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THESIS

**LEVERAGING STATE AND LOCAL LAW
ENFORCEMENT MARITIME HOMELAND SECURITY
PRACTICES**

by

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March 2016

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HOMELAND SECURITY PRACTICES**

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ABSTRACT

This thesis explores the practices of six state or local law enforcement agencies in the field of maritime homeland security. Using the Delphi Survey Method on a sample of the highest-risk, most strategically located, and most commercially important ports in the United States, this thesis looks at the successes and challenges of grant funding, training practices, recovery efforts, and state government role in maritime homeland security.

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LIST OF ACRONYMS AND ABBREVIATIONS

9/11	September 11, 2001
AMSC	Area Maritime Security Committee
COTP	Captain of the Port
DHS	Department of Homeland Security
DOD	Department of Defense
FLETC	Federal Law Enforcement Training Center
GAO	Government Accountability Office
HSPD	Homeland Security Presidential Directive
IED	improvised explosive device
INL	International Narcotics and Law Enforcement Affairs
JTTF	Joint Terrorism Task Force
MARAD	Maritime Administration
MARSEC	maritime security
MCSP	Maritime Commerce Security Plan
MIRP	Maritime Infrastructure Recovery Plan
MLETC	Maritime Law Enforcement Training Center
MOU	memorandum of understanding
MTSA	Maritime Transportation Security Act
MTSS	Maritime Transportation System Security Plan
NMDAP	National Maritime Domain Awareness Plan
NMSS	National Maritime Security Strategy
NSPD	National Security Presidential Directive
PSGP	Port Security Grant Program
TEW	Terrorism Early Warning
TWIC	Transportation Worker Identification Credential
USCG	United States Coast Guard

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EXECUTIVE SUMMARY

The roles and practices of state and local law enforcement in maritime homeland security are important to the discussion of security in the nation's ports. With so many federal agencies, programs, funding streams and other efforts directed at securing ports, efforts driven at the state and local level might be overlooked. The 361 ports of the United States have some interplay between federal, state, and local agencies, as well as varied and diverse types of operations traveling through the ports.

A study of the practices of the state and local agencies within these ports should consider both the agencies involved and the types of activity supported in these ports. Not only should the Department of Homeland Security (DHS) risk matrix be considered, but also the importance of these ports to the military and national security, and their respective roles in the commerce of the nation. The ports selected for study in this research were identified because of their convergence or overlap in more than one of these areas: Department of Homeland Security Group I ports, Department of Defense (DOD) strategic ports, and United States Maritime Administration top ten commercial ports. This methodology was used to identify the six port areas of Seattle/Tacoma, Los Angeles/Long Beach, Houston/Galveston, New Orleans, Virginia, and Delaware Bay/Philadelphia selected for this survey.

The actions taken by state and local law enforcement in the complex network of ports have the potential to impact larger homeland security practices across the United States. This research reveals that state and local law enforcement agencies operating within the maritime domain have adapted their traditional law enforcement and crime prevention postures to find creative practices to secure the maritime domain.

The goal of this research, data collection, and analysis was to determine how state and local agencies have chosen to fill the void between their state and local law enforcement practices and the requirements of federal regulations. More importantly, it was the author's hope to reveal the important, smart, or best practices that these state and local agencies have implemented to develop maritime homeland security within the ports.

What has emerged from this bridging of the gap is a new system of maritime homeland security for state and local law enforcement. Recognizing the importance of this new mission, this research revealed that a majority of the responding agencies had shifted their priorities from tactics that focused on law enforcement and crime prevention, to a new system of policing that addressed the larger priorities of port security. Following the development of this new system, these state and local law enforcement agencies have developed new capabilities to address threats within the maritime domain, these agencies have been inserted into new avenues of information sharing; they have deployed new equipment and discovered the need to enhance the training for their personnel.

With 361 ports nationwide, an effective process by which to identify a small number of state and local agencies was critical. The author looked at three important characteristics of the ports surveyed: the port's importance in terms of the risk it faces relative to other ports, the port's importance to commerce in the United States, and the port's importance to national security. Each of the ports surveyed in this research were ranked as important in at least one of these categories. Ports high in the risk evaluative criteria were determined to be so using the DHS's risk matrix. Ports important to commerce were determined to be so using the United States Maritime Administration's top ten list of commercial ports (ports highest in volume or value of goods imported). Ports important to national security were determined to be so using the DOD's network of 22 strategic ports (17 commercial and five military operated ports).

Six agencies within 361 is a relatively small sample size; even within their own ports, these six agencies were only six of 17 agencies that had maritime homeland security responsibilities within their ports. However, when six agencies from across the United States can be surveyed and a clear consensus of successful or effective practices can be conveyed, these practices may speak to best practices or better opportunities for other ports to follow. Additionally, where these six agencies found opportunities to work with other federal, state and local agencies toward a common goal and not carry the burden of maritime homeland security independently, it provides efficiency opportunities for agencies facing budget or staffing challenges.

The main claim of this study is that state and local law enforcement agencies have engaged not only in satisfying federal port security priorities, but also in implementing new and innovative practices that enhance homeland security. Survey responses revealed three themes related to the successes state and local agencies have experienced in the field of maritime homeland security.

First, ties were strong across the agencies to examples of partnering with other agencies. Each agency listed examples of training, exercises, and operations with which their agencies were able to partner with federal, state and local agencies to solve a problem in the field of maritime homeland security. These opportunities to partner included heightening a security posture in response to a maritime security threat, or working together to plan for and secure a special event within the port, or to test preparedness through simulations, drills, and exercises.

Second, respondent agencies identified the value of grant funding for their agencies to accomplish their maritime homeland security responsibilities. Surveyed respondents reported overwhelmingly that the influx of grant funding had provided a mechanism both for enhancing security measures to satisfy federal requirements, and a much needed funding stream to maintain new capabilities on an on-going basis.

The third example, training, provided by the respondent agencies was cited as both a success and an opportunity to continue to improve port and maritime security. Maritime homeland security agencies believed that the training they have provided within their own agencies, or training they have participated in within their region, has been extremely valuable to advancing their homeland security missions. These same agencies also believed the state or federal government have a role in providing standardized training, specific to maritime homeland security. These agencies had adapted to this challenge, but several of the agencies believed standardized training could assist with filling this gap.

In addition to successes, challenges also arose in maritime homeland security. Finance-focused concerns were prevalent when agencies discussed challenges they had already faced and what they saw of concern on the horizon. Specifically, agencies

identified budget cuts or constraints that had led to the reduction of staff. What further complicated this staff reduction was the acknowledgment that the mission of these agencies had greatly increased in the aftermath of September 11, 2001. Concerns were raised about sustaining this enhanced mission and continuing to “do more with less.” Since these maritime homeland security agencies have been heavily dependent on federal and state grants to fulfill their homeland security mission, these agencies expressed concern about the reduction in grant funding and the inflexibility of these grant funds to provide funding for what was needed most (personnel costs).

Recovery was another area of challenge for the agencies surveyed. With strong ties to the finance and commercial aspects of ports, recovery and the “return to normal” in the aftermath of a human generated or natural disaster events was the most difficult phase of the homeland security cycle for these ports to address. In the event that technology linked security measures failed as part of an incident impacting maritime homeland security, the recovery phase of the cycle was believed to be very labor intensive and demanding for these law enforcement agencies. Due to their existing internal budget and external grant concerns, recovery from homeland security incidents was believed to be a serious challenge for these agencies.

One agency surveyed was able to provide a detailed plan developed within its port region, to prepare for the recovery from a port-centered incident. This agency began with the inclusion of the recovery phase in its drills and exercises, a practice often skipped by other agencies. Additionally, this agency discussed plans within its own agency, as well as with its regional partners to shift security related personnel and equipment to speed the “return to normal” within its port. Due to the commerce flowing through U.S. ports, the return to normal or recovery from a maritime homeland security incident is a critical component for law enforcement and maritime homeland security agencies to plan for and address.

Many of the best practices highlighted by the surveyed agencies involved the practice of collaboratively working with other agencies in the maritime domain. Whether this collaboration was a build up to support planned exercises and special events, or the practice of routine, daily operations in special units, task forces, and operations centers,

the state and local agencies surveyed all recognized the value of working together to support maritime homeland security. Indeed, each agency readily recognized the size and scope of their responsibilities and the great demands a homeland security incident would place upon them. In support of these collaborative engagements, state and local agencies reported “layers” of joint agency cooperative efforts. These joint interactions extended from the command level of the agencies involved to the line, operational level of personnel in the field. To support these joint efforts, developing and maintaining a robust training program is greatly needed.

Standardized state-level training for police officers is the common framework for the state and local police and security agencies patrolling the maritime domain. This training model, usually implemented in the police academy environment, not only provides the basic training for state and local agencies in the maritime domain, but it may also provide an opportunity to provide maritime specific standardized training to bridge the gap between federal regulations and the maritime homeland security practices of state and local law enforcement.

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I. INTRODUCTION

America's system of ports is widespread, diverse, and comprised of components of commerce, recreation, national defense, and tourism. To understand the maritime homeland security efforts put into place after 9/11 better, a study of the practices employed taken by state and local law enforcement to secure these ports is important. This study provides a small perspective of a much broader effort to ensure the flow of commerce and defense necessary resources through the maritime borders. It is critical to the security of these ports that state and local law enforcement learn more about the practices that have enhanced security, and also to recognize where opportunities exist to make improvements in the system of maritime homeland security.

A. RESEARCH QUESTION

What maritime homeland security practices have been implemented by state and local law enforcement that could be leveraged nationally to enhance federal port security priorities?

B. PROBLEM SPACE

With 361 ports in the United States, 90% of the commerce of this country traveling through these ports, generating more than \$2 trillion to the economy, securing the maritime domain is essential to homeland security efforts and the secure movement of military equipment and people.¹ While the United States Coast Guard (USCG) is designated by federal statute² as having overall responsibility for events that occur in the maritime environment, often state and local law enforcement provide the initial response to maritime security related incidents. Federal agencies, such as the USCG³ and the

¹ Maritime Administration, *America's Ports and Intermodal Transportation System* (Washington, DC: United States Department of Transportation, 2009), 21.

² "ECFR—Code of Federal Regulations," December 27, 1994, http://www.ecfr.gov/cgi-bin/text-idx?SID=85489166456dde0aa934a9a134702d0b&mc=true&node=se33.1.1_101_630&rgn=div8.

³ Maritime Transportation Security Act of 2002 (2002) at 7.

Customs Service⁴ (now Customs and Border Protection), under the Department of Homeland Security (DHS) and identified in the Maritime Transportation Security Act of 2002 (MTSA), have also adopted instituted regulations, plans and strategies for incidents occurring within the maritime environment. Some of these regulations, plans, and strategies are explored in the literature review portion of this research.

Often, the initial response to violations of these regulations and incidents that may threaten maritime homeland security is initiated by state or local law enforcement agencies. As indicated by the state and local agencies surveyed for this research, 75% of the agencies in each port with primary responsibility for responding to maritime homeland security incidents were state or local law enforcement agencies. This research demonstrates that in the aftermath of 9/11, state and local agencies shifted their priorities from standard crime prevention and law enforcement duties to focus on securing the maritime homeland security environment. This research studies the practices these state and local agencies have implemented to satisfy federal regulations, and more importantly, to “fill the gap” and to secure the “maritime domain.” The concept of the maritime domain was first addressed in National Security Presidential Directive (NSPD)-41/ Homeland Security Presidential Directive (HSPD)-13, signed by President George W. Bush. This directive defines the maritime domain as, “All areas and things, on, under, relating to, adjacent to, or bordering on a sea, ocean or other navigable waterway, including all maritime-related activities, infrastructure, people, cargo, and vessels and other conveyances.”⁵ With this broad spectrum of areas in the maritime domain, the efforts to secure it involve numerous agencies, diverse methods, and coordination between public and private agencies. The actions taken by state and local law enforcement in the complex network of ports have the potential to impact larger homeland security practices across the United States. Figure 1 depicts the focus of this research on the post-9/11 practice changes implemented to bridge the gap between pre-9/

⁴ Maritime Transportation Security Act of 2002 (2002) at 27.

⁵ White House, *National Security Presidential Directive NSPD-41, Maritime Security Policy, Homeland Security Presidential Directive HSPD-13* (Washington, DC: White House, 2004), 2.

11 practices and federal regulations, plans, and strategies to enhance maritime homeland security.

Figure 1. Federal Influence on State and Local Law Enforcement Practices



A study of the changes in state and local law enforcement agencies' practices is important because it was anticipated to reveal best or smart practices that can be leveraged nationwide. The federal regulations put into place to guide efforts to secure the maritime domain in principle apply across America's system of 361 ports. Therefore, practices implemented in one port could be adopted by another. Conversely, this study of state and local law enforcement practices in the maritime domain is important because it may serve to identify unaddressed gaps in individual ports and their approach to securing the maritime domain.

