencies proved to be a key challenge for interagency participants, particularly from DoD, where unity of command and who is in charge is an essential tenant of military doctrine (Sovada, 2008, pp. 1–2). It was apparent to the nation that DoD, DHS and the National Guard were not successful in synchronizing their lines of effort. It was as if they were all in the same boat, paddling in different directions while the residents of the Gulf Coast waited and suffered.

C. DEEPWATER HORIZON

In 2010, a methane bubble sparked a deadly explosion on British Petroleum's offshore oil platform, Deepwater Horizon. The explosion caused the immediate deaths of 11 people, a large fire and the worst oil pollution disaster in history (James, 2010). More than 205 million gallons of raw crude oil are estimated to have gushed into the Gulf of Mexico (Hoch, 2010). A significant amount of this oil made its way onto the shores of Louisiana, Mississippi, Alabama and Florida. The mission involved identifying and containing resulting oil slicks and mitigating environmental damage to the shoreline while engineers worked to cap the well head located more than 5,000 feet below the surface. The information requirements for this effort consisted of accurate locational data about the oil slicks to move skimmer vessels and dispersant flights into position to combat the slick. These efforts generated an extensive need for IAA capabilities, particularly full-motion video and near-real time locational data for the oil slicks. Since skimmer vessels typically travel at speeds less than 10 knots, precise locational data was critical before committing the skimmers to areas where slicks were expected to be found. Although Deepwater Horizon crossed several of the ESF disciplines, remote sensing and IAA capabilities proved critical. The Deepwater Horizon National Incident Commander, Admiral Thad Allen told Major General Garry Dean, Commander of Air Forces Northern—the air component of USNORTHCOM, that remote sensing and IAA functions were so critical that a separate and distinct ESF for remote sensing would have facilitated a more timely and efficient response (Dean, 2010). Admiral Allen indicated that industry, the Coast Guard and interagency partners were heavily dependent on the NIMS/NRF incident command structure yet DoD was not. Additionally IAA and remote sensing functions are not currently aligned with the NIMS or the NRF, which posed significant organizational challenges to a timely and effective response. Admiral Allen pointed out that the current emergency response structure was essentially two-dimensional and that changing to a three-dimensional perspective greatly contributed to success (Robinson, 2010).

Clearly, a need exists for an organized and structured approach to remote sensing in the homeland security arena. Remote sensing can provide valuable information for emergency managers and first responders alike. DoD IAA assets are uniquely suited to this role because they can provide both broad area coverage and full-motion video that can offer rapid damage and infrastructure assessments, find people in need of rescue and assist in committing scarce emergency management resources to the places where they will do the most good.

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III. ANALYSIS OF DOD DOCTRINE, POLICY, LAWS AND ETHICAL CONSIDERATIONS PERTAINING TO ISR AND IAA

A. INTRODUCTION

USNORTHCOM's ability to provide support to civil authorities, particularly the ability to deliver ISR capabilities for IAA, is constrained by doctrine, policy and laws, as well as ethical considerations. Doctrine, the collective guidance that DoD uses to plan and execute operations, is focused on fighting wars and little of it has been dedicated to the civil support role. Policy, in the form of executive orders and DoD regulations, serves to limit the authority of the military to operate in the homeland, and in doing so, places significant restrictions on the manner in which USNORTHCOM can provide support to civil authorities. Legislation, specifically the *Posse Comitatus Act* and *Insurrection Act*, provide narrow guidelines that further regulate how the DoD may operate within the United States. Finally, privacy concerns pose ethical barriers that must be considered when using America's intelligence apparatus in a homeland security role, even when used with the most altruistic intentions. An examination of these factors will show that while significant, the policy, legal and ethical challenges are not insurmountable. The most significant challenges actually lie in the doctrine that DoD uses to deliver its capabilities.

B. JOINT DOCTRINE

The *Joint Doctrine* is the compilation of the current state of knowledge and wisdom in planning and conducting military operations and is considered authoritative. The military services use doctrine as the standard to which they must organize, train and equip their forces to provide a ready pool of trained people and capabilities to meet the needs of combatant commanders (Chariman Joint Chiefs of Staff, 2009, p. 193). It is also the standard by which geographic combatant commands (like USNORTHCOM) employ those forces provided by the services and conduct operations (Chariman Joint Chiefs of Staff, 2009, p. 193).

Joint Doctrine—Fundamental principles that guide the employment of U.S. military forces in coordinated action toward a common objective. Joint doctrine contained in joint publications also includes terms, tactics, techniques, and procedures. It is authoritative but requires judgment in application. (Chairman Joint Chiefs of Staff, 2009)

The *Joint Doctrine* encompasses many volumes of information, but a handful of these are applicable to any undertaking in which DoD becomes involved. *Joint Publications 2-0: Joint Intelligence* and *3-0: Joint Operations* are integral to any military operation because they represent DoD's fundamental organizational toolbox. In addition, *Joint Publication 3-28: Civil Support* is a key doctrine document for homeland security operations. The services also develop doctrine, procedures and concepts of operations to support joint operations. Unfortunately, the preponderance of this doctrine is built upon the DoD's wartime mission to conduct offensive and defensive operations against a foreign military force (Chairman Joint Chiefs of Staff, 2006, pp. x–xxv). This is true in regard to the preponderance of doctrine for conducting ISR operations as well. In fact, the most succinct illustration of this is stated on the cover of selected copies of *Air Force Doctrine Document 2-9: Intelligence Surveillance and Reconnaissance Operations* with the statement, “intelligence is targeting and targeting is intelligence.” In addition, the term targeting is used 98 times in the 74-page document (USAF, 2007, pp. 1–74). In other words, the armed forces developed a remote sensing capability through their ISR enterprise to develop the target intelligence necessary to apply force effectively to U.S. enemies and assess whether or not that force creates the desired effect by its application.

C. JOINT PUBLICATION 2-0: JOINT INTELLIGENCE

Joint Publication 2-0: Joint Intelligence (JP-2-0) is the keystone publication and provides “a common perspective from which to plan and execute joint intelligence operations in cooperation with our multinational partners, other U.S. Government agencies, and intergovernmental and nongovernmental organizations” (Chairman Joint Chiefs of Staff, 2007). It provides a primer on the national intelligence community and its various disciplines, addresses the principles of joint intelligence, discusses intelligence support to the processes of planning, executing and assessing military operations and then

delves into joint, interagency and multi-national cooperation. This publication recognizes the importance of such key concepts as unity of effort, information sharing and cooperation between military, coalition, federal, state and local interagency partners, and non-government organizations. The bulk of the publication focuses on intelligence preparation of the environment to leverage knowledge and information superiority as a force multiplier to joint operations. There is a cursory acknowledgement of the possibility that intelligence may be necessary for domestic operations (Chairman Joint Chiefs of Staff, 2007, pp. i–iv).

