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Quick Response Report #140

The Terrorist Attacks on September 11, 2001: Immediate Impacts and Their Ramifications for Federal Emergency Management

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INTRODUCTION

The recent terrorist attacks on the World Trade Center in New York City and the Pentagon are horrific events, of a scale and type never before seen in the U.S. or in the world. To our knowledge, no past terrorist disaster in the U.S. has resulted in both recovery and military actions to seek redress for the incident. The unique range and complexity of the aftermath are illustrated by the CNN website (www.cnn.com), which has reported daily on various activities connected with a) the investigation of the terrorist incidents, b) retaliation, and c) recovery.

Given the timing, nature, and magnitude of the attacks, plus the immediate extensive media coverage, the topics of terrorism and emergency management are receiving an unprecedented amount of attention not only in the U.S. but worldwide. Aspects of terrorism usually reserved to a small group of behind-the-scenes operational personnel suddenly are of interest and concern to citizens throughout the nation.

In researching and documenting the outcomes of the events in New York City and the Pentagon, we chose to focus primarily on emergency management at the federal level. Even with this limited focus, the effects of the September 11 events on the federal government involves a huge array of impacts and outcomes. This report will briefly describe the events and their effects, giving more time and space to some of the early impacts and ramifications. The report deals generally with emergency management issues and actions during the first 30 days after September 11. It does not cover the many problems and issues connected with the public management of health and environmental issues that began to emerge about four weeks after the attacks took place. Finally, our research relied mainly on secondary sources, because it was not possible to gain access to key actors for personal interviews in the first few weeks after the massive events.

The Unprecedented Role of the Public Sector

As noted by Waugh, "Emergency management is the quintessential governmental role. It is the role for which communities were formed and governments were constituted in the first place—to provide support and assistance when the resources of individuals and families are overwhelmed."¹ For the emergency management community these vastly destructive terrorist attacks have a large number of aspects, impacts, and implications that are unprecedented. Clearly, these events will go down in history as a major milestone in emergency management and probably will result in major changes in the emergency management systems at each level of government in the future.

Given the vast scope of impacts and ramifications for government actions and policies, at every level of government, this paper can only outline or briefly discuss some of the impacts and outcomes of the September 11 event. This report should be viewed as an early step in what is likely to be a long-term sequence of analyses and reports about a milestone set of disaster events.

APPROACH

Our approach was to use the conceptual framework for the *Disaster Time Line: Selected Milestone Events and U.S. Outcomes (1965-2001)*² as a starting point. We set out to research and document some of the political and policy impacts of the September 11 attacks and their ramifications at the federal level. While working on the Disaster Time Line, we discerned a predictable sequence of actions and outcomes from major defining disaster events since 1965. The key categories are: major after-action reports and documents; legislation, regulations, and executive orders; response plans; and organizational changes. We planned to document the expected sequence of actions and determine, to the extent possible, the causal relationships between the events and major outcomes.

Two issues arose while trying to apply the approach noted above. 1) Initially, it appeared that the September 11 events did not fit into the sequence observed previously. We later decided that although these events have some aberrations, they did fit into the basic pattern. The details of this finding will be discussed later. 2) The authors decided to prepare a new, separate graphic, the Counter-Terrorism Time Line, in order to focus on the level of detail and space needed to adequately and appropriately display all of the details and underpinnings of the federal involvement in counter-terrorism.³

EVENTS OF SEPTEMBER 11

Many researchers and journalists have produced detailed descriptions of the events and the response efforts. This report will highlight some of the most pertinent facts and offer some observations about their implications.

At 8:45 A.M. (EDT) on Tuesday, September 11, an American Airlines aircraft was hijacked by a group of terrorists after taking off from Boston and crashed into the north tower of the World Trade Center Complex in New York City. At that time, the severity of the incident, the numbers of people involved, and the reason for the crash were all unknown. At 9:03 A.M. a second plane, this time a United Airlines plane, hit the south tower of the World Trade Center.

During the period between the first and second crashes in New York City, the Washington Area Airport Authority had begun evacuating Reagan, Baltimore/Washington International, and Dulles airports as a precaution. Immediately after the second crash, the Federal Aviation Administration (FAA) issued a national "ground stop," which prevented all civil flights from taking off, thereby acknowledging that these actions were deliberate and that more attacks might be underway.

