Collaboration amid Crisis:
The Department of Defense during Hurricane Katrina

Introduction

On Tuesday, August 23 2005, the National Hurricane Center observed a tropical depression about 200 miles southeast of the Bahamas. A week later Hurricane Katrina had become the greatest natural disaster in living memory in the US, affecting 92,000 square miles, leaving over 1,800 dead, and destroying much of a major city.

Hurricane Katrina left a series of images. A deluged city. Victims signaling desperately for help. The dead and the displaced. Among those images were pictures of governmental failure, and some limited successes. Michael Brown, the beleaguered Director of the Federal Emergency Management Agency (FEMA),

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1 This case study was prepared by Donald P. Moynihan of the La Follette School of Public Affairs, University of Madison-Wisconsin. It draws from a variety of sources, most particularly A Failure of Initiative, A Report of the Senate Committee on Homeland and Security and Governmental Affairs. Full bibliographic details are contained in the teachers note.
was commended by President Bush for a “heckuva job,” just days before he was called back to Washington and asked to resign. Lt. General Russel Honoré, who led the military response to Katrina, offered a contrasting image of authority and urgency. The Mayor of New Orleans, Ray Nagin, described him as the “John Wayne dude.” Honoré’s arrival in New Orleans saw a gradual return to order. Most residents still stranded in the city echoed the sentiments of the young girl who shouted at a troop convoy entering the city: “Thank you Mr. Army!”
These images frame a simple narrative of what happened because of Hurricane Katrina. FEMA, and its parent organization, the Department of Homeland Security (DHS), failed. Their failure was partially remedied by the efforts of the military. There is some truth to this narrative, but it is also deceptive because it frames the response to Katrina in terms of the capacities of individual organizations. It leads us to think that solving “wicked problems” is a matter of finding the right organization.2

The botched response to Katrina was not a failure of individual organizations, but a failure of collaboration. Collaboration is a necessary quality of crisis response simply because there is no single organization that can respond to a large-scale crisis. A network of responders is required. FEMA itself is a relatively small agency and lacks the capacity to directly respond to even a medium-sized disaster. Its primary role in a disaster is to foster the coordination of state, local, and other federal responders, as well as non-profit and private actors. FEMA depends upon the willingness of other organizations to engage in the crisis

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2 For example, many felt that the lesson was that the DOD needed to take over crisis response. Congress modified the Insurrection Act to reduce the legal constraints on DOD intervention in natural disasters or other crises in 2006. However, all 50 Governors objected to this new federal authority and Congress removed the provisions in 2007.
response network, which in turn is driven by the mandated responsibilities these 
organizations have, the strategic decisions their leaders take, and their cultural 

This case examines the collaboration between FEMA and the most 
important response organization during Katrina: the Department of Defense 
(DOD). At various times the DOD appeared beset by inertia, while at other times 
it bypassed rules to provide resources even before FEMA asked for them. The 
complex nature of the relationship between these two organizations underlines that 
even when different actors share the same goal and coordination is essential, 
working together is not always easy. To understand the context of this 
relationship, we must first revisit some basic facts about Katrina, and learn about 
the federal policies that are intended to foster collaboration amid crisis.

**Background: Hurricane Katrina**

By Friday, August 26 at 11 a.m., the National Weather Service warned that 
Hurricane Katrina was heading toward New Orleans. The Governor of Louisiana, 
Kathleen Blanco, was worried enough to declare a state of emergency. Later, the 
National Weather Service revised its prediction. By 4 p.m. the storm was predicted 
to hit the Mississippi Coast. By 4 a.m. on Saturday New Orleans was again 
expected to be hit. On Saturday voluntary evacuations began in Louisiana, 
President Bush declared a state of emergency and FEMA and state emergency 
responders began 24-hour operations. By 7 p.m. on Saturday, the National 
Weather Service warned that levees could be topped in New Orleans, causing 
catastrophic flooding.