The Secretary of Defense may use his authorities to permit U.S. Northern Command (USNORTHCOM) to use its intelligence capabilities, and the Joint Intelligence Operations Center - North may task Department of Defense (DoD) intelligence components, to provide support to USNORTHCOM missions other than foreign intelligence or counterintelligence in continental United States (CONUS) special missions. (Chairman Joint Chiefs of Staff, 2007)

While this acknowledgement discusses the possibility of using ISR assets to support civil authorities, it does not recognize IAA as a formal mission set or codify it in doctrine. It also does not delve into the legal issues that must be satisfied prior to conducting IAA save for the one statement that indicates that the authority to authorize such missions rests with the Secretary of Defense.

Like most military publications, JP-2-0 is steeped in acronyms and military jargon that is not readily understood by those outside the military community. This presents potential impediments to timely IAA assistance from DoD to the interagency, which looks to the NIMS, and specifically the NRF, to understand what capabilities are available when dealing with homeland security problem sets. Since DoD's capabilities are primarily defined in the *Joint Doctrine*, it can be very difficult for an emergency manager, under the pressure of an actual or impending disaster, to research and understand easily the capabilities that DoD can offer.

D. JOINT PUBLICATION 3-0: JOINT OPERATIONS

Joint Publication 3-0: Joint Operations (JP 3-0) serves as the keystone document “that forms the very core of joint doctrine and establishes the framework for our forces’ ability to fight as a joint team.” (Chairman Joint Chiefs of Staff, 2006) The remainder of the publications that comprises the *Joint Doctrine* serves as enablers to this single unifying document, which contains a primer on joint operations and joint organization. It describes the role of the geographic combatant commanders as warfighters and the role of the services to organize, train and equip forces apportioned on an as-needed basis to the combatant commanders. It continues to describe the joint functions and a phased approach to operations for planning, execution and assessment (CJCS, 2006, pp. x–xxv).

Often called the “linchpin” of the joint doctrine publication hierarchy, the overarching constructs and principles contained in this publication provide a common perspective from which to plan and execute joint operations in cooperation with our multinational partners, other U.S. Government agencies, and intergovernmental and nongovernmental organizations. (Chairman Joint Chiefs of Staff, 2006)

JP 3-0 emphasizes the importance of the concept of unity of command in any military operation, but concedes that there are cases, particularly within the interagency, in which unity of command may be impossible to obtain. In these instances, the *Joint Doctrine* emphasizes the imperative of unity of effort (CJCS, 2006, p. A2). This is particularly applicable in the homeland security arena in which DoD operates in support of a lead federal agency that is, in turn, supporting a state or local government.

Although brief, the section on the intelligence core function recognizes the fundamental importance of understanding the operational environment and the necessity of good intelligence to satisfy this requirement. JP 3-0 states that surveillance and reconnaissance are necessary for satisfying information requirement across the spectrum of military operations (Chairman Joint Chiefs of Staff, 2006, pp. III 16–17).

Like JP 2-0, JP 3-0 recognizes that military operations may include domestic operations (Chairman Joint Chiefs of Staff, 2006, p. III 21) that support homeland security, but is primarily focused on offensive and defensive military operation against

foreign adversaries. JP 3-0, the keystone document for planning and conducting joint military operations fails to even conceive of the concept of using ISR assets to support homeland security. Additionally, like the rest of the *Joint Doctrine*, JP 3-0 is written for military professionals and is filled with DoD-specific terminology that includes a 29-page glossary of acronyms and definitions (Chairman Joint Chiefs of Staff, 2006, pp. GL 1–29). This may pose an impediment to interagency partners in the homeland security.

E. JOINT PUBLICATION 3-28: CIVIL SUPPORT

Joint Publication 3-28: Civil Support represents specific DoD doctrine for supporting civil authorities, conducting domestic operations and participating in consequence management (CJCS, 2007, p. i). This publication describes the Framework, the Operational Environment and Operations likely to be conducted by DoD in support of civil authorities (CJCS, 2007, pp. vii–x).

The *Framework* section discusses the relationship between DoD and civil authorities when conducting civil support missions. When describing the civil support framework, JP 3-28 references the *National Response Plan* (NRP) (CJCS, 2007, p. v). The *NRP* was replaced and superseded by the NRF shortly after the publication of JP 3-28 in September 2007. While dated, it is not entirely irrelevant as the NRF is essentially a more flexible evolution of the NRP.

The Civil Support Operational Environment section discusses the authorities under which DoD operates to support a lead federal agency and the process by which a request for assistance is validated and turned into a mission assignment. It outlines the roles and responsibilities of DoD organizations, the National Guard and key federal agencies engaged in the homeland security enterprise. This section also emphasizes the importance of the information environment and information sharing as a key enabler of civil support operations (CJCS, 2006, pp. II 1–26).

The section on Operations provides a discussion of the spectrum of missions that are DoD is likely to be asked to accomplish in its DSCA role. It also provides a tailored, phased approach to operations similar to the phases of joint military operations described in JP 3-0 (CJCS, 2006, pp. III 1–14). Intelligence is discussed throughout the document

and, specifically, in the mission descriptions of this section. JP 3-28 delves into a formidable level of detail and rightly separates intelligence activities by applying the legal authorities given to the 16 members of the national intelligence community as activities involving the conduct of either Foreign Intelligence (FI) or Counterintelligence (CI). It further discusses particular activities in which intelligence personnel and resources are used for purposes that fall into neither of these categories. IAA is neither FI nor CI and falls into this category (CJCS, 2006, p. IV 13).

While this is the most comprehensive DoD doctrine regarding DSCA, it falls short in several areas. It does recognize the need for information and intelligence as a key enabler for consequence management, as well as the possibility that DoD ISR assets could be used to satisfy these requirements in the form of what it calls Aerial Damage Assessment, but places barriers to its employment, which are not in sync with the requirements and demand for this specialized capability as demonstrated in events like Hurricane Katrina, the California Wildfires of 2007 and Deepwater Horizon. JP 3-28 appears to discourage the use of DoD ISR assets for IAA purposes and falls short of formalizing IAA as a DSCA mission set.

Aerial Damage Assessment—Aerial damage assessment (ADA) should be performed by DoD assets only when such actions cannot be performed by local entities or other federal agencies in a timely manner. Yet if tasked, ADA asset use should be efficient, effective, and utilize the least intrusive, least costly means to accomplish the support mission within necessary timelines. Use of DoD intelligence component capabilities in conjunction with aerial reconnaissance may be subject to intelligence oversight for intelligence activities (foreign intelligence or counterintelligence collection), or may be subject to operational parameters and limitation specified by the SecDef, if used for a mission other than an intelligence activity, such as search and rescue, damage assessment, or incident awareness and analysis. (Chairman Joint Chiefs of Staff, 2007)

This publication is written in a manner that attempts to bridge the jargon of the *Joint Doctrine* with the language of emergency management by framing DSCA operations against the NRP, which helps satisfy the NIMS interoperable communication requirement. While JP 3-28 goes further than any other strategic publication in aligning

military capabilities with national response, it falls short by not lining up the civil support operations with the ESFs outlines in the NRF (the current ESFs existed under the NRP).