Embarking on the journey to identify maritime homeland security practices implemented by state and local law enforcement begins with a look at what ports to study within the United States. With a system of 361 ports, is it fair to ask which ports would be selected for the study of these practices? What criteria exist to identify the most important ports across the United States? Who decides their importance, and upon what is this determination based?

For the purposes of this research, the author selected ports that were important because of their risk (as determined by the DHS), because of their importance to commerce (as determined by the United States Maritime Administration), and those with importance to national security (as determined by the DOD). The complete explanation of this methodology is explained in Chapter IV.

Considering the risk of ports, their importance to the economy and national security, the investment of Port Security Grant Program (PSGP) funds to secure the U.S.' ports, and the areas and agencies involved in this maritime domain, studying and identifying the roles of state and local law enforcement agencies in the maritime domain is vital to understanding the effectiveness of maritime homeland security. Such research and study could identify smart practices of these agencies, as well as gaps in maritime homeland security. With so many U.S. ports, a gap exists in understanding the extent to which any best practices in ports are being leveraged nationally and how these practices have reduced the risk faced by these ports. The federal PSGP provides a risk-centric view of priorities for maintaining port security within the United States. Studying the practices of individual ports may provide insight about how the specific practices of state and local agencies have been implemented to address these federal security priorities. Since these agencies are state and local, it may be necessary for state and local needs to satisfy federal priorities that should be considered at a national level. With nearly 15 years since the events of 9/11 and the changes in federal regulations implemented since then, it is important to ask what else should be done. In the literature review of this research, the author explores some of the regulations, plans, and strategies that have been implemented to secure the maritime domain.

C. LITERATURE REVIEW

Law enforcement agencies from the federal, state, and local levels all have roles in maritime domain security. Federal agencies have authorities and responsibilities identified by statute to enforce federal maritime laws and investigate federal crimes occurring in the maritime domain. Local agencies provide an initial response and are responsible in many cases for patrolling the maritime domain. The central premise of this thesis is that local law enforcement agencies are the most available, and therefore, should be the most responsible for addressing threats in the maritime homeland security domain. While federal agencies maintain overall responsibility for homeland security threats in the maritime domain, these agencies do not maintain a full-time presence in the maritime domain. Local law enforcement, due to its patrol presence for service calls of all types in

the maritime domain, is uniquely poised to provide an initial response to maritime homeland security events.

The problem confronted by state and local law enforcement in maritime homeland security is the lack of efforts made to study their agencies' roles in maritime homeland security to reveal best practices and potential avenues for innovation. This problem is important for two primary reasons.

First, the actions of state and local law enforcement in a tightly coupled, complex environment can potentially have cascading effects across this nationwide, intermodal network. As previously described, ports are critical to the national economy and the national defense. This closure or restricting of port activity was evident in the aftermath of 9/11. In ports like San Diego, local law enforcement worked in tandem with the USCG at heightened security to stop and board vessels entering the port. In addition to being very demanding for law enforcement personnel, these boardings restrict and slow all types of vessel traffic entering ports. Inaction by law enforcement that might allow a successful terrorist attack could result in port closures and global trade impacts as well. Providing a study of best or smart practices for state and local law enforcement may contribute to the mitigation of port security related events that could also potentially impact the nation and global trade.

Second, evidence states that ports separated geographically see similar trends in criminal or homeland security incidents. These trends have been observed in the "panga" vessels smuggling from Mexico north into the United States. What was initially observed in the Port of San Diego (the most southwest U.S. port) has now been seen in adjacent counties and as far north as Monterey, CA.⁶ If true in the smuggling environment, other areas may experience similar trends as well. Providing state and local law enforcement with common awareness and tools to counter threats to maritime homeland security could start with better understanding of what practices are employed by port security agencies.

⁶ Cynthia Lambert, "Panga Boats Running Drugs from Mexico Are Pushing North, Landing on SLO County Beaches," *The Tribune*, December 1, 2012, <http://www.sanluisobispo.com/2012/12/01/2313653/panga-boats-running-drugs-from.html>.

The federal mandates related to port security have been integrated in addition to existing traditional law enforcement responsibilities that existed before 9/11 (patrol, crime prevention, and others). A study of the system that has emerged as a result of incorporating these additional duties could provide valuable information to be shared across ports, and state and local law enforcement agencies.

For local law enforcement to secure the maritime domain effectively, a better understanding of local law enforcement's current capabilities is required. Local law enforcement is involved in the prevention, protection, initial response, and mitigation of attacks in the maritime domain. As observed in *Policing Terrorism: An Executive's Guide*, local law enforcement is uniquely positioned to provide an initial response to terrorism-related incidents.⁷ Additionally, this guide highlights the role of local law enforcement in understanding the threat environment they patrol. This guide has served as a resource for law enforcement agencies in employing community-oriented policing strategies to counter the threat of terrorism in the United States. While some may see this guide only as an effort to bolster the importance of state and local law enforcement, evidence exists of their role in being the first to encounter terrorism. The initial law enforcement first responders on 9/11 were Port Authority and New York Police Department personnel. Patrol officers were also responsible for the apprehension of Eric Rudolph⁸ and Timothy McVeigh.⁹

A review of the literature on the role of law enforcement in securing the maritime domain reveals that a large volume of writing has been focused on federal agencies. These agencies have federal statute designated roles and responsibilities regarding maritime homeland security. Writing focused on non-federal maritime law enforcement agencies has centered primarily on agency specific programs and practices. What appears to be missing from the literature on this topic is an overview of the roles shared by local

⁷ Graeme R. Newman and Ronald V. Clarke, *Policing Terrorism: An Executive's Guide* (Cooperative Agreement Number 2007-CK-WX-K008) (Washington, DC: U.S. Department of Justice, Office of Community Oriented Policing Services, 2008), <http://ric-zai-inc.com/Publications/cops-p143-pub.pdf>.

⁸ Yahoo News, "10 Years Later: The Rookie Police Officer Who Caught Eric Rudolph," May 20, 2013, <http://news.yahoo.com/10-years-later-rookie-police-officer-caught-eric-195600576.html>.

⁹ Routes. "McVeigh's Capture a Defining Moment for Town," May 20, 2010, <http://routes.ou.edu/?p=60>.

law enforcement agencies across the United States. A second piece missing from the literature is an analysis of whether existing practices and training shared by local law enforcement agencies is sufficient for local law enforcements roles.

Government documents create the requirement, mandate, or guidance for maritime homeland security. In the case of presidential directives, they define the domain and establish the approach to be taken by the United States. These initial mandates or directives translate into strategies, which are then implemented by federal, state, and local agencies. Once these strategies become plans, they become studies evaluated by academics, or their successes are highlighted in congressional reports.

1. Government Documents

In the aftermath of 9/11, a myriad of strategy documents, presidential directives, and other documents began to shape the homeland security enterprise. A recurring theme in these documents is the need to secure the maritime domain and the importance of coordination between federal, state, and local agencies. The first of these documents was the MTSA of 2002.¹⁰ This document discusses federal agency roles and responsibilities, as well as identifies the need for interaction with state and local law enforcement agencies. Another theme within this document is the need for agencies to understand the threat environment in the maritime domain. This understanding was to extend to vessels, facilities, and buildings with the intent of providing appropriate security measures to these areas.

In the aftermath of 9/11, the authors of MTSA also used this seminal document as a way to build two very important components of port security. First, through the “findings”¹¹ at the beginning of the document, MTSA outlines the diverse activities occurring within ports, the importance of securing points of entry and international boundaries of ports, and discusses the complexities of securing the vast maritime domain. Second, MTSA begins to build the framework for securing the ports. This framework has

¹⁰ “Maritime Transportation Security Act of 2002, Pub. L. No. 107-295 (2002),” accessed January 28, 2015, <https://www.gpo.gov/fdsys/pkg/PLAW-107publ295/pdf/PLAW-107publ295.pdf>.

¹¹ *Ibid.*, 4, 5.

a strong focus on the USCG,¹² but also mentions the United States Customs Service,¹³ and its importance in screening incoming cargo.

Subsequent federal government documents build upon the MTSA to provide a strategic framework for how the maritime domain should be secured. The plans and strategies that supported the MTSA include the National Maritime Security Strategy (NMSS) of 2005.¹⁴ This document identifies the importance and scope of the maritime environment for national security; it identifies threats to maritime security, and it lays out strategic objectives and actions to be taken. Two of these actions include obtaining maritime domain awareness and deploying layered security. While the NMSS began to shape the identification of threats and actions that should be taken to mitigate these threats, other supporting documents were required to continue to develop the security of the maritime domain. Supporting the National Strategy for Maritime Security (NSMS) are a series of seven implementation plans that provide for maritime security:

- National Maritime Domain Awareness Plan (NMDAP)
- Maritime Operations Threat Response Plan (MOTR)
- International Outreach and Coordination Strategy
- Maritime Infrastructure Recovery Plan (MIRP)
- Maritime Transportation System Security Plan (MTSS)
- Maritime Commerce Security Plan (MCSP)
- Domestic Outreach Plan¹⁵

Summarizing the aforementioned listed plans, they outline actions related to awareness, response, coordination, recovery, and security. As outlined in the NMDAP, these plans serve to provide a “comprehensive national effort to promote global economic

¹² “Maritime Transportation Security Act of 2002, Pub. L. No. 107-295 (2002),” 6–72.

¹³ *Ibid.*, 26, 27.

¹⁴ White House, *National Maritime Security Strategy* (Washington, DC: White House, 2005), <http://georgewbush-whitehouse.archives.gov/homeland/maritime-security.html>.

¹⁵ White House, *National Maritime Domain Awareness Plan for the National Strategy for Maritime Security* (Washington, DC: White House, 2013), ii, http://www.whitehouse.gov/sites/default/files/docs/national_maritime_domain_awareness_plan.pdf.

security, protect legitimate activities, mitigate the effects of natural disasters, and prevent hostile and illegal acts affecting the maritime domain.”¹⁶ These plans provide broad guidance to U.S. ports and how matters of port security should be addressed. Guidance includes priorities for port security and what are considered critical capabilities in maritime homeland security efforts.

Limited research is available that studies the effectiveness of port security practices. One study, a 2008 report produced for the Department of Justice highlighted general port security practices across 17 U.S. ports. This study looked at “promising practices” arising from local agencies involved in port security.¹⁷ A portion of this research project looked at practices of state and local law enforcement agencies and highlighted programs in place in the 17 studied ports. One of the author’s observations was that extensive study and documentation of federal agencies and programs has been done, but very little has been done to “rigorously study state and local agencies in their port security roles.”¹⁸ The recovery phase of the homeland security event cycle was one area examined in this study that the researchers learned “about fewer promising practices,”¹⁹ as compared to the other phases of the cycle.

An opportunity exists to expand on the research completed in this study. Specifically, rather than looking primarily at unique practices across ports, finding common themes could provide great benefit to the state and local agencies confronting similar maritime homeland security challenges. Also, having experts converge in an anonymous survey environment to bring some level of scrutiny to the maritime homeland security practices of state and local law enforcement could provide insight into the value and success of current practices.

¹⁶ White House, *National Maritime Domain Awareness Plan*, ii.

¹⁷ Antony Pate, Bruce Taylor, and Bruce Kubu, *Protecting America’s Ports: Promising Practices* (Rockville, MD: National Criminal Justice Reference Service, 2008), <https://www.ncjrs.gov/pdffiles1/nij/grants/221075.pdf>.

¹⁸ *Ibid.*, 6.

¹⁹ *Ibid.*, 105.

2. Scholarship

Various theses have focused on the USCG, the Federal Bureau of Investigation, Customs and Border Protection, and the United States Navy and each of these agencies' responsibilities in maritime domain security. The USCG as the primary federal maritime law enforcement agency has statutory enforcement authority for all "applicable federal laws on, under and over the high seas and waters subject to the jurisdiction of the United States."²⁰ With this broad federal statute authority, the USCG is the federal agency most often referenced in maritime law enforcement academic literature. Theses have focused on USCG past, present and future programs and anticipated challenges for this agency. Regarding port security programs, examples have included the small vessel security strategy program²¹ or proposals for implementing maritime security related strategies.

In his March 2011 thesis, "The Fire Service's Role in Maritime Homeland Security," Seattle Fire Department Captain Paul Foerster explored how the fire service fits in the context of maritime homeland security.²² This thesis employed a survey method and focused on federal programs, such as HOMEPORT and the Area Maritime Security Committee, as avenues for the fire service to reinforce the importance of its maritime homeland security mission. This research is important in that it examined how state and local first responder agencies, in this case the fire service, fit into the federal efforts for maritime and port security. The author also made a strong case for the fire service venturing beyond its fire suppression or emergency medical services role and asserted the value of having firefighters better integrated with homeland security efforts. Foerster's rationale is germane to this research because of seeking a better understanding of the maritime homeland security mission of state and local agencies operating in an environment of federal guidance and requirements. It also considered not only the current state, but what other avenues are available.