The roads were being closed in Washington, D.C., and the mayor had just given the order to evacuate the city of Washington, D.C. when another American Airlines plane hit the Pentagon office building in Arlington, Virginia, at approximately 9:40 A.M. The FAA issued an immediate order to ground all planes flying in U.S. airspace. The news spread quickly through blanket media coverage that a fourth plane was heading towards Washington, D.C., with the expectation that it was aiming for Congress or quite possibly the White House. The decision to evacuate the White House occurred around 9:45 A.M.

Around 10:00 A.M. a fourth commercial plane went down in Somerset County, Pennsylvania, about 80 miles southeast of Pittsburgh. About the same time a partial collapse occurred at the Pentagon building in the area of impact. Shortly after 10:00 A.M. the south tower of the World Center collapsed. Within the next half-hour, the northern tower of the World Trade Center collapsed. At approximately 5:30 P.M., a third tower in the World Trade Center complex, Building #7, also collapsed.

The Defining Characteristics

These attacks obviously were extraordinarily well planned and coordinated. They clearly had the goal of damaging the symbols of power in the U.S., causing as many casualties as possible and spreading fear. Also, by hitting at the World Trade Center Complex in New York City, which is the heart of the international financial community, there is no doubt that the terrorists hoped for long-term negative economic consequences.

Not just the people living in New York City or in Washington D.C., but many millions of people all across the country felt they were potential targets, especially those living in other large cities. The local, state, and federal responses were immediate and massive amounts of resources were deployed to the attack sites. Initially, it was estimated that the casualties in the World Trade Center could be around 10,000 and 800 people were estimated to be dead in the Pentagon incident. Sadly, the initial firefighting teams, including the New York City fire chief, deployed to the scene were among the dead and missing. The loss of about 300 skilled firefighters and their chief was a major blow to the response force.

In addition to responding to the known disasters, prevention of further damage was a major concern. As these catastrophic series of events occurred, it was not—and it still is not—clear whether there were other attack plans and when the threat of further attacks would end.

Both elected and appointed officials had to take immediate actions and make the kind of decisions that they had never done before to fulfill their duties to the citizens. No doubt the terrorists intended to shake the public trust towards the government. One immediate worry was how could four commercial jetliners have been successfully hijacked from different airports and their whereabouts while in the air remained unknown.

President Bush's mission changed profoundly in a matter of hours. He was forced to assume a defensive role for both himself and the country as a whole. And when the source of the attacks was determined, he had to mount a war offensive against the perpetrators and other allied terrorists located in many countries. Within hours, measures were taken to ensure the continuity of the government, to avoid mass panic, and to protect the nation and its citizens from further attacks.

In New York City, Mayor Rudy Giuliani quickly assumed responsibility for the response. In so doing, he displayed amazing leadership capabilities, including competently galvanizing the New York City public safety services and others to coordinate the response and later make the transition to the recovery phase. His display of compassion and great love for the city and its people was extraordinary. His extraordinary display of leadership and concern for his citizens was widely heralded and documented. It even led to his been knighted by Queen Elizabeth, which, without question, is a remarkable public acknowledgment of a heroic emergency response.

As thousands of members of urban search and rescue, emergency medical, emergency response teams, and tons of equipment, were deployed, it became obvious that the debris removal would take months, if not years, and hopes of finding any survivors quickly faded. The Federal Bureau of Investigation (FBI), other federal teams and the New York Police Department began the enormous task of sorting and sifting through debris for bodies and evidence, a task that also could take several months.

THE ROLE OF CNN AND OTHER MEDIA

Given the time of day, and the fact that many governmental and financial workers have access to Internet and TV news, word and pictures of the events spread fast. Thanks to CNN and other media, many public officials could see the actual scenes of the events in New York City and at the Pentagon only within minutes of their occurrence and were able to take action, such as opening emergency operations centers (EOCs) before being requested to do so officially.

What follows are two brief examples of initial response actions on the part of federal and military organizations: the U.S. Environmental Protection Agency (EPA) and the U.S. Coast Guard.

U.S. Environmental Protection Agency Headquarters (EPA)

On Tuesday morning, September 11, at the time of the first attack on the World Trade Center, at EPA headquarters in Washington, D.C., the Agency's emergency coordinator, Jim Makris, and his deputy were engaged in a previously-scheduled briefing for the EPA administrator about the Agency's emergency management system and capabilities. They received a call and were told to turn on the television to see the attack details. The officials then ended their

meeting and opened the emergency operations center (EOC) immediately thereafter to begin disaster operations, according to Ed Terry, manager of EPA's EOC. Shortly thereafter, EPA headquarters established links with all of its east coast regional offices to begin coordination and support of the New York City response efforts.