The Mayor of New Orleans, Ray Nagin, ordered a mandatory evacuation by 
9:30 a.m. on Sunday, and the Superdome was opened as a refuge of last resort. 
Katrina made landfall by 6:10 a.m. on Monday, and later that morning levees 
began to be overtopped and breached, leading to catastrophic flooding, although 
the Department of Homeland Security (DHS) and White House would not learn of 
this until early Tuesday morning. Search and rescue operations began by Monday 
afternoon, but communications also began to fail around this time. DHS Secretary 
Michael Chertoff declared an Incident of National Significance on Tuesday 
evening. On Thursday, buses finally arrived to begin evacuations from the 
Superdome, although evacuations from both the Superdome and another shelter, 
the Morial Convention Center, were not completed until Saturday, and some 
remained stranded on highways until Monday.
A catastrophe as large as Katrina is different from other disasters. It requires more of everything, especially resources and responders. At the same time, the storm reduced response capacity, especially state and local resources. Even as responders worked with degraded capacities, Katrina also created an unprecedented demand for actions and services, such as food, water, evacuation, search and rescue, and shelters. For example, in the days after Katrina, 563 American Red Cross or state emergency shelters in Louisiana housed 146,292 people who lacked adequate food, water, medical services, and toilet facilities.

**Coordinating Crisis Response**

The US government has struggled with how to deal with the challenge of fostering inter-organizational collaboration amid crisis. The aftermath of 9/11 saw the newly created DHS mandate a single model for crisis response coordination. This model was the Incident Command System (ICS). The ICS was an innovation of California forest fire responders in the early 1970s, who sought to find a common language, management concepts, and communications to facilitate coordination. The key innovation of the ICS was to temporarily centralize authority to direct multiple organizations. The designated incident commander directs and coordinates the tactical efforts of the many organizations using standard crisis response functions of operations, logistics, planning, and finance and administration (see figure 1 and appendix 1 for additional detail).

**Figure 1: The Incident Command System**

![Diagram of the Incident Command System](image-url)
In the years that followed the ICS’s creation, practitioners perceived it to be successful in reducing coordination problems and improving fire response effectiveness. As its reputation grew, crisis responders outside of California began to use the ICS to fight forest fires and for other tasks such as hazardous material cleanups, earthquakes, and floods.

In 2004, the DHS established a new National Response Plan (NRP) that included a requirement for all federal responders to use the ICS approach, as well as any state and local responders receiving DHS grants. Katrina was the first major disaster that took place after the introduction of the new crisis management policies, and represented their first critical test. But the ICS failed to provide unity of command and clear direction to responders during Katrina. No single individual took charge in the early stages of the disaster. There were three major operational commands in the field during Katrina featuring federal officials:

- The Joint Field Office and Federal Coordinating Officer (FCO): The NRP makes the FCO (William Lokey, from FEMA) the federal response commander. The FCO forms a unified command with the state coordinating officer, who is responsible for coordinating state and local needs and actions with federal actions. According to the classic ICS model the Joint Field Office is the commanding unit. But in the case of Katrina, two other commands existed.
- The Principal Federal Official (PFO): The NRP created the role of the PFO to act as the eyes and ears of the DHS on the ground, but not to make operational decisions. Secretary Chertoff appointed Michael Brown as the PFO on Tuesday, the day after landfall. But Brown lacked the required training for the role, and thought the role was an unnecessary distraction from his duties. Brown did such a poor job of communicating with Chertoff that the DHS Secretary eventually told him to stop moving and to stay put in Baton Rouge. There was confusion in the minds of DHS officials as to the role of the PFO. Some seemed to think that it was effectively the role of field commander, trumping the FCO. In a pre-Katrina response exercise this confusion had been apparent, but was unresolved. The PFO that succeeded Brown, Admiral Thad Allen, did not clear this confusion, but instead established a separate command that made operational decisions without working through the Joint Field Office. In practical terms, this tension was finally resolved when Allen also took on the role of FCO.
- Joint Task Force Katrina: This command directed DOD active duty forces. General Honoré, who led the Joint Task Force, took state and local government requests and pursued actions without coordinating with the Joint Field Office.
According to the NRP, state and local officials should have worked through the Joint Field Office. But the multiplicity of commands among federal responders made clear lines of intergovernmental coordination more difficult to establish.