F. DSCA AIR SUPPORT HANDBOOK AND THE AFNORTH IAA PLAYBOOK

The *Joint Doctrine* provides strategic level guidance for the employment of DoD forces throughout the spectrum of military operations. While all levels of DoD adhere to this doctrine, it is often necessary to expound upon it at the operational and tactical levels. In the case of IAA, Air Forces Northern (AFNORTH), the Air Component of USNORTHCOM, has done just that by developing the *Defense Support of Civil Authorities (DSCA) Air Support Handbook* and the *AFNORTH Incident Awareness and Assessment Playbook (AFNORTH IAA Playbook)*.

The *DSCA Air Support Handbook* and the *AFNORTH IAA Playbook* are complimentary documents that serve to articulate the relationships and processes that pertain to the employment of DoD airborne assets for DSCA missions. The *DSCA Air Support Handbook* provides an overview of the full spectrum of DoD airborne capabilities, including IAA, that can assist in consequence management and homeland security (Air Forces Northern, 2011, p. 4).

The *AFNORTH IAA Playbook* is the current evolution of the *AFNORTH IAA CONOPS*. It details the ISR capabilities that DoD can leverage in support of DSCA operations. It gives a brief description of the available systems in the DoD tool kit, capabilities and considerations for their employment to include cost per hour. The most important thing both the *DSCA Air Support Handbook* (Air Forces Northern, 2011, pp. 52–53) and the *AFNORTH IAA Playbook* bring to the table is a formal definition of IAA (Air Forces Northern, 2010, p. 4).

Incident Awareness and Assessments (IAA) Defined - IAA is similar to DoD's definition of Intelligence Surveillance and Reconnaissance (ISR). However, ISR is conducted outside the United States over foreign territory or within the United States during Homeland Defense events, while IAA is conducted within the United States in support of DSCA operations. The change in title is necessary to make it clear that DoD does not collect Intelligence on U.S. persons. IAA operations focus on providing timely

and usable information to all levels of command and to local, State, Civil, and Federal leaders in order to save lives, reduce human suffering and protect property. The three mission sets of IAA are Broad Area Coverage (BAC), Damage Assessment (DA), and Situational Awareness (SA). Similar to ISR in the HD mission, IAA capabilities include Electro-Optical (EO), Infrared (IR), Synthetic Aperture Radar (SAR), Multi-spectral/Hyper-spectral (MSI/HSI), and Full Motion Video (FMV). (Air Forces Northern, 2010, p. 4)

Both of these documents provide a formal definition of IAA and describe IAA capabilities in the context of emergency management. The *DSCA Air Support Handbook* specifically discusses *ESF #9 Search and Rescue*, as DoD is the lead agency for this task (Air Forces Northern, 2010, pp. 34–39). It provides a listing of the ESFs, but falls short of aligning specific capabilities with applicable ESFs (Air Forces Northern, 2011, p. 94). The *AFNORTH IAA Playbook* does not address the ESFs at all. Both documents are conducive to the NIMS interoperable communications concept as they are written in a manner that military professionals and interagency partners alike can understand. Unlike the *Joint Doctrine*, these are procedural documents unique to the service that produced them and are not considered authoritative across DoD.

G. EXECUTIVE ORDER 12333(AS AMENDED)

Executive Order 12333 (as amended by Executive Orders 13284, 13355, and 13470), United States Intelligence Activities, is the President's intelligence oversight directive. It places limitations on the 16 members of the National Intelligence Community. DoD comprises a bulk of that membership and is generally prohibited from conducting intelligence activities within the United States or conducting intelligence activities about a U.S. person or corporation. Some debate exists as to whether or not intelligence oversight applies to IAA since it is neither FI nor CI. It does, however, involve the use of intelligence resources and personnel and the current legal consensus in DoD is to obtain approval from the Secretary of Defense for the use of intelligence personnel and assets for the IAA mission. The *Joint Doctrine* is inconsistent at best at addressing these complex legal issues.

EO 12333 is implemented within the military by DoD 5240.1R, and supplemental regulations within each of the services. Air Force Instruction 14-104, Oversight of Intelligence Activities, specifically authorized the use of domestic imagery in support of natural disasters. This authorization comes with restrictions including the requirement for a Proper Use Memorandum (PUM) to ensure that imagery is used in a responsible manner in compliance with applicable law and policy.

The PUM requires that imagery products be used for specific operational needs and do purposefully contain information on U.S. citizens in violation of *EO 12333*. The PUM must also include procedures for mitigating inadvertent collection against persons and places in accordance with *EO 12333*. Compliance with *EO 12333* and applicable PUMs is vital for legal and ethical reasons, not the least of which is to maintain integrity and public trust.

H. THE POSSE COMITATUS AND THE INSURRECTION ACTS

The *Posse Comitatus Act*, Title 18 USC Section 1835, prohibits the Army or the Air Force from engaging in law enforcement activities except in instances specifically authorized by the Constitution or legislation and provides criminal penalties for doing so. Although not specifically enumerated in statute, DoD policy extends this prohibition to the Navy and Marines as well.

The *Posse Comitatus Act* came into being at the end of the Reconstruction period following the War Between the States. Its original purpose was to keep U.S. Marshalls from summoning federal troops to supervise elections. Depending on one's perspective, federal troops were being used to intimidate southern voters and keep them from the polls to increase votes for Carpetbagger Republicans, or to provide protection for former slaves attempting to exercise their newfound rights (Bobbitt, 2009, p. 418). It has evolved to mean an almost absolute prohibition against using federal military forces for law enforcement.

While the *Posse Comitatus Act* is a barrier to IAA, it is not a roadblock. IAA could be used to satisfy most situational awareness needs across the homeland security spectrum. However, conflicts could arise if IAA platforms were suddenly asked to

support law enforcement agencies to apprehend criminals or even in cases where they were supporting law enforcement with seemingly benign functions like traffic control. It is important to mention that since *the Posse Comitatus Act* only applies to federal military forces, these limitations do not apply to National Guard forces under state control. As an example, National Guardsmen under state authorizes routinely fly the RC-26 Metro III using the Dragoon sensor pod to provide optical and infrared imaging in support of civil law enforcement agencies primarily conducting counter-drug operations (Air Forces Northern, 2011, pp. 81–83).

