

Friend or Foe? Tough to Tell

The Coast Guard Commandant says we need a new approach to counter the risks of the small vessel threat in our ports and on our waterways. By Admiral Thad Allen, U.S. Coast Guard

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In keeping with the traditions of the sea-going services, I generally start my day with a hot cup of coffee. For the past several years, I have been drinking from a mug with the crest of the USS *Cole* (DDG-67) on it. I received it as a gift when I was the Coast Guard's Seventh District Commander in Miami, Florida, and the *Cole* visited Fort Lauderdale prior to her deployment and port call in Yemen. It's a fine mug but more important, the *Cole's* legacy provides me with a clear reminder of one of the gaps in our nation's maritime homeland security strategy: the potential exploitation of small vessels by terrorists, and smugglers of weapons of mass destruction (WMD), narcotics, illegal immigrants and other contraband.

At its core, this is a security issue, but the rippling economic ramifications of a small vessel attack against a high value target such as a container vessel, cruise ship, or petro-chemical facility, elevate the problem from a national level to cause for global concern. We need to more fully understand the existing small vessel threat, our inherent vulnerabilities and how a cooperative strategy involving the American public and private sectors, as well as the international community, can mitigate the risks.¹ The global threat is credible, the stakes are high and it is time to address this vulnerable area.

Maritime Terrorism

The October 2000 attack on the USS *Cole* illustrated al Qaeda's willingness to target high-value, maritime assets with a rudimentary delivery system—an improvised explosive device (IED) on a small vessel piloted by two individuals. Terrorists have continued to use small craft to exploit the open expanses of the maritime domain and avoid detection while striking maritime targets when they are most vulnerable. In October 2002, al Qaeda operatives packed a small fishing vessel with explosives and drove it into the side of the French supertanker *Limburg* 12 miles off the Yemen coast. In November 2005, 100 miles off the coast of



We learned very pointedly from the USS *Cole* attack that violent extremists will not hesitate to use any means, large or small, in their efforts to inflict blows to our maritime assets. Dedicated and risk-based operational efforts, coupled with partnerships between federal, state, and local government entities as well as with the private sector, are the best means of mitigating the threat of a maritime attack in U.S. waters.

USCG photo by PA1 Telfair H. Brown

Somalia, the cruise ship *Seabourne Spirit* was attacked by two 25-foot rigid hull inflatable boats wielding rocket-propelled grenades and automatic weapons. These are just two examples illustrating the vulnerability of larger commercial traffic to small vessels.

The antiterrorism/force protection lessons from the *Cole* attack are clear but we are only beginning to grasp the implications of a similar incident in a U.S. port. A waterborne improvised explosive device (WBIED) attack against a commercial or military vessel in our waters would not even have to be “successful,” in terms of sinking or disabling the target, in order to be effective. A significant attack could cause the port to shut down and spread anxiety throughout the global financial marketplace.

Other aspects of small vessel security must also be addressed. Vessels used by transnational contraband smugglers such as self-propelled semi-submersibles or high-powered “go-fast” speed boats, could easily be converted into delivery vehicles for WMDs or to deliver potential terrorists to our shores. The Coast Guard has developed mechanisms to stop them at sea such as our Counter-Narcotic Bi-Lateral Agreements and Airborne Use of Force from our helicopters. However, these tactics are used in the wide-open transit zones. The small vessel threat is more insidious since the enemy is not as apparent among the thousands of other legitimate recreational and commercial vessels operating inside our coastal waters.

To mitigate the small vessel threat, law enforcement agencies need greater maritime domain awareness, appropriate legal regimes, and partnerships across the public and private sector to implement risk-based solutions. We are working the issue but much more needs to be done.

A Needle in a Haystack

The small vessel threat is a needle-in-a-haystack challenge involving nearly 13 million registered and up to 8 million non-registered U.S. recreational vessels, approximately 100,000 fishing boats, and thousands of other miscellaneous commercial craft. These vessels routinely operate across the 3.4 millions square miles of ocean territory in our Exclusive Economic Zone as well as along our 95,000 miles of coastline. On any given day, small vessels share the same waterways with high-value commercial tankers, cruise ships, merchant vessels, and military traffic within the immediate vicinity of critical infrastructure such as bridges, waterfront facilities and petrochemical plants. For terrorists seeking mass casualties or severe economic impact, this environment offers many targets.