²⁰ "14 U.S.C. § 2-Primary Duties ch. 393, 63 Stat. 496 (1949)," accessed August 31, 2015, <http://www.law.cornell.edu/uscode/text/14/2>.

²¹ Brian Hill, "Maritime Terrorism and the Small Boat Threat to the United States: A Proposed Response" (master's thesis, Naval Postgraduate School, 2009), <https://www.hsdl.org/?view&did=232151>.

²² Paul Foerster, "The Fire Service's Role in Maritime Homeland Security" (master's thesis, Naval Postgraduate School, 2011).

Federally focused theses have considered the effectiveness of federal programs or have studied expanding the role of agencies to enhance homeland security. Dirk Sonnenberg, a lieutenant in the United States Navy, posed the hypothesis of utilizing the U.S. Navy as a maritime law enforcement agency.²³ Sonnenberg identified certain cases in which it was already legally allowed (piracy on the high seas), but he asserted that failing to expand this capability for the Navy left gaps in the vulnerabilities of the United States. This thesis also identifies the importance of law enforcement as a mechanism for countering threats to maritime homeland security. The effectiveness of law enforcement in this arena, coupled with the availability and capability of the Navy, were Sonnenberg's basis for better utilizing the Navy in this mission.

The aforementioned theses have played an important role in exploring possibilities or the potential for enhancing homeland security missions of existing agencies. Both looked at existing practices and how they could be leveraged to strengthen maritime homeland security better.

Academic writing about non-federal agency maritime security has focused on location or agency specific programs and initiatives. When non-federal agencies are referenced in the literature of federal programs, these documents typically reference improving coordination with non-federal agencies, or they highlight specific non-federal agency participation in a federal program.

Whether due to the broad guidance provided by government directives and plans, or the focused nature of academic writing to address jurisdiction specific maritime homeland security concerns, a study or sense of how state and local agencies have approached the challenges of maritime homeland security is missing. Having obtained this look at what exists from a best or smart practices perspective, how can these practices be shared to identify and leverage innovative maritime homeland security efforts nationwide?

²³ Dirk Sonnenberg, "Maritime Law Enforcement: A Critical Capability for the Navy?" (master's thesis, Naval Postgraduate School, 2012).

The scope of this research is limited. First, the six agencies surveyed for this research represent a very small percentage of the primary and secondary responding state and local law enforcement agencies that have responsibilities related to maritime homeland security. When considering that the United States has 361 ports, and each of these ports has several state or local agencies with some police or maritime homeland security obligations within this domain, the author recognized that more than 1,000 agencies potentially could have shared practices related to maritime homeland security. Recognizing the relatively small number of agencies surveyed as a limiting factor for this research, he attempted to make a case for why these agencies and the ports they police were important in the context of best practices for maritime homeland security. This research was dependent entirely on the self-identification of maritime homeland security experts for each port. It was also dependent upon the self-reporting and verification of maritime homeland security information these experts deemed accurate and important to this research. Where possible, the author verified information provided by these port experts. Additionally, he compared the experiences and responses of these port experts with his own experiences working in the field of maritime homeland security for more than 20 years.

The responses provided by these maritime homeland security experts represent subjective perspectives, based upon the experts' respective experiences and the author's subjective development of questions related to this topic. Where possible, he attempted to develop questions that asked open-ended questions to elicit narrative responses. His hope was to use the responses of these experts as a measure to determine if they understood the questions asked of them. While the subjective nature of the questions and responses limits this research, value exists in determining trends that may occur in the important field of maritime homeland security. The value of surveying these experts, independent of each other, lends to their responses being untainted by the opinions or responses of the other experts.

Second, the questions developed for the author's research surveys were based upon his experiences, as well as some previous research on similar related topics. These questions are limited in their scope. His hope in developing these questions was to leave

them somewhat open-ended and allow the respondent experts to provide feedback based upon both their understanding of the questions and their respective experiences working in the maritime homeland security field. One of the most obvious limiting factors of this type of questioning is that it lends itself to bias on the part of the survey question developer, as well as the survey question respondent. Anytime questions on such a widespread topic, such as maritime homeland security are developed, the questions must be narrowed to particular fields of interest, and by default, other questions outside that area of interest must be eliminated. Correspondingly, the responses to these limited questions will focus as the respondent understands them in the narrow context they were presented.

Third, and finally, this research focused almost entirely on the practices of state and local agencies. The author recognizes that maritime homeland security as a broad topic is not a practice only of these agencies. Rather, it is a partnership across agencies public and private, concerned businesses and citizens, visitors to the area and others. It was not the author's intent to exclude those outside of state and local law enforcement. Rather, it was his hope that by limiting his research to one dimension of the maritime homeland security model, he might be able to present meaningful responses from state and local law enforcement agencies and explain why they are important to the maritime homeland security mission.

D. CHAPTER OVERVIEW

In Chapter II, this research provides background and identifies the threats (one component of the DHS risk matrix) facing America's ports and examines what has been done to address these threats.

In Chapter III, the methodology for conducting this research is described. The Delphi Method survey and its iterative process anonymous debate are discussed. The selection of the ports is also outlined.

Chapter IV discusses the first round of survey questions and responses received in each of the following categories: best practices, lessons learned, as well as future

challenges and opportunities. This chapter includes a summary of the themes and topics identified by the surveyed maritime homeland security experts.

Chapter V continues the survey results into the second or supplemental round of survey questions. Based on the first round of survey questions, these supplemental questions were selected to narrow the focus and find consensus within the experts' responses.

The final chapter summarizes what has been learned through this research. Important opportunities for the future are also identified, and conclusions are drawn about the implications to the field and future study of maritime homeland security.

II. BACKGROUND

The deliberate misuse of the maritime domain to commit harmful, hostile, or unlawful acts, including those against the maritime transportation system, remains an enduring threat to the safety and security of the American people, to wider U.S. national security interests, and to the interests of our international allies and private sector partners.

— The White House, *Presidential Policy Directive 18*

A. IDENTIFYING THE THREAT

The threat to U.S. ports is best identified within the context of the environment, or as identified by NPSD/Homeland Security Directive, the “maritime domain.”²⁴ Maritime domain reflects the challenge for state and local law enforcement in securing ports, as this domain includes facilities, people, areas, waterways and anything else within, under, or around U.S. ports. Due to this wide array of security considerations for ports, simplifying the threat by identifying broad categories of what might be targeted within ports or what types of activities might be encountered within the maritime environment, can be an effective way of better understanding the threat. Ports essentially face two types of threats:

- Threats that seek to make use of ports and their interconnection to a national transportation network. Criminal networks, as an example, may seek to use ports as gateways to transport contraband through the legitimate modes of transportation. Terrorists as well, seeking to introduce weapons or destructive devices, may utilize the transportation network in place to support legitimate trade and commerce.
- Threats that target ports or something in the maritime domain, because of the importance to larger national security or economic interests. Natural or human caused events may target ports and disrupt the facilities, transportation nodes, commerce flows, or other legitimate activities occurring within this domain.

Due to their accessibility by intermodal transportation routes through the land and sea, ports are inherently vulnerable to attacks. Indeed, the aspects of their usefulness for

²⁴ Ibid.

supporting rapid movement of goods across the country are the same factors that make them vulnerable to criminal and terrorist exploitation. One incident outside of the United States that clearly depicts how easily accessed ports might be exploited for a terrorist operation was also one of the most deadly terrorist attacks in the last five years. In Mumbai, India, 10 armed terrorists attacked several targets within the city in a prolonged siege that played out over the course of 60 hours.²⁵ The terrorists hijacked a vessel outside of the port and then used an inflatable dinghy to get to shore. Through a combination of bombs and firearms, these terrorists attacked different target sites near the port, killing 173 people. The Mumbai attacks are important in the context of the threat to port security and the maritime domain, because they are illustrative of the challenges ports face in securing this domain. Easy access by sea, the ability to walk to diverse types of targets (hotels, restaurants, movie theaters, train terminals, and hospitals), heavily populated/trafficked areas, and unsecured facilities, were all components that contributed to the success of the Mumbai attacks.

Assessing the threat to U.S. ports, it might be considered whether this attack scenario could be played out domestically. Indeed, the response may be different in the United States, but many of the same factors that contributed to the terrorists' success in Mumbai could be translated to U.S. ports. As mentioned earlier in this research, ports are connected to transportation networks, often are adjacent to major metropolitan areas, and are often sprawling complexes with many different access points by land and sea. Conventional attacks within ports, near heavily populated metropolitan areas, pose a serious threat and a potential for consequences to critical infrastructure and human life.

Non-conventional incidents are also an emerging homeland security concern, and the threat posed by these types of attacks is a potential homeland security vulnerability within the maritime domain. Commander Joseph Kramek (USCG) identified this concern

²⁵ Angela Rabasa et al., *The Lessons of Mumbai* (Santa Barbara, CA: RAND Corporation, 2009), http://www.rand.org/content/dam/rand/pubs/occasional_papers/2009/RAND_OP249.pdf.

in a policy paper developed for the Brookings Institute.²⁶ In this paper, Kramek discusses the use of PSGP funds, how they have been applied in port security, and the vulnerability that has been created by ignoring the cyber threats to port security. Kramek argues that state and local agencies have overlooked this vulnerability and applied funds to more conventional threat scenarios. He summarizes the projects funded under port security as supporting “guns, gates, guards and identification cards.”²⁷

In support of his assertion about ports’ vulnerability to cyber attacks, Kramek points out that U.S. ports have allocated approximately 0.2% (\$6 million out of \$2.6 billion) of their PSGP funds to cyber security projects.²⁸ Kramek also asserts that this threat is greatly misunderstood, and that vulnerability assessments and response plans need to be developed in these port areas.

Summarizing the threat to U.S. ports, they face a significant challenge in securing their respective environment because of the all-encompassing nature of the maritime domain. Ports face the added challenge of having to be address threats emanating from the land or the sea. It could be argued that they are vulnerable to a wide array of attacks from conventional firearms (active shooters) to sophisticated cyber attacks targeting technology systems that automate operations and operate to secure the maritime domain.

B. PROGRESS SINCE 9/11

In the aftermath of 9/11, the federal government established grant programs to bridge the gap between pre-9/11 and post-9/11 first responder capabilities. For ports across the United States, grant funding for promoting port security has been allocated for more than a decade. Most recently, in August 2013, PSGP allocations of \$93 million were focused on 145 critical ports. These allocations targeted the following priorities:

²⁶ Joseph Kramek, *The Critical Infrastructure Gap: U.S. Port Facilities and Cyber Vulnerabilities*,” Center for 21st Century Security and Intelligence (Washington, DC: Brookings Institute, 2013), <http://www.brookings.edu/~media/research/files/papers/2013/07/02%20cyber%20port%20security%20kramek/03%20cyber%20port%20security%20kramek.pdf>.

²⁷ Kramek, *Critical Infrastructure Gap*, 8.

²⁸ *Ibid.*, v.

- increasing port-wide risk management
- enhancing domain awareness
- training and exercises
- expanding port recovery and resiliency
- having the capabilities to prevent, detect, respond to and recover from attacks involving improvised explosive devices (IEDs) or other non-conventional weapons²⁹

Of the 145 critical ports, these ports were grouped into 90 port areas, with seven being Group I or the highest risk ports. These Group I ports received \$55 million of the \$100 million available to “promote sustainable, risk-based efforts to protect critical port infrastructure from terrorism.”³⁰ These funding allocations reflect the DHS’ focus on providing the most at risk ports with the greatest percentage (55%) of available port security funds. As mentioned previously in this research, changes in funding do not reflect changes in risk. Additionally, efforts to ensure effective implementation of projects and use of allocated funding need to be strengthened.

Based upon this grouping, the DHS determines the priority for homeland security project related funding. Under this risk assessment model and the PSGP, the DHS has allocated funding to ports for use in reducing risk and mitigating the threat encountered within these ports.

To address the threat to U.S. ports, the federal government has developed a system of assessing risk to ports, has identified the USCG as the federal agency responsible agency for securing ports, has developed port security priorities, and has allocated funding to address capabilities within those priorities.³¹

²⁹ Federal Emergency Management Agency, *Funding Opportunity Announcement FY 2014 Port Security Grant Program* (Washington, DC: Department Homeland Security, 2104), http://www.fema.gov/media-library-data/1396623742630-9e497a99bef3e3c0265bbf84993b5e69/FY_2014_PSGP_FOA_Final_Revised.pdf.

³⁰ Ibid.

³¹ “Homeland Security Act of 2002 (2002),” 36, accessed February 14, 2016, <https://www.dhs.gov/homeland-security-act-2002>.