There were other factors that limited the potential for collaboration between federal officials and state and local officials. Much of state and local emergency infrastructure was destroyed, and first responders were themselves victims of the flood. Many local responders lost response assets, evacuated or were isolated by the flooding. In New Orleans, for example, city buses were flooded, even though they were staged in areas that had not seen flooding during previous storms. In any case, most potential drivers had already evacuated. Pre-designated Emergency Operation Centers were rendered unusable due to flooding or other damage, eliminating a base for command operations and resulting in poor coordination and wasted time as responders looked for new locations. Federal responders were often located too far away to be effective, and transportation was mostly unusable. Communications was also badly impacted, limiting the capacity to establish situational awareness, share information and coordinate action. Over three million telephone land-lines were lost in the affected states, including many 911 call centers. Wireless phones were also affected, with approximately 2,000 cell sites out of service, and few places to charge the phones because of widespread power loss.

But the potential for intergovernmental collaboration was also undermined prior to Hurricane Katrina via a series of post-9/11 policy changes. FEMA was moved into the newly-formed DHS in 2002, reducing its ability to maintain its traditional role as lynchpin of intergovernmental emergency relationships. The agency lost resources that allowed it to convene intergovernmental planning efforts that were central in building such relationships. It also lost political influence and the authority to provide grants for state and local preparedness efforts, giving state and local governments less reason to pay attention to FEMA. As FEMA fell into decline, so did agency morale. Senior managers left, taking with them decades of relationships with state and local counterparts.

**The DOD View of Crisis Response**

For federal agencies, the NRP had identified specific disaster responsibilities ahead of time in order to reduce confusion when a crisis occurred. The DHS hoped that this would establish a basis for crisis collaboration. FEMA would identify a need and communicate it to the appropriate federal agencies, who would
then supply the requested resources. Reflecting its outsized importance, the DOD had responsibilities in almost all of the emergency support functions identified by the NRP (see appendix 2).

But this process is complicated by the DOD’s understanding of its role in crisis response. DOD has its own directives that reflect a reluctance to become engaged in crisis response, and particular concerns about interagency collaboration. This policy decrees that the DOD will become involved “only when other local, state or Federal resources are unavailable and only if Defense support does not interfere with DOD’s primary mission or ability to respond to operational contingencies.” The official stance of the DOD is that it cannot be part of any incident command not under the control of DOD officials, arguing that, alone among federal agencies, it cannot be commanded by any civilian other than the President and the Secretary of the DOD.

Within these constraints, the DOD offers two forms of crisis response capacity. First, when necessary, the DOD is willing to provide help to civilian authorities, but views mission assignments from these agencies as requests for assistance rather than orders from a command. The DOD facilitates this coordination by placing a Defense Coordinating Officer to work with the Federal Coordinating Officer at the Joint Field Office of the incident. The Defense Coordinating Office is the on-site command of DOD resources unless a separate command is established. Second, if serious enough, the military may decide to establish a separate command to direct its own forces. In Katrina, this took the form of Joint Task Force Katrina, led by General Russel L. Honoré.

A further constraint on DOD collaboration during crisis is a set of self-imposed rules. The process for reviewing requests for assistance is established by 1997 DOD Directive 3025.15. Requests are supposed to go from the Federal Coordinating Officer to the Defense Coordinating Officer, who then passes them through the Northern Command (NORTHCOM – the part of the DOD whose theater of operations includes the United States) to the Office of the Secretary of Defense Executive Secretariat, and then to the Joint Director of Military Support (JDOMS). The validity and legality of the request is reviewed at each stage, and the request is expected to estimate the length of time support will be needed. JDOMS is required to consider the impact on the DOD’s budget, whether it is in DOD’s interest to participate, the legality of action, possible harm to civilians, and

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effect on readiness for overseas missions. The recommendation of JDOMS is
normally passed to the Joint Chiefs of Staff and requires Presidential approval, but
in times of disaster or if local authorities need immediate help, the DOD can move
more quickly.