A maritime equivalent to NORAD does not exist. In 2004, the International Convention for the Safety of Life at Sea (SOLAS) began requiring commercial vessels over 300 gross



More than 80 percent of the world’s trade is transported by merchant vessels. Those vessels enter the United States through the Marine Transportation System (MTS), a complex network of intermodal connections such as the Port of Los Angeles/Long Beach, enabling goods to be delivered from vessels to store shelves across the United States. In total, the MTS contributes over \$700 billion to our national economy.

tons, engaged in international voyages, to transmit positional data using the Automatic Identification System (AIS). The Coast Guard monitors AIS and also tracks vessels via radars and cameras in 11 U.S. ports with our Vessel Traffic Service (VTS). However, most small vessels are not legally required to transmit AIS signals and they can be extremely difficult to track using our existing VTS technology. We also have limited information regarding commercial fishing fleets and the wide variety of smaller commercial craft that ply U.S. waters on a daily basis.

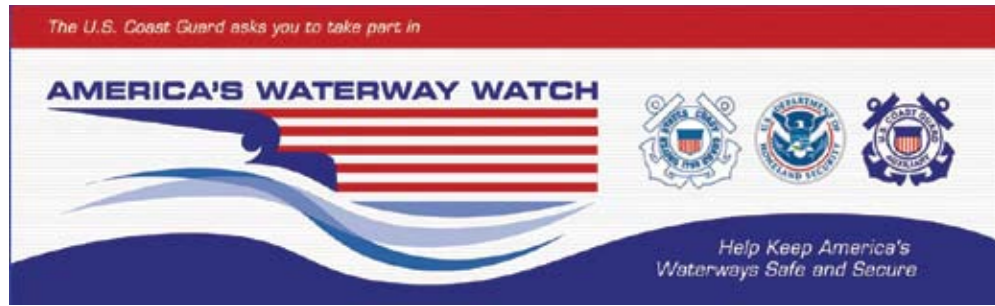
Since World War I, the Coast Guard has had the legal authority to coordinate security within the port environment. Our personnel actively monitor vessel traffic, designate and enforce security zones and participate in Area Maritime Security Planning with private and public stakeholders to coordinate local efforts.

While these activities have increased our situational awareness, we still do not have a complete picture of the recreational boating public, their traffic patterns, or the facilities they use on a regular basis. In sum, we have not achieved comprehensive domain awareness in the coastal waterways and ports. This shortcoming is a double-edged sword for the Coast Guard. It limits our ability to differentiate small vessel threats from legitimate operators, as well as to execute the complete range of our safety-related missions.

The Lifeblood of Our Economy

Some Americans take for granted how the shelves remain stocked at Target, Wal-Mart, and their local grocery store. More than 80 percent of the world’s trade is transported by merchant vessels.² The United States Marine Transportation System (MTS), a complex combination of waterways, ports, terminals, inter-modal connections, vessels, people, and support services that intertwines the public and private sectors, is the lifeblood of our national economy. Since the United States is the world’s leading maritime trading nation, accounting for nearly 20 percent of the annual ocean-borne overseas trade, our MTS also fuels the global economy.³

As the MTS has grown in global importance, its inherent vulnerabilities have also increased. Nearly 700 ships arrive in U.S. ports each day and nearly 8,000 foreign flag ships, manned by 200,000 foreign mariners, enter U.S. ports every year.⁴ Annually, the nation’s 326 ports handle more than \$700 billion in merchandise while the cruise line industry and its passengers contribute another \$35 billion in spending.⁵ Overall, the MTS supports a global chain of economic activity that contributes more than \$700 billion to our national economy each year.⁶ This enormous level of activity results in the MTS operating within extremely tight



Small-vessel operators are encouraged to contact America's Waterway Watch to report suspicious behavior.

tolerances, and with limited ability to deal with disruptions. When the port of Los Angeles/Long Beach closed due to a labor dispute in 2003, the cost to the American economy was approximately \$1 billion per day for the first five days with the cost rising sharply thereafter.⁷

To safeguard the MTS, the Coast Guard has worked with other Department of Homeland Security (DHS) components to produce the Small Vessel Security Strategy (SVSS).

The Small Vessel Security Strategy (SVSS)

The SVSS was built on prior research efforts and combined with private sector input from the 256 attendees at the June 2007 National Small Vessel Security Summit held in Arlington, Virginia. It uses a risk-based approach by first considering the vulnerabilities, likelihood, and consequences of a small vessel attack in a specific port. Once the risk is determined, appropriate resources can be allocated and security measures can be implemented. The SVSS engenders a spirit of international as well as public and private sector cooperation. It also creates a framework to enhance our maritime security posture and increases our level of awareness to that already achieved by much of the international community.