EPA has the authorities and responsibilities needed to perform needed emergency response functions under the National Contingency Plan. Plus, when the Federal Response Plan is activated, EPA has the lead responsibility for Emergency Support Function #10: Hazardous Materials. In this case, no one waited for formal initiation of any of the emergency response plans, but went right to work with their existing authorities.

U.S. Coast Guard—Initial Response in New York City

Captain Dennis M. Egan, U.S. Coast Guard (USCG), who directs the National Response Team (NRT) , first learned about the New York City disaster on CNN television. He immediately ordered that the alarm to the FBI's Weapons of Mass Destruction (WMD) hotline be activated. Rescue helicopters were sent to New York City from USCG bases in Atlantic City and Cape Cod. When helicopters arrived one hour later, New York Police Department helicopters already were on scene. The USCG's Long Island helicopter facility was stocked for support of the New York Police Department for several days, but not used in the search and rescue. The New York City government immediately moved its resources from Staten Island to Manhattan.

Various ferry ships, under USCG direction, were used to evacuate civilians out of Manhattan. The ships involved were the Staten Island Ferry and three other ferries; there were no major USCG ships in the area. Captain Egan commented on the fact that the USCG ships were heading in, while the Navy ships were heading out of the harbor. Many people fleeing the fires and destruction from the World Trade Center area ran toward the water, at the foot of Manhattan Island. The local police and coast guard officials on board the ferries were armed and available for assistance. Egan commented that USCG was a counter-terrorism "node" in these actions. The USCG went quickly from the response to security phase when it began screening passenger vessels and putting armed guards on cargo ships.

When the second plane hit the World Trade Center, coast guard area commanders were contacted. The Boston USCG Admiral invoked "regional incident command" and was established as the senior USCG official in New York City. He was instructed not to be in charge of the entire incident. He joined in the governor's and the mayor's response activities, but returned shortly thereafter to his post in Boston.

The Coast Guard Strike Teams set up operations in New York City to get the stock exchanges open again. They also conducted air sampling in the area. The Coast Guard used the "Vessel Traffic System" for navigation around the city. Because the antenna on the World Trade Center tower was a major part of the system, range was reduced significantly. A new antenna was rigged on Staten Island as a backup.

The Coast Guard observed that the Federal Emergency Management Agency (FEMA) set up their Regional Operations Centers after a five or six day delay due to the communications failures at the Federal Center in New York City that are discussed elsewhere in this report. Egan commented that there were no major initial turf wars to report. The mayor was "significantly in charge."

Communication was perhaps the greatest problem. All cell phone lines were dead. Only two major phone trunk lines into New York City remained, and both were completely saturated (this problem persisted for several days). The National Response Center sent three portable communication units by van to New York City the night of September 11. Those units were established at Battery Park, on Staten Island, and on the U.S.S. Comfort. Nevertheless, the coast guard had trouble setting up communications with those in charge in New York City.

Battery Park was taken over by the City of New York and by the FBI as a command center. The FBI Atlantic Strike Team had some initial trouble getting communications set up because their system was dependent on access by a self-contained van unit which could not navigate the rubble-covered streets.

Within two hours of the start of the attacks, there was an National Response Team conference call. At about 1:00 P.M., there was another National Response Team conference call. The Coast Guard established a liaison at the FBI

Strategic Intelligence Operation Center; this post was filled for two weeks.

Captain Egan noted that the most valuable preparations for the actual response of the USCG on September 11 was due to TOPOFF, a major federal disaster exercise mandated by Congress and held in 2000. This exercise apparently created many contacts that were vital in the September 11 response.

GENERAL BACKGROUND INFORMATION

In New York City, initial efforts on the part of local federal regional offices to deal with emergency response were hampered by damage to the city's emergency operations centers. New York City had recently completed a multi-million dollar state-of-the-art emergency operations center; but it was housed in one of the World Trade Center buildings that was totally destroyed. The State of New York seemed to fare better. The federal center in New York City was not physically damaged, but telecommunications were knocked out, which meant that FEMA Region II, EPA II and other federal agencies had to find other operational locations.

In Arlington, Virginia, the response relationships appeared to be efficient and effective, since the Arlington County Fire Department and Pentagon officials had worked with each other and conducted response exercises prior to September 11.

At the national level, things moved very quickly with presidential declarations of emergency for the Pentagon and disaster for New York City. The conventional procedures for obtaining a presidential declaration were not necessary; "self-initiating" requests, as allowed by the Stafford Act, occurred and the federal government as well as the military services began their response actions very rapidly.