The DOD’s caution about its role in crisis response reflects an underlying
concern about being dragged into non-military missions and becoming subservient
to other organizations. This concern is not new. In his classic analysis of civil-
military relations, Samuel Huntington argued that the DOD sought and needed a
measure of autonomy. In return, the military would maintain an ethic of
professionalism that emphasized obedience to a civilian command.

A suspicion of interagency cooperation is reflected in DOD history. Within
the DOD itself, distinct service cultures and interbranch rivalries have restricted
coordination. The suspicion of working with others has become more problematic
as the DOD has been asked to undertake a variety of new tasks that necessitate
coordination with outside actors, such as fighting terrorism, diplomacy, nation
building, the war on drugs, peacekeeping, and crisis response. Many in the military
regard such activities as mission creep because they are not directly
related to winning wars. In fact, such responsibilities have their own name: Military Operations Other than War (MOOTW).

One former Chairman of the Joint Chiefs of Staff mocked the Pentagon’s angst about mission creep by frequently stating that “Real men don’t do MOOTW.” The military strategist Michael Barnett notes that advocates for MOOTW have had to face a hostile DOD culture: “In the macho world of the military, it wasn’t difficult to see who would lose this doctrinal fight: obviously the guy who’s only talking about things ‘other than war.’ Who, after all, joins the military to do things other than war? I mean, isn’t that called the Peace Corps?”

The DOD during Katrina

Many responders, including some DOD officials, suggested that the DOD response to Katrina was sluggish. Other DOD officials defended their response, noting that they had set aside bureaucratic rules. Both characterizations are accurate to the extent that they reflect two distinct stages of the DOD’s response. In the first period, before and immediately after landfall, the DOD took an essentially reactive posture, where it waited for requests from civilian authorities. In the second period, beginning on Tuesday, the day after landfall, the DOD took a much more proactive stance, characterized by a “can-do” military culture that led the DOD to set aside its own rules and procedures in the name of greater effectiveness.

**Period One: “Why Isn’t the Red Tape Being Cut?”**

Both FEMA officials and Louisiana state officials described the initial DOD response as slow and overly bureaucratic. Scott Wells, a FEMA Federal Coordinating Officer with 30 years of military experience, described the JDOMS process as “more than awkward. It's more than cumbersome. It just takes a long time to execute.”

FEMA staff were frustrated by cases where the DOD could have been more responsive in processing requests. It took 24 hours for the DOD to process orders for helicopters to survey the damage. FEMA requested eight swiftwater rescue teams, squads trained and equipped to work in a flooded city, and equipment from Travis and March Air Force bases in California. While FEMA liaisons worked all night drawing up the request, they were told in the morning that Secretary Rumsfeld was unavailable to approve the request (Rumsfeld was in San Diego, his
schedule including a San Diego Padres baseball game). At one point, when told Pentagon rules did not allow for the quick procurement of a boat to house the homeless, FEMA Director Michael Brown asked: “Why isn't red tape being cut?”

State government officials encountered similar red tape. Andy Kopplin, Chief of Staff to Louisiana Governor Blanco, requested that the Pentagon allow the use of four helicopters that were at the Fort Polk Air Force Base in Louisiana. On Tuesday morning, Kopplin called the base and was told the Governor needed to make a request to the DOD to release the helicopters. After spending hours on the phone to an official at the Pentagon, permission was given. But then the helicopters were not released until the next day. Because pilots had spent the day idling on the tarmac awaiting orders, they had exceeded their allowed flight time for the day and were not allowed to fly.