Immediately after 9/11, the International Maritime Organization (IMO) focused on regulating cargo containers and enhancing the security of large commercial vessels (over 300 gross tons on international voyages) and port facilities. To meet this challenge, the United States was a major proponent of the International Ship and Port Facility Security (ISPS) Code that revolutionized maritime security protocols. In 2004 148 nations approved the ISPS Code. Recognizing that a security gap still existed within the maritime domain, our nation, in conjunction with representatives from the United Kingdom and Japan, presented a small vessel threat briefing to the IMO's Maritime Safety Committee (MSC) in 2007. This briefing addressed vessels not covered by the ISPS. To ensure a robust analysis, the briefing specifically included the private sector input

collected during the Small Vessel Security Summit.

The committee appointed an international Correspondence Group, comprised of 38 voluntary member governments and 8 non-governmental associations, to study small vessel security and submit proposed guidelines. The unprecedented number of participants underscored the seriousness of global concern. The Coast Guard has been an integral part of the Correspondence Group and we expect the guidelines to be adopted at the MSC's next session in November 2008. Even though the guidelines are voluntary, they reflect international consensus on small vessel security practices. Nations that follow the guidelines raise their status as favorable trading partners so it will encourage self-correcting behavior. Once the guidelines are approved, the Coast Guard will work with DHS to incorporate them into an implementation plan for the United States.

Not content to wait, some nations have already implemented their own safeguards. Singapore, home of one of the world's busiest ports, is adjacent to two of the most heavily trafficked waterways in the world; the Singapore and Malacca Straits. More than 1,000 vessels per day transit these two natural shipping choke points, making them both essential to the global supply chain and a near-perfect setting for a small vessel attack. To reduce that threat, Singapore has required all non-SOLAS covered vessels within its port to carry a low-cost transponder that transmits the vessel's identification and intended movement. By combining AIS data with information gleaned from the small vessel transponders, Singapore estimates it will be able to monitor 98 percent of the vessels within its waterways.⁸ While this type of monitoring heightens privacy concerns, the added situational awareness allows law enforcement agencies to identify high-risk vessels and detect anomalies in shipping patterns, two key aspects of a risk-based approach to maritime security.

Based on lessons from previous incidents and security efforts throughout the international community, the SVSS addresses four key risk scenarios from small vessels:

- Domestic Use of WBIEDs;
- Conveyance for smuggling weapons (including WMDs);
- Conveyance for smuggling terrorists; and
- Waterborne platform for conducting a stand-off attack, e.g. man-portable air-defense system (ManPADS).

A small vessel attack can range from a simple improvised explosive device to a WMD. A WMD would have obvious catastrophic implications but even a garage-built bomb or a small arms attack could force a port to shut down and have long-term economic and security ramifications. A small vessel could also be used to smuggle terrorists into the country. In 2007, approximately 5,000 illegal migrants successfully arrived on our shores and most were transported via small craft. There are a variety of ways for a small vessel to present a risk to our safety and security so we need to pursue a fresh approach to risk mitigation.

More Eyes and Ears

The overarching purpose of the SVSS is to ensure our maritime domain remains a secure environment, allowing vessel operators to safely conduct legitimate business or recreate without overly burdensome government regulations. Government agencies at the federal, state, local level must work in a concerted manner with the private sector to identify and separate the few potentially hostile small vessels from the millions of legitimate operators that routinely transit our coastal and inland waterways. The four major goals of the SVSS are to:

- Develop a strong partnership with the small vessel community to enhance maritime domain awareness;
- Strengthen maritime security and safety based on a coherent plan with a layered, innovative approach;
- Exploit technology to enhance our ability to detect, determine intent and interdict small vessels; and
- Improve coordination, cooperation, and communications between the public and private sectors as well as our international partners.

Since the majority of small vessel operators are professional mariners or legitimate

recreational boaters, we should develop strong partnerships with the people most familiar with their local environment. This community is in the best position to identify potential threats and report suspicious behavior. The National Association of State Boating Law Administrators (NASBLA) is the type of entity that can be a communications bridge between the public and private sectors. Their expertise, dedication to boating safety, and extensive communication networks will help in the development of national policies and assist localities in tailoring appropriate security measures. By advocating for the state registration of all motorized and non-powered vessels (canoes, kayaks, etc), NASBLA is helping local governments attain better situational awareness within, while ensuring freedom of movement on, their own waterways.