Among the response actions that are highly unusual or unique to the events of September 11:

- **Emergency and disaster declarations:** "self-initiating" declarations; use of emergency and then disaster declaration at Pentagon;
- **Problems with emergency operations centers:** at the local and federal levels due to destruction and incapacitation, respectively.
- **White House involvement:** rapid creation and selection of a director for the Homeland Security Office
- **Major changes for emergency management:** While fully operational, the White House and some federal agencies were making or planning major changes in processes, procedures, funding, and organizational arrangements for emergency management.

THE IMPACTS

As of October 28, the latest information from federal and local officials give the following totals for the number of people dead or missing from the September 11 attacks:

- In New York City, deaths are estimated at 4,167. That number includes the 157 people on the two hijacked planes at the World Trade Center. Of the 506 people whose remains have been recovered, 454 have been identified.
- At the Pentagon site, the total estimate is 189 casualties: 64 persons died on board the hijacked plane and another 125 are dead or missing in the Pentagon building.
- At the Pennsylvania plane crash, 44 were confirmed dead on the hijacked plane⁴. The number of injuries was relatively small because all of the above events were so devastatingly deadly.

The Economic and Financial Impact

It is a challenging task to calculate the overall costs of September 11 attacks. The destruction of the World Trade Center obliterated about 12 million square feet of Class A office space, which is the equivalent of all office space in Atlanta or Miami⁵. An additional 18 million square feet of office space in downtown Manhattan was damaged.

Infrastructure

In New York City, a significant amount of infrastructure was ruined in and around the neighborhood of the World Trade Center Complex, including a crushed subway station, plus the loss of five phone-switching stations, two electrical substations, 300,000 telephone lines, and 33 miles of cable⁶. It has been estimated that replacing the destroyed subway lines would cost around \$3 billion and that utility repairs, including 300,000 telephone lines, one phone switching station, and six miles of electrical cable are estimated to cost \$2 billion. Additionally, rebuilding the PATH New York/New Jersey station below the World Trade Center would be about \$2.4 billion. The estimated total cost for replacing the basic infrastructure is \$7.4 billion.

The Pentagon office building, which is owned by the Department of Defense, is estimated to have sustained \$1 billion in damages. It was fortunate that the hijacked plane hit the Pentagon in the newly-remodeled section, since relatively few people were in the not-yet-completed offices and the structure, windows, and other construction details were more attack-resistant than the rest of the building.

Equipment Losses

Going beyond the infrastructure costs in New York City, there were equipment and related losses—such as fire trucks, thousands of computers, furniture, and other equipment items—that disappeared with the towers. Early estimates suggested that anywhere between \$2 to \$5 billion worth of telecommunications and computer equipment was destroyed. The total property loss was estimated at \$34 million, according to the New York City Comptroller Alan Hevesi. That is nearly twice the \$16.8 billion record set by 1992's Hurricane Andrew⁷. Similarly, but on a smaller scale, at the Pentagon, computers, office equipment, and other unknown equipment and supplies were consumed in the fire after the plane hit.

Another unusually large cost in New York City was related to dealing with the immense amount of debris over the multi-acre area disaster site. The debris had to be sorted first for human remains and evidence and later deposited in a land fill. The New York City controller predicted that it would cost \$14 billion just to clean up and police the site.

Business Interruption

The New York City site probably set an all-time record for business interruption costs, which are estimated at \$21 billion. The most serious losses occurred in the downtown neighborhoods that were inaccessible for weeks after the attacks⁸.

Built in 1970, the World Trade Center housed more than 430 companies from 28 countries. They were engaged in a wide variety of commercial activities, including banking and finance, insurance, transportation, import and export firms, customs brokerage, trade associations, and representatives of foreign governments. An estimated 50,000 people worked in the World Trade Center and another 140,000 visited the complex daily. More than 4,000 of those employees are unaccounted for. Companies like Morgan Stanley, by far the World Trade Center's largest tenant with 3,700 employees (all but 15 unaccounted for), was fully operational less than 48 hours after the tragedy. Remarkably, Cantor Fitzgerald lost 680 of its 1,000 employees but was operational for bond trading two days after the attacks.⁹