The DOD argued that most delays in processing requests for aid were because of vague FEMA requests. From the perspective of FEMA officials working under difficult conditions, the DOD demanded an excessive level of detail, creating an information bar unlikely to be satisfied in the chaos of Katrina. Scott Wells suggested that the DOD wanted “to know 80 to 90 percent of the information before they will commit an asset.” Once the DOD reviewed a request, it often returned it to FEMA seeking additional clarification.

Some DOD officials on the front lines shared the frustration of other crisis responders. Captain Michael McDaniel, the lead Navy liaison to FEMA, said: “JDOMS is notorious or has been notorious, ‘Well, you can't ask for it that way. You need to do it like this.’ Well, tell me how I need to ask for it, you know? I just need some helicopter support down there.” Colonel Don Harrington, the lead DOD and National Guard liaison to FEMA agreed that “yes, there were some delays over there for 9,153 different reasons, and that created some angst...I think it's just a cultural thing, all the way up...Just a cultural reluctance that they want to make sure that mission analysis is done and all the options are explored before you come to DOD.”

General Honoré had also urged a more proactive approach. On Sunday evening he contacted NORTHCOM, requesting a consideration of what types of support could be provided, and sought a response by 2 a.m. the next morning. However, without direction to deploy resources from JDOMS, NORTHCOM was reluctant to explore options, delaying the ability of the DOD to become an active participant in the response. Major General Richard Rowe, the Operations Director at NORTHCOM, noted that “Joint Forces Command and the Joint Staff did not do
anything,” and did not want to see any requests initiated from within the military until FEMA had issued requests. This approach hampered Rowe’s ability to detail the types of support the DOD could immediately provide. In an email to Honoré 12 hours after landfall Rowe explained the delay in providing this information was due to being “somewhat hamstrung by JDOMS desire to wait for [Requests for Assistance].”

By waiting for specific requests and carefully vetting those requests through JDOMS, the DOD delayed its own capacity to respond. That DOD officials blamed FEMA for failing to prepare adequate requests for assistance indicates that the DOD began by treating Katrina as a disaster like any other. The DOD initially employed a “pull” orientation – assuming that crisis response would occur from the bottom up – rather than a “push” approach. A “push” approach would have seen the DOD move rapidly to deploy resources without formal requests, and to establish a separate command. The DOD would soon apply a “push” approach, as senior officials realized the extent of the catastrophe. The decision to move to this approach was made at a meeting of DOD leadership on Tuesday morning.

**Period Two: The Blank Check**

Like other federal officials not in Louisiana, DOD leadership assumed that New Orleans had “dodged a bullet” as late as Monday night. On Tuesday morning Assistant Secretary Paul McHale, Deputy Secretary Gordon England (who was acting Secretary in Rumsfeld’s absence), and the Chairman of the Joint Chiefs of Staff, General Richard Myers, met. They were concerned that media reports were underreporting damage, and that FEMA was not making requests in a timely fashion. Deputy Secretary England told the Joint Chiefs of Staff and representatives of the military services that they should “lean forward” and that NORTHCOM was to be provided with any asset it needed. On Tuesday afternoon, General Myers repeated these commitments to his service chiefs, adding that they could proceed on the authority of vocal command, from himself, or from Deputy Secretary England to provide the necessary resources needed to Admiral Timothy Keating, commander of NORTHCOM. Keating was told by England that he had a “blank check” to respond to Katrina. A later order provided further autonomy to DOD responders, expanding Myers vocal order to allow commanders to react anywhere they saw a need.

These leaders at the DOD anticipated that the full attention of the White House was now turned to Katrina, and as a result, their role would be significantly broadened. Admiral Ed Giambastiani, Vice Chairman of the Joint Chiefs of Staff
emailed Admiral Keating at 4.59 p.m. on Tuesday saying: “Whatever you can think of and get it moving yesterday, carriers, helos, trucks, amphibs, LCACs [Landing Craft Air Cushion], C-17s, C-130s, hospital ships, medical teams - whatever. Overkill is better than undershoot. POTUS [President Bush] is coming back to D.C. tonight just for this.”