Under the oversight of the USCG and the Captain of the Port (COTP) assigned to USCG sectors, maritime homeland security has developed a collaborative system of identifying threats, developing plans to address those threats, and exercising the plans to enhance preparedness. The collaborative system previously referenced is outlined in USC 33 CFR Part 103 and includes authorities of the USCG COTP, assembly of committees, development of plans, use of maritime security (MARSEC) threat levels, and coordination of other maritime homeland security functions.³² In the decade since this regulation was developed, these USCG functions have been developed into 43 COTP zones and the requirements of this regulatory system are in place.

State and local agencies have been partners with the USCG and the development of the maritime homeland security system that has emerged since 9/11. These agencies are included within the committees in their ports, are participants in plans and exercises, and have been recipients of PSGP funds to enhance port security capabilities. Law enforcement agencies under these state and local entities are often the initial response mechanism for criminal and terrorism incidents occurring within the maritime domain. To understand the complete picture of maritime homeland security better, the study of these agencies' practices is an essential piece of the complex system of security within ports.

As referenced earlier in this research and identified in a November 2011 Government Accountability Office (GAO) report on management and effectiveness of risk models and grants in port security, ports have “characteristics that make them vulnerable to terrorist attacks: they are sprawling, easily accessible by water and land, close to crowded metropolitan areas, and interwoven with complex transportation networks designed to move cargo and commerce as quickly as possible.”³³ The geographic factors, as well as the tight connection of port networks, provide the

³² “Overview of Area Maritime Security Regulations, 33 C.F.R. Part 103 (2003),” accessed August 25, 2015, http://www.aapa-ports.org/files/pdfs/overview_area_maritime_security_regulations.pdf.

³³ United States Government Accountability Office, *Port Security Grant Program, Risk Model, Grant Management, and Effectiveness Measures Could Be Strengthened* (GAO-12-47) (Washington, DC: U.S. Government Accountability Office, 2011), 5, <http://www.gao.gov/assets/590/587142.pdf>.

framework within which state and local law enforcement operate and must demonstrate the ability to adapt.

As a result of continued vulnerability of ports to conventional and unconventional attacks, due to the inability to identify reduction in risk in ports after more than a decade of PSGP projects and funding, and to develop a clearer understanding of the practices of state and local law enforcement within the complex system of maritime homeland security, it is essential to collect data from some of these ports and identify best practices to enhance port and maritime homeland security across the United States. Identifying these practices and to what extent they represent adaptation continues the dialog about the current status of maritime homeland security and presents an opportunity to prompt future research on this topic.

III. METHOD

The method utilized by the author in this research is important due to a number of factors. First, when narrowing the field of prospective ports from hundreds down to six, it is important to explain the characteristics of these ports and why they are important to the maritime homeland security discussion. Ultimately, the ports were selected due to their importance to national defense or commerce, or because of their relatively high risk rating. Second, selecting six experts from thousands of men and women working in the maritime homeland security field requires thoughtful consideration. The experts were selected because they and their respective agencies play an integral role in securing the selected ports. Finally, an iterative survey process was important, as little research had been completed in this field of study.

A. PORT SELECTION

Of the 361 ports in the United States, three criteria were used to determine which of these ports would be considered in this research. The ports selected for study were either high risk, important to commerce, or critical for the strategic defense of the United States. Ideally, this author sought to study ports that met more than one of the listed criteria areas.

1. DHS Group Ports

Between 2006 and 2012, the DHS invested over \$2.6 billion for maritime security through its PSGP.³⁴ The allocations for this grant program are determined through a DHS risk model, which divides U.S. ports into Group I and Group II ports. Group I ports are those determined by the DHS to have the highest level of risk, and Group II ports are all remaining ports. For 2014, the PSGP identified seven port areas as being Group I ports. These seven port areas, port clusters near a geographic area, were comprised of 98 total

³⁴ United States Government Accountability Office, *Port Security Grant Program*.

entities in nine different states. The 98 entities within these port areas were a mix of state, local, tribal, public, and private agencies, and corporations.³⁵

The seven Group I ports received an allocation of 55% (approximately \$55 million) of the total \$100 million available through the PSGP. Remaining ports (Group II ports) were able to compete for the remaining \$45 million of PSGP funds. Table 1 illustrates the list of Group I port areas, as well as the states, territories, and cities represented.³⁶

Table 1. FY 2014 PSGP Port Area Groupings

State/Territory	Port Area
California	Los Angeles/Long Beach Long Beach, Los Angeles San Francisco Bay Carquinez Strait, Martinez, Oakland Richmond, San Francisco, Stockton
Louisiana	New Orleans Baton Rouge, Gramercy, New Orleans, Port Plaquemines, South Louisiana, St. Rose
New Jersey / Pennsylvania / Delaware	Delaware Bay Camden-Gloucester, NJ; Chester, PA; Marcus Hook, PA; New Castle, DE; Paulsboro, NJ; Philadelphia, PA; Trenton, NJ; Wilmington, DE
New York / New Jersey	New York/New Jersey
Texas	Houston-Galveston Houston, Galveston, Texas City
Washington	Puget Sound Anacortes, Bellingham, Everett, Olympia Port Angeles, Seattle, Tacoma

Source: Federal Emergency Management Agency, *Funding Opportunity Announcement (FOA) FY 2014 Port Security Grant Program (PSGP)* (Washington, DC: Department of Homeland Security, 2104), http://www.fema.gov/media-library-data/1396623742630-9e497a99bef3e3c0265bbf84993b5e69/FY_2014_PSGP_FOA_Final_Revised.pdf.

³⁵ Federal Emergency Management Agency, *Funding Opportunity Announcement (FOA) FY 2014 Port Security Grant Program (PSGP)* (Washington, DC: Department of Homeland Security, 2104), http://www.fema.gov/media-library-data/1396623742630-9e497a99bef3e3c0265bbf84993b5e69/FY_2014_PSGP_FOA_Final_Revised.pdf.

³⁶ *Ibid.*, 28.

Although a concerted effort has been made to develop priorities and allocate federal grant funding through the PSGP, challenges have arisen with regard to the funding and how it is being used to enhance maritime homeland security. A November 2011 GAO report asserted that the management of these funds and the measures of effectiveness of this program should be strengthened.³⁷ Specifically, the report noted, “allocations were based largely on port risk and determined through a combination of a risk analysis model and DHS implementation decisions.” The report acknowledges that the reason this method poses a challenge is that it is not responsive to changes in port security practices, as occurs when new practices, projects, or programs are implemented.³⁸ To simplify this concern, the DHS has implemented a methodology for assessing the risk faced by U.S. ports. Based upon this methodology, the DHS allocates funding to ports to enhance homeland security and reduce risk in the maritime domain.

Another major concern identified in the report was a measure of the implementation of the projects funded through the PSGP. As identified in the report, only about 25% of the funds allocated through this program have been used. PSGP performance measures are needed to measure the effectiveness of how the funds are being used within ports to reduce risk and affect changes in homeland security

In 2015, the PSGP eliminated the grouping of ports by their respective risk classification. All ports competing for PSGP funding were clustered together to compete for the \$100 million in funding, irrespective of their relative risk rating. This change by the DHS that removed the consideration of “risk” as a measure of how PSGP funds would be allocated necessitates an examination of what other evaluative criteria might exist to determine the importance of ports within the United States. In addition to risk, what other factors could be considered when evaluating how ports have approached the challenge of maritime homeland security? Given the changes in the PSGP since its inception, it may be prudent to consider factors other than a risk rating to determine which ports may have maritime homeland security practices that may be leveraged. This research does not discard the DHS criteria of risk, but also considers variables related to

³⁷ United States Government Accountability Office, *Port Security Grant Program*.

³⁸ *Ibid.*, 20.

ports and their importance to commerce, as well as ports deemed strategically important to the DOD.

2. MARAD Top Ten Commercial Ports

Ports “share certain characteristics that make them vulnerable to terrorist attacks: they are sprawling, easily accessible by water and land, close to crowded metropolitan areas, and interwoven with complex transportation networks designed to move cargo and commerce as quickly as possible.”³⁹ Importance to the economy and port ties to larger national security matters are two other elements that must be considered in the discussion of U.S. ports and maritime homeland security. Recognizing their national economic importance, the United States Maritime Administration (MARAD) lists the top ten commercial ports within the United States. With 90% of the U.S. commerce traveling through ports and their connection to intermodal transportation nodes, incidents that impact U.S. ports quickly reverberate through this network. Disruptions to trade and shipping, regardless of cause, are translated into national economic impact. As identified in a 2013 MARAD report on commercial ports, the following ports are the top ten ports for all types of commerce:⁴⁰

- Houston, TX
- Los Angeles/Long Beach, CA
- New York, NY
- San Francisco, CA
- Virginia Ports, VA
- New Orleans, LA
- Columbia River
- Savannah, GA
- Philadelphia, PA
- Baltimore, MD

³⁹ United States Government Accountability Office, *Port Security Grant Program*, 5.

⁴⁰ Maritime Administration, *2011 U.S. Water Transportation Statistical Snapshot* (Washington, DC: U.S. Department of Transportation, 2013), 13, http://www.marad.dot.gov/documents/US_Water_Transportation_Statistical_snapshot.pdf.

3. DOD Strategic Ports

The other important aspect of ports considered in this research is the national security or critical military component attached to them. Twenty-two (seventeen commercial and five military) ports in the United States have received the designation of strategic ports. Figure 2 illustrates the list of ports and their respective locations in the United States.⁴¹ The DOD Secretary determines which ports are strategic based on their designation as “significant transportation hubs important to the readiness and cargo handling capacity of the Department of Defense.”⁴²

Figure 2. Strategic Seaport Locations



Source: GAO analysis of DOD data. Map Resources (map).

Source: United States Government Accountability Office, *Defense Logistics: The Department of Defense’s Report on Strategic Seaports Addressed All Congressionally Directed Elements* (GAO-13-511RSU) (Washington, DC: U.S. Government Accountability Office, 2013), 8, <http://www.gao.gov/assets/660/654578.pdf>.

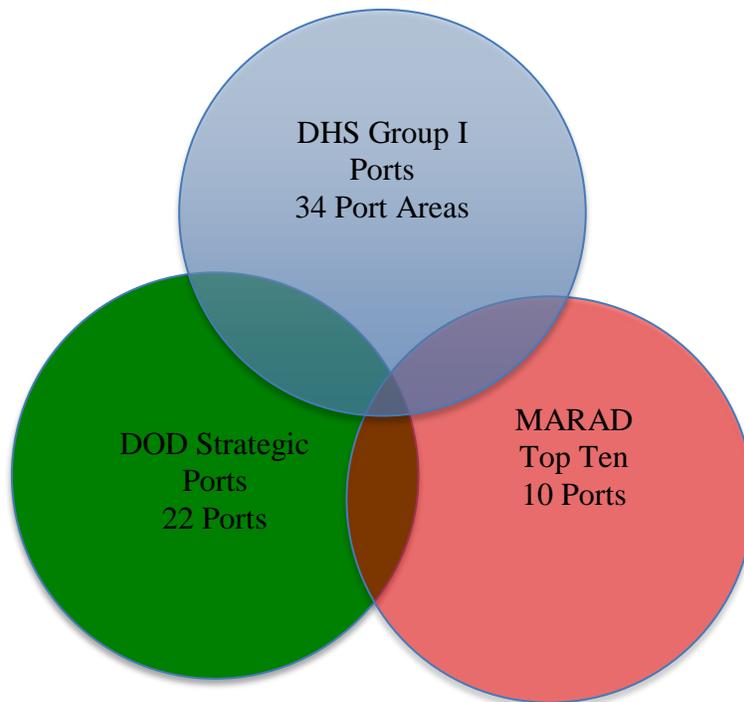
⁴¹ United States Government Accountability Office, *Defense Logistics: The Department of Defense’s Report on Strategic Seaports Addressed All Congressionally Directed Elements* (GAO-13-511RSU) (Washington, DC: U.S. Government Accountability Office, 2013), 8, <http://www.gao.gov/assets/660/654578.pdf>.

⁴² *Ibid.*, 7.

The DOD makes this determination based upon these ports' value in maintaining the ability to dock, load, and unload military vessels, personnel, and equipment. Indeed, many of the factors that make ports essential to the transport of trade and commerce are the same factors that the DOD requires to receive and deploy rapidly equipment and personnel necessary for national security matters. These strategic ports are part of a complex worldwide system that allows the DOD to transport equipment and personnel for military operations. Activities include the use of commercial facilities to re-supply and load (roll on and roll off) equipment to be shipped overseas, or to receive equipment and personnel upon returning from overseas.

Figure 3 illustrates how many ports constitute the DHS Group I port areas, the DOD strategic ports, and the MARAD top ten commercial ports.