Many Wall Street firms would have been inoperative for many more weeks after the attacks if it were not for the careful contingency planning that began after the 1987 stock market crash and accelerated after the 1993 World Trade Center bombing. These financial firms rely on two critical services to guarantee a quick rebound from natural and man-made disasters: 1) information backup services that collect computer tapes and store them in highly secure suburban facilities, and 2) alternative facilities that are fully equipped with mainframes and computer servers that

replace lost computing power. For a subscription fee, plus a disaster assessment that may run into the millions of dollars, stricken firms were able to move their personnel to such a service provider's center for up to six weeks. (After that the companies had to find their own space.)¹⁰ Many companies have decided that it is prudent to spread operations over multiple locations on different electrical grids and telephone networks.¹¹

Human Productivity

Another sad but important indicator of loss is the loss of human lives and their future productivity as indicated in purely financial terms. Given the average age of the workers who lost their lives (40), the New York City comptroller estimated the "lost human productive value" to be about \$11 billion. Measured by payroll, New York City, with less than 3% of the country's workforce, accounts for 37% of the U.S. securities industry, 20% of advertising, and 18% of book publishing. The best and brightest from around the world are drawn to New York because it is where they can do their finest work and reap the highest rewards. In the short run, the September 11 attack will add a \$500 billion blow to a city economy already stumbling from the bear market on Wall Street and the nationwide slump. More than 100,000 New Yorkers will eventually be thrown out of work by the attack, according to New York State Labor Department estimates.¹²

Airline Losses

The airline industry received a major blow due to the temporary shutdown of the air travel system and later widespread fear of flying by potential customers. Airlines and air freight were down for weeks. People who chose to fly faced long lines due to increased security measures. Anything suspicious became a reason to ground planes. After the attacks, the airlines have received a \$15 billion government bailout, announced 100,000 layoffs, and slashed 20% of their flights.¹³

In the Washington, D.C. area, Reagan National Airport and its businesses were the hardest hit in this ordeal. The airport was ordered to shut down immediately after the attacks and was not allowed to open until 23 days later due to its proximity to so many potential targets. The cost for closing was \$330 million per day to the airport and Northern Virginia businesses and \$27 million to state and local tax revenue.¹⁴

Insurance Payout

The \$126 billion commercial insurance industry is facing a \$30 billion payout. This industry will never quite be the same, since insurers and reinsurers had never considered terrorism when pricing their premiums. The uncertainty about how to predict the future attacks is a huge challenge for the insurance industry.

Tourism Income Losses

The tourism industry has been hit hardest in the Washington, D.C. area and New York but with secondary and tertiary effects in Boston, Los Angeles, Las Vegas, and other major tourist destinations. About one-third of the nation's 265,000 unionized hotel and restaurant workers have been laid off. Hotel expansion plans have been on hold almost everywhere.¹⁵

Revenue Losses

The U.S. economy, threatened by recession before September 11, has suffered a number of blows in the weeks since. The leading economic indicators dropped in September. Yet the nation's financial markets have thus far weathered the uncertainty, making up losses experienced in the days after reopening.

Mayor Rudolph Giuliani estimated the city will lose \$1 billion in revenues this fiscal year—including a 20% decline in personal income taxes and more than 30% declines in hotel and real estate transfer taxes. Additional costs for additional police overtime, downtown cleanup, and other services will soar into the billions. Even with the help from

Washington, New York is expecting a budget deficit of \$4 billion in the next fiscal year. The city agencies will have to cut \$1 billion from their spending plans. The federal government will reimburse the city for \$11.4 billion in expenditures directly related to the attack, such as \$5 billion for emergency construction at the World Trade Center site, and \$3.8 billion for police, fire, and health services. Congress has approved \$20 billion in aid for New York, Virginia, and Pennsylvania.¹⁶

The New York and American stock exchanges were closed for a week until September 18. The stock market declined by double digit percentages immediately after the terrorism attacks. The New York Stock Exchange dropped 1,369 points, the biggest point loss and the fifth worst week ever for the Dow Jones industrial average.

Charities and Donations

As a result of the attacks on the World Trade Center and all of the media attention given to it, an unusually large number of charities formed in addition to the major ones already in existence, such as the Red Cross and the Salvation Army, and an unprecedented amount of donations were received. The resulting problems ultimately had to be straighten out by the Attorney General of the City of New York. As a sidebar to this topic, the current president of the American National Red Cross lost her job as a result of some disputes with the Board of Directors of that organization. It should be noted that donations related to the Pentagon disaster do not appear to have the same complications.

OUTCOMES

It is not possible to overstate the dramatic changes in political culture, attitudes, and philosophy of the federal government regarding emergency management and counter-terrorism that have resulted from the September 11 attacks. Plus, many of these changes were immediate.