The *Insurrection Act, Title 10 USC, Sections 331-334*, provide an exception to the *Posse Comitatus Act* by authorizing the President to use military forces to contain an insurrection. The four sections of the act were passed at different times from 1792–1869 and empower the President to use federal troops or the militia to repress rebellion, insurrection, domestic violence or conspiracies that prevent the states from enforcing the law (U.S. Congress, 1807). In these cases, there would be no prohibition against utilizing federal military forces to conduct IAA in support of law enforcement.

I. ETHICAL CHALLENGES

Significant ethical challenges exist when using America's intelligence apparatus domestically. Americans enjoy constitutional protections to privacy, expression and freedoms that are as fundamental to our existence as the oxygen we take for granted in the air we breathe. Americans value their freedom and loathe ideas that threaten their constitutional protections.

During the 1970s, numerous abuses by the intelligence community became known through congressional hearings held by Senate Select Committee on Intelligence Activities, more commonly referred to as the Church Committee after its chairman, Frank Church. In 1970, a young man named Christopher Pyle uncovered evidence that the U.S. Army had more than 1,500 plain-clothes agents conducting surveillance of anti-war rallies during the Vietnam Conflict (Biewen & O'Harrow, 2011). Pyle caught the attention of Senator Frank Church who eventually chaired a congressional inquiry.

Among the abuses exposed was a program in which the Army compiled intelligence data on more than 100,000 Americans who had expressed anti-war sentiments between the mid-1960s and 1971 (U.S. Senate, 1976, p. 4).

The resulting distrust between the public and the intelligence community still continues today, which is illustrated by criticism of DoD's use of a U.S. Navy P-3 *Orion* surveillance aircraft during the Presidential Inauguration in 2009. The P-3 was flying with a caged video sensor that was ready to provide full-motion video for consequence management in the event that a terrorist attack occurred during the inauguration. An article in the *Los Angeles Times* mentioned that USNORTHCOM was monitoring activity on the mall with the P-3 (Meyer, 2009) and Internet blogs quickly filled with conspiratorial criticism purporting a range of theories ranging from the military spying on Americans to impending martial law. General Gene Renuart, the commander of USNORTHCOM at that time, was compelled to clarify the nature and activities of the P-3 activity. An example of the conspiratorial skepticism still remains posted on the USNORTHCOM blog where General Renuart attempted to clarify his position (Renuart, 2009).

The Church Committee spawned several key pieces of intelligence reform, most notably the Foreign Intelligence Surveillance Act (FISA) and *EO 12333*. FISA and *EO 12333* established procedural authorities, safeguards and restrictions on intelligence activities, affirms the Federal Bureau of Investigation's (FBI) authority as the single member of the intelligence community charged with domestic intelligence and generally prohibits the other members of the intelligence community from conducting intelligence activities against U.S. persons. The exceptions for DoD to conduct IAA with permission of the Secretary of Defense as discussed previously in Section G are in place to safeguard the rights of Americans.

While ethical considerations do not make IAA impossible, turning the resources of the U.S. intelligence community inward, even with the most altruistic of intentions, raises ethical issues and demands a careful and considered approach. *EO 12333* and DoD's amplifying guidance provide procedural safeguards to ensure the civil rights of Americans but transparency and public assurances are key factors anytime intelligence

resources are used to conduct IAA. Although IAA capabilities could significantly enhance homeland security law enforcement efforts, any use of DoD IAA capabilities is highly restricted and must be carefully considered to comply with law and policy in these instances.

As illustrated above, numerous factors in military doctrine, policy, laws and ethical issues exists that are obstacles to using IAA as a homeland security enabler. While each area presents challenges to the use of IAA, none is insurmountable. Although statutes and executive orders are rigid and exist to safeguard civil liberties, they are equipped with exceptions that allow for IAA in the right circumstances. The mere acknowledgement that ethical issues exist when using the nation's intelligence apparatus domestically in concert with the statutory and policy safeguards in place make it unlikely that military commanders would use IAA assets unscrupulously or for illegal purposes. This renders the ethical issues largely matters of perception that can be mitigated if not managed through a good public affairs program. This leaves the *Joint Doctrine* as the remaining impediment and illustrates that existing military doctrine for warfighting is not easily mated with the NRF and needs of emergency managers when DoD is asked to step up in the homeland security arena. By focusing on the gaps between military doctrine and the NRF, meaningful solutions may be identified that simplify the ability of DoD to provide IAA capabilities to the interagency and increase the efficiency of emergency response.

IV. MEASURES OF EFFECTIVENESS

A. INTRODUCTION

While IAA has the potential to increase the effectiveness of homeland security and defense, many obstacles impede using DoD intelligence personnel and equipment within the United States, even with benign intent when these activities are undertaken to further the interests of national security for the greater good. These obstacles present themselves in the form of doctrine, policy, laws and ethics. A thorough analysis of these obstacles in Chapter III showed that the legal and policy obstacles are essentially constraints that the legislative and executive branches have put in place to avoid or mitigate the ethical problems surrounding the use of federal military forces and the national intelligence community on U.S. soil. As the analysis indicates, the most significant impediments actually consist of bringing the DoD doctrine into alignment with the emergency management community through the NRF. This chapter narrows the focus to the examination of the *Joint Doctrine* and the NRF using specific criteria identified as necessary for the successful employment of IAA in the previous chapter. These criteria are the commonalities found through the analysis conducted in Chapter III that represent essential policy elements required for the successful employment of IAA in support of homeland security.

B. CRITERIA FOR MEASURES OF IAA EFFECTIVENESS

These specific criteria include the following.

- Authoritativeness
- Acceptance
- Ease of understanding
- Compatibility
- Fosters unity of effort
- Complies with federal law

- Complies with *EO 12333* (as amended)
- Contains safeguards to mitigate ethical issues

C. MEASURES OF EFFECTIVENESS: JOINT PUBLICATION 2-0: JOINT INTELLIGENCE

Joint Publication 2-0: Joint Intelligence (JP 2-0) is part of the *Joint Doctrine* and is, therefore, considered authoritative and accepted throughout DoD. Since JP 2-0 does not list IAA as a doctrinal mission set and JP 2-0 is accepted as authoritative guidance for incorporating intelligence into military operations, IAA is not widely recognized or accepted in DoD. JP 2-0 is written in military-speak so DoD's intelligence processes may not be easily understood by stakeholders outside the military, like those in the emergency management professions. The *Joint Doctrine* as a whole prefers to work under the auspices of unity of command but recognizes that in some instances unity of command may not be achievable and that unity of effort is essential in those cases. It addresses unity of effort through the concept of the JCMB, which is an ad hoc board consisting of representatives from the different service components prioritizing their collection requirements in support of the targeting cycle used to destroy an enemy and its capability to make war. However, JCMB members all work for a single unified commander so the unity of effort problem is really solved through unity of command (Chairman Joint Chiefs of Staff, 2007, p. I-11). This is somewhat impractical in a homeland security's interagency environment. Since JP 2-0 is primarily focused on kinetic military operations and does not address IAA, it skirts the legal issues, executive orders and the ethical requirements associated with IAA.