Figure 3. DHS, DOD, and MARAD Port Convergence



B. SELECTION CRITERIA

Ports that converge across two or more of the DOD Strategic, MARAD top ten commercial, and DHS grouped ports were selected for this survey. The rationale for focusing on ports that converge in two or more of the above listed areas is the belief that these ports are not only high-risk, but also important to the national economy, and the defense of this country. They must balance interaction with the military and consideration of a higher security posture in areas of the port. Or these ports, because of their importance to U.S. commerce, may have a greater need to balance business considerations along with security and risk concerns. Rather than merely facing a significant risk, based upon a threat, vulnerability, and consequence formula, these ports represent great impact to the movement of commerce and military resources.

The author's purpose in structuring the survey was to capture data from ports that have the greatest element of risk, are important for homeland defense, and are vital to the U.S. economy. Evaluating this data could provide insight about balancing elements of security and defense, while also supporting an environment conducive to the flow of commerce.

Reviewing the list of DHS Group I Ports, DOD Strategic Ports, and MARAD top ten ports, reveals the following information:

- Three ports are listed as Group I ports, DOD strategic ports and MARAD top ten ports (Long Beach, CA; Philadelphia, PA; and New York, NY).
- Three ports are DHS Group I and MARAD top ten ports (San Francisco, CA; New Orleans, LA; and Houston, TX).
- Two ports are listed as DOD Strategic Ports and MARAD top ten ports (Savannah, Georgia and Virginia Ports, VA).
- Two ports are DHS Group I and DOD strategic ports (Tacoma, WA; Oakland CA; and San Diego, CA).

For the purposes of this research, the author placed the highest priority on seeking the participation of ports that will provide the widest or most diverse perspective of risk, defense, and commerce. The ports of Long Beach, Philadelphia, and New York provide this perspective as identified by the DHS, DOD, and MARAD. Two ports from each of

the remaining groups are pursued for participation in the survey. Based upon the author's research, the following ports are sought for participation:

Three ports from the DHS Group I and MARAD lists:

- San Francisco, CA
- New Orleans, LA
- Houston, TX

Both DOD Strategic and MARAD top ten ports:

- Savannah, GA
- Virginia Ports, VA

Two DOD Strategic and DHS Group I ports:

- Tacoma, WA
- Oakland, CA

It is important to note that while only one city is identified in each port, these areas are comprised of port complexes encompassing more than one city. The PSGP allocates funds to port areas that are representative of more than one agency or jurisdiction. For 2014, seven port areas were listed as "Group I ports." In actuality, these areas spanned more than 34 cities and 98 public private, state, local, and tribal entities within those port areas.

C. EXPERT SELECTION

By focusing on agencies identified as DHS high-risk ports, DOD strategic ports, and MARAD top ten commercial ports, the author reached out to agencies across the country through phone and email exchanges. His hope was to develop a group of respondents that had law enforcement and maritime homeland security responsibilities in geographic areas not clustered in a certain region in hopes of avoiding responses only from west coast ports as an example. This geographic diversity was important, because it could help to demonstrate that effective practices were or were not confined to one part of the United States. It could also serve as a measure to indicate practices only employed in one region of the United States.

Following contact by phone or email with these agencies, the author sought to identify the individual(s) within each agency who met the criteria identified to respond to his surveys. In a couple of instances, he was referred by the initial agency he contacted to a second agency with more specific expertise in maritime homeland security responsibilities. Each agency representative received a letter of introduction and brief explanation of the purpose of my research.

From the contacts with these agencies, he received six responses agreeing to complete the surveys and assist with his research.

D. DELPHI METHOD SURVEY

Once the ports and their respective experts to participate in the author's surveys were identified, he adapted the Delphi Method to conduct two rounds of survey questions with each of the experts. Olaf Helmer of the RAND Corporation explored the basic elements of the Delphi Method in a paper he authored in March 1967.⁴³ This method is employed when limited information may be available on a topic, to collect subject experts' responses in a structured and controlled survey environment. None of the participants is known to the other, and these experts engage in "anonymous debate" to reveal a combined position.⁴⁴ Innovative avenues may be discovered as a result of one expert identifying a practice in which others have engaged. Additionally, if the group of experts believes a given practice is needed but has not yet been implemented, it could indicate a possible avenue to explore in future port security projects or research.

This research used elements of the Delphi Method, not for the purpose of forecasting the future, but to learn about what successful practices in maritime homeland security may exist across the country.

The goal of this survey method was to determine indicators of successful practices, trends, and possible avenues where innovation may be taking place. This research sought to expand upon interesting practices given the maritime environment, the

⁴³ Olaf Helmer, *Analysis of the Future: The Delphi Method* (Santa Monica, CA: The Rand Corporation, 1967), <http://www.rand.org/content/dam/rand/pubs/papers/2008/P3558.pdf>.

⁴⁴ *Ibid.*, 9.

complexities of securing the maritime domain, and the constraints placed upon state and local law enforcement agencies.

In collecting data about smart practices, trends, and innovation within state and local law enforcement in the field of maritime homeland security, it is this author's hope that the result will be some type of measure or initiation of a dialog about the extent to which these agencies have adapted to securing the maritime domain in the aftermath of 9/11. The concept of adaptation, and the failure of government agencies to do so, is a concept espoused by Amy Zegart in her book, *Spying Blind: The CIA, the FBI, and the Origins of 9/11*.⁴⁵ She asserts that three "important ideas" are attached to the concept of adaptation. First, some measure of change must occur. Second, adaptation requires large changes or a combination of smaller changes, changes that on a scale of magnitude that transform an organization. The third and final element required for adaptation is an "improved fit between the organization and its external environment." Measuring these three factors seems to be a good fit for the discussion of best practices and maritime homeland security. Especially important in this discussion is the final concept of state and local law enforcement and measuring to what extent they have improved their capabilities in the complex system of the maritime domain.

Summarizing the three elements of adaptation and applying them to the scope of this research, the intent is to collect data that reflects the extent to which state and local law enforcement have significantly changed their practices to adapt effectively to a changing maritime domain. As used in this description, the term "significant" reflects both the magnitude of the change, as well as the extent to which that change is reflective of the changing maritime environment. This concept also links well with "smart practices," as adaptation assumes an awareness and understanding of changes around it and is an intentional action in response.

The data collected was categorized by identifying common themes that evaluate the following:

⁴⁵ Published by Princeton University Press, Princeton, NJ, in 2007.

- Best practices—This section of the survey asked agencies to identify successful practices within four maritime homeland security categories: federal programs, state programs, training, and homeland security cycle successes.
- Lessons learned—Agencies were surveyed about the challenges they had faced within the realm of maritime homeland security. Specifically, each agency was asked what challenges they had faced regarding federal programs, state programs, and the homeland security cycle (identified as prevention, preparedness, mitigation, response, and recovery).
- Future Challenges—Agencies were queried about what future challenges they anticipated in the realm of maritime homeland security. A second question asked about challenges related to the budget and how they would affect their agency’s operations.
- Future Opportunities—Surveyed agencies were asked about two areas of future opportunities. First, agencies were asked about opportunities to better prepare or equip their agencies for the maritime homeland security mission. Second, agencies were asked about how federal programs might be changed to prepare or equip their agencies better for the maritime homeland security mission.

As this survey utilizes the Delphi Method, the responses from agency representatives, the goal of this research is to begin to fill a void in research by soliciting anonymous subject matter expert responses. The key to the effectiveness of this Delphi Method survey in the present research project is the selection of relevant ports and “experts”⁴⁶ to participate in the interviews. Selection of ports from only one geographic region in the United States would be at the exclusion of smart practices or trends in other parts of the country. Additionally, the selection of experts who are in a position to know not only what is being done (or not being done) in their port and why it is important to that port is a key component to this research. This component will allow for qualitative elements, as opposed to completely quantitative data, which is essential for understanding the system of maritime homeland security that has emerged for state and local law enforcement. The search for the defensible case for how these agencies have implemented their systems of port security is at the core of this research.

⁴⁶ Helmer, *Analysis of the Future: The Delphi Method*, 4.

E. RECRUITMENT OF RESPONDENTS

By selecting the ports based upon the aforementioned listed designations, the author believes it would provide a sample of diverse geographic areas and port security practices, while also offering a manageable sample size to analyze and evaluate the data received. He sent a total of 10 inquiries to ports that met at least two of the list criteria and received six responses. Selection of the experts to represent each of the previously listed port areas was based upon the following criteria:

- be employed by a state or local law enforcement agency whose duties include providing port security or maritime law enforcement duties
- fill a position within one of these agencies that has knowledge of operations related to port security and maritime law enforcement
- be able to provide perspective about changes in their agencies' and their ports' security and law enforcement system since 9/11

F. SURVEY

The author synthesized the questions based both upon his own experiences working with a maritime law enforcement agency, and his hope to probe areas of uncertainty. The first round of survey questions consisted of five areas of inquiry, totaling 25 questions. First, general questions were asked of each agency to provide information about the agency responding to the survey. These general questions included the name and size of the agency, the role of the respondent within that agency, operational commitments for this agency in the realm of port security, and any budget changes the agency had experienced.

Second, best practices questions were utilized as a method to probe areas that each agency could identify as having been successful in its port area. Third, the lessons learned question asked about areas each agency had identified as challenging. Fourth, agencies were asked to evaluate areas they believed would pose future challenges. Fifth, agencies were asked to report initiatives they believed would present future opportunities for their port area.

Upon receipt and analysis of the first round of questions, the author sent each survey respondent a supplemental questionnaire. This supplemental questionnaire probed

areas of interest that had been raised in the previous round of questions, and each survey respondent received the same list of four questions. First, respondents were asked about the role of law enforcement in the recovery phase of homeland security. Second, respondents were asked about their practices enforcing federal regulations related to port security. Third, respondents were asked to detail their participation in information-sharing forums specific to maritime homeland security. Fourth, respondents were asked about the role of their respective state governments in the field of maritime homeland security.

Once the first and second rounds of questions were completed, the author analyzed the information provided and searched to identify where common best practices and challenges were identified. Recognizing that this survey was a relatively small sample size, he examined the responses that indicated half or more of the responding agencies were believed a practice was a success or a challenge for their port. These common responses were further analyzed to identify themes within the context of maritime homeland security practices.

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IV. ROUND ONE SURVEY RESPONSES

The first survey question and responses were designed to establish basic information about the respondents and their agencies. Respondents were asked to identify their position and role in their agency, and to provide some information about the size and operational responsibilities of their respective agencies. After exploring the information about the respondents and each agency, the stage was set by asking open-ended questions about best practices, lessons learned, future challenges, and future opportunities. Some of the areas explored in these questions included inquiries about grants, training, certifications, and homeland security efforts within each port.

A. DOD/DHS/MARAD AGENCIES

As explained earlier, an emphasis was placed on agencies that were some combination of high-risk (DHS criteria), strategic ports (DOD criteria), or top ten commercial ports (MARAD criteria). Each agency agreeing to participate in the research was evaluated to determine where they fit into each of these criteria. The following summarizes the results of this evaluation:

- Three agencies operated in a port that met all three of the previously identified criteria. This port was a DHS Group I port, a DOD strategic port, and was also listed in the MARAD top ten commercial ports.
- Two agencies operated in a DHS Group I and MARAD top ten commercial ports.
- One agency operated in a DOD strategic and DHS Group I port.

B. RESPONDENT AGENCY GENERAL QUESTION RESPONSES

Of the agencies surveyed, two agencies were located along the west coast of the United States. These two agencies were primary or responding agencies to the port areas of Seattle/Tacoma and Los Angeles/Long Beach. Two agencies were located along the U.S. southeast coast (near the Gulf of Mexico). These two agencies were primary or responding agencies to one of the port areas in Texas and the Port of New Orleans. The

other two agencies were located along the U.S. east coast and were primary or responding agencies to the ports areas of Virginia and Philadelphia.⁴⁷

Agencies were asked to identify if they were a state, local, or other type of agency. One agency respondent described the agency as a port authority agency while one agency was a special district agency, two agencies were identified as state agencies, and two were identified as departments of their respective city agencies.⁴⁸ As defined by the Merriam-Webster online dictionary, a special district is “a political subdivision of a state established to provide a single public service (as water supply or sanitation) within a specific geographic area.”⁴⁹ In this case, the specific geographic area was a port within the United States.

Every agency surveyed reported that it shared jurisdictional patrol responsibilities with at least one other agency. On average (arithmetic mean), each agency shared jurisdiction with two other local agencies, one state agency, and one federal agency.⁵⁰ Five of the six responding agencies reported that they had a law enforcement presence within their port area 24 hours per day, seven days per week.⁵¹ The sixth agency reported that it was a secondary responding agency, called in to assist primary responding agencies. However, this agency also reported that it would be a state agency leading investigations into matters that compromise maritime homeland security, and it could be the lead agency in the recovery from a maritime homeland security incident.