The move to a “push” approach is reflected in the highly unusual decision to rely on vocal command. In almost all cases, deployments for resources follow written orders which are electronically tracked. Assistant Secretary McHale recalled: “The message from the Deputy Secretary of Defense, consistent with the counsel provided by the Chairman of the Joint Chiefs, was to act with a sense of urgency and to minimize paperwork and bureaucracy to the greatest extent possible.” Admiral Keating understood the direction as, “We're moving anything we think FEMA will need. No obstacles from DOD or Joint.” The shift to vocal command sought to prevent normal paperwork requirements from delaying the response. The DOD would take action consistent with the needs of the situation, and catch up with the paperwork later.

The switch to a proactive response was felt immediately on the ground. Captain McDaniel noted “The pendulum swung from one extreme to the other through this. I mean, it went from having to pry Secretary Rumsfeld's fingers off of a helicopter package...and this 100-pound gorilla just goes, ‘Okay, we've got it.’ Boom, and then the floodgates open.” This new responsiveness led FEMA and DHS staff to praise the DOD. DHS Deputy Secretary Michael Jackson described it as “one of the best examples of cutting through bureaucratic red tape and getting on with the job.”

The DOD no longer allocated resources by carefully vetting FEMA requests. If requests were not specific enough, DOD officials were now likely to fill in the details and move ahead. In addition, the DOD sought to anticipate FEMA requests by moving forward with what resources it thought appropriate. When FEMA requested resources, the DOD was ready to provide them. If the DOD felt that resources could be usefully deployed, but FEMA had not already requested those resources, the DOD generally put them in operation anyway, and then drafted its own requests for assistance, which it passed on to FEMA to send back to the DOD through official channels. For example, US Transportation Command began airlifts from New Orleans airport at 8 a.m. on Thursday, but it was not until Thursday evening that the DOD received a mission assignment to airlift evacuees, and this assignment was not processed until Friday. The majority of military resources deployed, worth about $805 million, were already in the process of
execution by the time they were officially approved by the Secretary of Defense on September 5.

At the same time, the appointment of Honoré to lead Joint Task Force Katrina provided another means by which the normal procedural constraints could be bypassed. Honoré started by finding a way to move his troops near the center of the action without waiting for orders. “My thought was ‘get there,’” because the first rule of war is you’ve got to get there.” In the absence of explicit orders to mobilize, one formal way that Honoré could move his troops was through a training exercise. He invented “Exercise Katrina” in order to move his troops to Camp Shelby in Mississippi before landfall. Waiting for an official request for assistance or deployment orders was not Honoré’s style: "That is a response, sometimes, by folks to say, ‘Let's wait until they ask for something.’ But in this case, we've got a case where we need to save life and limb. We can't wait for a [Request for Assistance] or shouldn't be waiting for one. If there's capability, we need to start moving.”

JDOMS directives allow local military commanders to make use of resources without prior permission to “save lives, prevent human suffering, or mitigate great property damage under imminently serious conditions.” Honoré, in many instances, replaced the JDOMS process – taking requests for state and local officials, evaluating them, and deploying resources. For example, Louisiana officials did not make a formal request for active duty forces to be deployed but simply asked Honoré. Active duty personnel searched for survivors, assisted rescues, and maintained law and order.