Some elements of the emergency response went extremely well, such as the personal leadership of Mayor Giuliani, Governor Pataki, and the high level of competence of the Arlington County, VA Police and Fire Services. But, many concerns about the weaknesses in the nation's ability to deal with a major terrorism event quickly surfaced, such as: a) the need for better detection and warning systems for a terrorist attack, b) central coordination at the federal level, c) weaknesses in the public health and disaster medical systems, and d) core capabilities of some states and localities to manage a massive disaster.

Other related systems were severely criticized for failures or weaknesses, such as the intelligence gathering and analysis capabilities of the international and domestic federal agencies; lack of coordination among various federal agencies with information about suspected terrorists; and problems in tracking foreign visitors and supposed students. The ramifications and implications are so substantial that it will take years of research and documentation to capture them.

A Major Sea Change

Within days after September 11, the Bush Administration and the Congress rapidly made a major philosophical shift in their attitudes and willingness to combat terrorism, including major changes in national priorities, budget, and spending plans—all in a matter of a few weeks after the events.

Public Attitudes Toward Government

On September 30, a New York Times article titled "Now Government is the Solution, Not the Problem," stated:

After 20 years of exulting in the power of the private sector, in deregulation, tax cuts and reining in the Washington bureaucrats, Republicans and Democrats alike are talking about a muscular role for the government in the aftermath of the September 11 terrorist attacks. They are bailing out the airlines,

establishing a new Office of Homeland Security, passing a big new aid package to rebuild the areas devastated by the attacks and pondering an even bigger effort to stimulate an ailing economy. When the chips are down, where do we turn? ... To the government's firefighters, police officers, rescue teams. To the nonprofit sector's blood banks and shelters. And to big government's Army, Navy and Air Force.¹⁷

Another perspective is that of the professional public administration community, which noted that the aftermath of the September 11 events provided a unique glimpse at public employees at work. In the newsletter of the American Society for Public Administration (ASPA), it was noted:

In a way unmatched in history, Americans had a chance to watch public administrators at work and, sometimes, under attack. They saw countless cases of unmatched bravery. The broadcast heroism, in fact, only hinted at the ways that government works rose to the challenges of their jobs.¹⁸

ASPA further noted: "The real work—how to refashion the field to master the enormous new challenges facing it—begins now. Public administration will not only become more important, but its job has been dramatically transformed."¹⁸

National Public Awareness of Terrorism

Given the timing, nature, and magnitude of the attacks, plus the immediate extensive media coverage, the topics of terrorism and emergency management received an unprecedented amount of attention not only in the U.S. but worldwide. Topics usually reserved to a small cadre of behind the scenes operational personnel suddenly were of interest and concern to citizens throughout the nation. This was captured in a *Washington Post* article (October 26, 2001) entitled **Think-Tank Presses are Suddenly Best-Selling Publishers**. The article noted: "Across Washington, think tanks are finding their once obscure books, studies, and policy reports are hot with the general public."

Discussions of terrorism, bio-terrorism, and weapons of mass destruction are now commonplace among the general citizenry in the U.S. The September 11 events provided a crash course on the topics. What was a somewhat esoteric technical area of interest, pursued by a relatively small group of responsible persons, is now discussed everywhere.

Public Awareness of Emergency Management

Citizens have become more aware of their public officials and how they conduct emergency management at each level of government. In New York City, Mayor Giuliani and Governor Pataki were directly involved in the response efforts and were highly visible doing their jobs on a daily basis. It should have been clear to most citizens that their local and state government officials were working ardently and effectively to help them.

One interesting indicator of the level of commitment and depth of the local emergency management effort is that at the third and final location of the city's emergency operations center ultimately contained 350 workstations, according to newspaper accounts. That huge number is a crude indicator of the amount of coordination involved in the response and early recovery activities.

Similarly, public awareness of the key roles and functions of local public officials in Arlington, Virginia, was heightened by the attack on the Pentagon. Prior to the event, Pentagon staff had worked closely with Arlington County Fire Department in the event of a major fire in that building. The County Fire and Policy Departments also were highly effective and committed to their jobs, according to two reports in the *Washington Post*. They too received great support and encouragement from the local citizens.