C. AGENCY STAFFING INFORMATION

The agencies responding to this survey were comprised of state, local, port authority and special district law enforcement agencies that serve a primary or supporting role in maritime law enforcement and homeland security matters. Respondent agencies

⁴⁷ All:Q1.

⁴⁸ All:Q3.

⁴⁹ “Special District,” accessed February 29, 2016, <http://www.merriam-webster.com/dictionary/special%20district>.

⁵⁰ Average determined by adding number of agencies from R1–R6:Q9 responses, dividing sum by 6.

⁵¹ Q8:R1–R4, R6. R5 is not a 24/7 maritime law enforcement agency.

ranged in size from less than 50 employees for the three of the agencies,⁵² about 200 employees for one agency,⁵³ and two agencies that reported more than 2,000 employees.⁵⁴ Two agencies had increased staffing since 9/11, two agencies had decreased staffing, and two agencies reported no change in staffing since 9/11.⁵⁵

Although two of the agencies reported staffing cuts, all but one of the survey respondents reported that its agency had significantly changed and increased its operational responsibilities since the terrorist attacks of 9/11.⁵⁶ The one agency that reported no operational changes was a responding or supporting agency, providing landside only law enforcement services in the port area. Four of the six agencies identified their operational changes as a shift from traditional law enforcement duties, to a model focused on securing critical infrastructure within the maritime domain using police patrols. Three agencies reported a significant shift in the security posture of their ports, and their respective agencies being the lead in increasing physical security measures at the facilities of their ports.⁵⁷ As one respondent wrote, the port they represented had shifted from an “open port” before 9/11 to a secured and controlled access port.⁵⁸

D. AGENCY EXPERTS RESPONDING TO THE SURVEYS

The survey respondents were comprised of two command staff (police captain or higher), two lieutenants, and two line operators (one officer and one senior special agent).⁵⁹ These respondents were identified as the representatives from their agencies as satisfying the previously listed criteria:

⁵² Q4:R1, R3, R4.

⁵³ Q4:R2.

⁵⁴ Q4:R5, R6.

⁵⁵ Q6:R1, R2 (increase); R3, R4 (decrease); R5, R6 (no change).

⁵⁶ Q10:R1–R4, R6.

⁵⁷ Q7:R1, R3, and R4.

⁵⁸ Q7:R4.

⁵⁹ Q2:All.

- be employed by a state or local law enforcement agency whose duties include providing port security or maritime law enforcement duties
- fill a position within one of these agencies that has knowledge of operations related to port security and maritime law enforcement
- be able to provide perspective about changes in their agencies' and their ports' security and law enforcement system since 9/11

All survey respondents were queried about questions related to the type of government agency they represented, staffing and operations, type of law enforcement certification their personnel receive, and shared operations and jurisdiction with other agencies in their maritime domain.

E. BEST PRACTICES RESPONSES

This section of survey questions asked about which federal (Q13) and state (Q16) government programs had been most successful for respondent maritime homeland security agencies, how each agency has participated in grants (Q14) and how these grants have been used (Q15), what training areas have best prepared each agency (Q17), and in what phases of the homeland security event cycle each agency has had the most success.

1. Successful Federal Programs

While this question did not ask about specific federal programs, respondents identified the grant programs⁶⁰ and interagency partnerships⁶¹ implemented in their ports as being the most successful practices.

Four of the five agencies having experience with federal grants responded that it had been the most successful federal maritime homeland security program. One agency did not participate in any federal port security grants.⁶² Agencies identified the use of these federal grant programs as having provided equipment that better prepared their agencies to fulfill their maritime homeland security mission, or security elements that had

⁶⁰ Q13:R1, R2, R4, and R6.

⁶¹ Q13:R1, R2, and R3.

⁶² Q13:R5.

been added to facilities and critical infrastructure to meet federal requirements under the MTSA.

Three of the six respondent agencies believed that interagency partnerships that highlighted information sharing, exercises and drills, training, or task forces were also successful federal maritime homeland security programs. These three agencies were able to provide 12 examples of different partnerships that existed in their respective ports to improve maritime homeland security. Examples included the Areas Maritime Security Committee, three task forces, operations centers, and training partnerships.

2. Successful State Programs

No consensus was demonstrated amongst surveyed agencies about successful state government maritime homeland security programs. Two agencies identified general emergency management, mandated police training, and general terrorism training provided by their respective states.⁶³ Based upon these responses or the lack of responses about successful state government maritime homeland security training, the author asked about the role of the state government in the realm of maritime homeland security.

3. Success in Grants

All except for one⁶⁴ of the surveyed agencies had experience with port security related grant programs. As explained in the section related to successful federal grant programs, agencies purchased equipment to conduct their maritime homeland security mission, and they used grant funds to secure facilities and critical infrastructure to meet federal MTSA requirements. Through the responses to these grant related questions, a strong consensus indicated that the maritime homeland security mission represented a significant change for these agencies. Their existing equipment and critical infrastructure security⁶⁵ was not sufficient to comply with federal requirements, nor was it sufficient to

⁶³ Q16:R2, R4.

⁶⁴ Q14:R5

⁶⁵ Q15:R1, R2, R3, and R4.

satisfy their perceived expanded role as not just police agencies, but agencies tasked with securing the maritime domain.⁶⁶

4. Success in Training

The respondents did not show a consensus about what training areas had best prepared their agencies. Examples of the best training included courses on the Incident Command System,⁶⁷ terrorism training,⁶⁸ natural disaster exercises,⁶⁹ vessel operations, and underwater IED courses.⁷⁰ One respondent also identified its own agency's on the job training as being the most successful training practice.⁷¹

The final best practices question asked about the homeland security cycle (identified as prevent, prepare, mitigate, respond, and recover) and what phase of the cycle each agency had been most successful in strengthening. The author's thought was that after exploring success in federal and state programs, grants and training, these agencies may be able to identify how these successes had best strengthened maritime homeland security in their respective areas.

5. Success in Prevention, Preparedness, Mitigation, Response, and Recovery

While no consensus was indicated in the areas in which these agencies had most strengthened their efforts, it was clear that most agencies believed they had strengthened their pre-incident (prevention and preparedness) efforts. Two respondents identified preparedness and two identified prevention. These agencies identified the target hardening or physical security measures (lighting, fencing, barriers, and access control) as the reason they had been most successful in these phases.⁷²

⁶⁶ Q15:R1, R2, R4, and R5.

⁶⁷ Q17:R1, R3, R4, R5, and R6.

⁶⁸ Q17:R4.

⁶⁹ Q17:R5.

⁷⁰ Q17:R6.

⁷¹ Q17:R3.

⁷² Q18:R1, R3, R4, and R6.

In summary, the author learned from the responses about best practices in maritime homeland security that the greatest successes were believed to be in the areas of federal grant programs to equip agencies for their expanded mission under homeland security and to secure facilities and critical infrastructure within their respective ports. Also, no consensus was demonstrated about successful training programs or successful state government programs.

F. LESSONS LEARNED

The next section of survey questions was labeled “lessons learned” and this area of inquiry was intended to elicit responses about areas that these agencies had found most challenging. Specifically, the questions asked about what challenges agencies had faced in federal and state programs and what phases of the homeland security cycle (prevent, prepare, mitigate, respond, and recover) had been the most challenging to develop.

1. Challenges in Federal Programs

Respondents were asked about what federal program challenges they had encountered in maritime homeland security. Interestingly, just as a consensus of the surveyed agencies believed that grants had been the most successful of the federal programs, a consensus also shown that the grants programs were the most challenging federal government concern. As previously mentioned, five of the six surveyed agencies had experience participating in federal port security grants. Therefore, the response by three of the agencies or 60% of agencies with grant experience created a consensus.⁷³ When citing concerns about these challenges, two elements of the grant programs created concern. First, two agencies noted that they had experienced a decrease in available grant funding.⁷⁴ Second, one agency reported that the process to obtain grant funds approved and received was lengthy and made it difficult to receive funds in a timely manner.⁷⁵

⁷³ Q19:R1, R3, and R6.

⁷⁴ Q19:R1 and R6.

⁷⁵ Q19:R3

The only other challenge shared by more than one respondent was noted as the gap between federal regulations and state or local enforcement of these regulations. Two agencies believed it was a concern.⁷⁶ One agency cited a concern that it fell to state and local agencies to enforce these regulations, and these agencies had no authority to do so. This lack of authority resulted in applying a state or local ordinance, which may not convey the seriousness of the offense committed.⁷⁷ The second respondent believed that a gap existed in training or education between what MTSA and the Transportation Worker Identification Credential (TWIC) enforcement required, and what state and local agencies understood about these regulations.⁷⁸

The next survey question asked about challenges with state government maritime homeland security programs. As observed in the previous section on best practices, no consensus was demonstrated about what state government programs had been successful.

2. Challenges in State Programs

As with best practices in state maritime homeland security programs, no consensus was exhibited concerning what challenges existed in state programs. Two respondents believed that the state government could fill a significant gap in training or education of state and local police agencies to satisfy the enforcement of federal regulations.⁷⁹ In the same manner that state governments might have a centralized agency to standardize basic police certifications, these agencies believed state government had a role in standardizing the basic certification of state and local agencies in the field of maritime homeland security.⁸⁰

The final question on lessons learned explored what phase (prevent, prepare, mitigate, respond, and recover) of the homeland security cycle had been most challenging for these agencies to strengthen.

⁷⁶ Q19:R2 and R4.

⁷⁷ Q19:R2.

⁷⁸ Q19:R4.

⁷⁹ Q20:R1 and R4.

⁸⁰ Q20:R4.

3. Challenges in the Homeland Security Cycle

Three of the six respondents believed that recovery presented the greatest challenge for their agencies to strengthen.⁸¹ All three agencies noting it as the greatest cycle challenge provided explanations for their responses. The first respondent observed past drills and exercises had been focused primarily on response and mitigation of incidents. However, this agency had recently begun devoting “time and resources” to the recovery phase to ensure a “safe and sound economic recovery for the Port.”⁸²

The second respondent reported that the challenge of working with agencies outside of law enforcement to ensure recovery from an incident was the factor that made this phase of the cycle most challenging.⁸³

The third agency noting the recovery challenge identified its staffing reductions as the greatest cause for this phase of the cycle being a challenge. This respondent believed that the demands of dedicating additional staffing to sustain a recovery effort made it a great concern not only for his agency, but also for other agencies in the same port area. It is worth noting that this agency had experience with recovering from an incident impacting its port area.⁸⁴

Summarizing the lessons learned for these state and local agencies, grants were believed by the respondents to be both very successful and very challenging. The challenge was believed to be access to grant funds, either due to decreased funding amounts or because of the lengthy process required to gain necessary approvals. No consensus was shown about state government program challenges, but perhaps an opportunity exists for the state government to fill basic training gap for state and local agencies. The recovery phase was believed to be the most challenging of the homeland security cycle due to the sustained time, resource, staffing, and interagency cooperation commitment required.

⁸¹ Q21:R1, R2, and R4.

⁸² Q21:R1.

⁸³ Q21:R2.

⁸⁴ Q21:R4.

G. FUTURE CHALLENGES

This section of questions asked respondents two questions to explore what challenges they believed they would experience in the future, and to identify what they believed changes in budget would mean for their agencies.

1. Challenges on the Horizon

No consensus was expressed among the surveyed respondents about what challenges they might face in the future. The only future challenge shared by more than one respondent was the area of grants. Two respondents believed that their greatest future challenge would be lack of or decreasing grant funding.⁸⁵ One of these respondents believed the expectation on his agency to fulfill the maritime homeland security mission would continue, and the loss of grant funds, coupled with this continued expanded mission, would be the greatest future challenge.⁸⁶

This sustainment of the maritime homeland security mission into the future was also a concern independent of a decrease in grant funds. One agency believed its greatest future challenge would be the ability to maintain current staffing levels, and therefore, to sustain its maritime homeland security posture.⁸⁷ The other respondent believed that stricter federal regulations would create demands on his staff and patrolling responsibilities.⁸⁸

Only one agency believed a future challenge would be an attack on its port area. Identifying it as a “waterborne attack,”⁸⁹ it was a departure from the other responses that identified disruptions in funding or staffing.

The second question in this section asked respondents about changes in their respective budgets and how these changes impact their operations.

⁸⁵ Q22:R1 and R3.

⁸⁶ Q22:R3.

⁸⁷ Q22:R2.

⁸⁸ Q22:R4.

⁸⁹ Q22:R6.