D. MEASURES OF EFFECTIVENESS: JOINT PUBLICATION 3-0: JOINT OPERATIONS

Joint Publication 3-0: Joint Operations (JP 3-0) is the keystone of the *Joint Doctrine* and is, therefore, considered authoritative and accepted throughout the DoD. JP 3-0 does not recognize the IAA mission set and since IAA only exists in the tactics, techniques and procedures of the service components (i.e., Air Forces Northern and U.S. Army North) that support USNORTHCOM in the form of concepts of operations, the

DSCA Air Support Handbook and the *AFNORTH IAA Playbook*, IAA is not widely accepted throughout DoD. JP 3-0 is steeped with acronyms and the military vernacular, so DoD's operational processes may not be easily understood by stakeholders outside the military like those in the emergency management professions. JP 3-0 places a priority on unity of command but recognizes that commanders may have to settle for unity of effort in some cases. It does not, however, make any substantive recommendations for achieving unity of effort. JP 3-0 is primarily focused on kinetic operations and does not address IAA or the legal issues, executive orders and ethical issues surrounding it.

E. MEASURES OF EFFECTIVENESS: JOINT PUBLICATION 3-28: CIVIL SUPPORT

Joint Publication 3-28: Civil Support (JP 3-28) is also part of the *Joint Doctrine*, and therefore, considered authoritative. More than any of the other joint publications, it is written to complement the emergency management community. However, JP 3-28 falls short because it was written to complement the NRP, which was superseded by the NRF within days of its publication. JP 3-28 does recognize that while supporting civil authorities in the homeland security environment, DoD must operate in support of a lead federal agency and should concentrate on achieving unity of effort. It falls short of codifying IAA as a formal mission set, but does broach the possibility under the auspices of aerial damage assessment. It recognizes the issues surrounding the *Posse Comitatus Act* and the *Insurrection Act*, as well as *EO 12333*. There are, however, some discrepancies regarding the need for intelligence oversight in compliance with *EO 12333* as expressed in DoD 5240.1R, AFI 14-104, and the *AFNORTH IAA Playbook*. JP 3-28 takes the position that intelligence oversight may not be applicable to what it terms aerial damage assessment, as it is neither FI nor CI. This position may actually increase the risk of creating ethical issues and seems to be at odds with DoD regulatory guidance concerning *EO 12333*. JP 3-28 comes closest of all the joint publications to recognizing IAA as a formal DoD mission set but does not incorporate the tactics, techniques and procedures developed within USNORTHCOM's service components.

F. MEASURES OF EFFECTIVENESS: DSCA AIR SUPPORT HANDBOOK

Air Forces Northern, the air component of USNORTHCOM, wrote the *AFNORTH DSCA Air Support Handbook* as a reference guide for the USAF Emergency Preparedness Liaison Officers to use in their roles as advisors to the emergency management functions in the states and territories. As such, it is designed to be compatible with the NRF. It is a concept of operations document falling under the category of tactics, techniques and procedures, developed at the operational level and is not yet incorporated in the *Joint Doctrine*. As such, it is not considered authoritative within the DoD. This presents particular problems whenever USNORTHOM is required to support civil authorities. Combatant Commanders generally do not have all of the forces assigned that are required to execute their missions during a contingency. For example, Commander, United States Central Command (USCENTCOM) had no standing forces prior to the first Gulf War and only a handful of standing forces when hostilities began in Afghanistan and Iraq. USCENTCOM relies on forces provided by the Joint Staff through the Global Force Management Process to conduct operations. Similarly, Commander USNORTHCOM has no standing forces. When USNORTHCOM is given a mission, it must obtain forces through the Joint Staff using the Global Force Management Process. Since IAA is not recognized in the *Joint Doctrine*, each time an asset is required to support an IAA mission, USNORTHCOM and its component commands must provide a customized proposal including justification of the requirement for ISR resources and compete with other doctrinal ISR mission resource requirements. Without IAA being recognized in doctrine, building a plan and justifying resources to conduct IAA each time a Katrina, California Wildfires, or Deepwater Horizon occurs is analogous to building a custom Ferrari each time one wishes to drive to the grocery store. This document also recognizes DoD's role in interagency relationships and is written with unity of effort as opposed to unity of command in mind. The *DSCA Air Support Handbook* does recognize that IAA has special requirements and offers strategies to comply with the *Posse Comitatus Act*, the *Insurrection Act* and *EO 12333*. In doing so, it attempts to mitigate ethical issues that may arise when conducting IAA missions.

G. MEASURES OF EFFECTIVENESS: AFNORTH IAA PLAYBOOK

The *AFNORTH IAA Playbook* provides the most succinct information in DoD on conducting IAA. Like the *DSCA Air Support Handbook*, it is written at the service level and has not been adopted into the *Joint Doctrine*. As such, it is not considered authoritative throughout DoD, which causes the same challenges outlined above when USNORTHCOM and its components attempt to secure ISR resources for IAA missions through the Global Force Management Process. Since IAA has not been adopted into the *Joint Doctrine*, a customized solution must be proffered to the Joint Staff each time an event or disaster of national significance occurs. The IAA Playbook is not aligned with the NRF but is written with the ease of understanding for interagency partners in mind. In the same thread, it recognized the interagency nature of DSCA and IAA operations and takes the unity of effort approach over unity of command. The *AFNORTH IAA Playbook* offers considerations for conducting IAA within the legal constraints posed by the *Posse Comitatus Act*, the *Insurrection Act* and *EO 12333*. It also discusses the need for a PUM for handling domestic imagery, which offers ethical safeguards against improper collection against U.S. persons.

H. MEASURES OF EFFECTIVENESS: THE NATIONAL RESPONSE FRAMEWORK

The NRF does not recognize IAA as a mission. The NIMS recognizes the need for information and intelligence as an enabler for conducting emergency management operations but does not realistically envision IAA. The NRF outlines specific tasks through the 15 ESFs that generate information and situational awareness requirements, but does not offer methodologies to answer these requirements. The NRF is authoritative in that it provides a framework for state, local and tribal governments to interface with the federal government, yet it is not directive in nature. It is essentially a blueprint for interagency cooperation, and as such, is accepted through consensus by interagency partners. The NRF is written in plain language for ease of understanding by stakeholders, and as such, is compatible with all homeland security disciplines. As a framework, the NRF is designed to allow interagency partners to operate within their given legal

authorities and assumes a coordinated federal response with a lead federal agency in charge being supported by DoD. Therefore, it is compliant with federal laws since it does not address IAA or using the DoD intelligence assets, the *Posse Comitatus Act*, the *Insurrection Act*, *EO 12333* and the surrounding ethical issues are not especially applicable.