The DOD was now clearly engaged in the response. This was good news for FEMA; having witnessed DOD’s concerns about performing non-military missions and FEMA was now seeing the “can-do” aspect of DOD culture. But it did not mean that FEMA and the DOD now had a smooth collaborative relationship. By committing to an all-out effort, the DOD largely edged FEMA aside, telling FEMA what resources it would provide before FEMA could formulate requests. In his testimony to the Senate, Scott Wells of FEMA likened the aid of the DOD to that of an 800-pound gorilla: “You're supposed to take care of that gorilla and be responsible for that gorilla, but that 800-pound gorilla is going to do what he wants to do when he wants to do it and how he wants to do it. So you lose some of that control in your organization with the Department of Defense structure.”
The establishment of Joint Task Force Katrina reflected DOD autonomy. The Task Force essentially represented a separate field command in addition to the civilian Joint Field Office, and the Principal Federal Official. The Task Force did little to coordinate the requests it received from state and local officials with other commands. This further weakened the prospect for unified command in response. For example, FEMA officials had devised a plan for evacuating the Superdome, and planned to do so on Wednesday morning. But General Honoré told National Guard at the Superdome to cancel these plans. At the request of Governor Blanco, Honoré implemented a separate evacuation plan without informing FEMA. Another example is body recovery and mortuary services, where the DOD became impatient when the Department of Health and Human Services, the official lead agency for this responsibility, was slow in responding. Eventually, the DOD took the lead in identifying and storing the dead bodies. In these examples, the DOD simply moved ahead and undertook tasks when it felt that coordinating with other agencies was delaying the process.

The aggressive response of the DOD in this period made it easy to forget its initial inertia. It was widely praised in the aftermath of Katrina. A special Senate committee highlighted the extraordinary efforts of the DOD in helping to restore some sense of order, but also noted “a cultural reluctance’ to commit Department assets to civil support missions unless absolutely necessary.” This combination of praise and criticism reflected the mixed results of the FEMA-DOD collaboration, and raised questions. Is it possible to structure collaboration in crisis situations? What barriers limit such collaboration, and how can they be overcome? What motivates coordination between agencies? What role do organizational rules, culture, and leadership have in shaping collaboration? Finding answers to these questions poses an ongoing challenge for policymakers looking to unlock the benefits of a crisis response that coordinates the range of capacities of the federal government and other responders, but does so with the rapidity demanded by crisis conditions.

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Conclusion

There are many reasons why the response to Hurricane Katrina was insufficient. This case does not try to deal with all such issues, but instead focuses on just one dyad, albeit an important one, in the Katrina response network. This network saw a huge number of organizations responding to a central goal: reducing the suffering and loss of life that resulted from the hurricane. Over 500 organizations were identified as involved in the immediate post-Katrina response (see appendices 2 and 3).

It is hard to envision any single command directing all of the organizations that responded to Hurricane Katrina. In part, this is because of the size of the network. Many of the responders, especially from the non-profit and private sectors, were not involved in pre-crisis planning, were not familiar with the ICS, and were simply trying to help in any way possible. By contrast, the DOD had pre-designated responsibilities and a better than average understanding of the ICS system. Even with these advantages, collaboration between the DOD and FEMA was not always smooth. Fostering intergovernmental collaboration and collaboration between government and private and nonprofit organizations pose an even greater challenge. But if the federal government struggles with crisis coordination among its own agencies, it is unlikely to be able to foster collaboration with others.
Appendix 1: Department of Homeland Security view of ICS management characteristics

- Common terminology
- Manageable span of control
- Modular organization – the command structure can be expanded to meet the nature of the incident while maintaining a manageable span of control. If the crisis expands, additional incident commands can be added, all under the control of single area command
- Management by objectives – actors should identify objectives, creating assignments, plans, procedures, and protocols to achieve these goals. Written incident action plans should be produced on a regular (typically daily) basis
- Pre-designated incident location and facilities – planning should identify likely locations and facilities for ICS operations
- Comprehensive resource management – processes for categorizing, ordering, dispatching, tracking, and recovering resources that give a timely account of resource utilization
- Integrated communications
- Establishment and transfer of command – the agency with primary jurisdictional authority can identify the incident commander
- Chain of command and unity of command – clear lines of authority where everyone has a designated supervisor
- Unified command – if there is shared jurisdiction, there may be multiple incident commanders. If so, they should work together as a single team
- Accountability – responders must check in via ICS procedures; the incident action plan must be followed
- Deployment – personnel/equipment respond only when requested or dispatched
- Information and intelligence management – a process must be established for gathering and sharing incident-related intelligence