2. Budget Changes

Three respondents reported that changes in budget would require them to alter their maritime homeland security operations.⁹⁰ These three agencies noted a difference between their maritime homeland security operations and their responsibilities as state and local law enforcement. One agency noted that it would become more reliant on technology to secure facilities and critical infrastructure to make its personnel available for law enforcement operations.⁹¹ Two other respondents reported that they would focus on priority services and allow other capabilities to wane.⁹²

Summarizing what the author learned from the future challenges section of this survey, grant funding and staffing concerns were believed to be the greatest future challenges for these agencies. For both grants and staffing, the concern about the future was that these agencies might not be able to sustain their required maritime homeland security mission obligations due to changes in their own budgets, or because of the loss or decrease of available grants.

H. FUTURE OPPORTUNITIES

The final section of the initial round of survey questions asked two questions. First, in general, what opportunities were there to better prepare these agencies for the future? Second, how could federal programs or practices be changed to better equip or prepare these agencies?

1. General Opportunities

Five of the six respondents identified training as the area of greatest future opportunities.⁹³ While these five respondents identified their training opportunities differently, all respondents believed training was the key to best preparing their respective agencies for the future. Basic, standardized port security awareness and

⁹⁰ Q23:R3, R4, and R5.

⁹¹ Q23:R4.

⁹² Q23:R3 and R5.

⁹³ Q24:R1, R2, R3, R5 and R6.

preparedness training was believed to be the best opportunity for three of the agencies. The remaining two agencies identified general training opportunities as the key to best prepare their agencies.

The second future opportunities question asked about ways to improve federal programs or practices to prepare or equip state and local law enforcement agencies better.

2. Changes in Federal Programs or Practices

Four respondents believed changes to federal grant programs could be made that would provide the most benefit for state and local law enforcement.⁹⁴ First, federal grants could be improved by providing incentives for emergency preparedness and mutual aid partnerships.⁹⁵ Second, grant programs could be more flexible to allow for more funding to be applied to personnel and training costs.⁹⁶ Third, by shifting grant focus away from facility and critical infrastructure security and to improving preparedness of the state and local law enforcement personnel patrolling port areas, these funds would better prepare these agencies for maritime homeland security incidents.⁹⁷ Finally, one respondent identified increasing the amount of available funding as the best way to change federal programs.⁹⁸

No consensus was shown about other ways to improve federal programs or practices. Other issues discussed included information sharing and mutual aid.

To summarize the identified future opportunities, state and local law enforcement believed that the best way to prepare and equip their agencies for the future was to offer improved training opportunities for these agencies. Changes to flexibility within the grant programs, increased funding, and incentives for partnerships was believed to be the best way to improve federal programs and practices.

⁹⁴ Q25:R1, R2, R4 and R6.

⁹⁵ Q25:R1.

⁹⁶ Q25:R2.

⁹⁷ Q25:R4.

⁹⁸ Q25:R6.

V. SUPPLEMENTAL QUESTIONS

After completing this initial round of survey questions, the author reviewed the responses provided and developed a second round of supplemental questions to explore four areas of inquiry. First, respondents were asked about the role of law enforcement in the recovery phase of the homeland security cycle. Since it was identified by consensus as the most challenging phase of the cycle for law enforcement agencies, the author developed a question to ask about what these agencies believed was their role and ideally to better understand why this phase presented a challenge. Second, he asked about the practice of state and local agencies enforcing federal regulations. Both from his own experience in maritime homeland security and based upon the survey responses received, he knows it is an area of concern, with a need for coordination, and is an area in which opportunities may exist. This area of concern was mentioned 12 times in the initial survey questions.

The third supplemental question asked about information-sharing groups, committees, or centers that specifically focused on maritime homeland security matters. Surveyed respondents referred to these forums 11 times in the initial round of survey questions, and it was important to identify specific examples that focused on port security matters. Fourth, the author asked about the state government role in providing training or certifications for maritime homeland security matters. Training needs were identified 14 times in the previous round of survey questions, and it seemed that a perceived void existed in the involvement of state government in standardizing training in maritime homeland security.

A. ROLE OF LAW ENFORCEMENT IN RECOVERY

Since half of the agencies had identified this phase of the homeland security cycle as being the most challenging phase,⁹⁹ the author wanted to understand what these agencies believed their role was in recovery and hopefully to better understand why it presented a challenge.

⁹⁹ Q21:R1, R2, and R4.

All six of the respondents identified that the staffing required from their agencies to ensure the security of the port in the aftermath of an incident was the factor that made recovery the most challenging.¹⁰⁰ This demand on personnel, coupled with the perception that recovery from these incidents was a long-term commitment, were two of the factors identified.

One respondent¹⁰¹ was able to provide a detailed explanation of the role of his agency to support recovery from an incident. Like the other five respondents, this respondent discussed the need to provide additional personnel to promote security within the port. However, this respondent was able to identify a specific plan within the port that identified his agency's responsibilities during recovery. Generally, this agency was responsible for shore side and waterside security, patrols, and traffic control.

From this general description of responsibilities, this respondent discussed how these duties are integral to "assist in keeping the Port open and commerce moving."¹⁰² To that end, his agency had agreements to partner with other departments within the port and allied agencies to assist with damage assessment, debris removal, repairs, and other duties to "get the port back to normal operations."¹⁰³ These efforts included the shifting of equipment typically used for security missions, and repurposing this equipment and personnel to assist with assessments of prioritized infrastructure.

Summarizing the responses to the first supplemental question, state and local law enforcement agencies believe the demands on their staffing over a long duration of time are factors that make the recovery phase the most challenging. In addition to merely dedicating additional personnel to recovery efforts, one respondent was able to provide a detailed plan and objectives to be accomplished by his agency while recovering from a maritime homeland security incident.

¹⁰⁰ SQ1:R1, R2, R3, R4, R5, and R6.

¹⁰¹ SQ1:R2.

¹⁰² Ibid.

¹⁰³ Ibid.

B. STATE AND LOCAL ENFORCEMENT OF FEDERAL REGULATIONS

With the changes implemented by the MTSAs, and the additional federal regulations this act put into place, the author asked agencies to identify their practices regarding the enforcement of these federal regulations. Since five of the six agencies surveyed were responsible for 24/7/365 operations within their respective ports,¹⁰⁴ it seemed likely that these agencies would at least be a “first responder” to federal regulation violations, and at most, could be a “first enforcer” of these regulations.

Four of the respondents reported that their respective agencies were authorized to enforce federal regulations.¹⁰⁵ This enforcement was done directly by two agencies,¹⁰⁶ through task force officers by one agency,¹⁰⁷ and by written agreement by one agency.¹⁰⁸ One of the challenges noted by an agency that directly enforces these violations was the difficulty in getting federal prosecutors to accept and file the case. The fallback position for this agency was to enforce a less specific state or local ordinance (criminal trespass or fictitious government document), which may not convey the same seriousness as the prevailing federal statute.¹⁰⁹

The responses to this supplemental question revealed no consensus regarding how state and local law enforcement agencies. These agencies either relied on state and local ordinances to enforce federal violations, federal regulations directly, or these regulations under the authority of a federal task force.

C. MARITIME HOMELAND SECURITY FOCUSED INFORMATION SHARING

Every surveyed agency was able to provide at least one example of a group of federal, state, and local agency representatives who met to share information on maritime homeland security. The common thread throughout these information-sharing forums was

¹⁰⁴ Q8:R1, R2, R3, R4, and R6.

¹⁰⁵ SQ2:R1, R2, R3, and R5.

¹⁰⁶ SQ2:R1 and R3.

¹⁰⁷ SQ2:R2.

¹⁰⁸ SQ2:R6.

¹⁰⁹ SQ2:R3.

the Area Maritime Security Committee (AMSC) led by the USCG.¹¹⁰ Not only was the main committee identified by the respondents as a mechanism for sharing information, but four of the respondents were able to identify sub-committees under the AMSC that met to ensure information sharing within smaller groups to facilitate event or team specific sharing of information. Examples included the intelligence, law enforcement, and dive operations sub-committees.¹¹¹

The Joint Terrorism Task Force (JTTF),¹¹² the Terrorism Early Warning (TEW)¹¹³ group, and area fusion centers were also listed in the layers of information sharing about maritime homeland security.

The layered examples of information sharing provided by the respondents indicated a two-way flow of information. First, for groups centered within ports, these groups actively engaged in information sharing with entities outside the port for situational awareness (from the AMSC to the JTTF, TEW or fusion centers).¹¹⁴ Second, entities centered outside of the port (JTTF, TEW, fusion centers) had embedded port representatives or squads to ensure a maritime homeland security context in information and intelligence sharing (from these groups to the port areas).¹¹⁵

D. STATE TRAINING AND CERTIFICATIONS

Respondents were asked about the role of the state government in providing training or certification specifically for maritime homeland security matters. Five of six of the respondents believed the state governments had a role to play in standardizing training for their respective agencies.¹¹⁶ Following the state system of certifying basic police training, four of the agencies believed state government should certify training

¹¹⁰ SQ3:R1, R2, R3, R4, R5, and R6.

¹¹¹ Ibid.

¹¹² SQ3:R2, and R3.

¹¹³ SQ3:R1.

¹¹⁴ SQ3:R1, R2, R3, R4, R5, and R6.

¹¹⁵ SQ3:R1, R2, R3, and R4.

¹¹⁶ Q11 R1-R6; SQ4:R1, R2, and R4–R6.

standards for maritime homeland security.¹¹⁷ While not going so far as to say that the state government should provide standards or certification for maritime homeland security, one respondent believed the role of the state government was to provide funding for maritime homeland security training.¹¹⁸ One respondent believed maritime homeland security certifications and training were the responsibility of the federal government.¹¹⁹

Summarizing the responses from the fourth supplemental question, five of the six surveyed agencies believed the state government had a role to play in maritime homeland security training or certification. Four of these agencies believed that the role included standardizing training to be provided for state and local law enforcement, and one agency believed the state government should provide funding for the necessary training.

¹¹⁷ SQ4:R1, R2, R4, and R5.

¹¹⁸ SQ4:R6.

¹¹⁹ SQ4:R3.

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VI. SUMMARY, RECOMMENDATIONS, AND CONCLUSION

The maritime domain is vast and its security poses significant challenges for agencies public and private, federal, state, local and tribal, police, fire, and other disciplines. Protecting and securing this domain, however, ensures the flow of commerce, provides a system for military movement of equipment and personnel, and supports an environment protected for many other uses.

A. MARITIME HOMELAND SECURITY AS A NEW MISSION

The maritime homeland security agencies responding to this survey all reported a consensus that they had altered their primary mission from a focus primarily on crime prevention and law enforcement to a mission that leans toward creating a safe and secure environment within their ports. At the same time, these agencies did not leave behind their traditional police agency responsibilities.¹²⁰ Rather, they added additional operational duties including suspicious activity reporting and investigation, anti-terrorism operations, joint agency task forces, tactical and special units, and security zone enforcement.¹²¹ Such a change in mission focus has come at a significant cost in staffing and resources from these agencies.

Considering that 2/3 of surveyed agencies reported a reduction or no change in their budgeted staffing, adding the maritime homeland security mission focus has led to these agencies having a perception that they are doing more with less. Filling the budget gap between law enforcement, crime prevention mission, and the expanded focus to include a maritime homeland security mission, federal grant programs have provided equipment, training, and security apparatus for critical infrastructure. These grants and products they have provided serve as a much-needed mechanism for support of the expanded mission focus under the maritime homeland security. While these grants have well served maritime homeland security agencies for the purchase of target hardening

¹²⁰ Q7:All.

¹²¹ Q10:R1, R2, R3, R5; Q12:R2, R4, R5, R6; Q15:R1, R2, R3, R4, and R6.

security elements (cameras, lighting, fencing, and barriers), they have not served as a good conduit for the personnel and training needs of these agencies.¹²²

It is also apparent, based on the survey responses that agencies have relied heavily on partnerships with other federal, state, and local agencies to ensure the ability to secure America's ports under the maritime homeland security mission. The majority of agencies saw their greatest future challenge as anything that might disrupt the system of maritime homeland security that has emerged from these partnerships. Whether it was loss of grant funding or reductions in budgeted funds and staffing, these disruptions were the greatest concern for surveyed agencies.¹²³

B. GRANT FUNDING

This research revealed a unanimous opinion among the respondent experts that federal grants had provided equipment, training, technology, and other security measures. These elements of port security put into place through federal grants had allowed these agencies to expand from merely being police agencies, to becoming agencies that addressed larger maritime homeland security issues. Some of the examples were the ability to implement measures to secure the facilities and critical infrastructure physically within ports. Cameras, access control, fencing, lighting, and barriers served as some of the security elements put into place to convert ports from "open" pre-9/11 to "secure" in a post-9/11 environment. Outside of facility and critical infrastructure elements, these agencies also were able to provide equipment, training, and facilities to support their expanded operational responsibilities.¹²⁴

Two general areas of concern arose through these survey responses that relate to the federal grant programs. First, agencies were concerned about decreases in grant funding, and it was apparent that the agencies participating in federal grant programs had become dependent upon them to put into place and keep in place the security mechanism for their ports' security.