I. COMPARISON OF POLICY AND DOCTRINE

A side-by-side comparison of these policy and doctrine documents using the criteria specified above as measures of effectiveness illustrates the policy gaps with respect to IAA.

Table 2. Comparison of IAA Policies and Doctrine Against IAA Measures of Effectiveness

	<i>JP 2-0</i>	<i>JP 3-0</i>	<i>JP 3-28</i>	<i>DSCA Handbook</i>	<i>IAA Playbook</i>	<i>NRF</i>
<i>Recognizes IAA Mission Set</i>				X	X	
<i>Authoritative</i>	X	X	X			X
<i>Accepted</i>	X	X	X			
<i>Easy to Understand</i>				X	X	X
<i>Compatible</i>				X		X
<i>Unity of Effort</i>			X	X	X	X
<i>Compliant with Federal Laws</i>	X*	X*	X	X	X	X
<i>Compliant with EO 12333</i>	X*	X*			X	
<i>Contains Ethical Safeguards</i>					X	

*These publications are compliant with federal laws and *EO 12333* because they primarily address overseas operations. They do not address the use of intelligence assets and personnel for domestic operations.

Since the joint publications are geared toward warfighting, they are particularly lacking when it comes to interagency cooperation and compliance with federal laws, executive orders and ethical safeguards necessary for IAA. As the framework for national emergency response, the NRF is accepted as a consensus policy for interagency cooperation. While it outlines specified and implied information requirements through

the 15 ESFs, it does not offer methodologies for satisfying these requirements. The *DSCA Air Support Handbook* and *AFNORTH IAA Playbook* attempt to bridge the gaps between the *Joint Doctrine* and the NRF but neither are authoritative.

Now that these gaps and seams in policy and doctrine have been identified, they can be used to formulate recommendations that can potentially increase the effectiveness of IAA delivery and employment for homeland security and defense. The next chapter examines recommendations for bridging these policy gaps.

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V. POLICY RECOMMENDATIONS FOR IMPROVING IAA

A. INTRODUCTION

The previous chapters have served to identify doctrinal, policy, legal and ethical challenges that pose obstacles to the use of DoD ISR capabilities as an enabler for homeland security. Careful analysis of these obstacles illustrates that federal law, *EO 12333* and ethical challenges are not insurmountable and essentially define constraints within which federal military forces and members of the national intelligence community must operate domestically to safeguard the rights of Americans.

The primary obstacles have been shown to lie in the disconnect between military doctrine and emergency management policy. The *Joint Doctrine* is geared toward fighting wars and creating kinetic effects on the battlefield. The NRF fails to recognize the spectrum of capabilities, to include IAA, which air power can bring to bear on problems, and in doing so favors a two-dimensional approach to managing emergencies. While heading the Deepwater Horizon response, Admiral Thad Allen lamented this fact in a newspaper interview when he stated, “we needed to manage the situation as a three-dimensional battle space.... I got up at four the next morning and wrote an e-mail explaining to everyone that we were going to move away from a traditional spill response and go to 3-D battle management.” He claimed that recognizing this and moving toward a 3-D strategy was the pivotal point that turned the tide in the oil spill response (Robinson, 2010).

Bearing these facts in mind, several recommendations are set forth below that should be considered for incorporation into the *Joint Doctrine* and the NRF. These recommendations should improve the ability of USNORTHCOM to provide IAA in support of homeland security and improve the ability of the emergency management community to take advantage of the capabilities that IAA brings to the task of saving lives and mitigating threats to the homeland. DoD will always face legal and cultural restraints when operating in the domestic environment and these recommendations are

not magical solutions that will instantly eliminate these challenges. Instead, these recommendations are the first steps in the long journey of incorporating DoD ISR capabilities into the homeland security enterprise toolbox.

B. RECOMMENDATIONS FOR JOINT DOCTRINE

As mentioned earlier, the *Joint Doctrine* is the authoritative DoD guidance for planning and executing joint operations. To formalize IAA as a mission set recognized by DoD in its entirety, it must be codified into the *Joint Doctrine*. The best way to do this is to incorporate the definition of IAA into the pertinent joint publications.

1. Joint Publication 2-0

Joint Publication 2-0: Joint Intelligence is the authoritative portion of the *Joint Doctrine* that outlines how DoD conducts intelligence. The analysis in Chapter IV identified several areas in which *Joint Publication 2-0* could be improved that would facilitate the use of IAA for homeland security. As currently written, this document does not recognize IAA as a DoD mission and does not address it. Although IAA is considered neither FI nor CI, it is conducted using intelligence assets and personnel, and therefore, is not inappropriate to address in this document. Since it does not currently address IAA, it does not address the legal and ethical issues surrounding IAA.

The recommended course of action is to incorporate IAA, as defined in the *AFNORTH IAA Playbook*, into *Joint Publication 2-0*. Since this publication is specific to the conduct of joint intelligence operations, it should include a comprehensive overview of IAA and the issues surrounding the use of ISR for domestic support. This should include a discussion of the situational awareness and information requirements from the NRF that IAA can potentially satisfy along with a discussion of the necessity of achieving unity of effort in the interagency environment. It should also include a discussion of the current policy view that IAA is neither FI nor CI but uses intelligence resources, and therefore, requires specific authorities from the Secretary of Defense prior to execution. A discussion of the ethical safeguards, such as legal reviews and proper use memoranda, should be included.

In doing so, *Joint Publication 2-0* would offer authoritative IAA guidance to the DoD at large. It would also address the legal issues surrounding IAA and offer guidance on the ethical safeguards required to conduct this type of mission. This would be accomplished through inputs from USNORTHCOM to the existing joint publication rewrite cycle in which combatant commands make recommended changes to the *Joint Doctrine*.

2. Joint Publication 3-0

Joint Publication 3-0: Joint Operations is the keystone publication for the *Joint Doctrine* in its entirety. It is the authoritative portion of the *Joint Doctrine* that addresses the full spectrum of joint operations and is accepted as definitive guidance on the subject. As currently written, *Joint Publication 3-0* does not address IAA or recognize it as a DoD mission. This presents particular challenges for USNORTHCOM when tasked to conduct IAA for DSCA. Since this keystone document does recognize IAA, it does not address the legal and ethical issues surrounding IAA.

The recommended course of action is to incorporate IAA, as defined in the *AFNORTH IAA Playbook*, into this document. Since *Joint Publication 3-0* is the keystone of the *Joint Doctrine*, this is vital to formalizing IAA successfully as a DoD mission set. As this publication is operational rather than intelligence specific, a brief overview of the IAA mission, capabilities and considerations, including a reminder that Secretary of Defense approval is required prior to execution, should be sufficient depth for the intended audience of this document.