Even if they wanted to, most small vessel operators may not know how to report suspicious behavior. Two of the most effective means of reporting maritime threats are to contact America's Waterway Watch (AWW) or the National Response Center (NRC). The AWW Web site (<http://www.americaswaterwaywatch.org/>) provides a wealth of resource information on safe boating habits, how to detect suspicious behavior, and how to actually report it to the proper authorities.

The use of technology to detect WMDs or ManPADs, information sharing, and continual communication among all maritime stakeholders are essential to developing a layered security approach that is both responsive and respectful to the users of the MTS.

Engaging the small vessel community as another set of "eyes and ears" on our waterways presents a value-proposition for both the private and public sector. Enhanced maritime security will result in a safe and efficient transportation system that benefits all maritime stakeholders. By using the venues for two-way communication, the small vessel community can offer safety as well as security related reports. The analysis of this broad range of information will enable law enforcement and regulatory authorities to develop historical data on small vessel trends.

By layering this type of localized port information with longer-range data on foreign merchant vessels, such as the 96-hour Notice of Arrival rule, we can achieve greater domain awareness. The Coast Guard's search and rescue, environmental protection, and waterways management efforts will also benefit from a deeper understanding of the maritime domain. The Coast Guard needs private sector partnerships to improve mission execution across the full breadth of our responsibilities; not just for homeland security purposes.

The SVSS is only the initial step. Once the IMO small vessel guidelines are approved and published, they will be incorporated into our national maritime security plans. It is still important to understand that no single strategy can possibly address a topic as complex as small vessel security. Every port is different so we must view risk scenarios within the context of specific geographic areas. Our solutions need to be risk-based to identify the potential illicit actors while ensuring the free-flow of legitimate commercial traffic and the freedom of movement American boaters have come to expect. We must emphasize the participation of all stakeholders within the maritime domain in order for any plan to be effective. Every day, millions of recreational boaters and thousands of commercial mariners traverse our waters for pleasure or work. They value the openness of our waterways, and we should maximize their cooperation.

A Risk-Based Approach

The best way for law enforcement agencies to differentiate friend from foe in the maritime domain is to utilize a risk-based security approach.

To date, maritime security solutions have focused on larger commercial vessels. While these form a foundation to build on, they do not transfer systematically to the small boat community because of their inherent differences. The small vessel community has many



A terrorist attack within U.S. waters, near a U.S. port, or to our military vessels, like the devastation of the USS *Cole* (pictured above), is a constant reminder of our need to further our nation's maritime homeland security strategy.

diverse stakeholders while larger commercial traffic is generally represented by globally-based organizations. Another major difference is the limited interaction between small vessel operators and the public and private entities that manage the waterways. Umbrella organizations like NASBLA are bridging this divide and can act as liaisons for the small vessel community.

Small vessel security is an asymmetric threat—a complex problem with multiple variables and frames of reference. We need a fresh perspective in order to quantify our vulnerabilities and reduce the risks that small vessels may pose to our maritime security. The Small Vessel Security Strategy provides the framework to do just that. To be effective however, it will require the commitment and cooperation of everyone who enjoys or works on our waterways.

¹ Small vessels are characterized here as any watercraft regardless of method of propulsion, less than 300 gross tons. Although there is no exact correlation between a vessel's length and its gross tonnage, a vessel of 300 GT is approximately 100 feet in length.

² Department of Homeland Security, *Secure Seas, Open Ports: Keeping our waters safe, secure and open for business* (Washington, DC: 2004), p. 2.

³ Commission for Environmental Cooperation of North America, *Free Trade and the Environment: The Picture Becomes Clearer* (Montreal (Quebec), Canada: 2002), p. 12.

⁴ James D. Hessman, "The Maritime Dimension: Special Report: The Coast Guard's Role in Homeland Security," *Sea Power*, April 2002, p. 1.

⁵ *The Contribution of the North American Cruise Industry to the U.S. Economy in 2006* (August 2007), prepared for Cruise Lines International Association by Business Research & Economic Advisors, p. 35.

⁶ U.S. Commission on Ocean Policy, *An Ocean Blueprint for the 21st Century*. (Washington DC: 2004), p. 31.

⁷ Peter Chalk, "Maritime Terrorism in the Contemporary Era: Threat and Potential Future Contingencies," *The MIPT Terrorism Annual 2006*, p. 25.

⁸ Japan International Transport Institute, "Maritime Security Measures for Non-Solas Vessels," RADM Lui Tuck Yew, Chief Executive Maritime and Port Authority of Singapore, www.japantransport.com/conferences/2005.

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