¹²² Q19:R2, R4; Q22:R2, R3, R4; Q23:R3, R4, R5; Q25:R2, and R4.

¹²³ Q22:R1, R2, R3, and R4.

¹²⁴ Q7:R1, R3, R4, and R5.

Fears that these grant programs are beginning or continuing to be reduced may lead these state and local maritime law enforcement agencies to revert to their pre-9/11 posture and missions. In the case of the federal PSGP, funding allocations to this program since 2008 supports fears of reduced funding. In 2008, this program (PSGP) was allocated \$388,600,000, and since then, funding has dwindled to \$100,000,000 allocated in 2014.¹²⁵ It was clear from the survey responses received that 1/3 of the agencies considered the reduction in grant funding, coupled with reductions in budgeted staff, to be a threat to their ability to continue to satisfy the maritime homeland security mission. For these agencies, they reported they would revert to a focus on more traditional, pre-9/11 law enforcement focused operations. Such operations shift from the securing and patrolling of marine facilities, and return law enforcement to a focus on law enforcement and crime prevention. It is important to note that to the extent maritime law enforcement agencies are dependent upon grant funding to sustain their maritime homeland security mission operations, reduced funding could reduce these types of missions and shift agencies to a pre-9/11 focus on crime prevention and law enforcement operations.

The second general concern was that federal grants did not necessarily provide funding in areas most needed by state and local law enforcement. Specifically, these agencies believed that funding should be available for use to cover personnel and training costs associated with the maritime homeland security mission.¹²⁶

C. UNDERSTANDING THE ROLE OF LAW ENFORCEMENT IN RECOVERY

It is imperative after acknowledging the “new mission” of maritime homeland security for state and local law enforcement that these agencies understand their respective roles in the homeland security cycle; from preparing and preventing incidents where possible, to mitigating and responding, through to the post-disaster recovery role for law enforcement. The agencies surveyed in this research clearly believed that they had been very successful in developing pre-incident (prevention and preparedness)

¹²⁵ Federal Emergency Management Agency, *Funding Opportunity Announcement (FOA) FY 2014 Port Security Grant Program (PSGP)*.

¹²⁶ Q22:R2, R4; Q23:R4; Q24:R1, R2, R3, R5, R6; Q25:R2, and R4.

capabilities. These agencies identified their efforts to install physical security measures as the key to success in strengthening these phases of the cycle.¹²⁷

As experienced through terrorist acts of 9/11 and the Oklahoma City bombing, as well as natural disasters, such as Hurricanes Katrina and Sandy, the recovery phase is an enduring one for regions experiencing these incidents. It is imperative for law enforcement to understand its role in the recovery phase of the homeland security cycle. Half of the agencies identified this phase of the cycle as the most challenging to develop.¹²⁸ The reasons recovery posed a significant challenge for these agencies were the heavy and sustained staffing demands the respondents believed this phase would place on their agencies. For example, in the event a natural disaster or human generated attack disabled the physical security elements in a port's critical infrastructure protection, state and local law enforcement personnel would be required to secure these areas until the facility security measures were repaired.¹²⁹

Yet, previous research, as mentioned in the literature review of this thesis, has yielded little information on promising practices as it pertains to recovery efforts in the maritime environment.¹³⁰ Beyond the demands of sustained staffing to fill security gaps for recovery efforts, two agencies offered insight into what their respective ports were doing to strengthen their recovery posture in the aftermath of an incident. One agency reported that recovery was missing from past drills and exercises conducted within its port. Due to this factor, no common understanding was reached about the demands recovery might place on regional agencies responding to an incident in the port.¹³¹ Thus, a starting point for the role of state and local law enforcement in recovery efforts might be an intentional, planned discussion as part of an existing exercise to identify what initial demands might be placed on state and local agencies following an incident.

¹²⁷ Q18:R1, R3, R4, and R6.

¹²⁸ Q21:R1, R2, and R4.

¹²⁹ Ibid.

¹³⁰ Pate, Taylor, and Kubu, *Protecting America's Ports: Promising Practices*, 105.

¹³¹ Q21:R1.

Another respondent outlined its recovery efforts and was able to identify an existing plan that covered resource and staffing expectations that would be placed upon its agency. It included a plan to team up with existing departments to shift security equipment and personnel to support a return to normal operations. Steps outlined under this plan were coordinated under the leadership of the USCG COTP.¹³² This plan as part of a coordinated effort to recover from an incident appears to be a good practice for stepping beyond exercise discussions, and placing detailed and coordinated expectations upon state and local law enforcement.

D. TRAINING AND CERTIFICATION FOR THE NEW MISSION OF MARITIME HOMELAND SECURITY

Given the shift in mission acknowledged by state and local law enforcement agencies surveyed, training and certification standards for law enforcement are critical to success in maritime homeland security. Ports and the maritime domain are vast expanses of public and private facilities that cover multiple jurisdictions, diverse transportation nodes, and infrastructure critical to commerce and the movement of military equipment and personnel. Adding complexity to this domain are regulations and requirements put into place by various federal agencies, yet requiring enforcement from the state and local agencies patrolling the U.S. ports. Indeed, five of the six surveyed agency respondents believed great opportunity existed for future training to fill significant gaps in state and local agency maritime homeland security responsibilities.¹³³ This response was the strongest consensus result from the survey, other than grant related responses.

When asked to identify the gaps that existed for these agencies and what might be done to fill these gaps, two themes emerge. First, half of the surveyed respondents believed standardized training was needed to assist their agency personnel with understanding and enforcing federal port security regulations. TWIC, security requirements outlined in the MTSA, and enforcement of federal security and restricted

¹³² SQ2:R2.

¹³³ Q24:R1, R2, R3, R5, and R6.

areas were three examples of these federal regulatory requirements.¹³⁴ In the absence of standardized training, these agencies had filled this gap through on the job, “in house” training.

Every respondent to this survey reported that their agency personnel received state mandated, standardized certification to become basic police officers.¹³⁵ This method of providing standardized training through a state certifying body appears to be a good opportunity for providing standardized maritime homeland security training as well.

Given the shift in mission acknowledged by state and local law enforcement agencies surveyed, training and certification standards for law enforcement are critical to success in maritime homeland security. Ports and the maritime domain are vast expanses of public and private facilities that cover multiple jurisdictions, diverse transportation nodes and infrastructure critical to commerce, and the movement of military equipment and personnel. Adding complexity to this domain are regulations and requirements, implemented by various federal agencies, yet requiring enforcement from the state and local agencies patrolling the U.S. ports. The agencies surveyed in this thesis reported several approaches to enforcing federal maritime regulations.

However, one example of an effort to standardize training for police officers in the maritime domain did present itself. Beginning in 2009, Los Angeles area local police and sheriff’s agencies partnered with the Federal Law Enforcement Training Center (FLETC) to develop a basic maritime operator’s course. This course was developed by the Maritime Law Enforcement Training Center (MLETC) in the Port of Los Angeles, California to standardize the training police officers utilize in their maritime homeland security operations. Rather than the State of California mandating requirements for these police officers, courses valuable to the police officers have been developed at the local level and state certification has been granted for these courses. The goal of MLETC is to provide a mechanism whereby state and local law enforcement develop a standardized approach to their roles in maritime law enforcement and homeland security. Recognizing

¹³⁴ Q19:R2 and R4.

¹³⁵ Q11:All.

these agencies are required to do both policing and port security on the water, the training offered by MLETC serves as an avenue to standardize training for agencies within the State of California.¹³⁶

Opportunities may also result as they relate to how agencies within the United States have taken their practices and worked with international ports to improve maritime domain security throughout the world. As America's ports are only one component of the global network of ports, it stands to reason that securing ports that export to America is by extension not only securing the ports of origin, but also securing the American ports receiving their shipments.

In 2015, the San Diego Unified Port District's Harbor Police Department (San Diego Harbor Police) signed a memorandum of understanding (MOU) with the U.S. Department of State, International Narcotics and Law Enforcement Affairs (INL), designed to enhance maritime security assistance to ports in Asia and Latin America. Under this partnership agreement, the San Diego Harbor Police will seek to host visitors from foreign ports, as well as to visit foreign ports, in the hope of offering insights and practices to secure better ports shipping goods to the Port of San Diego.¹³⁷ While this program is a recent port security effort, the Port of Miami has also signed on to a similar MOU to enhance maritime security efforts in Latin America and the Caribbean. As these MOUs and partnerships develop, opportunities may arise to study and document the successes within these port areas.

E. CONCLUSION

Just as America's system of ports is widespread, diverse, and comprised of components of commerce, recreation, national defense, and tourism, so too must be the approach to maritime homeland security. This research examined only the role of state and local law enforcement as it relates to their practices securing the maritime domain.

¹³⁶ "Maritime Law Enforcement Training Center," February 15, 2016, <https://www.portoflosangeles.org/security/mletc.asp>.

¹³⁷ "Harbor Police Enter MOU with Department of State for International Law Enforcement," May 7, 2015, <https://www.portofsandiego.org/harbor-police/3886-harbor-police-enter-mou-with-department-of-state-for-international-law-enforcement.html>. Upon request, this author may provide a copy of the MOU for use or reference by other law enforcement agencies.

The field of maritime homeland security would benefit from additional research about successful practices outside of government agencies. Private sector companies play an important role in the business of ports, and their security practices should be evaluated. This role is especially true in situations in which these practices promote collaboration across public private partnerships.

An additional avenue of research is the enduring role of recovery in the field of maritime homeland security, and what role law enforcement should play in this phase of the homeland security cycle. If the expectation on law enforcement is to do more than merely provide additional staffing to secure maritime facilities, these expectations and best practices for recovery should be researched and identified.

What is clear from this research is that opportunities certainly exist to improve aspects of the maritime homeland security system utilized by state and local law enforcement. However, strong evidence also states that the most successful practices for state and local law enforcement are all tied to partnerships with other state and local agencies, as well as federal partners. Task forces, security committees, operations and coordination centers, training centers, grant programs, and other partnerships all highlight the need for cooperation to secure America's ports.

APPENDIX A

General Questions (Q1–Q25)

1. What is the name of your law enforcement agency?
2. What is your position within your agency?
3. Is your law enforcement agency best described as a state, county, city, or other municipality?
4. How many full-time, sworn law enforcement personnel is your agency budgeted for?
5. How many civilian/support personnel is your agency budgeted for?
6. How has your budgeted staffing changed since September 11, 2001?
7. How have your operational responsibilities changed since the September 11, 2001?
8. Does your agency deploy law enforcement personnel 24 hours per day, 7 days per week for port security and law enforcement purposes?
9. In your port area, which other agencies (federal/state/local) have personnel and vessels on-duty 24/7/365?
10. What examples can you provide of joint maritime homeland security operations between federal/state/local agencies?
11. Are there separate state standards or certifications required to be a state/local law enforcement officer in your port area?
12. Please describe any “special units” your agency utilizes in the realm of maritime homeland security. Examples might include dive teams, canine units, explosive ordinance disposal, SWAT or Tactical Teams, firefighting elements, or other special teams.

Best Practices

13. In the realm of maritime homeland security, what federal programs or practices have been most successful for your agency?
14. How has your agency participated in grant programs?

15. Have you used grant funds to expand or maintain maritime homeland security operations? If you have both expanded and maintained your operations, what percentage
16. In the realm of maritime homeland security, what state programs or practices have been most successful for your agency?
17. What training areas have best prepared your agency to secure the port areas you police?
18. What phases of the homeland security event cycle (prevent, prepare, mitigate, respond, recover) have you had the most success in strengthening at your agency?

Lessons Learned

19. What challenges has your agency encountered with federal programs or practices in maritime homeland security?
20. What challenges has your agency encountered with state programs or practices in maritime homeland security?
21. What phases of the homeland security event cycle (prevent, prepare, mitigate, respond, recover) have you found to be the most challenging to strengthen at your agency?

Future Challenges

22. What challenges might be on the horizon that you believe your agency will face in the realm of maritime homeland security?
23. How have changes in budget affected your agency? How have these changed your agency's operations?

Future Opportunities

24. What opportunities for your agency are you planning on to better prepare or equip your agency for the future?
25. Where can federal programs or practices be changed to better prepare or equip state and local law enforcement for maritime homeland security incidents?

APPENDIX B

Maritime Homeland Security Survey Supplemental Questions (SQ1–SQ4)

1. What is the role of law enforcement in the recovery phase of maritime homeland security incidents?
2. Are there examples of agreements, or state laws that allow your agency to enforce federal regulations (examples might be security/restricted zone enforcement or TWIC regulations)?
3. Are there examples (groups, centers, committees) of information sharing specifically focused on maritime homeland security matters?
4. What is the role of state agencies in providing training or certifications specifically for maritime homeland security matters?

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