## Appendix 2: DODs Role in Disaster Response Functions in the National Response Plan

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<tr>
<th>Emergency Support Function</th>
<th>DOD's Specific Role</th>
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<tbody>
<tr>
<td>1. Transportation</td>
<td>Provides military liaison to ESF#1 desk and military transportation to move resources, and assists in contracting for civilian aircraft</td>
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<td>2. Communications</td>
<td>Uses own resources to provide own communications and coordinates numerous other communication issues with the Federal Emergency Communications Coordinator</td>
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<td>3. Public Works and Engineering</td>
<td>Army Corps of Engineers provides technical assistance, engineering, and construction management</td>
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<td>4. Firefighting</td>
<td>Conducts firefighting on DOD installations and assists other lead agencies for firefighting on non-DOD land</td>
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<td>5. Emergency Management Annex</td>
<td>No specific role identified</td>
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<tr>
<td>6. Mass Care, Housing, and Human Services</td>
<td>Army Corps of Engineers provides ice and water; inspects shelter sites for suitability; and assists in construction of temporary shelters and temporary housing repair</td>
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<td>7. Resource Support</td>
<td>No specific role identified</td>
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<tr>
<td>8. Public Health and Medical Services</td>
<td>Transports patients to medical care facilities; assists with mortuary services; procures and transports medical supplies; and provides DOD medical supplies, blood products, medical personnel, laboratory services, and logistics support</td>
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<td>9. Urban Search and Rescue</td>
<td>When requested, serves as a primary source for rotary and fixed-wing aircraft to support urban search-and-rescue operations; and Army Corps of Engineers provides (1) certain training and structural integrity analysis, (2) assessments of whether buildings are safe to enter, (3) building stability monitoring, and (4) other services</td>
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<tr>
<td>10. Oil and Hazardous Materials Response</td>
<td>Provides the federal on-scene coordinator and directs response actions for releases of hazardous materials from its vessels, facilities, vehicles, munitions, and weapons; and Army Corps of Engineers provides response and recovery assistance involving radiological dispersion devices and improvised nuclear devices</td>
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<tr>
<td>11. Agriculture and Natural Resources</td>
<td>Assesses (1) the availability of DOD food supplies and storage facilities, (2) transportation equipment at posts near the affected area, and (3) laboratory, diagnostic, and technical assistance; and assists in animal emergency response; develops appropriate plans; and the Army Corps of Engineers provides expertise and resources</td>
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to assist in removal and disposal of debris and animal carcasses

12. Energy Coordinates emergency power team missions with power restoration activities and provides appropriate support

13. Public Safety and Security If directed by the President, quells insurrection and provides physical and electronic security systems assistance and expertise

14. Long Term Community Recovery Provides technical assistance in community planning, civil engineering, and natural hazard risk assessment and supports national strategy development for housing, debris removal, and restoration of public facilities and infrastructure

15. External Affairs No specific role identified other than to provide support as required

Source: Report of the Committee on Homeland and Security and Governmental Affairs

Appendix 3: The number and type of organizations involved in the response to Hurricane Katrina

Table 1

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<tr>
<th>Level of Jurisdiction</th>
<th>Source of Funding</th>
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<tr>
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<td>National</td>
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<tr>
<td>Federal</td>
<td>67</td>
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<td>State</td>
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<td>Sub-Regional</td>
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</tr>
<tr>
<td>Parish/County</td>
<td>53</td>
</tr>
<tr>
<td>Totals</td>
<td>304</td>
</tr>
</tbody>
</table>


Taken from Comfort, Louise. The Dynamics of Policy Learning, unpublished paper.
Appendix 4: Visual representation of the Hurricane Katrina Response Network

Taken from Comfort, Louise. *The Dynamics of Policy Learning*, unpublished paper.