By incorporating these changes into *Joint Publication 3-0*, IAA would finally become a formalized DoD mission. Since this publication is the keystone, modifications to other relevant publications would be easier because the remainder of the *Joint Doctrine* supplements *Joint Publication 3-0*, which would be accomplished through inputs from USNORTHCOM to the existing joint publication rewrite cycle in which combatant commands make recommended changes to the *Joint Doctrine*.

3. Joint Publication 3-28

If *Joint Publication 3-0* is the keystone of the *Joint Doctrine*, then *Joint Publication 3-28: Civil Support* is the cornerstone of the Defense Support to Civil Authorities mission. It is considered DoD's authoritative guidance for civil support operations. Analysis of this publication revealed it to be dated because it was written to complement the NRP, which has been superseded by the NRF. *Joint Publication 3-28* comes as close to any authoritative doctrinal document to recognizing IAA, but does not quite get there. It gives a nod to using ISR for what it terms Aerial Damage Assessment. It also attempts to address the legal, policy and ethical issues surrounding the use of federal forces and ISR domestically; however, it provides conflicting guidance with respect to intelligence oversight and *EO 12333*.

The recommended course of action for this document is to incorporate IAA and include comprehensive information pertaining to IAA and surrounding issues. It should be revised and updated to maximize compatibility with the NRF. By aligning DoD mission capabilities with the ESFs found in the NRF, both compatibility between DoD and the emergency response community may be achieved, which would result in a DoD doctrinal publication written in something resembling plain English rather than military jargon and would be both authoritative and accepted. The IAA definition from the *AFNORTH IAA Playbook* should be incorporated into this publication along with a comprehensive discussion of the ESFs and associated situational awareness and information requirements (outlined in the NRF under the scope of each ESF) that may be satisfied through IAA. This should also include a comprehensive discussion of the special authorities required from the Secretary of Defense, as well as a clarification of the intelligence oversight and ethical safeguards requirements, such as legal reviews and proper use memoranda needed to conduct IAA effectively. Ideally, *Joint Publication 3-28* would compliment a stand-alone emergency support function (notionally ESF #16) for IAA. If an ideal ESF #16 existed, DHS would most likely be designated as the lead agency with DoD designated in as a supporting role. *Joint Publication 2-0* uses the JCMB concept to ensure both unity of command and unity of effort with respect to intelligence collection. The IRSCC within the Intelligence and Analysis Branch of DHS

is a multiagency, ad hoc organization chartered to assist in coordinating remote sensing efforts for the interagency during homeland security events (Department of Homeland Security, 2009, p. 45). The IRSCC could serve the function of an Interagency Joint Collection Management Board. In the case of the interagency, little probability exists of achieving unity of command, but the IRSCC could become the mechanism used to obtain unity of effort for IAA.

Formalizing IAA in *Joint Publication 3-28* and aligning it with the NRF has the potential to make IAA work better. Incorporating a comprehensive overview of IAA and its surrounding issues can help to overcome the obstacles that impede the effective use of ISR for homeland security, which would be accomplished through inputs from USNORTHCOM to the existing joint publication rewrite cycle in which combatant commands make recommended changes to the *Joint Doctrine*.

C. RECOMMENDATIONS FOR THE NRF

The NRF is the Rosetta Stone for emergency response. It is the common language that emergency managers and first responders use to conduct consequence management. Analysis of the NRF revealed that while the NIMS recognizes the need for information and intelligence to enable effective response operations, no provision is made for it in the emergency support functions. Additionally, Admiral Thad Allen articulated frustration at the existing national emergency response policies while serving as the national incident commander for Deepwater Horizon. He suggested that an ESF for IAA could have made for a more effective response and that the possibility of incorporating such an ESF into the NRF should be investigated (Dean, 2010).

The recommended course of action for the NRF is to add ESF #16, Incident Awareness and Assessment. The scope of ESF #16 should include remote sensing, broad area coverage, damage assessment and situational awareness. It should capture the idea of IAA capabilities used to rapidly survey and assess affected areas and allow emergency managers to make rapid, informed decisions in the aftermath of an event or disaster. DHS should be designated as the lead agency for ESF# 16 with the IRSCC serving as the

Interagency JCMB. The IRS SCC should serve as the focal point for unity of effort and consensus to manage the overall IAA effort, coordinate resources and ensure unity of effort.

By implementing this recommendation, the NRF would offer a three-dimensional response using IAA to facilitate the efforts of emergency managers and first responders alike, which would potentially allow incident commanders to direct scarce resources with increased speed and effectiveness. These changes would be implemented by coordination through USNORTHCOM to the interagency, specifically to DHS and FEMA. It is recommended that an endorsement from Admiral Allen be included while Deepwater Horizon is still fresh in the corporate memory of the emergency response and homeland security community. This will require buy-in from stakeholders within DHS and the IRS SCC.

D. COMPARISON OF CURRENT AND PROPOSED POLICIES

By conducting a side-by-side comparison of the current doctrine and policies with the proposed changes to those policies against the measures of effectiveness outlined in Chapter IV, it becomes clear that these recommended changes have the potential to advance the effectiveness of using IAA for homeland security and defense. As can be seen, *Joint Publication 3-28* becomes, as it rightly should be, the bridge between the *Joint Doctrine* and the NRF. The recommended changes to *Joint Publications 2-0* and *3-0* serve to buttress *Joint Publication 3-28* with respect to IAA. The addition of ESF #16, Incident Awareness and Assessment, in the NRF formalizes the role of IAA in emergency management and makes the military and emergency management communities more compatible. Additionally, designating DHS as the lead federal agency responsible for ESF #16 and designating the IRS SCC as the Interagency JCMB, should promote unity of effort.

Table 3. Comparison of Current and Proposed IAA Policies and Doctrine Against IAA Measures of Effectiveness

	JP 2-0		JP 3-0		JP 3-28		DSCA Handbook	IAA Playbook	NRF	
	C	P	C	P	C	P	C	C	C	P
<i>Recognizes IAA Mission Set</i>		X		X		X	X	X		X
<i>Authoritative</i>	X	X	X	X	X	X			X	X
<i>Accepted</i>	X	X	X	X	X	X				
<i>Easy to Understand</i>						X	X	X	X	X
<i>Compatible</i>		X				X	X		X	X
<i>Unity of Effort</i>		X			X	X	X	X	X	X
<i>Compliant with Federal Laws</i>	X*	X	X*	X	X	X	X	X	X	X
<i>Compliant with EO 12333</i>	X*	X	X*			X		X		
<i>Contains Ethical Safeguards</i>		X				X		X		

*These publications are compliant with federal laws and *EO 12333* because they primarily address overseas operations. They do not address the use of intelligence assets and personnel for domestic operations. C –Current, P–Proposed.