Changes in the Public Sector Focus and Workload

As was noted above, the role of public practitioners in emergency management has changed and probably will continue to change at the U.S. goes into the recovery period. A related outcome is the effect on public officials, both elected and appointed and the long-term burden on their workloads. For example, Senator Hillary Clinton (Democrat, New York)

described the economic damage as "incalculable" and said she has been consumed with the details of organizing federal assistance for the city and expects that responding to the emergency on both the national and local levels will dominate her Senate career for the foreseeable future.¹⁹

SOME SPECIFIC OUTCOMES

The five specific categories of observed outcomes of major disaster events that the authors developed and used in the *Disaster Time Line: Selected Milestone Events and U.S. Outcomes (1965-2001)* were applied to the September 11 events in order to capture some of the most frequently observed aspects of outcomes from a political and policy perspective.

Major Reports and Documents

After examining dozens of major disaster events during the years 1965-2001, the authors noted that immediately after a major event, either the Congress or the White House initiated hearings, after-action reports, and/or studies to determine what the problems and deficiencies were in responding adequately to disaster events. This step occurred without exception in the 36 years examined. Yet, in less than a week after the September 11 events, major national legislation was enacted and organizational changes occurred. There were two highly unusual aspects in the immediate aftermath of the terrorist attacks: 1) no hearings or studies were ordered to determine what went wrong and what remedies were needed, and 2) the speed and bipartisan nature of the legislative process were unprecedented.

The authors noted the sequence with great interest because it was an aberration from the pattern observed since 1965. After making a rough time line chart of the sequence, we surmised that several major reports about terrorism that had already been completed by September 11 were used rather than ordering new studies and reports. Some relevant ones that were quickly updated and issued are several GAO reports on counter-terrorism and on protecting critical infrastructure, the Gilmore report III update, and the Stimson Center reports. (See the reference section of this report.)

It would appear, that the information and knowledge about what to do already existed before September 11.²⁰ What was lacking was the political backing for change and the political will to act. A rapid sequence of actions regarding improved emergency management and protection of critical infrastructure then followed.

Legislation

In a matter of weeks after the terrorist events, the degree of national attention and commitment to dealing with the outcome of the incidents led to the rapid enactment of two major pieces of legislation. The first was the Response and Recovery Act, which included appropriations of \$40 billion immediately, and the second was the U.S.A. Patriot Act, which includes many new means of dealing with domestic terrorism. It is notable that major legislation and funding were completed within weeks after the events without either the White House or Congress ordering hearings and after action studies and reports.

Other unusual characteristics of the aftermath of this disaster are: 1) the speed with which the federal government and the New York state delegation met and agreed to create and pass congressional legislation and appropriation of \$40 billion to finance the costs of response and recovery efforts, and 2) that major federal organizational and coordination changes occurred relatively rapidly, even before Congressional hearing or special task forces were formed.

Since September 11, many new bills relating to terrorism are pending before Congress. The list of pending legislation is sizeable and has been changing at a rapid rate. (For a complete, current list of pending and enacted laws, go to the Library of Congress's special website (www.thomas.loc.gov/home/terrorleg.htm) devoted to legislation dealing with the terrorists attacks.)

Executive Orders

About five days after the terrorist events, the president announced the formation of the Homeland Security Office and of the appoint of Governor Tom Ridge of Pennsylvania to head that office. The new office was formed by executive order and does not have legislative authority, which is a topic of concern for many members of Congress. On October 8th, Executive Order 13228 was issued and then Order 13231, which deals with Critical Infrastructure Protection, followed shortly thereafter.

Key Federal Response Plans

It is expected that both the Federal Response Plan and the National Contingency Plans will be reviewed and revised, based on the September 11 attacks. It is too early to know the nature of these changes. The structural and organizational issues as well as the basic authorities for Homeland Security Office probably will have to be clarified before the implementing mechanisms and response plans are changed.

Major organizational changes

Paramount among the changes here is the rapid creation of the **Homeland Security Office**. Other major changes pending include a wide array of security concerns, such as changes in airport and airline safety responsibilities, regulations, and procedures; changes in immigration and naturalization laws and regulations; and changes in the transportation systems in the country—to cite only a few.

It is too early to know just what the Homeland Security Office will do with regard to contributing to changes in response plans, systems, and even recovery. Given the breadth of the Executive Order mandating the formation of that office, it would be likely major changes are in the offing. Some other changes that are likely to occur in the coming months include: improved warning and alert systems, improved detection and treatment for chemical and biological agents, improved intelligence gathering and analysis from both domestic and international sources, changes in emergency management systems and personnel training, changes in FEMA's National Preparedness Office, changes in the Federal Response Plan and the National Contingency Plan, and more national C-T exercises.

NEXT STEPS

Given the short time available to prepare a Quick Response report and the vast complexity of the attacks and their aftermath, the authors are at work on a *Counter-Terrorism Time Line: Major Milestone Events and Their U.S. Outcomes (1988-2001)*, which will augment the existing Disaster Time Line. The authors also are developing a narrative explanation of the chronology and an analysis report.

Finally, in a recent newspaper article entitled *Suddenly, Americans Trust Uncle Sam*²¹, noted author Francis Fukuyama is quoted as saying: "Trauma and war bring out communal solidarity and remind people of why we have government." Regarding the creation of trust in government, he said "... a national crisis alone does not create trust in government. It's a combination of external threats and government effectiveness."

FOOTNOTES

1. Waugh, William L., Jr. 2000. *Living with Hazards, Dealing with Disasters*. New York: M.E. Sharpe, p. 3.
2. Rubin, Claire B. and Irmak Renda-Tanali. 2001. *Disaster Time Line: Selected Milestone Events (1965-2001)* Version 2; 2001 (On-line www.disaster-timeline.com).
3. A narrative chronology of the years 1988-2001 and an analysis of the major actions warrant separate products that will not be available after this report is issued. For more details, see www.disaster-timeline.com.

4. Source: www.cnn.com
5. *Fortune* (Special Report), October 1, 2001, p. 94 and the *Washington Post*, October 28, 2001.
6. *Fortune* (Special Report), October 1, 2001, p. 94.
7. *Fortune* (Special Report), October 1, 2001, p. 100.
8. *Washington Post*, October 28th, 2001.
9. *CNN*, October 2001, and *Fortune* (Special Report), October 1, 2001.
10. *Fortune* (Special Report), October 1, 2001, p. 96.
11. *Business Week*, October 22, 2001, p. 104.
12. *Business Week*, October 22, 2001, p. 102.
13. *Business Week*, October 22, 2001, p. 102.
14. *Business Week*, October 22, 2001, p. 102.
15. *The Washington Post*, October 28, 2001.
16. *Business Week*, October 22, 2001, p. 110.
17. *New York Times*, September 30, 2001, p. 14.
18. **The Next Public Administration Revolution**, in *P.A. Times*, October 2001. 24(10):3.
19. *New York Times*, October 11, 2001, p. A7.
20. This unusual sequence is graphically illustrated in the forthcoming **Counter-Terrorism Time Line**, On-line www.disaster-timeline.com.
21. *New York Times*, November 3, 2001.

OTHER SOURCES

Rubin, Claire B. 2000. *Emergency Management in the 21st Century: Coping with Bill Gates, Osama bin-Laden, and Hurricane Mitch*. Working Paper #104. Boulder, CO: Natural Hazards Research and Applications Information Center (<http://www.colorado.edu/hazards/wp/wp104/wp104.html>).

Rubin, Claire B. and Irmak Renda-Tanali,. *Counter-Terrorism Time Line: Major Milestone Events and Their U.S. Outcomes (1988-2001)* Version 1; 2001. Forthcoming. (www.disaster-timeline.com).

U.S. Government Accounting Office. *Homeland Security: Key Elements of a Risk Management Approach*. GAO-02-150T. Testimony, October 12, 2001.

_____. *Homeland Security: A Framework for Addressing the Nation's Efforts*. GAO-01-1158T. Testimony, September 21, 2001 (<http://www.gao.gov>).

_____. *Combating Terrorism: Selected Challenges and Related Recommendations*. GAO-01-822. (210pp.) September 21, 2001 (<http://www.gao.gov/new.items/d01822.pdf>).

White House, **Executive Order #13228**, creating the Homeland Security Office and Council available on-line from the National Archives website (www.archives.gov).

OTHER RESOURCES

Special Periodicals Devoted to the Disasters:

Fortune, October 1, 2001

Business Week, October 24, 2001

Media News Sources (September 12-October 31):

New York Times - newspaper and web version

Washington Post - newspaper and web version

CNN - Internet and television

Situation Reports: (available from FEMA, <http://www.fema.gov/priv/pao/clips.htm>)

Informal interviews with Captain Dennis M. Egan, U.S. Coast Guard and Director of the National Response Team and Mr. Ed Terry, Manager of the Emergency Operations Center, U.S. Environmental Protection Agency Headquarters, Washington, D.C.

Major Studies/Reports/Government Documents: An excellent list (with URLs provided) of basic, in-depth studies related to counter-terrorism that have been completed in the past few years can be found on the ANSER website under "Worth Reading." (<http://www.homelandsecurity.org/research.cfm>).

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