E. CHAPTER SUMMARY

Using DoD ISR in support of homeland security and defense encompasses many complex issues. While these recommendations may not solve every issue surrounding IAA, implementing these simple policy changes could go a long way to formalizing the IAA mission facilitating recognition and acceptance beyond USNORTHCOM, throughout DoD. This could prove very advantageous for USNORTHCOM when competing for resources with other warfighting commanders in the Global Force Management Process and streamline the IAA process and, thus, alleviating the need to design a custom solution each time a disaster or homeland security event occurs that requires military support. Additionally, increasing the compatibility of the *Joint Doctrine* and the NRF should increase the effectiveness of the DSCA response and IAA as a whole.

The next chapter summarizes the potential contribution that IAA can make to homeland security and defense, the challenges and obstacles that impinge upon USNORTHCOM's ability to deliver IAA capabilities to the interagency, and policy recommendations that may help overcome these problems.

VI. CONCLUSIONS

Since its inception, USNORTHCOM has been responsible for providing DoD support to the civil authorities of the United States when asked and legally authorized to do so. Generally speaking, this support occurs when a disaster or homeland security event occurs of such scale and proportion that it exceeds the capabilities of federal, state and local civil authorities. Hurricane Katrina was such an occurrence, and represents the watershed homeland security event that changed the way the emergency management and homeland security communities think and operate.

One capability that DoD brings to any operation is ISR. This generally consists of flying both manned and unmanned sensor platforms above the battle space to develop a clear picture of the situation. In wartime, this picture would include the disposition of enemy forces, as well as the locations of roads, bridges and infrastructure and specific information required to target the enemy. In other words, ISR provides a high level of situational awareness that can be used strategically to obtain the big picture and tactically to obtain the intelligence necessary to engage individual targets. The situational awareness that ISR provides is a significant force multiplier on which military commanders have come to rely for the full spectrum of operations.

DoD ISR capabilities have the potential to be a force multiplier in the homeland security arena as well. USNORTHCOM has coined the term IAA to denote the use of ISR when used domestically to support homeland security. Notably, IAA has been used in events, such as Hurricane Katrina, the California Wildfires of 2007, the earthquake in Haiti and most recently, the Deepwater Horizon oil spill. IAA has the potential to provide incident commanders and first responders alike with vastly improved situational awareness. Having the big picture can allow incident commanders to make rapid decisions regarding where and how to apply precious resources to a large-scale problem. It can also arm first responders with vital information about the conditions in an affected

area they are about to enter. However, significant obstacles exist that impede the ability of DoD to use intelligence assets and personnel for domestic operations. These impediments consist primarily of policy, legal and ethical barriers.

Policy barriers within DoD and the emergency management community present the most tangible obstacles to the use of ISR in support of homeland security. Within DoD, the *Joint Doctrine* is the strategic-level, authoritative guidance used by the military services to conduct full spectrum operations. The preponderance of the *Joint Doctrine*, particularly the portions dedicated to operations and intelligence, are focused on warfighting. The single Joint Staff doctrinal publication (JP 3-28) dedicated to supporting civil authorities is somewhat dated. IAA concepts of operations, tactics, techniques and procedures have matured at the operational level but have yet to be incorporated into relevant joint doctrine. Since these operational level policies are not considered authoritative and have not been incorporated into the *Joint Doctrine*, IAA is not accepted throughout DoD as a defined mission set.

The NRF is accepted and used as the overarching guidance by federal, state, local and tribal stakeholders to conduct emergency responses. The NRF contains 15 ESFs, each of which contains specified informational requirements, many of which can potentially be fulfilled using IAA. The NRF is essentially two-dimensional in its approach to emergency management. It does not recognize the value of leveraging remote sensing operations, such as IAA, to provide critical information for rapid assessment and understanding. Additionally, DoD doctrine is centered on warfighting. When DoD is tasked with supporting civil authorities, warfighting doctrine and the NRF are not compatible. They are figuratively a square peg and a round hole.

EO 12333 (as amended), Conduct of Intelligence Activities constitutes another policy barrier to the conduct of IAA. *EO 12333* places limitations on members of the national intelligence community with respect to domestic activities and U.S. persons. *EO 12333* places a general prohibition on DoD intelligence components against collecting intelligence information within the United States or on U.S. persons with certain limited

exceptions. With respect to IAA, these prohibitions are not insurmountable. Current legal opinions indicate that IAA does not constitute FI or CI and may be conducted within the constraints of *EO 12333* with approval of the Secretary of Defense.

Legal barriers also exist to the conduct of IAA. The *Posse Comitatus Act* and the *Insurrection Act*, like *EO 12333*, serve to constrain the activities of federal military forces in the domestic arena. The *Posse Comitatus Act* prohibits the services from acting in a law enforcement capacity. Federal forces must take care to ensure that IAA is not conducted in a manner in which federal military forces could be construed or appear to be acting as an agent of law enforcement unless the criteria exists for the President to invoke the *Insurrection Act*. Like *EO 12333*, careful analysis of these federal laws shows these barriers are not insurmountable.

Finally, ethical barriers serve as impediments to the conduct of IAA in support of homeland security. These ethical issues became known in the early 1970s because of allegations that national intelligence agencies were acting in a manner inconsistent with America's constitutional values. These allegations were brought to light through Senate Hearings known as the Church Commission. Among the abuses revealed was evidence that the military was collecting intelligence on thousands of American citizens who held anti-war views. The backlash from these revelations resulted in restrictive policies like *EO 12333* and created an air of public distrust that lingers today, which was evidenced as recently as the last presidential inauguration when accusations that Navy surveillance aircraft were spying on inaugural participants. However, careful analysis supports the conclusion that ethical concerns can be mitigated by the constraints imposed by law, *EO 12333*, and a considered approach prior to execution.

With these factors in mind, the areas that present the greatest challenges are found in policy. Specifically the current state of DoD's *Joint Doctrine* and the NRF need to be modified. IAA should be defined as an accepted DoD mission set by adding it to key publications relevant to conducting IAA. Specifically, it should be codified in *Joint Publication 2-0: Joint Intelligence*, *Joint Publication 3-0: Joint Operations* and *Joint Publication 3-28: Civil Support*.

IAA should also be incorporated into the NRF as a separate emergency support function with DHS as the lead federal agency, through the Interagency Remote Sensing and Coordination Cell (IRSCC), to bring the three-dimensional approach to emergency response. DoD uses a JCMB concept to manage ISR priorities and ensure unity of effort and command. The Interagency Remote Sensing Coordination Center should serve as an Interagency JCMB that guarantees unity of effort for the IAA process.

Many challenges face the use of the military in domestic operations. Even more challenges arise when elements of the national intelligence community are used domestically. There is, however, great potential to increase the effectiveness of homeland security and emergency response by leveraging DoD ISR capabilities for IAA. While the policy recommendations in this thesis do not purport to solve all of the complex issues surrounding the use of IAA in homeland security, implementing these fundamental policy changes represent significant strides toward overcoming internal obstacles within DoD while increasing compatibility between DoD and the emergency management community.

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